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Extensible Markup Language (XML)

Contents

XML: Overview

[CR: 20000706] [Table of Contents]

Several introductory and tutorial articles on the Extensible Markup Language (XML) are referenced in the shorter XML Introduction document. Most articles are accessible online.

"The Extensible Markup Language (XML) is the universal format for structured documents and data on the Web." -- *W3C XML Web site, 2000-07-06.*

The Extensible Markup Language (XML) is descriptively identified in the XML 1.0

W3C Recommendation as "an extremely simple dialect [or 'subset'] of SGML" the goal of which "is to enable generic SGML to be served, received, and processed on the Web in the way that is now possible with HTML," for which reason "XML has been designed for ease of implementation, and for interoperability with both SGML and HTML." Note that the "HTML" referenced in the preceding sentence (*bis*) means HTML 4.0 and 3.2 which were in common use as of 10-February-1998, when the XML 1.0 specification was published as a W3C Recommendation. The next version of 'HTML' is expected to be reformulated as an XML application, so that it will be based upon XML rather than upon SGML. As of December 1998, 'Voyager' was the W3C code name for HTML reformulated as an application of XML.

XML was initially "developed by a W3C Generic SGML Editorial Review Board formed under the auspices of the W3 Consortium in 1996 and chaired by Jon Bosak of Sun Microsystems, with the very active participation of a Generic SGML Working Group also organized by the W3C." An XML WG (Working Group) under W3C served initially as an editorial board, which received input from an XML Special Interest Group.

As of late 1998, the XML design effort was re-chartered under the direction of an XML Coordination Group and XML Plenary Interest Group to be carried out in five new XML working groups: XML Schema Working Group, XML Fragment Working Group, XML Linking Working Group (XLink and XPointer), XML Information Set Working Group, and XML Syntax Working Group. These working groups were designed to have close liaison relationships with the W3C's Extensible Style[sheet] Language (XSL) Working Group and Document Object Model (DOM) Working Group.

"Extensible Markup Language, abbreviated XML, describes a class of data objects called XML documents and partially describes the behavior of computer programs which process them. XML is an application profile or restricted form of SGML, the Standard Generalized Markup Language. By construction, XML documents are conforming SGML documents."

"XML is primarily intended to meet the requirements of large-scale Web content providers for industry-specific markup, vendor-neutral data exchange, media-independent publishing, one-on-one marketing, workflow management in collaborative authoring environments, and the processing of Web documents by intelligent clients. It is also expected to find use in certain metadata applications. XML is fully internationalized for both European and Asian languages, with all conforming processors required to support the Unicode character set in both its UTF-8 and UTF-16 encodings. The language is designed for the quickest possible client-side processing consistent with its primary purpose as an electronic publishing and data interchange format." [971208 W3C press release]

"XML documents are made up of storage units called *entities*, which contain either parsed or unparsed data. Parsed data is made up of *characters*, some of which form the *character data* in the document, and some of which form *markup*. Markup encodes a description of the document's storage layout and logical structure. XML provides a mechanism to impose constraints on the storage layout and logical structure. A software module called an **XML   processor** is used to read XML documents and provide access to their content and structure. It is assumed that an XML processor is doing its work on behalf of another module, called the **application**. This specification describes the required behavior of an XML processor in terms of how it must read XML data and the information it must provide to the application." [adapted from the Proposal]

Valid XML documents are designed to be valid SGML documents, but XML documents have additional restrictions. The W3C XML WG has published a technical NOTE providing a "detailed comparison of the additional restrictions that XML places on documents beyond those of SGML": see http://www.w3.org/TR/NOTE-sgml-xml for the details. The NOTE also includes an SGML declaration which describes the constraints of XML applicable to an SGML parser. [local archive copy]

[This paragraph is superseded by the technical NOTE 'NOTE-sgml-xml' referenced immediately above.] Features in SGML but not in XML include [as of November 5, 1996]: "Tag omission; The CONCUR, LINK, DATATAG, and SHORTREF features; The "&" connector in content models; Inclusions and exclusions in content models; CURRENT, CONREF, NAME, NAMES, NUMBER, NUMBERS, NUTOKEN, and NUTOKENS declarations for attributes; The NET construct; Abstract syntax; Capacities and quantities; Comments appearing within other markup declarations; Public Identifiers; Omission of quotes on attribute values." For a more recent/complete comparison of features, see the relevant section in the language specification, or "What else has changed between SGML and XML?" in the FAQ, maintained by Peter Flynn.

As of December 1997, the current and former members of the XML WG are: "Jon

Bosak, Sun (Chair); James Clark (Technical Lead); Tim Bray, Textuality and Netscape (XML Co-editor); Jean Paoli, Microsoft (XML Co-editor); C. M. Sperberg-McQueen, U. of Ill. (XML Co-editor); Dan Connolly, W3C; Steve DeRose, INSO; Dave Hollander, HP; Eliot Kimber, Highland; Eve Maler, ArborText; Tom Magliery, NCSA; Murray Maloney, Muzmo and Grif; Makoto Murata, Fuji Xerox Information Systems; Joel Nava, Adobe; Peter Sharpe, SoftQuad; John Tigue, DataChannel."

Historically: The W3C SGML Editorial Review Board, as of November 5, 1996, had the following members: Jon Bosak, Sun (jon.bosak@sun.com), chair; Tim Bray, Textuality (tbray@textuality.com), editor; James Clark (jjc@jclark.com), technical lead; Dan Connolly (connolly@w3.org), W3C contact; Steve DeRose, EBT (sjd@ebt.com), editor; Dave Hollander, HP (dmh@hpsgml.fc.hp.com); Eliot Kimber, Passage Systems (kimber@passage.com); Tom Magliery, NCSA (mag@ncsa.uiuc.edu); Eve Maler, ArborText (elm@arbortext.com); Jean Paoli, Microsoft (jeanpa@microsoft.com); Peter Sharpe, SoftQuad (peter@sqwest.bc.ca); C. Michael Sperberg-McQueen, U. of Ill. at Chicago (cmsmcq@uic.edu), editor.

W3C XML Adjunct Specifications

[CR: 20000705][Table of Contents]

The W3C *Extensible Markup Language (XML) 1.0 Specification* is the principal document governing the XML standard. Several other W3C specifications are also critical to the understanding and implementation of XML as it is currently used. These specifications are being developed by various working groups, sometimes as part of activity outside the sphere of the XML Activity. Some examples:

- XML 1.0 Specification Errata
- Namespaces in XML
- XML Information Set
- Canonical XML
- Associating Style Sheets with XML Documents
- XML Fragment Interchange
- XML Schema
- XML Linking Language (XLink)
- XML Pointer Language (XPointer)
- XML Base
- XML Inclusions (XInclude)
- XSL Transformations (XSLT)
- XML Path Language (XPath)
- Extensible Stylesheet Language (XSL)
- XML Query
- Document Object Model (DOM)

XML/XLink/XSL Specifications: Reference Documents

[CR: 20011213][Table of Contents]

Extensible Markup Language (XML) [Formerly: 'xml-lang']

Extensible Markup Language as a W3C Recommendation

[February 10, 1998] *Extensible Markup Language (XML) 1.0.* W3C Recommendation 10-February-1998. Editors: Tim Bray (Textuality and Netscape), Jean Paoli (Microsoft), and C. M. Sperberg-McQueen (University of Illinois at Chicago). Reference: REC-xml-19980210.

