Survey and Assessment of

IC

Canadian Involvement in ISO/TC 204

(Standards for Transport Information and Control Systems)

by

E. Ryerson Case

E. R. Case & Associates

**A Study Undertaken
for the
Transportation Development Center
Transport Canada
September, 1996**

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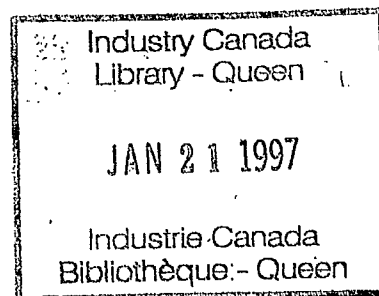
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Study Objectives

This study was commissioned mainly to assess and report on the effectiveness of Canadian participation in ISO/TC 204 activities and to outline a course of action to ensure that the level of participation is adequate to protect Canadian interests during the development of international ITS standards. In addition, it was the intention to provide an overview of ITS standards development activities as a whole, with particular emphasis on ITS standards development initiatives in the United States.

1. Background

ISO

ISO (International Organization for Standardization) was founded in 1946 by 25 national standards organizations to bring together producers and users in the development of voluntary international standards. Canada is a founding member.

ISO standards are developed by Technical Committees, which are established for the systematic development and review of international standards in a particular technical area. Each may have several subcommittees, which may be further subdivided into working groups, or there may be working groups only, depending on the scope and complexity of the technical area.

All national bodies have the right to participate in the work of the various technical committees. Those countries which choose to actively participate are called P-members and are obliged to vote on all questions submitted for voting and on draft international standards. Those choosing only an observer role are called O-members.

Once a Technical Committee (TC) is approved by the ISO Technical Management Board, the TC Secretariat is allocated to one of the participating countries. The Secretariat provides the necessary technical and administrative services to ensure that the committee can function effectively.

The responsibility for organizing and running the subcommittees and working groups (the "convenership") is assigned to P-member countries on a voluntary basis. Each then appoints a "convener" to act as chair.

ISO TC plenary sessions are held semi-annually to review and approve working group plans and proposals. Each P-member country must appoint a Head of Delegation to attend the plenary meetings and carry the national vote to support the official national position.

International standards are developed on a individual project basis . Each proceeds through the five stages listed in the accompanying table, which also gives the name and abbreviation of the documents associated with each stage.

The official link with ISO is through a national standards organization which is a member body of ISO, in Canada's case, the Standards Council of Canada (SCC). Each P-member country must set up a technical advisory committee to support and develop the

national position on particular standards. ITS Canada (then the Canadian IVHS Roundtable) was assigned this role by SCC, which in turn established the Canadian Advisory Committee (CAC) of ITS Canada which is the body responsible for organizing Canadian input to ISO/TC 204 via SCC.

Technically, designated national experts in any given working group are actually not members of the working group. They are members of their national delegation to the working group, since it is each member country which has a vote, not the individual expert.

ISO Project Stages and Associated Documents

Project Stage	Associated Document	
	Name	Abbreviation
0 Preliminary Stage	Preliminary Work Item	PWI
1 Proposal Stage	New Work Item Proposal	NP
2 Preparatory Stage	Working draft(s)	WD
3 Committee Stage	Committee draft(s)	CD
4 Approval Stage	Draft International Standard	DIS
5 Publication Stage	International Standard	-

The operating relationships between an ISO Technical Committee and the organizations in the participating countries (P-members) is shown below. In come cases, countries establish national subcommittees and working groups which correspond on a one-to-one basis with the ISO subcommittees and working groups. In others, it handled on a less formal basis.
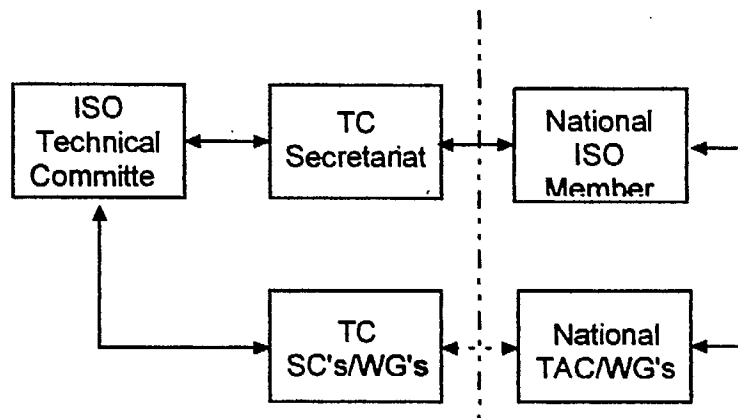
General ISO Technical Committee Operating Relationships

Full details of approved ISO procedures can be found in "DIRECTIVES PART 1 - Procedures for the Technical Work, Third Edition", which is available from the Standards Council of Canada.

ISO/TC 204

ISO Technical Committee 204 was established to oversee the development of international standards for Transport Information and Control Systems (TICS). The founding meeting was held at Georgetown University in April of 1993, during which sixteen Working Groups were established with participation from seven countries. Fourteen countries participated.

The accompanying table shows the area, convenership and convener for each active Working Group. As noted, Canada is responsible for Working Group 7 on Commercial/Freight Management.

ISO/TC 204 WORKING GROUPS

WG	Working Group Name	Convenership	Convener
1	Architecture	United Kingdom	Bob Williams
2	Quality and Reliability Requirements	United States	Bill Dawson
3	TICS Database Technology	Japan	Masao Shibata
4	Auto Vehicle & Equipment Identification	Folded into WG 1	
5	Fee and Toll Collection, Mgt and Access Control	Netherlands	H. J. Stoelhorst
6	General Fleet Management	United States	Chip White
7	Commercial/Freight Management	Canada	Kelly Gravelle
8	Public Transport/Emergency	United States	Alan Kiepper
9	Integrated Transport Information, Mgt and Control	Australia	Max Lay
10	Traveler Information Systems	United Kingdoms	Ghassan Freij
11	Route Guidance and Navigation Systems	Germany	Wolf Zechnell
12	Parking Management/Off-Road Commercial	Inactive	
13	Human Factors and Man/Machine Interface	United States	Gene Farber
14	Vehicle Control Systems with External Interfaces	Japan	Norio Komodo
15	Dedicated Short Range Communications	Germany	Jurgen Kossak
16	Wide Area Communications Protocols/Interfaces	United States	Russ Shields

ISO/Technical Committee 204 Chairman - Martin Rowell

ISO/TC 204 Secretariat - Society of Automotive Engineers (Arlan Stehney, Secretary)

List of ISO/TC 204 Documents Submitted for Comment or Ballot to Date

ISO No.	Type	WG	Name	Date Due
N172	NP	5	Automatic Fee Collection	Completed
N173	CD	9	Data Exch Between Traffic Mgt & Info Centers	10-20-96
N177	NP	15	DSRC Physical Layer (Layer 1) - µ-wave & IR	10-15-96
N178	NP	15	DSRC Data Link Layer (Layer 2)	10-15-96
N179	NP	15	DSRC Application Layer (Layer 7)	10-15-96
N180	Canc	15	Communication Profiles for DSRC	Withdrawn
N183	NP	14	Road Vehicle - Adaptive Cruise Control	8-31-96
N184	NP	14	Road Vehicle - Forward Obstacle Warning	8-31-96
N185	NP	14	Test Methods for Traf Impediment Warn'g Sys	8-31-96
N199	NP	16	TICS Wide Area Comm Msg Protocol Struct	10-15-96

The above table lists the ISO/TC 204 documents which have been submitted to date for consideration by P-member countries. Most of these documents originate with CEN, the European Committee for Standardization, which is well ahead of ISO/TC 204 in the development of ITS standards. This is often a contentious issue since it is, in general, not in North America's best interests to simply rubber stamp a CEN standard. Canada has not responded with comments or a position on any of these work items.

2. Canadian Participation in ISO/TC 204

Canadian Advisory Committee

The Canadian Advisory Committee (CAC) is a commitee of ITS Canada. The founding meeting was held in Toronto in August, 1993. Following the meeting, a list of volunteers interested in participating in ISO/TC 204 as either an expert or as an observer (interested participant) was assembled and submitted to SCC (see Appendix A). This list was used as the basis for establishing the complement of the CAC listed in the following table and for the designated technical experts to work in the various working groups (see Table 5). These were submitted to the ISO/TC 204 Secretariat by SCC.

