



conneXions

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Standards Program Office
Bureau des normes

Regional Seminars Rescheduled

A few days after distribution of the first issue of "Connexions", the announced regional seminars on IT&T standards were "frozen". This decision was part of the government-wide freeze on discretionary expenditures until March 31, 1992. SPO staff and their regional contacts moved quickly to inform registered participants, invited speakers and others supporting these events. It was gratifying to see the expedient, competent way in which these actions were taken, especially by regional staff who were the front line organizers of the seminars.

The net result was one of cooperation, understanding, and if anything, renewed enthusiasm for the seminars by all involved. Several letters were received expressing disappointment and the hope that the seminars could be rescheduled at an early date.

I am pleased to announce that the rescheduled seminars will be held in Toronto on June 3, in Halifax on June 11, in Montreal on June 18, in Calgary on June 23, and in Vancouver on June 24.

This means that the formulation of the proposed action plan for Canada in IT&T standards will be delayed until late Fall '92. On the positive side, this will allow time to consider other important events underway. One such item is the work to develop an umbrella organization for coordination and consensus-building in IT&T standards work in the Americas. We've examined this topic in this issue of "Connexions".

Bill McCrum
Director

Systems Interconnection Research
(Standards Program Office)

DSI Lab Provides the Answers

When the SPO needs indepth understanding of a standards issue, it can turn to its own in-house Systems Interconnection (DSI) laboratory for the answers.

With 10 years of operation under its belt, the state-of-the-art lab has produced a number of world firsts in OSI research. Its demonstrations of achievement at foreign and domestic trade shows have led to a demand for its collaboration in joint projects by prestigious organizations in the United States, Japan, Europe and Canada.

The lab's research leans toward building foundations in areas of strategic importance to Canada. It focuses on demonstrating the technical feasibility of concepts which may lead to technology transfers to enhance the competitiveness of the Canadian IT&T industry.

Specific areas of work include the development of software tools which can

automate the implementation of standards on commercial systems, generate tests for checking their conformance to specifications, and realize computer-assisted protocol specifications in terms of standardized formal notations.

Over the past five years, the DSI lab has been involved in ongoing research for the Multi-Media Networks project sponsored by the Defence Research Establishment Ottawa under the Department of National Defence Recoverable Program. The lab's responsibility is to carry out research to extend Open Systems Interconnection (OSI) standards to include security features to meet military needs.

The lab is also working on an informal collaborative project with HP/IDACOM to develop DSI's WinTTCN software workbench for the PC environment. When completed, WinTTCN could

provide Canadian IT&T test centres with an efficient and economic approach to the production of executable test suites aligned with the appropriate international standards.

The technical expertise acquired by the DSI lab staff has led to a number of requests by the Canadian IT&T industry and universities across the country for technical and strategic assistance. These have included assistance in the development of Canadian criteria for accreditation of Canadian test centres for information technology products and systems, and the negotiation of mutual recognition of OSI test results between Canada and Europe, and between Canada and the United States.

For more information on the DSI lab, please contact Os Monkewich at (613) 990-4494, or fax him at (613) 957-8845.

PROFILE -- MICHAEL BINDER

Michael Binder is the Senior Assistant Deputy Minister, Research and Spectrum



Michael Binder

Michael Binder joined the public service in 1971. He has held various professional and managerial positions in a number of departments and agencies, including the Defence Research Board, the Ministry of State for Urban Affairs and the Canada Mortgage and Housing Corporation.

In 1981, he became Director of Departmental Operations in the Program Evaluation Branch of the Office of the Comptroller General of Canada. He joined the Department of Communications (DOC) in 1985 as Assistant Deputy Minister, Corporate Management.

In January 1992, Mr. Binder assumed new responsibilities as DOC's Senior Assistant Deputy Minister, Research and Spectrum. As SADM, he is responsible for coordinating cross-departmental activities

and for the department's extensive regional operations. In addition, he is responsible for a number of industry support programs, R&D policy, management of the departmental informatics branch, and for providing substantive direction to the department's laboratories and the Government Telecommunications Agency. He also carries corporate responsibility for standards which is discharged under his authority by the Standards Program Office.

Mr. Binder is a graduate in Mathematics-Physics from Sir George Williams University in Montreal, and holds both Masters and Doctorate degrees in Physics from the University of Alberta. He is a member of the Board of Directors of Telesat Canada and the Standards Council of Canada.

