

Report of Official Foreign Travel
to Canada
10–19 August 2001

James David Mason
Internet, SGML, and Integration Services
Information Technology Services
SAIC

5 September 2001

Prepared by the
Y-12 National Security Complex
Oak Ridge, Tennessee 37831
managed by
BWXT Y-12, L.L.C.
for the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22800

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Report of Official Foreign Travel to Canada
10–19 August 2001

James David Mason
Internet, SGML, and Integration Services
Information Technology Services
SAIC

5 September 2001

Prepared by the
Y-12 National Security Complex
Oak Ridge, Tennessee 37831
managed by
BWXT Y-12, L.L.C.
for the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22800

Report of Official Foreign Travel to Canada 10–19 August 2001

James David Mason

Abstract

In support of DOE's use of SGML, XML, HTML, and related standards, I have served since 1985 as Chairman of the international committee responsible for SGML and related standards, ISO/IEC JTC1/SC34 (SC34) and its predecessor organizations. During my August 2001 trip, I attended the summer 2001 meeting of SC34/WG3 in Montréal, Canada. I also attended *Extreme Markup Languages 2001*, a major conference on the use of SGML and XML sponsored by IDEAlliance, and participated in the reorganizational meeting of TopicMaps.org, which is in transition from being an independent group to becoming a Member Section of OASIS (Organization for the Advancement of Structured Information Standards).

Supporting standards development allows the Department of Energy/National Nuclear Security Administration (DOE/NNSA) and the Y-12 National Security Complex (Y-12) the opportunity both to provide input into the process and to benefit from contact with some of the leading experts in the subject matter. Oak Ridge has been for some years the location to which other DOE sites turn for expertise in SGML, XML, and related topics.

Note: This report continues a series, the most recent of which, Y/WPP-017, reported on the Spring 2000 meeting of SC34 in Berlin, Germany. Copies of documentation for all SC34 meetings are available from the SC34 site on the Web: (<http://www.y12.doe.gov/sgml/sc34/sc34oldhome.htm>). This report is available on the SC34 Web site at <http://www.y12.doe.gov/sgml/sc34/document/0245.htm>. Hyperlinks in the online report connect it to the documents it references.

Introduction

Over the course of the past two decades, SGML (Standard Generalized Markup Language, ISO 8879:1986) and its applications, including HTML (Hypertext Markup Language), and profiles, most notably XML (Extensible Markup Language), have come to dominate the interchange and use of structured data. SGML and many of the standards related to it were developed and are maintained by ISO/IEC JTC1/SC34 (SC34), which I chair.

The SC34 project gaining the most attention recently is Topic Maps (ISO/IEC 13250:2000), which describes metadata structures for organizing and indexing large collections of information resources. The Topic Map standard seems poised to have a major effect on knowledge-management applications. Topic Maps are being used in the knowledge base for the Ferret analytical engine developed at Y-12 and are being investigated as a mechanism for maintaining and publishing classification guidance on a DOE-wide basis. Topic Maps also have good potential as a structuring tool in other knowledge-preservation activities.

In August 2001, I attended a series of meetings in Montréal related to the support of SC34 standards and their application. SC34's Working Group 3 (SC34/WG3), Information Association, which is responsible for Topic Maps, met on Saturday, 11 August. The *Extreme Markup Languages 2001*

conference, sponsored by IDEAlliance, followed during the next week. On Saturday, 18 August, TopicMaps.org held a restructuring meeting.

Summer Meeting of ISO/IEC JTC1/SC34/WG3, Montréal, Canada

The SC34/WG3 meeting on Saturday, 11 August 2001 was attended by nine experts representing five countries (France, Germany, Norway, the United Kingdom, and the United States) and one external liaison body (International SGML/XML Users' Group). The meeting was chaired by Steve Pepper, Convenor of WG3 and head of the Norwegian delegation to SC34.

SC34/WG3 works mainly on matters of hypertext and multimedia documents and linking. The new Topic Maps (ISO/IEC 13250, <http://www.y12.doe.gov/sgml/sc34/document/0129.pdf>) standard, published last year, occupies most of WG3's effort. At recent meetings WG3 has concerned itself with starting new projects for models (conceptual, data, processing) and languages (query, constraint) for Topic Map support. At this meeting, because some of these projects are still out for initial approval ballot, WG3 discussed issues of general concern, such as determining the relationships among the support facilities and planning a course of development that makes the best use of resources.