Canadian Advisory Committee

(SCC List, June 28, 1996)

Name	Affiliation	Function
Brokelsby	Austec	Expert
Case*	Consultant	Reviewer
Gravelle	Mark IV	Convener WG 7
Harmelink	Consultant	Chair
Kelman	Metro Toronto	Expert
Krakiwsky	Univ of Calgary	Expert
Lapointe	MTQ	Expert
Lefebvre	MTQ	Expert
MacEwen	CSA	Liaison
Meyers	TDC	
Plunkett	Geomatics	Expert
Rolston	Industry Canada	Expert
Rousseau	Cira Inc.	Expert
Smiley	HF North	Expert
Stewart	IBI	Expert
Sultana	MTQ	Expert
Tritter	Delcan	Reviewer
Truchon	MTQ	Expert
Wang	MTO	Expert, H of D**

* Added June 28, 1996   ** Head of Delegation

Process

Project documents, many of which are voting packages from the Working Groups, are sent from the TC 204 Secretariat to SCC, which distributes them to CAC members. They are then sent (or should be) to the appropriate designated expert(s) for review and voting, and passed back to the CAC Chair to compile the national vote. Completed documents are then returned to SCC which forwards them to the TC 204 Secretariat. In many cases (but not all), the CAC member is also the expert, and can review and vote on

the document directly. The current SCC list of designated experts on the various Working Groups is shown in the next table.

Most of the work of generating new project work items and writing draft standards is done by the working groups, which is entirely voluntary. To ensure that a working group can operate effectively, it is essential that the working group convener (chair) establish and maintain close contact with each national designated expert. Although fax and e-mail are the principal means of communications, most working groups meet two or three times a year, and the cost of travel can become a major obstacle. There is often a massive amount of documentation to review (usually CEN 278 documents), which can become burdensome.

SCC List of Canadian Designated Technical Experts

WG	Working Group Name	Member 1	Member 2	Member 3
1	Architecture	Heti	Stewart	-
2	Quality and Reliability Req'mts	-	-	-
3	TICS Database Technology	Lapointe	Plunkett	-
4	(Folded into WG 1)	-	-	-
5	Fee and Toll Collection	Abrahamsohn	-	-
6	General Fleet Management	Krakiwsky	-	-
7	Commercial/Freight Mgt	Gravelle	Tardif	Lefebvre
8	Public Transport/Emergency	Hemily	-	-
9	Integ Trans Info, Mgt & Control	Sultana	Kelman	-
10	Traveler Information Systems	Wang	-	-
11	Route Guid. and Nav. Systems	Plunkett	-	-
12	Prkg Mgt/Off-Road Commercial	-	-	-
13	Human Factors and MMI	Smiley	Truchon	-
14	Veh. Control Syst. with Ext. I/F	-	-	-
15	Dedicated Short Range Comm	Sabounghi	Tierney	Tritter
16	Wide Area Comm	Rolston	Williams	-

Initiatives to Support CAC Activities

It was recognized from the start that the CAC, which is largely voluntary, would require support to function effectively. In September, 1993, the CAC Chair submitted a request to Transport Canada for funding to support CAC activities. A detailed business plan was included which identified the following:

- hiring of a national secretary to provide administrative support to the Committee ($30K/year)

- establishing a national e-mail/bulletin board service ($25k)

- travel funding for the Head of Delegation to attend ISO Plenary Meetings ($10K).

The funding ($65K) was expected to be required annually for two to three years. Presumably, this level of support was based on the assumption that it was in Canada's best interests to be active in all working groups. Working group experts, being volunteers, were expected to cover their own costs for time, travel, etc.

Unfortunately, due to funding cut-backs, Transport Canada was unable to provide this funding support, and the proposal has remained in limbo since that time. Unquestionably, the lack of such support has had a negative effect on Canada's ability to meet its full obligations as a P-member country in ISO/TC 204. The lack of a national secretary to sort out and distribute the large amount of incoming documentation to the appropriate experts has probably had the most serious impact. A dedicated e-mail/BBS service is probably no longer necessary since most people have their own internet service provider, and the cost of travel for the Head of Delegation could be shared with the private sector.

As will be pointed out later in Sections 5 and 6, the amount of support needed will depend on the extent of our participation. If Canada desires to be active in all areas, then a national secretary is probably necessary. If participation in a few critical areas is sufficient, then the sorting could probably be done on a voluntary basis.

3. U.S. Standards Activities

ISO/TC 204

The United States is well organized to participate in ISO/TC 204. As indicated earlier, the American National Standards Institute (ANSI), as a member body of ISO, is the official link with ISO/TC 204. The U.S. national technical advisory committee is called a Technical Advisory Group (TAG), which corresponds to the CAC (Canadian Advisory Committee). ITS America is the U.S. TAG Administrator; the officers are listed in the table below.

U.S. Technical Advisory Group (TAG)

U.S. TAG Administrator	-	ITS America
U.S. TAG Chair	-	Bill Spreitzer
U.S. TAG Vice Chair	-	Rick Weiland
U.S. TAG Secretary	-	Roy Courtney
Head of Delegation	-	Bill Spreitzer

The U.S. TAG has delegated the responsibility of supporting ISO/TC 204 to U.S. Working Advisory Groups (WAG's), where there is a WAG corresponding to each TC 204 Working Group, as illustrated in the diagram on the next page. Each WAG is sponsored by an organization which serves as the U.S. WAG Administrator, as shown in the table below.

U.S. Working Advisory Groups (WAG)

U.S. WAG	Working Group Name	U.S. WAG Administrator
1	Architecture	ITS America
2	Quality and Reliability Requirements	IEEE
3	TICS Database Technology	SAE
5	Fee and Toll Collection, Mgt and Access Control	IBTTA
6	General Fleet Management	PI, Inc.
7	Commercial/Freight Management	ATA
8	Public Transport/Emergency	Volpe
9	Integrated Transport Information, Mgt and Control	ITE
10	Traveler Information Systems	SAE
11	Route Guidance and Navigation Systems	SAE
13	Human Factors and Man/Machine Interface	SAE
14	Vehicle Control Systems with External Interfaces	ITS America
15	Dedicated Short Range Communications	ASTM
16	Wide Area Communications Protocols/Interfaces	TIA

The U.S. TAG is very active and convenes numerous meetings to formulate the U.S. position, especially just prior to TC 204 Plenary meetings. Nevertheless, at least two of the ISO WG's which they convene have been very slow in developing a program of work (WG 6 & 8). In fact, the U.S. is experiencing many of the same problems as Canada in meeting their ISO/TC 204 obligations, and for the same reasons.
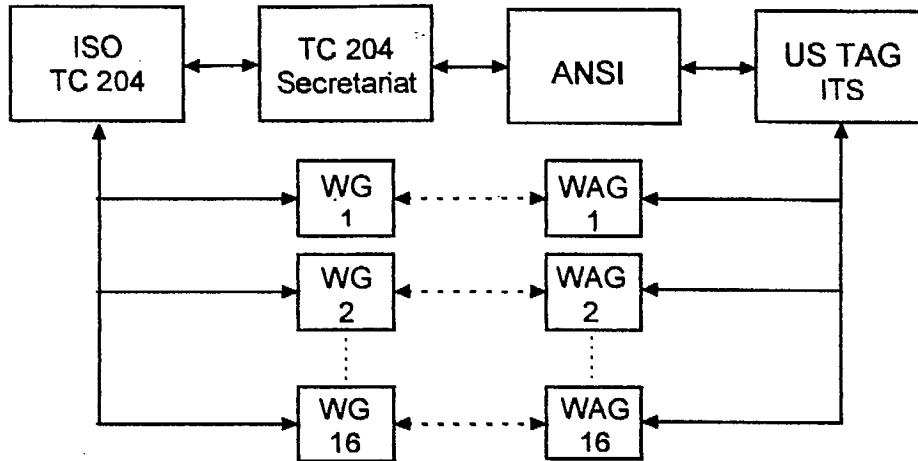
U.S. Paricipation in ISO/TC 204

In a recent meeting of the ITS America Standards & Protocols Committee, a change in the US TAG balloting procedure was proposed (see Report in Appendix E). Rather than have the TC 204 documents sent directly to the US TAG for review and voting, it is proposed that they be sent first to the appropriate WAG for review and then be sent to the US TAG with a voting recommendation. This would save time since the US TAG almost always relies on input rom the WAG's before voting.