[October 06, 2000] *Extensible Markup Language (XML) 1.0 (Second Edition)*. W3C Recommendation 6-October-2000. Edited by Tim Bray (Textuality and Netscape), Jean Paoli (Microsoft), C. M. Sperberg-McQueen (University of Illinois at Chicago and Text Encoding Initiative), and Eve Maler (Sun Microsystems, Inc. - Second Edition). Reference: http://www.w3.org/TR/2000/REC-xml-20001006.

[December 13, 2001] *XML 1.1*. W3C Working Draft 13-December-2001. Edited by John Cowan (Reuters). Version URL reference: http://www.w3.org/TR/2001/WD-xml11-20011213/. Latest Version URL: http://www.w3.org/TR/xml11/.

Abstract: "The Extensible Markup Language (XML) is a subset of SGML that is completely described in this document. Its goal is to enable generic SGML to be served, received, and processed on the Web in the way that is now possible with HTML. XML has been designed for ease of implementation and for interoperability with both SGML and HTML."

Sources: [see W3C for additional translations]

HTML Format	http://www.w3.org/TR/1998/REC-xml-19980210.html	[archive copy]
XML Format	http://www.w3.org/TR/1998/REC-xml-19980210.xml	[archive copy]
PDF Format	http://www.w3.org/TR/1998/REC-xml-19980210.pdf	[archive copy]
Postscript Format	http://www.w3.org/TR/1998/REC-xml-19980210.ps	[archive copy]
Latest version	http://www.w3.org/TR/REC-xml	
In Chinese	Source from lightning.prohosting.com	[archive copy]
In French	Source from babel.alis.com	[archive copy]
In French	In preparation	[M. Goossens]
In German	Source from www.mintert.com	[archive copy]
In Italian	Source from IAT-CNR	[archive copy]
In Japanese	Source from fxis.co.jp	[archive copy]
In Korean	Source from trio.co.kr	[archive copy]
In Romanian	Source from agora.ro	[archive copy]
In Spanish	Source from SGML-ESP	[archive copy]
In Spanish	Source from Epsilon Eridani	
In Swedish	Source from XML.SE	[archive copy]
XML Spec DTD	"-//W3C//DTD Specification V2.0//EN"	[archive copy] [*]
Design Report	W3C XML Specification DTD (Report)	[archive copy, v20]
Errata [1]	XML 1.0 Specification Errata	[archive copy 2000-04-09]
Second Edition	XML 1.0 Second Edition, Recommendation	[cache]
Second Edition [RV]	Second Edition Review Version	[cache]

Other Links:

- [October 09, 2000] XML 1.0 Second Edition as W3C Recommendation. The W3C's XML Core Working Group has published a new W3C Recommendation for *Extensible Markup Language (XML) 1.0 (Second Edition)*. Reference: W3C Recommendation 6-October-2000, edited by Tim Bray, Jean Paoli, C. M. Sperberg-McQueen, and Eve Maler. This REC specification follows the earlier publication of a public Review Version. "This second edition is not a new version of XML (first published 10-February-1998); it merely incorporates the changes dictated by the first-edition errata as a convenience to readers. The errata list for this second edition is available at http://www.w3.org/XML/xml-V10-2e-errata. The document abstract, unchanged from the 1998 first edition, appears to validate the hermeneutical theory that a text's intent escapes from the author and passes immediately into the control of the community upon utterance: "The Extensible Markup Language (XML) is a subset of SGML that is completely described in this document. Its goal is to enable generic SGML to be served, received, and processed on the Web in the way that is now possible with HTML. XML has been designed for ease of implementation and for interoperability with both SGML and HTML." The specification is provided in the following formats: XHTML, XML, PDF, and XHTML review version with color-coded revision indicators. See also the (non-normative) "Production Notes" in Annex I: "This Second Edition was encoded in the XMLspec DTD (which has documentation available). The HTML versions were produced with a combination of the xmlspec.xsl, diffspec.xsl, and REC-xml-2e.xsl XSLT stylesheets. The PDF version was produced with

the html2ps facility and a distiller program."

- [August 15, 2000] Paul Grosso (Co-Chair XML Core WG) announced that the W3C XML Core Working Group has released a draft of the Extensible Markup Language (XML) 1.0 Second Edition for public review: *Extensible Markup Language (XML) 1.0 (Second Edition) Review Version*; Reference: W3C Working Draft 14-August-2000. "The second edition is not a new version of XML; it is designed to bring the XML 1.0 Recommendation up to date with the XML 1.0 Specification Errata (first edition)." Reviewers are asked to report errors to the 'xml-editor@w3.org' mailing list, which is publicly archived. Paul writes: "At this time, we are making two versions of the draft Second Edition available for a four week public review, and all interested parties are invited to review the current drafts and submit comments. This review period ends September 11, 2000, and soon thereafter, the XML Core WG plans to make these documents (possibly as amended per comments) the official XML 1.0 Recommendation Second Edition. All these public review documents are linked from the W3C TR page. The 'plain' draft Second Edition is at http://www.w3.org/TR/2000/WD-xml-2e-20000814.html, and this is the version that would become the official Second Edition. We have also produced a 'review copy' which highlights changes between the first edition and this Second Edition, and it is at http://www.w3.org/TR/2000/WD-xml-2e-review-20000814. This *may* be provided along with the official Second Edition if it is deemed useful and appropriate, but the 'plain' version is the official one. Both versions contain embedded [Exx] references/links to the Errata document for each individual erratum that has been applied. (If we decide to maintain the 'review' version, we may decide to delete the [Exx] references from the 'plain' one.) Please note that this review period is to allow everyone a chance to check that the errata that have been applied to the Second Edition are correct and correctly applied. Reports of further errata or ambiguities in XML 1.0 are welcome, but they will likely be saved to be considered for possible application to a later edition, not added to this Second Edition." [cache]
- Annotated Version of the XML specification, from Tim Bray. See further description below.
- Bob DuCharme. *XML: The Annotated Specification.* The Charles F. Goldfarb Series on Open Information Management. The Definitive XML Series from Charles F. Goldfarb. Upper Saddle River, NJ: Prentice Hall PTR, 1999.
- [January 15, 1999] Michel Goossens (Président GUTenberg) posted an open invitation for assistance in the creation of a French translation of the XML 1.0 Specification and Peter Flynn's XML FAQ document. Alternately, if any readers are aware of the availability of such a translation already, or of a similar initiative, please communicate with Goossens about it so as to avoid duplication of efforts.
- Press release: "The World Wide Web Consortium Issues XML 1.0 as a W3C Recommendation. Key Industry Players, Experts Collaborate to Develop Interoperable Data Format for the Web." [local archive copy]
- Announcement on TEI-L, "XML 1.0 Is Official." From TEI Editor, C. M. Sperberg-McQueen. Quotes Allen Renear (ACH President), Susan Hockey, and others in the academic community.
- XML 1.0 Fact Sheet; ;[local archive copy]
- XML 1.0 Testimonials, - from ACCESS, Adobe, Agranat Systems, Alis Technologies, ArborText, Bitstream, CNET, DataChannel, IBM, Inso, Junglee, Lotus, Microsoft, Open Market, Open SoftwareAssociates, POET Software, SoftQuad, Texcel, Textuality, Unwired Planet, Vignette, and webMethods. [local archive copy]
- "W3C Endorses First XML Standard for Global Use." By Dana Gardner. In *InfoWorld Electric*. Posted at 11:40 AM PT, February 10, 1998.
- Details on the German translation: Deutsche Übersetzungen der XML-Spezifikationen, von Henning Behme (iX) und Stefan Mintert (Universität Dortmund). Also available in .ZIP format.
-

On the 'XML Specification DTD' and the corresponding 'Report' (documentation):
See the separate document.