Two of the editors of ISO/IEC 13250 (Michel Biezunski and Steve Newcomb) presented a defect report that had been submitted by Japan (SC34 N238) and proposed a response to it (SC34 N239).

WG3 examined two documents related to Topic Map support models, a data model proposed by Lars Marius Garshol (SC34 N241), and a processing proposed model by Newcomb and Biezunski (SC34 N243). We decided to proceed with a Core Model (Level 0 of the overall Topic Map model) on the basis of the Newcomb and Biezunski document and an Infoset Model (Level 1) based on the core model, starting with the Garshol proposal. (An Infoset, short for "information set," might be seen as a collection of all the structural information a processor can extract from an SGML or XML document.) The model project may examine connections between the Topic Maps models and other modeling techniques, such as Express (the modeling language of ISO 10303, STEP) or UML and MOF (Unified Modeling Language and Meta Object Facility, from the Object Management Group).

ISO/IEC 13250 is specified in terms of HyTime (Hypermedia/Time-Based Structuring Language, SIS/IEC 10744). Although HyTime is immensely powerful and has heavily influenced other projects, such as the W3C's work on advanced hyperlinking, it has the reputation for being difficult to understand and apply. After the adoption of the Topic Map standard last year, a small group, a number of whom are active in SC34, began working on XTM, a project to create an XML interchange representation of Topic Maps, with hyperlinking according to W3C recommendations rather than full HyTime linking. The XTM development group, operating as TopicMaps.org (<http://www.topicmaps.org/>) has successfully completed its initial goals and is reorganizing (see below). At the Berlin meeting of SC34/WG3, it was decided to move the technical work on XTM models and interchange formats back into SC34, and that transfer is one of the sources from which the Topic Map models have begun. The XTM document type definition is out for ballot as a technical corrigendum for ISO/IEC 13250. At this meeting, WG3 endorsed establishing a liaison with TopicMaps.org when it completes its move to OASIS, a consortium in the structured-information industry (<http://www.oasis-open.org/>).

The Recommendations of the WG3 meeting are available online at <http://www.y12.doe.gov/sgml/sc34/document/0240.htm>. Documents distributed during the meeting are listed in Appendix C.

Conference: *Extreme Markup Languages 2001*

The Graphic Communications Association (GCA, started as an affiliate of Printing Industries of America, <http://www.gca.org/>) has been a supporter of SGML and its applications from the earliest days. Their conferences on SGML-related topics had already grown steadily over the years, but the arrival of first HTML and then XML has caused an explosion of participation in both North America and Europe. Earlier this summer, GCA became separate from PIA and changed its name to IDEAlliance. *Extreme Markup Languages* is IDEAlliance's most technical conference in the area of SGML, XML, and related technologies.

This year's *Extreme Markup Languages* conference in Montréal continued several themes from last year's, particularly the nature of markup languages, schema languages, and the relationship between RDF and Topic Maps.

Last year's conference, with Michael Sperberg-McQueen's keynote on the "Meaning and Interpretation of Markup" and Allen Renear's "The Descriptive/Procedural Distinction Is Flawed," seems to have started a trend of considering what SGML and XML actually mean. This year Wendell Piez took up the theme with his "Beyond the Descriptive vs. Procedural Distinction," taking a rhetorical approach to both the intent and the meaning of markup and providing a new look at validation strategies. In "XML, Stylesheets and the Remathematization of Formal Content," Andrea Asperti and colleagues at the University of Bologna examined formal proofs and the means of linking the logical content of mathematical expressions to their presentation. Schema languages for XML have proliferated recently, and at the conference they underwent formal analysis from Henry Thompson and Richard Tobin, as well as from Makoto Murata. (Murata also presented the most recent status of RELAX NG, which merges his RELAX schema language with James Clark's TREX.) The theoretical theme of the conference filtered its way down into specific technologies like Topic Maps, as could be seen in "Towards a General Theory of Scope," by Steve Pepper and Geir Ove Grønmo.