Domestic Standards Development

In August of 1995, the ITS America Board of Directors formalized a standards policy framework to encourage ITS America to be more active in coordinating and accelerating the development of ITS standards. This included:

- A recommendation to the US DOT to provide funding to accelerate the development of ITS standards in the U.S

- Using the Council of Standards Organizations (CSO), a subcommittee of the ITS America Standards & Protocols Committee, as the forum for the review and direction of the U.S. domestic ITS standards development program.

- Continued support of the role of ITS America as U.S. TAG Administrator for ISO/TC 204.

The U.S. National ITS Architecture

The National Architecture Study was completed early this year and culminated in the release of 25 reports covering virtually every aspect of the architecture, including ITS standards. The latter include a Standards Development Plan, a Standards Requirements Report and a set of 11 Standards Requirements Packages selected to cover the broadest set of needs and interests possible, while still maintaining a logical grouping of information.

The Standards Development Plan identifies subsystem interfaces as potential candidates for ITS standards. It rates their respective interoperability requirements in four categories, *national*, *regional*, *product-oriented* and *none required*. *International* interoperability is not identified explicitly. However, there is unquestionably a commitment to support an international effort where there is a clear benefit from full North American interoperability, in which case national standards would be presented as candidates for international standardization. Two specific areas were mentioned,

- Dedicated Short Range Communications for tolling, border clearance and in-vehicle signage.

- Advanced Vehicle Safety / Automated Highway Systems involving vehicle-roadside communications and vehicle-to-vehicle coordination.

There is little doubt that the National Architecture will play a major role in the development of ITS standards in the United States. The ITS America Board of Directors recently confirmed this, and it is being strongly promoted and supported by the U.S Department of Transportation.

Federally-Funded Standards Development Program

A Federally-funded program to accelerate the development of ITS standards in the United States was announced early this year. The U.S. DOT entered into cooperative agreements with the following five Standards Developing Organizations (SDO's) to facilitate ITS standards development over the next five years:

- American Association for Testing and Materials (ASTM)
- American Association of State Highway and Transportation Officials (AASHTO)
- Institute of Electrical and Electronic Engineers (IEEE)
- Institute of Transportation Engineers (ITE)
- Society of Automotive Engineers (SAE)

The published awards were:

Organization	Start-up Funding	Total Award
ASTM	$ 70 K	$ 2.55 M
AASHTO	219	2.77
IEEE	269	4.22
ITE	65	2.28
SAE	473	4.22

However, the funding is actually awarded for individual projects on a task order basis. The types of activities which are eligible for funding are:

- Writing of draft standards
- Holding workshops
- Testing
- Support for public sector participation
- Support for participation by U.S. experts in ISO/TC 204

Funding is limited and requires that priorities be clearly identified and activities targeted. The intent is that the funding should leverage the voluntary consensus process, not replace it. The relationship between the various bodies involved is shown in the block diagram below.

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┌──────────┐                    ┌──────────┐
│   ITS    │                    │   FHWA   │
│ America  │                    │          │
└────┬─────┘                    └────┬─────┘
     │                               │
     ▼                               ▼
┌──────────┐   Funding Requests ┌────────┐   ┌──────────────┐
│  S & P   │ - - - - - - - - - ▶│  ITS   │◀─▶│    JPL &     │
│ Comm'tee │◀                   │  JPO   │   │ Architecture │
└────┬─────┘                    └────────┘   │     Team     │
     │                               ▲       └──────────────┘
     ▼                               │
┌──────────┐  ┌─────┐  ┌────────┐    │
│ Unfunded │─▶│ CSO │◀▶│ Funded │────┘
│  SDO's   │  │     │  │ SDO's  │◀───── Incremental Funding
└──────────┘  └─────┘  └────────┘
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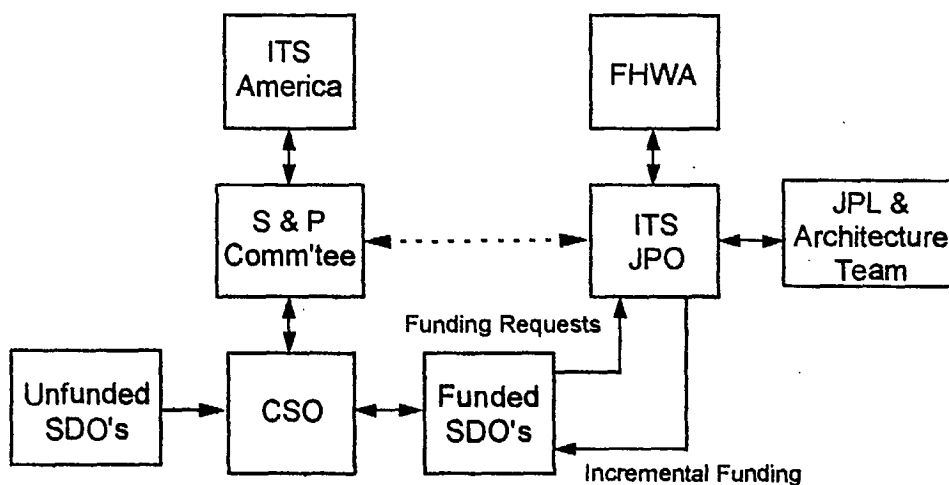
U.S. Domestic ITS Standards Development

ITS America ITS Standards Survey

Earlier this year, the ITS America Standards and Protocols Committee embarked on the development of a "Five Year Plan for ITS Standards Development in North America".

An important first step was to provide guidance on ITS standards priorities to the SDO's. A list of 44 ITS standards needs was culled from various sources, including the Architecture Program and the July 1995 TRB Architecture/Standards Workshop. This list was distributed to 1,600 members of the ITS community in April with a request to rank the standards needs in four categories, very high, high, moderate and not a priority item. There were 178 responses. In considering the submitted rankings, willingness to participate was an important factor. The results of the survey are listed on the next two pages.

Eleven items received the highest ranking indicating the need to be developed within one year. Two of these, the Umbrella Standard for ITS Data Dictionaries and the Message Set Template, are to be devloped by IEEE within 6 months. The next 25 were ranked as high-priority items requiring development within 3 years. The remaining eight were of moderate priority requiring developed within 5 years.

Standards Needs Under SDO Consideration; DD = Data Dictionary, MS = Message Set   08-09-96

Survey	Survey Priority	Board Priority	Standards Needs	Lead SDO	Supporting SDO(s)
34	1	VH	National Trans Comm ITS Protocol (NTCIP)	AASHTO	ITE/SAE/NEMA
1	2	VH	Location Reference Specification	SAE	AASHTO/ITE
15	3	VH	MS for Controlling Field Equipment (NTCIP)	AASHTO	ITE/SAE/NEMA
37	4	VH	Traffic Controller 2070 (NTCIP)	ITE	AASHTO
4	5	VH	Traffic Management DD	ITE	AASHTO
20	6	VH	MS for Incident Management	IEEE	AASHTO/ITE
33	7	VH	DSRC Protocol	ASTM	AASHTO/IEEE/SAE
5	8	VH	Traveler Information DD & MS	SAE	AASHTO/IEEE
3	9	VH	Umbrella Standard for ITS DD	IEEE	ITE/SAE
10	10	VH	MS for ETC and CVO DSRC	IEEE	SAE/AASHTO
16	11	H	MS for TMC Intercommunication (NTCIP)	AASHTO	ITE/NEMA
2	12	H	Spatial Data Interchange		IEEE/SAE*
18	13	H	MS for Automatic Vehicle Indentification	IEEE	ASTM/SAE
8	14	VH	MS Template	IEEE	ITE/SAE
13	15	H	MS for Mayday Alert	SAE	AASHTO
27	16	H	MS for CV Safety & Credentials Information	DISA X12	IEEE/SAE
14	17	H	MS for Traffic Signal Priority (NTCIP)		ITE/SAE
44	18	H	Communications survey of stds. & practices	IEEE	SAE
6	19	H	CV Operations DD	DISA X12	IEEE/SAE
28	20	H	MS for CV Credentials	DISA X12	SAE
9	21	H	ITS Map Datum	SAE	
42	22	H	ASN.1 [ISO 8824] Application to ITS	SAE	IEEE
11	23	H	MS for Vehicle Nav (1) Outbound	SAE	ITE

Standards Needs Under SDO Consideration; DD = Data Dictionary, MS = Message Set   08-09-96