Extensible Markup Language as a Proposed Recommendation

[December 08 [12], 1997] Extensible Markup Language (XML) 1.0, issued as a W3C Proposed Recommendation. December 8, 1997. Editors: Tim Bray (Textuality and Netscape), Jean Paoli (Microsoft), and C. M. Sperberg-McQueen (University of Illinois at Chicago). Reference: PR-xml-971208. Version URL: http://www.w3.org/TR/PR-xml-971208. Announced at the SGML/XML '97 Conference in Washington, D.C. See the press release, or a press release, alternate source. XML WG Chair Jon Bosak clarified the WG's new work focus in light of the

publication of this PR.

- HTML Format
- Postscript format
- Postscript, .ZIP compressed
- RTF format
- XML format
- local archive copy (HTML)
- Japanese translation of the XML PR, in HTML format and in XML format
- Associated and referenced NOTE: "Comparison of SGML and XML." By James Clark. Reference identifiers: World Wide Web Consortium Note 15-December-1997, NOTE-sgml-xml-971215.

Extensible Markup Language - Other Earlier Working Draft Versions

- [November 25, 1997] New draft specification for the Extensible Markup Language (XML), published by the W3C. References: W3C Working Draft 17-November-1997, WD-xml-971117, Version 1.0. The version URL: http://www.w3.org/TR/WD-xml-971117; [local archive copy].
- "Extensible Markup Language (XML)." Version 1.0. Edited by Tim Bray, Jean Paoli, and C. M. Sperberg-McQueen. W3C Working Draft 07-Aug-97. WD-xml-970807. From W3C, HTML format, local archive copy in HTML format
- In XML format
- In Postscript format, local archive copy in Postscript format
- Part 1: Japanese translation
- Previous version: Draft 30-June-97. HTML version, Postscript; local archive copy in HTML, or Postscript.
- Previous version: Draft 31-March-97. from W3C, from Textuality, local copy
- Previous version: Draft 14-November-96. HTML version, from W3C

Extensible Linking Language (XLL/XLink) [Formerly: 'xml-link']

[CR: 19980128] [Table of Contents]

Note: A separate document xll.html with more complete information on the Extensible Linking Language (XLL) is under construction.

- "Extensible Markup Language (XML): Part 2. Linking." Version 1.0. Edited by Tim Bray and Steve DeRose. W3C Working Draft July-31-97. WD-xml-link-970731. From W3C in HTML format. The local archive copy
- Part 2 from Textuality [HTML] - check the version number!
- Part 2 from UNC Sunsite [Postscript] check the version number!
- Part 2: Japanese translation
- Previous version: WD-xml-link-970630 - "Extensible Markup Language (XML): Part 2. Linking. W3C Working Draft June-30-97; [local archive copy]
- Previous version: Draft 06-April-97. http://www.w3.org/pub/WWW/TR/WD-xml-link-970406.html, Part 2 970406: local mirror copy

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Extensible Style Language (XSL) [Formerly: 'xml-style']

[CR: 19980128]

Note: A separate document xsl.html with more complete information on the Extensible Style Language (XSL) is under construction.

- Extensible Style Language Proposal [September 11, 1997]. Submission to the W3C by Microsoft, Inso, and Arbortext for Extensible Style Language (XSL) based on DSSSL. August 27, 1997. Title: *A Proposal for XSL*. Reference: NOTE-XSL.html. Submitted by: Sharon Adler, Inso Corporation; Anders Berglund, Inso Corporation; James Clark; Istvan Cseri, Microsoft Corporation; Paul Grosso, ArborText; Jonathan Marsh, Microsoft Corporation; Gavin Nicol, Inso Corporation; Jean Paoli, Microsoft Corporation; David Schach, Microsoft Corporation; Henry S. Thompson, University of Edinburgh; Chris Wilson, Microsoft Corporation. HTML version

- from W3C. XSL proposal local archive copy
- XSL submission: the overview, and Press release from Microsoft, or press release from ArborText; local archive copy
- XSL submission: from Microsoft
- [January 23, 1998] Formation of a W3C Working Group for XSL. See XSL Information from W3C (Chris Lilley)
- **Software** implementations supporting the "Proposal for XSL" submitted to W3C:
  - XSLJ - Jade-compatible XSL-to-DSSSL translator from Henry Thompson
  - msxsl - Microsoft XSL Processor, Technology Preview
  - XML Styler - ArborText tool for creating and modifying XSL stylesheets
  - docproc - an XML + XSL document processor from Sean Russell
- ECMAScript is referenced in the XSL proposal. ECMAScript: ECMA-262 JavaScript Language Specification. "A general purpose scripting language (GPSL)", 1997. Available as PDF, or MS Word, in Win 32 self-extracting binary. Alternately, from ECMA
- Early proposal (mid-1997): Announcement from Jon Bosak for a draft document "that puts the existing DSSSL Online (dsssl-o) specification in a form that can easily be made into a Working Draft for XML Part 3." Draft for discussion [Postscript]. Part 3 draft: local mirror copy [Postscript]

XML FAQ Documents: Answers to "Frequently-Asked-Questions"

[CR: 20020709] [Table of Contents]

See now the separate document for references to SGML/XML FAQs. This document cites the earlier versions of the XML FAQ (1.5, 1.4, 1.3, 1.2, 1.1) and early translations into Japanese, Spanish, and Korean.