Elaine Svenonius's keynote, "The Intellectual Foundations of Knowledge Representations," which presented an ontology of cataloging and knowledge-representation systems, set the tone for much of the conference. More than a third of the presentations at the conference dealt with knowledge representation, usually through some aspects of Topic Maps or RDF. Indeed, a third of those knowledge-related presentations dealt with Topic Maps *and* RDF. The SGML community started out just trying to capture documents in an enduring electronic format. Now we've moved far beyond that: we're concerned with what those documents mean—and what the documents we can't capture mean. SGML and XML have moved beyond being metagrammars for tagging text and have spawned metalanguages for navigating information.

Another major theme of the conference was information transformation. There were a number of presentations and tutorials on XSL and related topics. Papers like "XSL and Hyperdocuments: Applying XSL to Arbitrary Groves and Hyperdocuments," by Eliot Kimber and his colleagues at DataChannel, show how transformation has moved far beyond simply applying stylesheets to prepare documents for printing.

The conference was quite lively, and there is a continuation of rapid growth in interest in the SGML/XML world and, more importantly, support for SGML/XML applications.

TopicMaps.org

As mentioned above, TopicMaps.org is the operating name of the group that created the XTM (XML Topic Map) interchange specification. Having accomplished its initial goal of developing XTM, it has

passed the technical work back to SC34/WG3. The group is now in the process of becoming a member section of OASIS. As part of OASIS, TopicMaps.org will be able to promote the use of Topic Maps and develop applications and profiles for using Topic Maps.

(The name TopicMaps.org is connected to a Web site, <http://www.topicmaps.org/> that supported the XTM effort. The Internet domain name "topicmaps.org" belonged to Michel Biezunski, who has transferred it to OASIS, which will support the Web site on their servers. OASIS is an established industry consortium that was formerly known as SGML Open. OASIS, in cooperation with the United Nations, has developed the ebXML electronic-business specification. They have cosponsored numerous conferences with GCA , and one of their committees is responsible for maintenance of DocBook, an XML document specification that is widely used in publishing for the computer industry.)

As part of the reorganization under OASIS, TopicMaps.org is developing a new charter that will be submitted to the OASIS board of directors. At this meeting, we selected interim officers: Eric Freese, the chairman of the earlier organization, is the interim chairman of the new one. Steve Pepper, the Convenor of SC34/WG3, is the interim marketing lead. I am the interim technical lead, responsible for coordinating any technical committees we create.

Conclusion and Recommendations

The world of SGML appears to be quite healthy, whether one looks at the fundamental level of standards development or surface layers of application.

Although DOE has been involved with SGML and related standards since the late 1970s, interest in these subjects has tended to reside in specialized groups. The rise of the WWW brought a casual, if frequently effective, use of SGML (in the form of HTML) to a wide community but did not spread wide understanding of the underlying technology. The rise of XML and its adoption by major software houses suggests that use will become even more widespread. For some uses, a casual approach to XML may suffice. However, for records, product data, interpretive knowledge bases, and other mission-sensitive information, DOE should take an active position on the development and use of SGML-related standards.

The growth of Topic Maps and other XML-based mechanisms for knowledge engineering has potentially great impacts on mission-critical information for DOE and NNSA. As NNSA's weapons programs increasingly call for electronic data capture, there is a need for stable mechanisms for both capturing and cataloging the information. Particularly in the case of stockpile life-extension programs, there is a need for this data to be usable for decades after it is collected. Current methods of collecting the data do not offer adequate assurance that the data will continue to be usable. Adoption and implementation of standard methods based in SGML/XML should be a high priority for DOE and NNSA.

The application of XML and Topic Maps to knowledge management in projects such as that for the Ferret classification engine should be pursued. This technology will aid the creation and maintenance of knowledge bases and the extension of the Ferret engine beyond its current local application. Application of Topic Maps to classification guidance at the Office of Nuclear Security Information should lead to better distribution of classification information within DOE and NNSA.

Because DOE is one of the organizations adopting SC34 standards, it should continue active participation in SC34's work, particularly the work on Topic Maps. As DOE's use of these standards increases, the need for continued commitment to their maintenance and extension will increase as a consequence. DOE should also keep aware of developments in the realm of applications by participating in conferences and developers' groups. Furthermore, DOE should establish more internal means for sharing tools, techniques, and applications. Extension of the NWIG metadata system and construction of a

comprehensive records system such as that proposed by Y-12's WRAP project can profit from DOE's future support of SGML/XML. Ferret technology seems a good candidate for extension to other DOE facilities and perhaps for commercialization as well. Y-12, as the leader in development of SGML-related standards, is in a good position to continue also as a leader in their application.