Survey	Survey Priority	Board Priority	Standards Needs	Lead SDO	Supporting SDO(s)
35	24	H	High Speed Data Subcarrier Protocol	NRSC	SAE
17	25	H	MS for External TMC Communication	ITE/AASHTO	
19	26	H	MS for Automatic Vehicle Location	IEEE	SAE
31	27	H	MS for CV Accident Reporting	?	IEEE/SAE
21	28	H	MS for HazMat Management	?	IEEE/SAE
36	29	H	Radio Broadcast Data System Protocol (low speed)	NRSC	SAE
7	30	H	Public Transit Data Dictionary & MS	ITE	SAE
24	31	H	MS for Public Transit Emergency Services	SAE	SAE*
32	32	H	MS for CV International Border Crossing	DISA X12	SAE
22	33	H	MS for Public Transit Electronic Fare Coll	IEEE	SAE
39	34	H	In-Vehicle Databus Interface	SAE	
23	35	H	MS for Public Transit Operations Mgmt.	ITE	IEEE/SAE
25	36	H	MS for Public Transit Information Services	ITE	IEEE/SAE
30	37	M	MS for CV Compliance Review Reporting	?	SAE
12	38	M	MS for Vehicle Navigation (2) Interact. RG	SAE	ASTM
43	39	M	Independent Testing Institute	SAE	ASTM
40	40	M	Vehicle Nav/Route Guidance Guidelines	SAE	
29	41	M	MS for CV Citations	?	SAE
38	42	M	Map Database Truth in Labeling	SAE	
26	43	M	MS for Parking Management	IEEE	SAE/ITE/AASHTO
41	44	M	Intelligent Cruise Control Guidelines	SAE	

* If not lead: VH = Very High; H = High; M = Moderate

13(b)

The survey also requested that high priority ITS and related standards needs/activities not on the list be identified. This resulted in an additional 60 items being added, for a total of 104. Some of these are already underway by SAE, IEEE and other SDO's in related areas, and many ISO/TC 204 work items are included.

ITS Standards Catalog

An ITS Catalog of Standards and Protocols is being developed jointly by FHWA (through JPL) and ITS America to serve the following two primary functions:

- Serve as a guide for coordinating ITS standards developoment by standards developing organizations in the Unitied States (all SDO's, not just the five which are Federally-funded)

- Povide an easily accessible summary of the status of the development of ITS standards and protocols through the various stages of development.

The Catalog, which will evolve over time, will contain both technology standards and interface protocols, including existing standards and protocols, devloping (draft) standards, and newly proposed standards and protocols being developed over the next five years.

Futher information can be found ITS America web site, "http:/www.itsa.org".

4. Status of Canadian Participation

Survey

A survey of those who expressed an interest in participating either as an expert or as an interested participant at the CAC meeting in Toronto on August 16, 1993 was carried out in April and May, 1996. A copy of the questionnaire and a list of the addressees are in Appendix A.

The first part of the questionnaire (questions 1 to 7) sought to ascertain the current status of Canadian participation in ISO/TC 204. The remaining questions related to the future - an assessment of the relative importance of this activity to Canada and what should be done to ensure continuing, effective Canadian participation.

The results of the survey are tabulated on the three tables in Appendix B. They are summarized by the bold-faced numbers on the copy of the survey questionnaire on the next page. As noted in Appendix B, replies were received from 29 of the 42 addressees, often with considerable delay.

Survey Results

Present Status

Referring to results summary, the following observations and comments can be made about Canadian participation to date:

- It is predominantly the consultant and the public service sectors who expressed an interest in ITS standards. There was little participation from the manufacturing and service sectors.

- Of the 29 respondents, only 9 said they were active in ISO/TC 204 activities.

- For those who were not active, lack of contact, time and travel funds were the main factors which discourgaged participation. Almost a half were not contacted at all, including three who were listed by the SCC as experts.

- Of those who said they were active, 9 were experts and 2 were observers (interested participants). Many who were listed as wishing to be interested paraticipants received no communication at all.

- Fax, mail and e-mail were the main means of communication. Few attending Working Group meetings.

- Participation by those who were active was seriously limited by lack of employer support, travel funds and available after-work time. There were also complaints about the overwhelming amount ot documentation which had to be reviewed. Financial remuneration did not appear to be an important factor, except perhaps for the self-employed.

Referring specifically to Canadian representation in the following table on the various Working Groups shows a comparison between the experts on the present SCC Roster and those who identifed themselves as such in the survey.

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Summary of Results
Survey of Canadian Participation in ISO/TC 204

1. Name: _____   Phone : _____

2. Employment sector: **1** ☐ Manufacturing   **2** ☐ Services   **12** ☐ Public Service
    0 ☐ University   **2** ☐ Association   **13** ☐ Consultant **0** ☐ Retired

3. Have you been active in any of the ISO/TC 204 Working Groups?   **20** ☐ No   **9** ☐ Yes

4. If "No", what were the factors which limited or discouraged your participation?

    5 ☐ Lack of time   **11** ☐ Lack of travel funds   **14** ☐ Was never contacted   **2** ☐ Lack of employer support
    3 ☐ No longer interested   **1** ☐ Other - "Realization that Canada was not serioulsy in the ITS game"

5. If "Yes", in which Working Group and in what capacity did you participate?   WG"s _____

    9 ☐ Expert   **2** ☐ Interested Participant (Observer)   **0** ☐ Other

6. How did you communicate with your Working Group?

    8 ☐ Mail   **11** ☐ Fax   **1** ☐ Teleconferences
    4 ☐ Phone   **5** ☐ E-Mail   **14** ☐ Meetings (Including CAC Meetings)

7. Highest ranked factors (1's) affecting ability to participate:

    7 Support of employer   **6** Available travel funding
    1 Available time during working hours   **4** Available time after working hours
    0 Financial remuneration   **1** Administrative/logistic support

8. Rank the importance of involvement in ISO/TC 204 standards development to your Company/Organization and, in your opinion, to Canada in general?

    Company/Organization: **5** ☐ High   **12** ☐ Medium   **9** ☐ Low
    Canada: **15** ☐ High   **8** ☐ Medium   **3** ☐ Low

9. What type of continuing Canadian participation do you believe is necessary in your WG(s)?

    0 ☐ None   **7** ☐ Monitor   **13** ☐ Active participation by Canadian experts

10. If a pooled fund was available to support Canadian ISO/TC 204 activities, how would you rate the importance of the following :

    (a) Administrative and logistic support   **5** ☐ High   **15** ☐ Medium   **3** ☐ Low
    (b) Reimbursement of travel expenses   **22** ☐ High   **0** ☐ Medium   **3** ☐ Low
    (c) Internet access (e-mail, home page, etc.)   **11** ☐ High   **10** ☐ Medium   **3** ☐ Low
    (d) Financial remuneration (consulting)   **5** ☐ High   **7** ☐ Medium   **11** ☐ Low

11. Would your Company/Organization be interested in contributing to such a fund?

    4 ☐ Yes   **3** ☐ Maybe   **18** ☐ No.

12. Comments: See Survey Results Table in Appendix B

Canadian Experts Participating in ISO/TC 204

WG	TOPIC	SCC Roster	as of	June 28/96	From	Survey
		Member #1	Member #2	Member #3	Member #1	Member #2
1	Architecture	Heti	Stewart	-	Stewart	-
2	Quality and Reliability Req'mts	-	-	-	-	-
3	TICS Database Technology	Lapointe	Plunkett	-	Plunkett	-
5	Fee and Toll Collection	Abrahamsohn	-	-	-	-
6	General Fleet Management	Krakiwsky	-	-	Krakiwsky	-
7	Commercial/Freight Mgt	Gravelle	Tardif	Lefebvre	?	-
8	Public Transport/Emergency	Hemily	-	-	-	-
9	Integ Transp Info Mgt & Control	Sultana	Kelman	-	Sultana	-
10	Traveler Information Systems	Wang	-	-	Wang	-
11	Route Guid and Nav Systems	Plunkett	-	-	-	-
12	Prkg Mgt/Off-Road Commercial	-	-	-	-	-
13	Human Factors and MMI	Smiley	Truchon	-	Smiley	-
14	Veh Control Syst with Ext. I/F	-	-	-	-	-
15	Dedicated Short Range Comm	Sabounghi	Tierney	Tritter	Sabounghi	Tritter
16	Wide Area Communicatons	Rolston	Williams	-	Lester	-

There clearly has been considerable attrition and the SCC list has not been kept up to date. Several experts have dropped out or formally resigned, for a variety of reasons - no longer involved in ITS, found it too demanding, did not have support of their employer, lack of interest, etc. Most of those experts who are active are not really participating fully in working group activities (attending meetings, reviewing material, etc.), mainly because of lack of time and travel funding.