XML Information Online: Other WWW Sites

[CR: 20001101] [Table of Contents]

- SGML, XML, and Structured Document Interchange - W3C activity statement
- Extensible Markup Language (XML) - W3C Overview
- Overview of SGML and XML Resources - W3C
- XML at Sun Microsystems - 'Standards and technologies driving the DOT-COM world'
- XML Resources - James Clark
- XML.com - Seybold, O'Reilly, Songline. Includes an index of XML articles from Seybold Publications.
- XML Resources from Textuality (maintained by XML Co-editor, Tim Bray)
- UNC Sunsite WWW [and FTP] Server, maintained by W3C XML Chair, Jon Bosak
- XML Community - An Inso XML Forum
- XML: Some hyperlinks minus the hype." By Philip Wadler (Bell Labs, Lucent Technologies). "XML (Extensible Markup Language) is a magnet for hype: the successor to HTML for web publishing, electronic data interchange, and e-commerce. In fact, XML is just a notation for trees, little more than a verbose variant of Lisp S-expressions; and a way to define tree grammars, a poor-man's BNF. Yet this simple basis has spawned scores of specialized sub-languages: for airlines, banks, and cell phones; for astronomy, biology, and chemistry; for the DOD and the IRS. This note is a brief guide to web resources that explain XML..."
- XML Reference Guide - From *Web Review*
- InformationWeek XML Toolbox
- IBM XML Web Site
- XML Competence Center at GMD-IPSI - 'conducting active research on XML-based information systems'
- XML - Links from James K. Tauber's XML page
- *XML Files* - GCA's XML Magazine. Edited by Dianne Kennedy, published by Norm Scharpf. Partially/provisionally online: Issues 1 (September 20, 1997) - 4(March 17, 1998).
- Xmlu.com Website

- [XML Software Guide](#) - WDVL
- [xmlTree](#) - Resource listing for "a list of sites and resources which offer data according to XML formatting rules." By [James Carlyle](#).
- [XML](#) - Links from The Virtual School of Molecular Sciences (VSMS)
- [XML Resources](#) - Links from ArborText
- [finetuning.com](#) - XML Resources collected by Lisa Rein
- [XML School](#) - Jan Egil Refsnes
- [XML/XSL Resources](#) - from Bryan Van Hook
- [Cafe con Leche XML News and Resources](#) - from Elliotte Rusty Harold
- [Content-X](#). Focused on the application of server-side XML.
- [XML](#) Adam Rifkin's Collection of Links
- [XML Links](#) - From DataChannel. Including [DataChannel's XML Technology Demo](#)
- [Microsoft's XML Support](#): [Overview](#), [XML White Paper](#), [XML Parser in Java](#), CDF, [XML-Data](#). Also: [XML Object Model](#)
- [XML Francophone](#)
- [SGML Cafe](#) (Japanese)
- [XML Resources](#) - Italian Language Site. Paolo De Lazzaro.
- [Korean XML site](#) from Techno 2000 Project Inc.
- [Chinese XML Now!](#) = Chinese XML Web Site. 'A project to help developers of Chinese XML Software.'
- [Chinese XML Site](#) - Open China/Open XML.
- [Korean XML Web site XMLis.com](#) Contact: [Kwangmin Lee](#).
- [World Wide Weave](#) - "Weave allows people to publicize new XML-based web sites and documents Weave contains only sites that provide content in XML-based markup."
- [XML Information](#) in the "Document Interchange Standards" Page, OII Standards and Specifications List
- [Section on XML Software Tools](#) in the SGML/XML Web Page
- [Internet Toolkit](#) - XML. PC Magazine/ZDNet.
- [XMLshareware.com](#)

XML: Proposed Applications and Industry Initiatives

[CR: 20040102] [Table of Contents]

The XML applications and announced industry initiatives listed below have not been evaluated according to any serious criteria for quality and genuineness. Since the various specifications documents for XML/XLink/XSL are still in some flux, it would often be unfair or difficult to make such a judgment. Obviously, many of these application areas provide exemplary models, having unquestioned integrity and high quality. Some already play a vital role in profitable commercial enterprise. It is also to be expected that some early XML/XLink/XSL applications may be merely demonstrations, toys, proof-of-concept applications; still others might be naive or ill conceived. It may be necessary to regard some of these ideas 'in draft' like some of the specifications documents themselves. The good news is this: Net users are seeing clearly that a fixed tag set (like HTML) is not the solution. . .

Contents Listing for XML Applications and Industry Initiatives

- [W3C Specifications Documentation](#)
- [IEEE Standard DTD](#)
- [OASIS Specification DTDs and Tools](#)
- [Text Encoding Initiative (TEI)](#)
- [Markup Language for Complex Documents (Bergen MLCD Project)](#)
- [Manuscript Access through Standards for Electronic Records (MASTER)](#)
- [XCES: Corpus Encoding Standard for XML](#)
- [Global Document Annotation Initiative (GDA)](#)
- [Electronic Metadata for Endangered Languages Data (EMELD)](#)
- [Encoding and Markup for Texts of the Ancient Near East](#)
- [Electronic Text Corpus of Sumerian Literature (ETCSL)](#)
- [XML System for Textual and Archaeological Research (XSTAR)](#)
- [Perseus Project](#)
- [The Making of America II Project](#)
- [Metadata Encoding and Transmission Standard (METS)](#)
- [Harvard University E-Journal Archive Project](#)
- [Image Metadata Aggregation for Enhanced Searching (IMAGES)](#)

- Encoded Archival Description (EAD)
- Encoded Archival Context Initiative (EAC)
- Linking and Exploring Authority Files (LEAF)
- STEP/EXPRESS and XML
- STEPml XML Specifications
- Atom Publishing Format and Protocol
- Channel Definition Format, CDF (Based on XML)
- RDF Rich Site Summary (RSS)
- Open Content Syndication (OCS)
- Web Modeling Language (WebML)
- Portable Site Information (PSI)
- XHTML and 'XML-Based' HTML Modules
- Ruby Annotation
- W3C Document Object Model (DOM), Level 1 Specification
- Web Collections using XML
- Meta Content Framework Using XML (MCF)
- XML-Data
- Namespaces in XML
- Resource Directory Description Language (RDDL)
- The Australia New Zealand Land Information Council (ANZLIC) - Metadata
- NISO Circulation Interchange Protocol (NCIP)
- Alexandria Digital Library Project
- European Visual Archive Project (EVA)
- ATLA Serials Project (ATLAS)
- BiblioML - XML for UNIMARC Bibliographic Records
- bibteXML: XML for BibTeX
- Medlane XMLMARC Experiment - MARC to XML
- Nomen Project for Enhanced MARC 21 Name Authority
- e-Government Interoperability Framework (e-GIF)
- Controlled Trade Markup Language (CTML)
- Governmental Markup Language (GovML)
- US Federal CIO Council XML Working Group
- United States Congress: XML for Legislative Documents
- ParlML: A Common Vocabulary for Parliamentary Language
- US Internal Revenue Service and SGML/XML for Tax Filing
- Tax Information Group for ECommerce Requirements Standardization (TIGERS)
- US Office of Justice XML Standards Initiative
- Legal XML Working Group
- LegalXML Electronic Court Filing TC
- COSCA/NACM JTC XML Court Filing Project
- New Mexico District Court XML Interface (XCI)
- Georgia State University Electronic Court Filing Project
- US Patent and Trademark Office Electronic Filing System
- WIPO XML DTDs for the Electronic Patent Cooperation Treaty Application
- Election Markup Language (EML)
- XML and Voting (Ballots, Elections, Polls)
- Environmental Protection Agency (EPA) Central Data Exchange (CDX)
- PEO Interchange XML Initiative (PIXIT)
- Tukwila Data Integration System (University of Washington)
- UML to XML Design Rules Project
- XML Metadata Interchange Format (XMI) - Object Management Group (OMG)
- OMG Common Warehouse Metadata Interchange (CWMI) Specification
- OMG Model Driven Architecture (MDA)
- Object Management Group XML/Value RFP
- MDC Open Information Model (OIM)
- Dublin Core Metadata Initiative (DCMI)
- Harmony Project ABC Ontology and Model
- RSLP Collection Description Project
- Vocabulary Markup Language (VocML)
- Open Archives Metadata Set (OAMS)
- Xyleme Project: Dynamic Data Warehouse for the XML Data of the Web
- TV Anytime Forum
- Publishing Requirements for Industry Standard Metadata (PRISM)
- Platform for Internet Content Selection (PICS)
- Extensible Graph Markup and Modeling Language (XGMML)
- Structured Graph Format (SGF)
- Graph Exchange Language (GXL)
- Petri Net Markup Language (PNML)
- XML and Petri Nets
- Outline Processor Markup Language (OPML)
- Web Standards Project (WSP)
- BIC Workgroup for XML-based eBusiness Standard Convergence
- XML Mail Transport Protocol (XMTP) for XML SMTP and MIME Representation
- HTML Threading - Use of HTML in Email
- Open Software Description Format (OSD)
- Log Markup Language (LOGML)