Harmonize Regional Standards, Says TSACC's Chairman

The Americas should join forces to harmonize information technology and telecommunications (IT&T) standards, and to speak as one cohesive voice in the international arena.

That was the proposal Paul Racine, Chairman of the Telecommunications Standards Advisory Council of Canada (TSACC), put forward in April 1992 at the Americas Telecommunication Standards Symposium held in Orlando, Florida.

Racine suggested that the establishment of a regional telecommunications standards organization would provide a forum to reach consensus on the harmonization of standards within the Americas. It would also address positions and strategic directions for the formulation of international standards. In addition, the group would study policy issues of common interest, and recommend priorities for work to be undertaken by

the member standards bodies in the Americas region. Member countries would include Canada, the United States, and countries in South and Central America and the Caribbean.

But Racine stressed that his proposal is not intended to create a unique set of standards and directives for the Americas. "Rather, it is to facilitate the adoption of common international standards and directions which would promote trade and inter-operability in the telecommunications sector," he told conference participants.

The global IT&T market is extremely competitive. World-wide spending on telecommunications products, systems and services was about \$400 (U.S.) billion in 1989, and it is projected that it will reach \$567 billion (U.S.) by 1993, and exceed \$1 trillion (U.S.) by 2001, according to figures supplied by Northern Business Information (NBI).

It is also estimated that by 2001, the IT&T market will be the largest single sector of the global economy, exceeding both the automotive and petroleum industries. In order to enjoy its share of this economic pie, Canada must work with its regional counterparts to establish a unified voice which will represent its interests in the international standards arena.

Canada is committed to being a key and influential player in the international IT&T marketplace. On February 27, 1992, Perrin Beatty, Minister of Communications, introduced legislation aimed at making Canada more competitive in the telecommunications sector at home and abroad. One important aspect of the new policy is to beef up Canada's participation in domestic, regional and international standards activities.

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**Guest Column by Doug MacEwen
DGTP/DSIS, Department of Communications**

Standards and International Trade in Telecom Services

For over 40 years, the General Agreement on Tariffs and Trade (GATT) has provided the framework for trade in goods among its 108 members. An important element of GATT is that national product standards should not be used as a barrier to international trade. However, international trade in goods is now augmented by a rapid growth in the provision of international services. On a global basis, the service sector represents an \$800 billion (U.S.) market.

Recognizing the boom of services industries, The Uruguay Round of GATT proposes to include services in the agreement. The architects of the North American Free Trade Agreement (NAFTA) between Canada, the United States and Mexico, are also studying whether or not to add services to the bargaining table. In this light, telecommunications services are viewed as tradeable.

The draft General Agreement on Trade in Services (GATS) is a framework of general rules applying to service sectors covered by a country's market access commitments. A country's "Schedule of Commitments" lists all sectors where foreign firms would be allowed into the market. They would be regulated no differently than national firms supplying similar services.

Officials from DOC are playing an important role in the GATS negotiations. Robert Tritt, Director of Trade Policy & Canada-U.S. Telecommunications, chaired the GATS Working Group on Telecommunications which was responsible for developing the Telecommunications Annex. Doug MacEwen has provided policy input.

Annexes to the Agreement will set out how these rules apply in a specific sector. The Telecommunications Annex confirms the importance of telecommunications as a distinct sector of economic activity. The Annex also recognizes its

role as the underlying transport means for other activities such as financial services or value-added telecommunications services. The principal focus of the Annex is on reasonable and non-discriminatory terms and conditions for "access to and use of" public telecommunications networks. Specific provisions discuss the ability to lease private circuits, attach equipment and use telecommunications networks for intra-corporate communications and to access foreign data bases.

Since the right of foreign service providers to attach equipment to telecommunications networks is a key element of the Annex, mandatory telecommunications interface standards take on a new importance with respect to international trade in services. In this regard, the Annex specifies that conditions will only be imposed if necessary to protect the technical integrity of public telecommunications networks and services, and to safeguard the public service responsibilities of telecommunications carriers. A list of these conditions is included in the Annex.

A similar approach is being proposed in the current NAFTA negotiations. It is expected the telecommunications-related sections of this agreement will be more specific than the GATS agreement since it involves only three countries which already enjoy close trading relationships.