Future meetings

SC34 has the following meetings scheduled for the next year:

Group	Dates	Location	Host
SC34	8-13 December 2001	Orlando	GCA
SC34/WG3	10 March 2002	Seattle	GCA
SC34	May 2002	Barcelona	GCA

Project meetings may also be scheduled between SC34 meetings.

SC34 continues to schedule most of its meetings in conjunction with conferences sponsored by GCA. These conferences generally deal with SGML, XML, HyTime, DSSSL, and related topics; combining meetings with the GCA conferences allows a reduction in the number of trips for experts who participate in both activities. My travel to this meeting was supported in part by GCA.

Appendix A

James David Mason: Itinerary, 10–19 August 2001

Dates	Location	Contacts	Purpose
9 August 2001	Knoxville; Montréal, Quebec, Canada		Travel
10 August 2001	Montréal	David Steinhardt, Marion Elledge (IDEAlliance, hosts)	Meeting of ISO/IEC JTC1/SC34/WG3
11 August 2001	Montréal		Weekend and open day
12–17 August 2001	Montréal	David Steinhardt, Marion Elledge (IDEAlliance, hosts)	Conference: <i>Extreme Markup Languages 2001</i>
18 August 2001	Montréal	David Steinhardt, Marion Elledge (IDEAlliance, hosts)	Meeting of TopicMaps.org
19 August 2001	Montréal, Knoxville		Return travel

Appendix B Principal Contacts

ISO/IEC JTC1/SC34WG3 Montreal Meeting Attendance August 2001

Dr. Michel Biezunski
Infoloom, Inc.
1, Blvd. du Temple
Paris, 75003
France
Telephone: +331-44598429
Facsimile: +331-44598429
E-mail: mb@infoloom.com

Mr. G. Ken Holman
Crane Softwrights Ltd.
1605 Mardick Court, Box 266
Kars, Ontario K0A-2E0
Canada
Telephone: +1 613 489-0999
Facsimile: +1 613 489-0995
E-mail: gkholman@CanadaMail.com

Mr. Sam Hunting
eTopicality
912 Pine Street #4
Philadelphia, PA 19107
Telephone: +1 661-547-6510
E-mail: sam_hunting@yahoo.com

Dr. James David Mason
Y-12 National Security Complex
Bldg. 9113, M.S. 8208
P.O. Box 2009
Oak Ridge, TN 37831-8208
Telephone: +1 865 574 6973
E-mail: mxm@y12.doe.gov

Mr. Graham Moore
empolis UK Ltd.
Unit B
The Dorcan Complex
Faraday Road
Swindon SN35HQ United Kingdom
Telephone: +44 1793 485465
E-Mail: gdm@empolis.co.uk,
<http://www.empolis.co.uk>,

Dr. Steven R. Newcomb
Coolheads Consulting
405 Flagler Court
Allen, Texas 75013
Telephone: +1 972 359 816
E-mail: srn@coolheads.com

Dr. Nikita Ogievetsky
Cogitech, Inc.
P.O. Box 72
Hewlett, NY 11557-0072
Telephone: +1 917 406 8734
E-mail: nogievvet@cogx.com

Mr. Steve Pepper
Ontopia
Maridalsvn. 99B
Oslo
N-0461 Norway
Telephone: +47 908272460
Facsimile: +47 2202 1681
E-mail: pepper@ontopia.net

Dr. Hans Holger Rath
empolis GmbH
Havelstr. 9
64295 Darmstadt
Germany
Telephone: +49.172.66.90.427
Facsimile: +49 9365 8062 66
E-mail: holger.rath@empolis.com

Ms. Ann Wrightson
alphaXML, Ltd.
15 Kensington Close
Batley, West Yorkshire WF17 7RL
United Kingdom
Telephone: +44 1491 630050
E-mail: ann.wrightson@alphaxml.com

Appendix C

Literature Acquired

ISO Technical Committees are literature intensive. ISO/IEC JTC1/SC34WG3 distributed documents 238–244 in the course of the Montréal meeting. These documents are available over the WWW through links from SC34's site; the current document register is at <http://www.y12.doe.gov/sgml/sc34/document/0250.htm>