- XLF (Extensible Log Format) Initiative
- ALURe (Aggregation and Logging of User Requests) XML Specification
- Apache XML Project
- Relational Markup Language (RML)
- WAP Wireless Markup Language Specification
- Extensible Messaging and Presence Protocol (XMPP)
- Common Profile for Instant Messaging (CPIM)
- Presence Information Data Format (PIDF)
- XML Messaging (IETF)
- Jabber XML Protocol
- XML Messaging Specification (XMSG)
- XML Encoding for SMS (Short Message Service) Messages
- MessageML
- Multi-Channel Access XML (MAXML)
- The SyncML Initiative
- XML Document Navigation Language (XDNL)
- HTTP Distribution and Replication Protocol (DRP)
- Materials Property Data Markup Language (MatML)
- Measurement Units Markup Language
- XML-Based 'Chem eStandard' for the Chemical Industry
- Chemical Markup Language
- Molecular Dynamics [Markup] Language (MoDL)
- NCBI Molecular Biology Data Model
- StarDOM - Transforming Scientific Data into XML
- Bioinformatic Sequence Markup Language (BSML)
- BIOpolymer Markup Language (BIOML)
- CellML
- Gene Expression Markup Language (GEML)
- GeneX Gene Expression Markup Language (GeneXML)
- Genome Annotation Markup Elements (GAME)
- "OMG Life Sciences Identifiers Specification
- MicroArray and Gene Expression Markup Language (MAGE-ML)
- Microarray Markup Language (MAML)
- XML for Multiple Sequence Alignments (MSAML)
- Systems Biology Markup Language (SBML)
- OMG Gene Expression RFP
- Protein Extensible Markup Language (PROXIML)
- Taxonomic Markup Language
- XDELTA: XML Format for Taxonomic Information
- The Species Analyst Project
- Virtual Hyperglossary (VHG)
- Weather Observation Definition Format (OMF)
- Open Philanthropy Exchange (OPX)
- Open Financial Exchange (OFX/OFE)
- Interactive Financial Exchange (IFX)
- FinXML - 'The Digital Language for Capital Markets'
- Investment Research Markup Language (IRML)
- Extensible Financial Reporting Markup Language (XFRML)
- Extensible Business Reporting Language (XBRL)
- Vendor Reporting Extensible Markup Language (VRXML)
- XMLPay Specification
- Financial Products Markup Language (FpML)
- ISO 15022 XML
- Treasury Workstation Integration Standards Team (TWIST)
- Market Data Definition Language (MDDL)
- Market Data Markup Language (MDML)
- Weather Markup Language (WeatherML)
- MarketsML Initiative
- Research Information Exchange Markup Language (RIXML)
- Data Link for Intermediaries Markup Language (daliML)
- swiftML for Business Messages
- Straight Through Processing Markup Language (STPML)
- FAML DTD for Financial Research Documents
- XML-MP: XML Mortgage Partners Framework
- Mortgage Bankers Association of America MISMO Standard
- EcoKnowMICS ML
- Trading Partner Agreement Markup Language (tpaML)
- Internet Open Trading Protocol (IOTP)
- XML Voucher: Generic Voucher Language
- papiNet Standard
- Java XML-Based Messaging System (JAXM)
- Java API for XML Registries (JAXR)
- Patents and Open Standards
- XML and Digital Rights Management (DRM)
- Creative Commons Project
- OASIS Rights Language
- Digital Property Rights Language (DPRL)
- Extensible Rights Markup Language (XrML)

- Open Digital Rights Language (ODRL)
- MPEG Rights Expression Language
- <indecs>2rdd Consortium - Rights Data Dictionary
- Digital Object Identifier (DOI) System
- Extensible Access Control Markup Language (XACML)
- Enterprise Privacy Authorization Language (EPAL)
- Extensible Media Commerce Language (XMCL)
- Electronic Book Exchange (EBX) Working Group
- XML-Based Provisioning Services
- Information Technology Markup Language (ITML)
- XRPM Working Group for Extensible Resource Provisioning Management
- Active Digital Profile
- Extensible Provisioning Protocol (EPP)
- XML and Encryption
- P3P Specification: Platform for Privacy Preferences
- Extensible Name Service (XNS)
- Dialogue Moves Markup Language (DMML)
- XML Digital Signature (Signed XML - IETF/W3C)
- Digital Signatures
- XML Key Management Specification (XKMS)
- XML Common Biometric Format (XCBF)
- Security Assertion Markup Language (SAML)
- Liberty Alliance Specifications for Federated Network Identification and Authorization
- Web Services Security Specification (WS-Security)
- Security Services Markup Language (S2ML)
- XML Access Control Language (XACL)
- AuthXML Standard for Web Security
- Intrusion Detection Message Exchange Format (IDMEF)
- Incident Object Description and Exchange Format (IODEF)
- Digital Signatures for Internet Open Trading Protocol (IOTP)
- XML Encoding of SPKI Certificates
- Digital Receipt Infrastructure Initiative
- Digest Values for DOM (DOMHASH)
- Signed Document Markup Language (SDML)
- Financial Services Markup Language (FSML)
- FIXML - A Markup Language for the FIX Application Message Layer
- Electronic Commerce Modeling Language (ECML)
- Bank Internet Payment System (BIPS)
- smartX ['SmartCard'] Markup Language (SML)
- Real Estate Transaction Markup Language (RETML)
- OpenMLS and RELML (Real Estate Listing Markup Language)
- Data Consortium (Real Estate Standards)
- Comprehensive Real Estate Transaction Markup Language (CRTML)
- ACORD - XML for the Insurance Industry
- iLingo XML Schemas for Insurance
- Customer Profile Exchange (CPEX) Working Group
- Customer Support Consortium
- Standards for Technology in Automotive Retail (STAR)
- XML for the Automotive Industry - SAE J2008
- Spacecraft Markup Language (SML)
- XML.ORG - The XML Industry Portal
- X-ACT - XML Active Content Technologies Council
- Electronic Business XML Initiative (ebXML)
- Reliable Messaging
- Universal Business Language (UBL)
- Joint UN/EDIFACT and ASC X12 Core Component Development Initiative
- UN/CEFACT XML Business Document Library Project (XBDL)
- DISA Registry Initiative (DRIVE)
- BASDA eBIS-XML
- OASIS Business Transactions Technical Committee
- Portal Markup Language (PML)
- EDGARspace Portal
- Global Commerce Initiative (GCI)
- DII Common Operating Environment (COE) XML Registry
- XML and Emergency Management
- OASIS Emergency Management TC
- "Application Security
- Mathematical Markup Language (MathML)
- OpenMath Standard
- OMDoc: A Standard for Mathematical Documents
- Re-Useable Data Language (RDL)"
- Metadata - PICS
- MIX - Mediation of Information Using XML
- CDIF XML-Based Transfer Format
- Synchronized Multimedia Integration Language (SMIL)
- Multimodal Presentation Markup Language (MPML)
- Moving Picture Experts Group: MPEG-7 Standard