These rusults indicate that Canada is falling short of fulfilling its responsibilities as a "Participating" member of ISO/TC 204.

<u>Future Participation</u>

Referring again to the results summary on the previous page, the following observations can be made by a review of the response to questions 8 through 11:

- The majority of respondents rated the importance of involvement in ISO/TC 204 as medium to low for their company or organization, and high to medium for Canada in general.

- ISO/TC 204 was thought to be sufficiently important to warrant active participation by Canadian experts in their working group by 65% of respondents. The remainder thought monitoring of their working group activities would be sufficient.

- Travel funding rated the most important support required for effective Canadian participation in ISO/TC 204. Internet access and administative support were also considered important.

17

- Over 70% of respondents said they or their organization would not contribute to a common fund to support Canadian ISO/TC 204 activities.

Refer to the last Table in Appendix B for respondents comments (Question 12).

Additional Comments

Canadian Advisory Committee (CAC)

Established as an arm of ITS Canada to provide a link with the Standards Council of Canada on ISO/TC 204, this committee has held two meetings since it was founded in August, 1993.

CAC Mailing List

The CAC mailing list with the SCC has obviouly not been kept up to date.

Business Plan

No action has been taken to implement the Business Plan described in Section 1, although some arrangements were made to fund travel for the Head of Delegation, Jackson Wang.

SCC Publications

It appears that many CAC members did not receive copies of the SCC publications on international standards, such as the "Guide for Canadian Delegates", the "*Where to* Guide to Standards" and "International Standardization". These are useful to familiarize members with the international standards development process and the duties and responsibilities of the various participants.

Milton Harmelink

Milt Harmelink served as the Chair of the CAC until his retirement from MTO. He has recently resigned and requested that all communications previously directed to him as CAC Chair be directed to MTO in care of Colin Rayman.

Jackson Wang

Jackson Wang of MTO has played a very active role since attending the founding meeting of ISO/TC 204 at Georgetown University in April, 1993, both as Canadian Head of Delegation and as an expert in WG 10.

As Head of Delegation, he attended five of the seven plenary meetings which have been held since that time. His time was made available by MTO and funding for his travel was shared by Transport Canada and MTO. Kelly Gravelle served as Acting Head of Delegation for the meeting held in Tokyo in November of 1993.

Jackson attended five WG 10 meetings, some of which were held in conjunction with the ISO Plenary meetings. His participation was supported by ENTERPRISE.

Both MTO and ENTERPRISE are no longer supporting these efforts and Jackson has officially resigned as Head of Delegation. He continues to serve as an expert in WG 10.

The most recent ISO Plenary meeting was held in June, 1996. Barry Meyers of TDC, who was in Europe on business at the time, represesented Canada on the closing day of the Plenary in London.

The next ISO Plenary meeting will be held in Orlando the week before the ITS World Congress in October.

<u>Kelly Gravelle</u>

Canada agreed to accept Convenership of WG 7 (Commercial/Fleet Management) after it was offered at the Georgetown meeting in 1993. Kelly Gravelle of MARK IV was appointed Convener at the founding meeting of the Canadian Advisory Committee in August of 1993. Due to pressure of work and changing company priorities, he has been unable to fullful his responsibilities as Convener of WG 7 and Canada has been asked by the ISO/TC 204 Secretariat to designate a replacement at the earliest opportunity.

5. Conclusions

The conclusions which follow are based on an assessment of the results of the Survey outlined in Section 4 and on the numerous conversations the writer has had with various individuals who are involved with ISO/TC 204 in one way or another in Canada.

- Canadian involvement has been largely ineffective and the rationale for participating in ISO/TC 204 must be re-examined. At present, Canada is not meeting its obligations as a "P" country in ISO/TC 204.

- There seems to be a strong feeling that it is a good thing for Canada to be involved in ISO/TC 204. However, when it comes to individual organizations, the rationale for participation is not nearly as strong. It is at this level where commitments have to be made.

- Working group experts are not contributing effectively, mostly because they lack the time. Little has been done to help them sort out the immense amount of material they receive to enable them to better utilize what little time they do have available. Few can attend working group meetings because of lack of travel funds.

- With one or two exceptions, the manufacturing and service sectors in Canada do not appear to consider ITS standards of much importance to their business, which is reflected in their apparent lack of interest in ITS in general. Canada is believed by some to be a small player in ITS and should limit its participation in ITS standards development accordingly.

- Only those Canadian organizations which have a direct stake in ITS (commercial, regulatory, or otherwise) will make the investment to support active participation in ITS standards development.

- It will be very difficult to find the resources to implement the proposed Business Plan to support CAC activities. The fact that it has not progressed beyond the proposal stage in over two years is a clear indication of the lack of support. Public sector resources are severely limited and the private sector is very reluctant to contribute to a fund to cover such overhead functions.

- To continue as a P-member country, Canada must be represented by a delegate at the ISO Plenary meetings. It will be difficult to find the resources to support a Canadian delegate.

- U.S. domestic ITS standards development may be of more immediate interest to many Canadian stakeholders than ISO standards, at least in the near term.

In view of the forgoing, it is difficult to give an optimistic prognosis for successful participation of Canada in ISO/TC 204. There are three options:

1. Continue to participate as a P-member country, with an obligation to vote on all questions formally submitted for voting and on draft international standards and, whenever possible, to attend meetings.

2. Switch to observer status (O-member). Canada would still have the right to receive committee documents, submit comments, attend meetings and vote on draft International Standards, according to its own best interests.

3. Choose neither P-member nor O-member status, in which case Canada would cease to have the rights and obligations indicated above except that it would still have the right to vote on draft International Standards, a right of all national bodies irrespective of their status.

Option 1 would require formal withdrawal of Canadian convenorship of Working Group 7 on Commercial/Freight Management. This activity has been largely dormant anyway and the ISO/TC 204 Secretariat, as mentioned earlier, has requested that Canada replace the convenor, or release the convenorship to another country. If an acceptable (self-sustaining) replacement cannot be found in the very near future, Canada should withdraw.

Even if an acceptable convenor can be found for WG 7, Option 1 still requires that a sufficient number of experts can be found who are able and willing to participate on a self-sustaining basis, including the Head of Delegation. Even though only those WG's which are of particular interest to the various stakeholders need to be covered, based on the results of the Survey, this will not be an easy task. If a sufficient number of experts cannot be found (an indication of lack of stakeholder interest), then Options 2 or 3 should be considered.

It may be that the prospect of Canada having to withdraw as a P-member will give sufficient impetus for the necessary resources and personnel to be found to support continuing participation. This will depend very much on whether or not ITS Canada remains viable and can provide the necessary leadership to ensure that this happens. It should be recalled that one of the reasons for setting up ITS Canada in the first place was to address the issue of ITS standards.

Combined with the commitment to hold the ITS World Congress in Toronto in 1999, Canada's full involvement in ISO/TC 204 would provide evidence of the need and importance of having a strong, independent organization like ITS Canada in this Country, but active participation by the private sector is absolutely necessary for this to happen.

6. Recommendations

It is assumed that ITS Canada continues to be viable and is in a position to take action, at its discretion, on the recommendations in this Section.

Near Term Actions Based on the Status Quo

1. Appoint a new Convener for WG 7. The replacement must be self-sustaining (committed full support, including both time and travel expenses). This is urgent.

2. Appoint a new Head of Delegation. The replacement must be also be self-sustaining. This must be done before the next TC 204 Plenary in Orlando, Florida.

3. Confirm membership in the CAC and convene a meeting (or canvas by e-mail) to elect a new Chair, and urgently address the outstanding TC 204 documents sent out by the SCC for balloting.

4. Canvas the list of experts and retain only those who are self-sustaining and who can fulfil their responsibilities as designated working group experts (reviewing proposals, voting, attending WG meetings, etc.). None of the listed experts are able to meet these requirements at present. Those interested only in maintaining a watching brief should be listed as observers.

Failure to fill any of these appointments (presumably because of lack of stakeholder interest) would seriously jeopardize Canada's status as a P-member country and consideration would have to be given to becoming an O-member, or to choosing to be neither. In any case, Canada has the right to vote on international draft standards.

Longer Term Actions

Assuming that the major hurdles above have been cleared and that Canada still maintains at least an O-member status, there are a number of actions which could be taken which would facilitate and support Canadian participation in ITS standards development.

5. Establish an ITS Standards Committee within ITS Canada with the mandate to cover both ISO and non-ISO ITS standards. The CAC would be a subcommittee of this committee devoted to ISO/TC 204 activities.