Canada's overall objective in these multi-lateral and tri-lateral trade negotiations is to ensure compatibility between our telecommunications policy and regulatory objectives and our international trade agreement objectives and commitments.

For more information, contact Doug MacEwen at (613) 998-4420 or fax him at (613) 952-0567.

(Continued from page 2: Harmonize ...)

"Canada realizes the need to coordinate standards development with its neighbouring geographic regions," said Racine. "This proposed forum can help to speed up the establishment of international standards beneficial to all of us."

To ensure the interests of all members are met, Racine suggested that all decisions would come about through consensus. This would allow the forum

to function as an equal partnership. However, if consensus cannot be reached, member countries could still approach international bodies with their individual concerns. And in order not to duplicate the work of national standards bodies, the umbrella group would use existing standards forums and draw upon the expertise of member countries.

Racine envisaged the umbrella group could meet at least twice a year or as

required, and that executive duties be rotated among the member countries. If the Canadian proposal is accepted, it is likely a working group would be set up to study ways to organize the forum.

"TSACC is prepared to accept a leadership role," Racine said. "We are also prepared to undertake the initial secretariat responsibilities, including hosting the first meeting before mid-1993."

Canada to Develop Native Language Syllabic Standards

DOC is leading a drive to have Canada's aboriginal languages recognized as part of an international standard for information technology applications.

This will help native groups communicate more effectively with each other via computer and other information technology products and services.

DOC and native groups are working together to develop a syllabic repertoire for Canadian aboriginal languages. Once a complete repertoire is developed, DOC will ask the International Organization for Standardization (ISO) to commit a space on its Universal Multiple-Octect Coded Character Set (UCS ISO 10646). The UCS is comprised of up-to-date and comprehensive sets of characters representing almost all of the world's written languages.

The challenge DOC and native groups face is to create a syllabic repertoire reflecting the heritage of all of Canada's aboriginal peoples. Last January, a number of aboriginal educators, computer users and language experts from across the country met in Winnipeg with DOC staff to discuss how this could be accomplished. The Canadian Aboriginal Syllabics Encoding Committee (CASEC) was formed at this meeting to further examine the issue. Its mandate is to develop a repertoire for standardization at the national and international levels.

This may prove to be a daunting task. Traditionally, the native people did not have written languages. Over the years, teachers and missionaries developed written versions based on shorthand and phonetic characters to preserve

these languages. In many cases, however, these versions were geared specifically to individual languages, and are not compatible.

CASEC plans to incorporate all native languages into a unified code table for the UCS application. At the Winnipeg meeting, CASEC examined Nunavut, Metis Cree (y-dialect), *n & l* dialect, Nunavut, Naskapi, Dene, Eastern y-dialect Cree, Oji-Cree, Ojibwa and *th* dialect Cree languages for common sounds and symbols that can be put into a combined repertoire.

Once a code table has been developed, CASEC will submit it to the Canadian Standards Association (CSA) Technical Committee on Character Coding for approval as a Canadian standard. After this standard has been approved, CASEC will approach the ISO for UCS designation.

This is not the first time Canada has applied for a spot. In 1987, Canada voluntarily withdrew its application because it was incomplete, and lacked the full support of native groups. CASEC plans to stay in close contact with all native groups to ensure the new application meets their approval.

DOC has played an important role in organizing this venture to create information technology applications for the aboriginal community. Louise Campbell of ADMRS/DGCP has spent the past two years orchestrating and coordinating the establishment of this project, working closely with such native groups as the National Association for Cultural Education Centres. Andy Kwan of the Standards Program Office (SPO) chaired the Winnipeg meeting which culminated in CASEC's formation. Though the membership of CASEC is limited to

native people, SPO was one of only three non-native groups to be asked to join as an ex-officio member.

The SPO will offer technical assistance to CASEC to help them develop a common syllabics repertoire and appropriate code tables. DOC will also continue to provide management, standards development and technology applications development expertise.

For more information, please contact Andy Kwan at (613) 990-4498, or fax him at (613) 957-8845.

"Connexions" is published by the Standards Program Office of the Systems Interconnection Research Division, Department of Communications. It is produced for internal use only, and concentrates on issues of concern to the standards-making process for the information technology and telecommunications industry. For more information please write to us at 300 Slater Street, 16th Floor, Ottawa, Ontario, K1A 0C8, call us at (613) 990-4492, or fax us at (613) 957-8845.