- MPEG-21 Part 2: Digital Item Declaration Language (DIDL)
- DIG35: Metadata Standard for Digital Images
- Common Picture Exchange Environment (CPXe)
- Extensible Metadata Platform (XMP)
- W3C Scalable Vector Graphics (SVG)
- WebCGM
- Precision Graphics Markup Language (PGML)
- Vector Markup Language (VML)
- Image Markup Language (IML)
- VRML (Virtual Reality Modeling Language) and X3D
- Covad xLink API (XML-Based DSL Provisioning)
- WebBroker: Distributed Object Communication on the Web
- Web Interface Definition Language (WIDL)
- XML/EDI - Electronic Data Interchange
- Global Engineering Networking Initiative (GEN)
- XML/EDI Repository Working Group
- TranXML
- Value Chain Markup Language (VCML)
- TransportationXML (tXML)
- Tracker XML (TXML)
- Uniform Code Council (UCC) XML Program
- Physical Markup Language (PML) for Radio Frequency Identification (RFID)
- VICS CPFR XML Messaging Standard
- Global Uniform Interoperable Data Exchange (GUIDE)
- Implementation Guideline Markup Language (igML)
- BizCodes Initiative
- Universal Data Element Framework (UDEF)
- European XML/EDI Workshop
- EEMA EDI/EC Work Group - XML/EDI
- ANSI ASC X12/XML and DISA
- OpenTravel Alliance (OTA)
- Hospitality Industry Technology Integration Standards (HITIS) Project
- Information and Content Exchange (ICE)
- CommerceNet Industry Initiative
- eCo Interoperability Framework Specification
- BizTalk Framework
- eCo Framework Project and Working Group
- Commerce XML (cXML)
- Marketplace XML (mpXML)
- QuickBooks Extensible Markup Language (qbXML)
- ArapXML for General Ledger and Account Receivable/Account Payable Integration
- SMBXML: An Open Standard for Small to Medium Sized Businesses
- Electronic Procurement Standardization
- RosettaNet
- Open Catalog Protocol (OCP)
- eCatalog XML (eCX)
- vCARD in XML and RDF (Electronic Business Card)
- Hybrid Mail Language (HML)
- Markup Languages for Names and Addresses
- IDEAlliance Address Data Interchange Specification (ADIS)
- British Standard BS7666 for Geographical Referencing
- xNAL Name and Address Standard (xNL, xAL)
- Customer Identity / Name and Address Markup Language (CIML, NAML)
- AND Global Address XML Definition
- Whois Export and Exchange Format
- CECA XML Specification for Civil Estate Data
- TimeML: Markup Language for Temporal and Event Expressions
- Historical Event Markup and Linking (HEML)
- iCalendar DTD Document (xCal)
- XML Encoded Form Values
- Capability Card: An Attribute Certificate in XML
- Telecommunications Markup Language (tML)
- Telecommunications Interchange Markup (TIM, TCIF/IPI)
- aecXML Working Group - Architecture, Engineering and Construction
- Building Construction Extensible Markup Language (bcXML)
- MasterBuilder Construction Management and Accounting
- eBuild-XML
- Green Building XML (gbXML)
- Product Data Markup Language (PDML)
- Product Definition Exchange (PDX)
- Electronic Component Information Exchange (ECIX) and Pinnacles Component Information Standard (PCIS)
- ECIX QuickData Specifications
- ECIX Component Information Dictionary Standard (CIDS)
- ECIX Timing Diagram Markup Language (TDML)
- XML and Electronic Design Automation (EDA)
- UML eXchange Format (UXF)

- Java Architecture for XML Binding (JAXB)
- XML Data Binding Specification
- XML Localization Interchange File Format (XLIFF)
- Translation Memory Exchange (TMX)
- OpenTag Markup
- *Scripting News* in XML
- InterX.org Initiative
- Document Encoding and Structuring Specification for Electronic Recipe Transfer (DESSERT)
- NuDoc Technology
- Coins: Tightly Coupled JavaBeans and XML Elements
- DMTF Common Information Model (CIM)
- SNIA Storage Management Initiative Specification (SMI-S)
- Management Protocol Specification
- Data Center Markup Language (DCML)
- Universal Plug and Play Forum
- XML Transition Network Definition (XTND)
- IPDR.org Network Data Management Usage Specification
- XML and 'The Semantic Web'
- XML and Attribute Grammars
- XML Belief Network File Format (Bayesian Networks)
- Predictive Model Markup Language (PMML)
- Triple-s XML Survey Interchange Standard
- Multilingual Upper-Level Electronic Commerce Ontology (MULECO)
- Resource Description Framework (RDF)
- Ontology Interchange Language (OIL)
- Meaning Definition Language (MDL)
- (XML) Topic Maps
- STARLab ORM Markup Language (ORM-ML)
- DARPA Agent Mark Up Language (DAML)
- OWL Web Ontology Language
- Robotic Markup Language (RoboML)
- Rule Markup Language (RuleML)
- Business Rules Markup Language (BRML)
- Business Process Modeling Language (BPML)
- Agent-Oriented Rule Markup Language (AORML)
- Extensible Rule Markup Language (XRML)
- Simple Rule Markup Language (SRML)
- Relational-Functional Markup Language (RFML)
- Ontology and Conceptual Knowledge Markup Languages
- Information Flow Framework Language (IFF)
- Simple HTML Ontology Extensions (SHOE)
- XOL - XML-Based Ontology Exchange Language
- Description Logics Markup Language (DLML)
- Case Based Markup Language (CBML)
- Artificial Intelligence Markup Language (AIML)
- Physics Markup Language (PhysicsML)
- Procedural Markup Language (PML)
- Process Interchange Format XML (PIF-XML)
- QAML - The Q&A Markup Language
- LACITO Projet Archivage de données linguistiques sonores et textuelles [Linguistic Data Archiving Project]
- Geography Markup Language (GML)
- UK Digital National Framework (DNF) for Geographical Information
- Point of Interest Exchange Language Specification (POIX)
- Exploration and Mining Markup Language (XMML)
- LandXML
- Navigation Markup Language (NVML)
- Extensible Data Format (XDF)
- FITSML for Flexible Image Transport System
- Gemini Observatory Project
- NASA Goddard Astronomical Data Center (ADC) 'Scientific Dataset' XML
- Extensible Scientific Interchange Language (XSIL)
- Object Oriented Data Technology (OODT) and XML
- Astronomical Markup Language
- Astronomical Instrument Markup Language (AIML)
- Genealogical Data and XML
- GedML: [GEDCOM] Genealogical Data in XML
- BannerML
- adXML.org: XML for Advertising
- SPACE XML
- Newspaper Association of America (NAA) - Standard for Classified Advertising Data
- AdMarkup XML DTD for Classified Advertising
- News Industry Text Format (NITF)
- XMLNews: XMLNews-Story and XMLNews-Meta
- NewsML and IPTC
- SportsML