   Arrange for the chair of the ITS Canada Standards Committee to be on the ITS America Standards & Protocol (S & P) Committee and for ITS Canada to be represented on the ITS America Council of Standards Organizations (CSO). In this way, ITS Canada will be made aware of the progress of both domestic and ISO ITS standards development in the U.S.

   There should be no difficulty arranging this with ITS America. Teleconferencing facilities are available for these meetings so that it would not be necessary to attend them all in person. Arrangements could be made with ITS America to have all of the

meeting documentation sent out prior to the meetings. Since it would be desirable to attend some of these meeitngs, resources will have to be found to support travel to ITS America Offices in Washington, DC, where these meeting are usually held.

6. Explore alternate approaches for funding a National Secretary to support ITS Canada ITS standards activities, both ISO and non-ISO. Vigorously explore the possibility of forming a partnership between the public and private sectors to provide such funding. ITS Canada, if it is to survive as an independent organization, will probably need the services of a professional manager (executive director), at least part-time. It would make sense for one person to handle both jobs.

7. Establish an e-mail network on the Internet using the Transport Canada server, and using Transport Canada as the majordomo for ITS Canada mailing lists. Dial-up access is not necessary since most people today have access to the Internet through their own ISP. Strongly encourage ITS Canada members to use the Internet.

8. Establish a Web site for the ITS Canada Standards Committee which would be linked to the ITS Canada Web site (assumed to already exist). Explore the possibility providing the SCC and the ISO cover pages from each standard document available on the WWW, and the full documents as down-loadable files. This would facilitate access, reduce the amount of paper circulated and perhaps also reduce the need to travel.

9. Examine the possibility of utilizing the Canadian divisions of the SDO's to participate in the US ITS standards development program.

   As outlined in Section 3, the USDOT has awarded contracts to five SDO's (IEEE, ITE, SAE, AASHTO and ASTM) to facilitate the development of ITS standards in the United States. To ensure North American interoperability, it is in the best interests of Canada (Mexico also, to a lesser degree) to monitor and contribute to the development of these standards. IEEE, ITE and SAE all have active Canadian memberships from which experts could be drawn.

   This would also help increase the involvement of these organizations in ITS Canada and in ITS in general. The counterparts to AASHTO (TAC?) and ASTM should be identified to see if similar arrangements can be made with sister organizations in Canada. Participating Canadian experts may well be eligible for USDOT funding to cover travel and other expenses.

10. Explore the idea, suggested recently to me by Roy Counrtney of ITS America, of holding a North American ITS standards summit in the near future. Such a meeting between experts from the US, Canada and Mexico would help ensure that ITS interoperability extends throughout most of North America.

APPENDIX
A

FAX COVER PAGE

May 12, 1996 · Page 1 of @N

To: @F @L WG(s): @C Fax: @X

From: **Ryerson Case**

E. R. Case & Associates
71 Allangrove Crescent
Agincourt, ON M1W 1S4

Tel: 416-497-5044
Fax: 416-497-3805
E-mail: rcase @@ inforamp.net

Survey of Canadian Participation in ISO/TC 204

The Transportation Development Center of Transport Canada has commissioned a study onbehalf of ITS Canada to determine the status of Canadian involvement in ISO TC-204 and to recommend a course of action to ensure that Canadian interests are adequately protected during the development of international ITS standards.

Your name was submitted to the ISO/TC-204 Secretariat in June of 1993 in accordance with your expressed interest (I) in ISO/TC 204 activities, and/or offer to serve as a possible expert (E), in the Working Group(s) indicated above beside your name.

.We are interested in knowing the degree of your participation so far and your opinion about how best to ensure adequate Canadian participation in ISO TC 204 activities in the future. Please take a few minutes to fill in the attached questionnaire and fax it back to me at 416-497-3805.

Any comments or suggestions would be much appreciated.

WE NEED YOUR INPUT

PLEASE TAKE A FEW MINUTES TO COMPLETE THE ATTACHED FORM AND FAX
BACK TO ME AT 416-497-3805
May 23, 1996

Survey of Canadian Participation in ISO/TC 204

1. Name: _____   Phone : _____

2. Employment sector: ☐ Manufacturing   ☐ Services   ☐ Public Service
                         ☐ University   ☐ Association   ☐ Consultant   ☐ Retired

3. Have you been active in any of the ISO/TC 204 Working Groups?   ☐ No   ☐ Yes

4. If "No", what were the factors which limited or discouraged your participation?

    ☐ Lack of time   ☐ Lack of travel funds   ☐ Was never contacted   ☐ Lack of employer support
    ☐ No longer interested   ☐ Other _____

5. If "Yes", in which Working Group and in what capacity did you participate?   WG"s _____

    ☐ Expert   ☐ Interested Participant (Observer)   ☐ Other _____

6. How did you communicate with your Working Group?

    ☐ Mail   ☐ Fax   ☐ Teleconferences (number ____)
    ☐ Phone   ☐ E-Mail   ☐ Meetings (number ____)

7. Rank in order of importance those factors which allowed you to participate (1 to 5, 1 highest):

    __ Support of employer   __ Available travel funding
    __ Available time during working hours   __ Available time after working hours
    __ Financial remuneration   __ Administrative/logistic support
    __ Other _____

8. Rank the importance of involvement in ISO/TC 204 standards development to your Company/Organization
    and, in your opinion, to Canada in general?

    Company/Organization: ☐ High   ☐ Medium   ☐ Low
              Canada: ☐ High   ☐ Medium   ☐ Low

9. What type of continuing Canadian participation do you believe is necessary in your WG(s)?

    WG ____: ☐ None   ☐ Monitor   ☐ Active participation by Canadian experts
    WG ____: ☐ None   ☐ Monitor   ☐ Active participation by Canadian experts

10. If a pooled fund was available to support Canadian ISO/TC 204 activities, how would you rate the
    importance of the following :

    (a) Administrative and logistic support   ☐ High   ☐ Medium   ☐ Low
    (b) Reimbursement of travel expenses   ☐ High   ☐ Medium   ☐ Low
    (c) Internet access (e-mail, home page, etc.) ☐ High   ☐ Medium   ☐ Low
    (d) Financial remuneration (consulting)   ☐ High   ☐ Medium   ☐ Low

11. Would your Company/Organization be interested in contributing to such a fund?   ☐ Yes   ☐ No.

12. Comments:

Canadian ISO/TC 204 Survey Distribution List

No.	Reply	Last Name	First Name	Fax	Telephone	WG
1.	✓	Bonsall	John	416 823 8503	416 823 8500	E8
2.	✓	Brokelsby	Keith	403 489 3697	403 486 0511	E4
3.	✓	Case	Ryerson.	416 497 5044	416 497 5044	I1, I10, E16
4.	✓	Cohen	Steven	905 670 1344	905 670 1225	I13
5.	✓	Cripwell	Paul	613 237 7347	613 237 2220	I10
6.		D'Aoust-Martin	C.	416 974 9661	416 581 8733	I3
7.	✓	Fung	John	416 890 6117	416 890 0798	I4
8.	✓	Ghanthan	Sri	613 995 4564	613 238 3222	SCC
9.		Gravelle	Kelly	905 624 4572	905 624 3025	C7, I4, I15
10.	✓	Harmelink	M.D.	905 274 6146	905 274 6257	Chair
11.	✓	Hemily	Brendon	416 365 1295	416 365 9800	I8, I5
12.		Heti	Gabe	416 235 4936	416 235 3454	E1, I10, I16
13.	✓	Johnson	Bill	613 993 5146	613 993 5981	TC
14.	✓	Kelman	Les	416 392 4426	416-392-8305	E9
15.		Korpal	Peter	416 235 4097	416 235 3535	I9, I10
16.	✓	Krakiwsky	Edward	403 284 1980	403 220 7878	E6, I11
17.		Lapointe	Claude	418 644 0266	418 651 0469	E15, I16,
18.		Larouche	Regis	418 528 1008	418 528 3207	I5
19.	✓	Lefebvre	Luc	514 873 7389	514 873 8125	E7, IG
20.	✓	Lester	David	416 971 8354	416 353 8459	E16
21.	✓	Lorange	Claude	514 841 3222	514 841 3246	I7
22.	✓	Loukes	David	506 450 4838	506 451 0055	E3
23.	✓	Parviainen	Jouko	416 844 9945	416 849 5806	IG
24.		Pekilis	Barry	416 235 4936	416 235 3455	I8, I5
25.	✓	Plunkett	Gordon	613 952 0916	613 992 0389	E3
26.	✓	Rayman	Colin	416 235 4904	416 235 3785	I9
27.		Reynolds	Peter	416 890 4590	416 890 2794	I8, I5
28.	✓	Rolston	Gary	613 990 3158	613 990 4696	E16
29.	✓	Sabounghi	Lewis	514 283 7158	514 283 0029	E15
30.	✓	Smiley	Alison	416 596 6946	416 596 1252	E13, I11,
31.	✓	Stewart	Scott	416 596 0644	416 596 1930	E1
32.		Strasberg	L.	416 235 4936	416 235 3452	IG
33.	✓	Suen	Ling	514 283 7158	514 283 0002	I13
34.	✓	Sultana	Sandra	514 864 2821	514 873 5245	E9
35.	✓	Tardif	Louis Paul	613 563 2701	613 932 0377	E7, I5
36.		Tierney	Robert	416 624 4572	416 624 3025	E15
37.	✓	Tritter	Bowen	416 441 0226	416 391 7512	E15, I16
38.	✓	Truchon	Maurice	418 644 7249	418 643 3735	E13
39.	✓	Tsai	Joe	416 235 4936	416 235 3453	E4
40.	✓	Wang	Jackson	416 235 4097	416 235 5021	E10, I3, I16
41.	✓	Williams	Jocelyn	416 971 9426	416 353 8840	I16
	30✓					