ISO/IEC JTC1/SC34 Document Register, Montréal (August 2001)

Document Number	Date of Request	Title	Requestor
238	7 August 2001	Defect Report on ISO/IEC 13250:2000	SC34 Japan
239	11 August 2001	Response to Defect Report on ISO/IEC 13250:2000	M. Biezunski
240	11 August 2001	Recommendations of WG3 Meeting, Montréal	S. Pepper
241	11 August 2001	Topic Map foundational model requirements	L. M. Garshol
242	11 August 2001	A Topic Map Data Model: An infoset-based proposal	L. M. Garshol
243	11 August 2001	Topicmaps.net's Processing Model for XTM 1.0, version 1.0.1	M. Biezunski and S. Newcomb
244	11 August 2001	Illustration of a proposed Core Model	M. Biezunski and S. Newcomb

The Proceedings of the GCA Conference *Extreme Markup Languages 2001* are available from Dr. Mason.

DISTRIBUTION

DOE DISTRIBUTION

1. Ms. C. S. Blackston, U. S. Department of Energy, 19901 Germantown Road, HR-34, Room C-137, Germantown, MD 20874-1290
2. Mr. William J. Brumley, DOE-ORO Y-12 Site Office
3. Mr. Philip A. Carpenter, DOE-ORO ORNL Site Office
4. Ms. Debbie Cutler, OSTI, P.O. Box 62, Oak Ridge, TN 37831
5. Ms. Kelli Holden, Bldg. K-1030, MS-7312
6. Mr. Vinh Lê, U. S. Department of Energy, SO-222, 19901 Germantown Road, Germantown, MD 20874-1290
7. Mr. R. C. Morgan, Manager, Office of Scientific and Technical Information, OSTI
8. Mr. Axel Ringe, Office of Scientific and Technical Information, OSTI
9. Mr. Donat R. St. Pierre, Safeguards and Security, ORO
10. Mr Lawrence Sanchez, U. S Department of Energy, IN-1, Room GA-301, Forrestal Building, Washington, DC 20585
11. Mr. Andrew P Weston-Dawkes, U. S. Department of Energy, SO-222, 19901 Germantown Road, Room J-309, Germantown, MD 20874-1290
12. Mr. B. R. White, U. S. Department of Energy, 19901 Germantown Road, HR-34, Room C-137, Germantown, MD 20874-1290
13. Threat Reduction Team, 4x24 NHB, Washington, DC 20505
- 14–15. Office of Scientific and Technical Information, OSTI

INTERNAL DISTRIBUTION

- | | |
|---------------------|-----------------------------------|
| 16. R. A. Beard | 29. P. J. Kortman |
| 17. M. A. Bell | 30. C. H. Malarkey |
| 18. D. K. Briscoe | 31. J. D. Mason |
| 19. L. J. DeMarotta | 32. S. H. McConathy |
| 20. K. M. Dobbs | 33. P. M. McCoy |
| 21. K. R. Finney | 34. R. W. McGaffey |
| 22. M. D. Galyon | 35. K. M. McKeehan |
| 23. D. S. Griffith | 36. B. K. Robinette |
| 24. D. R. Hamrin | 37. J. R. Snyder |
| 25. J. D. Hensley | 38. T. O. Tallant |
| 26. T. M. Insalaco | 39. E. W. Whitfield |
| 27. S. R. Jordan | 40. Y-12 Plant Records Department |
| 28. A. J. Klein | 41. Foreign Travel Office—RC |