- News Markup Language (NML)
- XMLTV
- Notes Flat File Format (NFF)
- Java Help API
- Cold Fusion Markup Language (CFML)
- Edge Side Includes (ESI)
- Document Content Description for XML (DCD)
- XSchema
- Document Definition Markup Language (DDML)
- Character Mapping Markup Language (CharMapML)
- WEBDAV (IETF 'Extensions for Distributed Authoring and Versioning on the World Wide Web')
- DAV Searching and Locating (DASL)
- XML File Formats for Office Documents
- DocBook XML DTD
- Darwin Information Typing Architecture (DITA XML)
- NLM XML DTDs for Journal Publishing, Archiving, and Interchange
- OpenOffice.org XML File Format
- Microsoft Office 11 and InfoPath [XDocs]
- Graphic Communications Association - GCA 'Paper' DTD
- Open eBook Initiative
- ONIX International XML DTD
- NISO Digital Talking Books (DTB)
- Apache Cocoon JavaDoc Documentation in XML
- JDox: XML Format for Sun Javadoc
- JRefEntry DTD
- XML for Publishers and Printers (XPP)
- Job Definition Format (JDF)
- Personalized Print Markup Language (PPML)
- Printing Industry Markup Language (PrintML)
- PML: Markup Language for Paper and Printing
- PrintTalk Consortium
- printcafe eProduction eCommerce eXchange (PCX)
- PostSecondary Electronic Standards Council XML Forum for Education
- IEEE LTSC XML Ad Hoc Group
- Universal Learning Format Technical Specification
- Educom Instructional Management Systems Project (IMS) Metadata Specification
- Shareable Content Object Reference Model Initiative (SCORM)
- Learning Material Markup Language (LMML)
- Schools Interoperability Framework (SIF)
- Tutorial Markup Language (TML)
- International Development Markup Language (IDML)
- Voice Browser Call Control (CCXML)
- Call Processing Language (CPL)
- Call Policy Markup Language (CPML)
- VoiceXML Forum (Voice Extensible Markup Language Forum)
- Speech Application Language Tags (SALT)
- CallXML
- VoxML Markup Language
- Telephony Markup Language (TML)
- DARPA Communicator Project and XML Log Standard
- Multilevel Annotation, Tools Engineering (MATE)
- Computing Environment for Linguistic, Literary, and Anthropological Research (CELLAR)
- Architecture and Tools for Linguistic Analysis Systems (ATLAS)
- TalkBank and the Codon XML-Based Annotation Framework
- ACE Pilot Format DTDs
- Transcriber - Speech Segmentation and Annotation DTD
- Natural Language Semantics Markup Language
- Extensible Telephony Markup Language (XTML)
- SABLE: A Standard for Text-to-Speech Synthesis Markup
- W3C Speech Synthesis Markup Language Specification
- W3C Speech Recognition Grammar Specification
- Java Speech Markup Language (JSML/JSpeech)
- SpeechML
- TalkML
- Project Management XML Schema (PMXML)
- Asynchronous Transactions and Web Services
- XML for Workflow Management [NIST]
- SWAP - Simple Workflow Access Protocol
- XML-Based Workflow and Process Management Standards: XPDL, Wf-XML
- Exchangeable Routing Language (XRL)
- Architecture Description Markup Language (ADML)
- Human Markup Language (HumanML)
- Theological Markup Language (ThML)
- XML Scripture Encoding Model (XSEM)
- Open Scriptural Information Standard (OSIS)

- OpenText.org Papyrus Encoding Markup
- LitML: A Liturgical Markup Language
- XML-F ('XML for FAX')
- XML and Forms
- XHTML-FML: Forms Markup Language
- Extensible Forms Description Language (XFDL)
- XML Forms Architecture (XFA)
- Electronic Form System (EFS)
- Broadcast Markup Language (BML)
- Broadcast Hypertext Markup Language (BHTML)
- IEEE Standard DTD
- Open Settlement Protocol (OSP) - ETSI/TIPHON
- Directory Services Markup Language (DSML)
- DirXML
- DIF Directory Interoperability Proposal
- XML DTD for ACAP - ACAP Data Interchange Format
- WDDX - Web Distributed Data Exchange
- XIOP - XML Corba Environment-Specific Inter-ORB Protocol
- XML-RPC
- Blocks eXtensible eXchange Protocol Framework (BEEP)
- ANTACID Replication Service
- IETF Working Group for Open Pluggable Edge Services (OPES)
- Layered Object Transport Protocol (LOTP)
- XML for Exchange of Structure and Identification of Management Information (SMI)
- WorldOS
- XML Common Business Library (xCBL)
- Universal Commerce Language and Protocol (UCLP)
- VISA XML Invoice Specification
- NACS XML Data Interchange (NAXML)
- ARTS IXRetail
- First Retail Mark-up Language
- Open Applications Group - OAGIS
- Schema for Object-oriented XML (SOX)
- XMLTP.Org - XML Transfer Protocol
- The XML Bookmark Exchange Language (XBEL)
- Simple Object Definition Language (SODL) and XMOP Service
- W3C XML Protocol
- Web Services Interoperability Organization (WS-I)
- Simple Object Access Protocol (SOAP)
- Universal Description, Discovery, and Integration (UDDI)
- "Stateful Web Services
- Web Services Addressing (WS-Addressing)
- Standards for Business Process Modeling, Collaboration, and Choreography
- Web Services Inspection Language (WSIL)
- Web Services Conversation Language (WSCL)
- Web Services Description Language (WSDL)
- Web Service Choreography Interface (WSCI)
- Web Services for Interactive Applications (WSIA)
- Web Services Flow Language (WSFL)
- Web Services User Interface (WSUI) Initiative
- Web Services for Remote Portals (WSRP)
- Web Services Experience Language (WSXL)
- Business Process Execution Language for Web Services (BPEL4WS)
- XLANG
- Direct Internet Message Encapsulation (DIME)
- Microsoft Hailstorm
- Transaction Authority Markup Language (XAML)
- ASN.1 Markup Language (AML)
- XML Encoding Rules for ASN.1 (XER)
- Object-Oriented Programing Meta-Language (OOPML)
- XML and Music
- FlowML: A Format for Virtual Orchestras
- XML in Clinical Research and Healthcare Industries
- Clinical Data Interchange Standards Consortium
- Electronic Common Technical Document (eCTD) for Pharmaceuticals
- National Library of Medicine (NLM) XML Data Formats
- ISIS European XML/EDI Healthcare Pilot Project (XMLEPR)
- Open Healthcare Group 'XChart'
- DocScope: Open Source XML Healthcare Project
- Health Level Seven XML Patient Record Architecture
- ASTM XML Document Type Definitions (DTDs) for Health Care
- The CISTERN Project - Standard XML Templates for Healthcare
- Template Definition Language (TDL)
- Human Resource Management Markup Language (HRMML)
- HR-XML Consortium
- Staffing Industry Data Exchange Standards (SIDES)