Those Who Could Not Be Contacted

No.	Last Name	First Name	Fax	Telephone	WG
1.	Abrahamsohn	George	416-235-4936	416-235-	E3
2.	Doucet	Paul-Phillipe	418 528 1008	418 528 3335	I16
3.	Gadula	Christopher	416 745 6938	416 745 6044	I4
4.	Pare	Yolande	418 643 1893	418 528 3420	I7
5.	Rousseau	Jean-Marc	514 383 0404	514 383 4971	E11
6.	Savignac	Pierre	514 483 1231	514 483 1231	I13

APPENDIX
B

Results of Survey of Canadian Participation in ISO/TC 204

Survey Question #	Reply rec'd	WG* Expert	1. Name	Man	Serv	Pub Serv	Univ	Assoc	Consult	Ret	No	Yes	No time	No funds	No contact	No empl support	No interest	Other	WG	Expert	Obs	Other	Mail	Phone	Fax	E-mail	Teleconf	No of Mtgs
1		5	Abrahamsohn																									
2	1		Bonsall						1		1				1		1											
3	1		Brokelsby	1							1			1	1		1											
4	1		Case						1		1				1													
5	1		Cripwell						1			1							10		1				1	1		
6			D'Aoust-Martin																									
7	1		Fung						1		1				1													2
8	1		Ghanthan					1			1																	
9		7	Gravelle																									
10	1		Harmelink						1		1																	
11	1	8	Hemily					1			1				1													
12		1	Heti																									
13	1		Johnson			1					1																	
14	1	9	Kelman			1						1				1			9	1					1			
15			Korpal																									
16	1	6	Krakiwsky						1		1			1	1	1			6	1					1			
17		3	Lapointe																									
18			Larouche																									
19	1		Lefebvre			1					1				1													
20	1		Lester		1						1				1													
21	1		Lorange						1		1				1										1			
22	1		Loukes						1		1			1	1													
23	1		Parviainen						1			1	1					1			1		1		1			2
24			Pekilis																									
25	1	3	Plunkett			1						1	1	1									1	1	1			
26	1		Rayman			1					1				1													
27			Reynolds																									
28		16	Rolston			1																						
29	1	15	Sabounghi			1						1			1				15	1			1	1	1	1		1
30	1	13	Smiley						1			1			1				13	1			1	1	1	1		2
31	1	1	Stewart						1			1			1				1	1						1		
32			Strasberg																									
33	1		Suen			1					1				1													1
34	1	9	Sultana			1					1				1				9	1			1		1			
35	1	7	Tardif						1		1		1	1	1													
36		15	Tierney																									
37	1	15	Tritter						1			1	1	1					15	1			1					2
38	1	13	Truchon			1					1		1	1			1		13	1								
39	1		Tsai			1					1				1								1		1			
40	1		Vetter (Cohen)		1						1				1													
41	1	10	Wang			1						1							10	1			1	1	1	1	1	4
42	-	16	Williams																									
Total	**29**	**19***	**5**	**1**	**2**	**12**	**0**	**2**	**13**	**0**	**20**	**9**	**5**	**11**	**14**	**2**	**3**	**1**		**9**	**2**	**0**	**8**	**4**	**11**	**5**	**1**	**14**

*On SCC list of experts as of June 28, 1996.

Survey Question			1. Name	7. Factors Affecting Participation							8. Importance of WG/TC 204 to:						9. Type of Participation?			
#	Reply rec'd	WG Expert	Name	Employer supptort	Travel funds	Available worktime	Available hometime	Remuneration	Adm/Log support	Other	Company/Organization H	M	L	Canada H	M	L	WG#	None	Monitor	Active
1		5	Abrahamsohn																	
2	1		Bonsall																	
3	1		Brokelsby									1		1			4			1
4	1		Case										1	1			16		1	
5	1		Cripwell	3		2	1					1		1			10			1
6			D'Aoust-Martin																	
7	1		Fung	3	1			2	4			1		1						
8	1		Ghanthan											1						
9		7	Gravelle																	
10	1		Harmelink										1	1						
11	1	8	Hemily											1						
12		1	Heti																	
13	1		Johnson									1			1					
14	1	9	Kelman			1							1			1	9		1	
15			Korpal																	
16	1	6	Krakiwsky		1			1			1			1			6			1
17		3	Lapointe																	
18			Larouche																	
19	1		Lefebvre									1				1				
20	1		Lester								1			1			16			1
21	1		Lorange	1	2	1	2	5					1	1						
22	1		Loukes									1		1			3			1
23	1		Parviainen	1					2				1			1			1	
24			Pekilis																	
25	1	3	Plunkett	1	4	4	5	5	3			1			1		3, 11		1	
26	1		Rayman									1		1			9			1
27			Reynolds																	
28		16	Rolston																	
29	1	15	Sabounghi	1	1						1			1			15			1
30	1	13	Smiley	1	1			5	5			1			1		13			1
31	1	1	Stewart	1	5	5	1		1		1			1			1			1
32			Strasberg																	
33	1		Suen	4	5	3	1		2			1		1			13		1	
34	1	9	Sultana	3		2						1		1			9		1	
35	1	7	Tardif										1	1					1	
36		15	Tierney																	
37	1	15	Tritter	1	2	4	3						1	1			15			1
38	1	13	Truchon									1		1			13			1
39	1		Tsai	2	1	3		5	4			1		1			12			1
40	1		Vetter (Cohen)																	
41	1	10	Wang	2	1			4	3		1			1			10, 15			1
42	-	16	Williams																	
Total	29	19		24	24	24	14	27	24	0	5	12	9	15	8	3		0	7	13

*On SCC list of experts as of June 28, 1998.