EXTERNAL DISTRIBUTION

42. Dr. David Abrahamson, Trinity College, Computer Science Department, O'Reilley Institute, Dublin, 2 Ireland

43. Ms. Barbara Beeton, American Mathematical Society, 201 Charles Street, P.O. Box 6248, Providence, RI 02940
44. Dr. Doris Bernardini, DoD/DISA/Center for Standards, Code JEBC, 10701 Parkridge Road, Reston, VA 22091-4398, U.S.A.
45. Dr. Michel Biezunski, 1, Blvd. du Temple Paris, 75003 France
46. Mr. Martin Bryan, The SGML Centre 29, Oldbury Orchard Churchdown, Gloucester GL3 2PU United Kingdom
47. Mr. Robin Cover, ISOGEN International, 6634 Sarah Drive, Dallas, TX USA 75236
48. Mr. Marion Elledge, IDEAlliance, 100 Daingerfield Rd., Alexandria, VA 22314-2888
49. Mr. Paul A. Ellison, Computer Unit, University of Exeter, Laver Building, North Park Road, Exeter EX4 4QE, United Kingdom
50. Dr. Martin J. Fritts, 1710 SAIC Drive, P.O. Box 1303, Mail Stop 2-6-9, McLean, VA 22102
51. Mr. Thomas F. Frost, Chairman ISO/IEC JTC1, AT&T, Room 1A29, 20 Independence Blvd., Warren, NJ 07059-6798
52. Ms. Pam Gennusa, 175 East Delaware Place, Apt 9010, Chicago, IL 60611
53. Dr. Charles F. Goldfarb, Information Management Consulting, 13075 Paramount Drive, Saratoga, CA 95070
54. Ms. Sara Hafele, (ISO/IEC JTC1/SC34 Secretariat), American National Standards Institute, 25 West 43rd Street, New York, NY 10036
55. Sam Hunting, eTopicality, 912 Pine Street #4, Philadelphia, PA 19107
56. Mr. G. Ken Holman, Crane Softwrights Ltd., 1605 Mardick Court, Box 266, Kars, Ontario K0A-2E0, Canada
57. Mr. Eliot Kimber, ISOGEN International, 2608 Pinewood Terrace, Austin, TX 78757
58. Dr. Yushi Komachi, Panasonic/MCGS, 2-3-8 Shimomeguro, Meguro-ku, Tokyo 153, Japan
59. Mr. Ken Lasky, 1710 SAIC Drive, P.O. Box 1303, Mail Stop 2-6-9, McLean, VA 22102
60. Mr. Bruce E. Lownsbury, Lawrence Livermore National Laboratory, Mailcode L-170, 7000 East Ave., P.O. Box 808, Livermore, CA 94550
61. Dr. Tamara J. Miller, 611 Hodges Library, University of Tennessee, Knoxville, TN 37996
62. Mr. Graham Moore, empolis UK Ltd., Unit B, The Dorcan Complex, Faraday Road, Swindon SN3 5HQ, United Kingdom
63. Dr. Steven R. Newcomb, Coolheads Consulting, Inc., 405 Flagler Court, Allen, Texas 75013
64. Mr. Eamonn Neylon, Manifest Solutions, John Eccles House, Robert Robinson Avenue, Oxford Science Park, Oxford OX4 4GP, United Kingdom
65. Dr. Nikita Ogievetsky, Cogitech, Inc., P.O. Box 72, Hewlett, NY 11557-0072
66. Mr. Steve Pepper, Ontopia A.S., Maridalsvn. 99B Oslo N-0461, Norway
67. Dr. Lynne Price, 48680 Taos Road, Fremont, CA 94539
68. Mr. Roger Price, Department of Computer Science, University of Massachusetts Lowell, One University Avenue, Lowell, MA 01854
69. Mr. Daniel Rivers-Moore, RivCom, Lotmead Business Village, Swindon, Wiltshire SN4 0UY, United Kingdom
70. Dr. Hans Holger Rath, empolis GmbH Havelstr. 9 64295 Darmstadt, Germany
71. Mr. Rudolph M. Riess, 15 Hersam, Stoneham MA 02180
72. Mr. Norman Scharpf, IDEAlliance, 100 Daingerfield Rd., Alexandria, VA 22314
73. Mr. Jerry L. Smith, Code JEBCD, DISA Center for Standards, 10701 Parkridge Boulevard, Reston, VA 20191-4357
74. Mr. David Steinhardt, IDEAlliance, 100 Daingerfield Rd., Alexandria, VA 22314-2888
75. Dr. Richard Strehlow, 5120 Kingston Pike, Knoxville, TN 37919

76. Ms. B. Tommie Usdin, Mulberry Technologies, Inc, 17 West Jefferson Street, Suite 207, Rockville, MD 20850
77. Ms. Yvonne Vine, The International SGML/XML Users' Group, P.O. Box 361, Swindon, Wiltshire SN25 4ZT, United Kingdom
78. Ms. Ann Wrightson, alphaXML Limited, 15 Kensington Close, Batley, West Yorkshire WF17 7RL, United Kingdom