

WORKSHOP

Re: XML File Format for Bulk Traffic Data

Convened by Transport Canada and ITS Canada

In conjunction with ITS Canada Annual Conference

Niagara Falls, Ontario

May 2, 2007

Notes: Taken by William (Bill) Johnson

Record of Proceedings

Introduction (8:40 a.m.)

Susan Spencer, Transport Canada, welcomed the delegates to the workshop and gave a brief overview of the workshop background, purpose and “charge” to the delegates.

- The ITS Architecture for Canada has a place for standards but no specific Canadian need had emerged until the XML Ad Hoc working group came forward last year to express a need for a standard (or a profile of existing standards) in order to transfer bulk traffic data from traffic centres to external users and suppliers (and back).
- This workshop’s purpose is to review the state of XML for traffic data; hear from users on their needs; and to position the debate.
- The charge to the delegates is to consider what, if anything, needs to be done; and, if so, is TMDD the right approach; and do we have a Canadian solution for follow up actions, if needed.

Presentation Session (8:50 a.m.)

(Note that the PowerPoint presentations are posted in PDF format on the ITS Canada website.)

- Existing XML Traffic Management Standards (~40 min.)
 - > Robert Rausch, TransCore, USA
 - > An overview of the TMDD (Traffic Management Data Definition) standards developed for centre-to-centre ITS standards under the NTCIP program at ITE.
- MTO Needs and Uses of XML Standards (~20 min.)
 - > Phil Masters, Ministry of Transportation of Ontario (MTO)
 - > An overview of the current and future needs of MTO to exchange traffic data with external users and suppliers.
- XML Applications at TransLink (~15 min.)
 - > James Fam, Greater Vancouver Transportation Authority (GVTA)
 - > An overview of TransLink and the ITS Corporation and the active projects to present traffic information to users via iMove and other services.

(Morning break 10:15 a.m.)

- Application of Existing XML Standards – Case Studies (~15 min.)
 - > Richard Chylinski, Delcan

- > An overview of a number of traffic management and data exchange case studies in Vancouver BC, Los Angeles CA, and Baltimore MD.
- XML Traffic Files: A Private Sector Perspective (~15 min.)
 - > Barrie Kirk, Globis Data
 - > An overview of the emerging streams of traffic data transfers between private suppliers (and users) and public traffic control centres and the need to agree on a common application profile and a home for it.

Discussion Session (11:00 a.m.)

Susan Spencer, Transport Canada moderated the open discussion session.

Question (Pierre Bolduc): what is a common application profile?

Richard Chylinski: a common application profile defines what elements to use from all the available TMDD standards.

Robert Rausch: this is where one adopts the elements needed for an application or for a regional context from an existing set of standards; the next version of the TMDD standard will make it easier to create application profiles

Question (Susan Spencer): what are the implications for agencies of common formats?

Phil Masters: MTO would welcome a common standard to reduce the effort by MTO staff in dealing with traffic data interfaces. Adopting a standard would not likely make a big change to the MTO systems so it should be relatively easy to implement

James Fam: instead of running around to agencies, agencies look to TransLink for traffic data interfaces; these are now in their infancy

Robert Shirra: spoke about iMove experience: (1) there is a lot of interagency data harvesting that needs standards to simplify; (2) both the province and the private sector wish to get data from various cities and provincial sources

Barrie Kirk: 511 will require a national architecture and standard interfaces

Phil Masters: many U.S. private sector firms approach him and point to U.S. experience with common interfaces and their success

Robert Shirra: need to be sure that all provinces are on the same page

Frank Rao: vendor specific standards exist; has anyone been tasked to develop a common approach in Canada? (Answer is No) Traffic controller standard has been borrowed from the U.S.; there are a lot of questions and no knowledge base

Robert Rausch: TMDD standards are developed by those who attend the meetings; if something is missing, one can advise him (Bob) via a [list for comments](#) (on the website?); (he expressed his view that the traffic data needs in Canada should be much the same as in the U.S.

Colin Rayman: Canada contributed to U.S. standards development activities individually in the past; there is a need for a coherent Canadian response to U.S. development activities

Question (Susan Spencer): is there something for Canada to do differently from the U.S.?

Phil Masters: there is an opportunity now to move forward as per the presentations by Barrie and Richard to develop an application profile; and to do so not just as individuals; this would be good for Canada and Ontario although funding will be an issue for agencies

Jeffrey Smart: private sector view is that it is more economic to adopt U.S. standards; is there scope in TMDD to do a regional standard? It would be cheaper for Canada to adopt; is there a requirement for regional adoption?

Jeffrey Smart: there should be a contact point in ITS Canada who is available to work with U.S.

Clark Lim: TransLink data collection (e.g. GIS, etc.) is looked at from a high level; criteria are efficient communications, regional language differences (e.g. map data differs due to interpretation), issues to take note of are credibility, etc.

Michael Flanigan: Mississauga has a \$700K project for a minimal ITS system; they are looking forward to future ITS implementations; there are procurement issues; they want a standard to make it easier and to facilitate traffic data interfaces

Question (Susan Spencer): Pleased with the MTO lead to integrate their traffic operations, but:

1. Is there a need for outreach and training (e.g. Bob Rausch mentioned a 4-day course that he teaches)?
2. Is there a need (under ITS Canada) for a group to look into a common application profile for traffic data?