Survey Question			1. Name	10. Importance of Support Required for Canadian Participation												11. Contribute to Pool*			12. Comments
	Reply	WG		Adm support			Travel expenses			Internet			Remuneration						
#	rec'd	Expert	Name	H	M	L	H	M	L	H	M	L	H	M	L	Yes	No	Maybe	
1		5	Abrahamsohn																Withdrew
2	1		Bonsall																Not interested - withdrew
3	1		Brokelsby		1		1				1			1			1		Moved to New Zealand. Believes continued Cdn participation is important
4	1		Case		1		1			1				1			1		It seems that coordination and follow-up were sadly lacking.
5	1		Cripwell		1		1				1			1			1		
6			D'Aoust-Martin																
7	1		Fung			1	1				1			1			1		
8	1		Ghanthan																SCC wants to facilitate Canadian participation but cannot assist financially
9		7	Gravelle																
10	1		Harmelink	1			1			1			1				1		Priv sector & Ind Cda interest is best indicator of level of Cdn involvement.
11	1	8	Hemily																Might have participated as a corresponding member I had been contacted.
12		1	Heti																Withdrew
13	1		Johnson		1		1			1					1	1			If there was matching funds from industry and senior management agreed
14	1	9	Kelman			1			1	1					1		1		Very demanding; after work only. Responded twice. Resigned Jan/95.
15			Korpal																
16	1	6	Krakiwsky			1	1			1			1				1		This is one area where government must take financial leadership.
17		3	Lapointe																
18			Larouche																
19	1		Lefebvre		1		1			1					1		1		
20	1		Lester		1		1				1				1			1	
21	1		Lorange		1		1				1				1		1		
22	1		Loukes		1		1			1				1			1		Too bad there's no mechanism for the right people to participate
23	1		Parviainen	1			1				1		1				1		Participation will have minimal impact without a funded Nat'l ITS Prgm.
24			Pekilis																See Colin Rayman's response
25	1	3	Plunkett		1		1			1				1				1	Canada is a small player in this activity, but should be aware of developments
26	1		Rayman		1		1			1					1			1	Those responsible for Canada's participation failed to discharge their duties.
27			Reynolds																
28		16	Rolston																Retiring this September
29	1	15	Sabounghi	1			1									1			We need Canadian representation at the ISO/TC 204 Plenary meetings
30	1	13	Smiley			1	1			1			1				1		Too much paper sent to experts - it's overwhelmelming, filtering is needed
31	1	1	Stewart		1		1					1	1				1		Already supporting employees, wouldn't contribute to fund used by others
32			Strasberg																See Colin Rayman's response
33	1		Suen		1		1				1				1	1			Mostly in-kind services and staff support but Senior Mgt approval required
34	1	9	Sultana	1			1			1					1		1		Monitored WG 9; prefer to be more active/attend meetings but had no funding
35	1	7	Tardif			1			1			1			1		1		Canada is a small market and player - a monitoring brief is enough.
36		15	Tierney																
37	1	15	Tritter		1		1					1			1		1		Looking for a meaningful way to contribute to ITS standards development
38	1	13	Truchon	1					1	1							1		Received documentation but not active. No longer concerned with ITS
39	1		Tsai		1		1				1				1		1		
40	1		Vetter (Cohen)																Replaced Steve Cohen
41	1	10	Wang		1		1			1				1		1			Game over if no pooled funding
42	-	16	Williams																In marketing - Dave Lester is Bell representative
Total	29	19		5	15	5	22	0	3	11	10	3	5	7	11	4	18	3	

*On SCC list of experts as of June 28, 1996.

APPENDIX
C

ITS America Standards & Protocols Committee Meeting
Washington DC , August 13, 1996

The following notes and comments are based on the author's observations during the meeting and should be read in conjunction with the agenda and copies of the presentation overheads provided in Handout 1. Some of the material presented in the meeting, which up-dated various aspects of the US ITS standards development program, has been incorporated into the main body of the author's report "Survey and Assessment of Canadian Involvement in ISO/TC 204", of which this is an appendix.

Actions from Previous Meeting (June 26/96)

In the previous meeting of the Committee (June 26), ITS America proposed that links be created with the SDO web sites. These are now available (see Handout 1). The urgent need to develop an umbrella data dictionary and message set template was recognized and IEEE has since agreed to undertake this development, which is on a very short fuse (end of year). Their proposal has been submitted to FHWA..

ITSA Board of Directors & Coordinating Council Meetings

"Standards, Standards, Standards" were the catch words for these meetings, underscoring the perceived importance of standards to the future of ITS. A Board resolution confirmed that the national architecture should serve as the foundation of ITS standards development. The need for rapid standards development was emphasized. ITSA was asked to provide a standards needs schedule and, if progress is too slow, to reconsider a previous proposal to have ITSA become an SDO itself.

The Board accepted the prioritized list of standards needs derived from the ITSA Standards Survey (see Handouts 3 & 4) but grouped the priorities into three categories, very high, high and medium (see Handout 1).

ISO/TC 204 US TAG

A change in procedure was proposed in the US TAG (Technical Advisory Group) balloting process to increase its effectiveness. Instead of going to the US TAG (ITS America) it is proposed that all TC 204 documents go first to the US WAG (Working Advisory Group) technical experts and their recommendations then to the US TAG. We have a sort of hybrid arrangement in Canada. Some of the documents go to the experts first but not all. Some ideas on how to streamline the process in Canada are in the Report.

ITS America has taken a number of actions to improve the effectiveness of the process, including establishing an ID code for ISO ballots and a computer tool to process them, devising a numbering system for standards documents and a listing of standards meetings on their web page (see list in Handout 1). A proposal to have ITS America

participate in the balloting process was considered premature by Chairman Weiland since it clearly has policy implications which would have to be dealt with by the Board.

A meeting of the US TAG was held recently (September 10/96) to prepare for the ISO/TC 204 meeting (the US is the host) being held the week before the Third ITS World Congress in Orlando in October. They also reviewed TAG operating procedures and voting mechanisms and examined ways to improve the US voice in ISO/TC 204 activities.

ITS America wears two hats with respect to ITS standards development, a somewhat conflicting role. As the ANSI-designated US TAG, it must represent the best interests of the United States. In most other matters, it reverts to its North American orientation, which is further obscured by the fact that is has worldwide membership.

The question of Canadian input arose here - makes me wonder, since Canada has no established WAG's corresponding to each TC 204 Working Group, if we should simply join their WAG's (not being citizens, we'd have no vote but our expertise would be welcome) and use them as a forum for sorting out our own voting position. By far, the issues involve North America vrs Europe, not the US vrs Canada.

FHWA Standards Program - Mike Schagrin, FHWA

The program could take a hit but it is unlikely, and there is a push to get more funding for the SDO's. Need to show more progress, though.

They are in final negotiations with the four Model Deployment Sites (Seattle, Phoenix, San Antonio and NY TRANSCOM). These represent a great opportunity to showcase standards if they are mature enough to apply, and will be an incentive for standards development generally. However, as Chairman Weiland pointed out, there is a caution here. In Europe, their attempts to develop standards before system implementation proved to be impractical and pointed to the need to have provisional standards available to avoid delays. It was suggested that they could be developed quickly in a small number (say 6) of key areas to try to avoid this problem.

ATIS Interoperability Summit - Rick Schuman, ITSA

An ATIS Interoperability Summit (Workshop) was held in May, 1996 to review results of the National Architecture Study and various operational tests, and develop recommendations for appropriate coordination/standardization activities to promote interoperable deployment of ATIS.

In particular, the objective was to identify the types of information which, if made available by traffic management systems and transit management systems to information service providers, would expedite the deployment of traveler information systems in the near-term. A working draft list of priority elements was approved by the ITSA Board and submitted with a covering letter to Secretary of Transportation. These are intended to be a point of departure for both the model deployment sites and the standards development.

Concern was expressed that there is no pathway between products developed for one-of-a-kind systems and those being developed for national use.

Those who are members of the ITSA ATIS Committee will have received copies of the material resulting from this workshop. An excellent paper by Allan Kirson of Motorolla (currently an ITSA Distinguished Industry Fellow) entitled "Further Reflections on Message Sets" is included.

Reports on Standards Activities

Reports were given by the five DOT-supported SDO's (IEEE, ITE, SAE, AASHTO and ASTM) and the ANSI/X12 Committee (by phone from the APL.). Overheads of their presentations are in Handout 1.

Until very recently, FHWA has been a bit slow approving some of the SDO proposals, apparently due to internal deliberations about managing the program. A number have now been approved, including two from IEEE.

Strategic Directions for the S & P Committee

Chair Rick Weiland indicated that the original subject-oriented, demand-driven subcommittee structure was no longer needed. Most subcommittees have become largely inactive and will be retired. It was time to switch to a focussed task force approach to provide guidance, oversight, policy and coordinations functions (high-level stuff). The details are in Handout 1.

John May, Chair of IEEE SCC 32, asked if this meant S & P was abandoning their role to define standards requirements. Weiland said this role was taken over by the "Alphabet Soup" committees (ATMS, ATIS, CVO, etc.) but that S &P was still responsible to review the SDO's through the Council of Standards Organizations (CSO) which is a special subcommittee of the S & P Committee.

ITS Standards Catalog

JPL (Jet Propulsion Laboratory, and FHWA contractor)) has a an ITS Standards Catalog with over 300 entries which is up-dated monthly. Version 5.0 is available on the ITSA web site. It will be expanded to include the ISO/TC 204 NWI's (New Work Items).

FHWA has set up a database for tracking ITS developing standards, funded on not.

Weilland suggested the two should be combined.

Next Meeting

November 12, at the TMDD (Traffic Management Data Dictionary) meeting in Atlanta.

Handouts from ITS America S & P Committee Meeting

1. Bound Volume containing agenda and copies of all overheads

2. ITS America Standards & Protocols Committee Membership Roster

3. ITS America ITS Standards Survey Results - June 10, 1996

4. ITS America ITS Standards Survey Results Addendum 1 - July 15, 1996

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