Barrie Kirk: Training would come after the application profile is established; all seem to agree on the need for a common format, but must put a boundary on the scope of the work; the issue is focused for Globis on traffic data; e.g. while transit data is a real issue, it is not germane to Globis' problem; there is a role for the private sector to contribute to training but not company specific

Phil Masters: need to concentrate and focus on data outputs; the biggest need is to move centre-based traffic data to the public (and travellers); need to plug into TMDD; Supports moving MTO work to national level; ITS Canada lead role is a good idea (do not rely on an agency to take lead role); Focus small and deliver.

Robert De La Durantaye (Weather Network): wanted to echo Barrie's call for focus on traffic data; Weather Net collects data from many agencies and needs a common format; agencies say they have one but are still "at discussion stage"; WN adapts inputs to their own standard and would support and participate in a common standard exercise

Robert Rausch: (refers to Barrie's chart of data flows from/to public and private sectors); Paths from private to government (and government to private adds Phil) have strings attached; issue is how to co-mingle data from different sources with different strings attached? Often can't be done; U.S. example is to build to 'moving' standards (i.e. they are under constant evolution); Information sharing is okay; Data quality is an issue; Command and control is not easy to accommodate

Phil Masters: Government to private sector traffic data flows do have prices attached (e.g. MTO charges for data); there is also the issue of capital dollars (used to create the data collection systems) which governments typically can get to expand systems, versus operating dollars (which governments would pay to private info providers such as cell phone probes) which are very hard for governments to get more of; Also, government cannot generally resell data bought from a private firm back to other private firms. Government may also not be allowed to provide this information to the public. This would necessitate systems to keep this data separate which would make the systems more complex.

(Lunch break 12:00 noon)

Discussion Session (13:15 p.m.)

Susan Spencer re-opened the discussion by re-framing the charge to delegates:

- Do we need a common traffic data format?
- Do we adopt TMDD?
- Do we have a Canadian solution?

Susan Spencer summarized her position, after hearing the morning presentations and discussion and after consultation over lunch with her colleagues, into the following 7 points/questions:

1. Not looking at an ITE / NTCIP / TMDD level solution; but
Need to feed into the ITE / NTCIP / TMDD process (refer to website addresses)
2. Canada needs to develop application profiles for its ITS needs
 - starting with traffic data
 - using TMDD and XML

How, then, to proceed?

3. Can ITS Canada provide a host for the proposed activity?
 - leadership must be established for both technical and strategic issues
4. Need to create a steering committee
 - role is to decide technical representation
5. Training for standards must be part of the proposed activity
 - for example, Bob delivers a standards course
 - ITS Canada can offer training in workshops to “raise awareness”
6. Training for the actual agreed common “application profile” is also needed
 - this is a specific requirement
7. Establish link back to the TMDD work.

Comments:

Robert Shirra: could an invite from ITE be extended to a country?

Robert Rausch: process is to send an e-mail to join the TMDD working group on individual basis

Bill: the proposed steering committee could identify the contact person on behalf of Canada

Robert Rausch: Transport Canada should approach Lee Simmons, their counterpart in USDOT, to discuss Canada's participation in the TMDD

Question (Susan Spencer): Who would participate on an ITS Canada Steering Committee?

Susan Spencer called for a show of hands (many respond).

Phil Masters of MTO was proposed as a co-chair of the Steering Committee in light of his strategic view of the need and opportunity for a traffic data application profile.

The other co-chair would be selected to represent the technical issues.

Colin Rayman: ITS Canada would proceed with an internal review to see how it could accommodate the proposed Steering Committee; he foresaw two decisions:

- choose how to organize it
- choose an appropriate leader

A formal decision to confirm arrangements would be made at the next Executive meeting (at end of May)

Susan Spencer: offered to call the chair, ITS Canada to move things along faster

Robert Shirra: the ITS Canada board will support the initiative and make it open to all members

Colin Rayman: Will Steering Committee members likely be members of ITS Canada, or not?

Susan Spencer: Involve all interested parties

Barrie Kirk: Workshop attendance list would be a good start to contact interested parties

Susan Spencer: a post-workshop communications plan should include:

- newsletter article in ITS Canada newsletter
- workshop summary with PowerPoint presentations, posted on the ITS Canada website (post-haste)

Workshop Ends (14:40 p.m.)

Susan Spencer closed the workshop by thanking all who contributed to the workshop:

- Bob Rausch for attending and presenting the TMDD work in the U.S.
- All the other speakers Phil, James, Richard, and Barrie
- Barrie Kirk for bringing the issue forward for discussion and resolution
- Bill for taking notes
- ITS Canada and Colin for organizing the event
- Transport Canada staff members Pierre and Yann
- All participants who gave up their time and contributed their advice.

References

TMDD

To send comments or to join the TMDD working group: TMDD@ITE.ORG

To find TMDD documents to download: www.ite.org/tmdd

To find (free) NTCIP document links: www.ntcip.org