- XML-HR Initiative - Human Resources
- Rosetta Group XML Résumé Library
- ECMData - Electronic Component Manufacturer Data Sheet Inventory Specification
- Bean Markup Language (BML)
- The Koala Bean Markup Language (KBML)
- Jigsaw XML Format (JigXML)
- Chinese XML Now!
- MOS-X (Media Object Server - XML)
- FLBC (Formal Language for Business Communication) and KQML
- ISO 12083 XML DTDs
- Electronic Thesis and Dissertation Markup Language (ETD-ML)
- XML Markup Languages for User Interface Definition
- Extensible User Interface Language (XUL)
- Microsoft Extensible Application Markup Language (XAML)
- The Extensible Bindings Language (XBL)
- User Interface Markup Language (UIML)
- Process Specification Language (PSL) and XML
- Batch Control Markup Language
- SCL Component Test Bed Specification
- AgXML
- American Iron and Steel Institute (AISI) XML Workgroup
- Steel Markup Language (SML)
- Energy Trading Standards Group (ETSG)
- Petroleum Industry Data Exchange (PIDX) XML Transaction Standards
- Petrotechnical Open Software Corporation (POSC) XML Related Projects
- PetroXML Initiative
- Partner Interface Process for Energy (PIPE)
- Marine Trading Markup Language (MTML)
- Navy CALS Initiatives XML
- eFirst XML for Scholarly Articles
- XML DTD for Phone Books
- Using XML for RFCs
- Guideline XML (gXML)
- Extensible Protocol
- Data Documentation Initiative: A Project of the Social Science Community
- XML and Databases
- XML for Analysis
- SODA2 - An XML Semistructured Database System
- RAX - Record API for XML
- XML and CORBA
- "Smalltalk Interchange Format in XML (SMIX)
- Chess Markup Language (ChessML)
- Mind Reading Markup Language (MRML)

W3C Specifications Documentation *aka* 'XML Spec DTD'

[CR: 20001005]

[*][SWEB][ODD][19990205] Content is now in a separate document: see "XML Specification DTD." See the XML Spec DTD and documentation.

IEEE Standard DTD

[CR: 20020706]

See now the separate document "IEEE Standard DTD."

Text Encoding Initiative (TEI)

[CR: 19990802]

[June 30, 1999] A 'TEI Lite DTD in XML' was made available from the TEI Web site. See the references for TEI - the XML version in a separate document, and the section 'Academic Applications' for background on the SGML version of the TEI DTD.

Channel Definition Format, CDF (Based on XML)

Channel Definition Format (CDF) is an application of the Extensible Markup Language designed for push technology. The proposal has been submitted to the World Wide Web Consortium.

- Channel Definition Format (CDF) - Main entry

RDF Rich Site Summary (RSS)

[CR: 19990513]

"My Netscape Network (MNN) is a free Netcenter service that lets you create your own My Netscape channel. Create an RDF Site Summary (RSS) 0.9 file that describes your content." See description and references in a separate document. Note 'OCS' below.

Open Content Syndication (OCS)

[CR: 20010920

See the separate document.

W3C Document Object Model (DOM), Level 1 Specification

[CR: 19990106]

In early January 1999, a W3C Working Draft for the Document Object Model (DOM) Level 2 Specification Version 1.0 (WD-DOM-Level-2-19981228) was released. It "defines the Document Object Model Level 2, a platform- and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure and style of documents. The Document Object Model Level 2 builds on the Document Object Model Level 1. Level 2 adds interfaces for a Cascading Style Sheets object model, an event model, and a query interface, amongst others."

On October 1, 1998, the World Wide Web Consortium published the Document Object Model (DOM) Level 1 Specification, Version 1.0 as a W3C Recommendation. "The Document Object Model is a platform- and language-neutral interface that will allow programs and scripts to dynamically access and update the content, structure and style of documents. The document can be further processed and the results of that processing can be incorporated back into the presented page."

The main database entry for the W3C DOM has been moved to a separate document.

Web Collections using XML

"Web Collections are an application of XML - a meta-data syntax that fits easily within the framework of the World Wide Web. Web Collections are an application of XML, the Extensible Markup Language. In addition, Web Collections can be expressed inside HTML documents or on their own. In addition they are stylistically similar to HTML to enable easy authoring. . . Some of the anticipated applications of Web Collections include Web Maps, HTML Email Threading, PIM functions, scheduling, content labeling, and distributed authoring." ["work in progress"]

- Web Collections using XML - March 09, 1997. By Alex Hopmann, with Scott Berkun, George Hatoun, Yaron Goland, Thomas Reardon, Lauren

Antonoff, Eric Berman, and others. [mirror copy]

Meta Content Framework Using XML

[CR: 19970622]

Netscape Communications announced a new proposed XML application. According to the notice on the Netscape Developer's page: "The Meta Content Framework, or MCF, provides a standard way to describe files or collections of information. A new Netsape document describes how to apply MCF using XML, the Extensible Markup Language."

Links:

- The main MCF entry in the SGML/XML Web Page
- W3C Member link

XML-Data

[CR: 19980501]

On January 5, 1998, a new (revised) submission on XML-Data was presented to the W3C by Microsoft, ArborText, DataChannel, and Inso. Reference: W3C Note 05 Jan 1998. Authors: Andrew Layman, Edward Jung, Eve Maler, Henry S. Thompson, Jean Paoli, John Tigue, Norbert H. Mikula, and Steve DeRose. According to the introduction, XML-Data "describes an XML vocabulary for schemas, that is, for defining and documenting object classes. It can be used for classes which as strictly syntactic (for example, XML) or those which indicate concepts and relations among concepts (as used in relational databases, KR graphs and RDF). The former are called 'syntactic schemas;' the latter 'conceptual schemas.' The text of this NOTE thus "provides a specification (XML-Data) for describing and exchanging structured and networked data on the Web. Such exchange is facilitated by schemas defining the characteristics of classes of objects. The objects can be syntactic constructs such as are used in XML instances, or may be more abstract such as are found in databases, information models or directed, labeled graphs. This paper describes an XML vocabulary for schemas. One immediate implication of these ideas is a substantive part of the functionalities of XML document types can now be described using the XML instance syntax itself, rather than DTD syntax. We expect XML-Data to be useful for a wide range of applications, such as describing database transfers or remotely-located Web resources."

[Previous draft:] On June 22 1997, Jean Paoli announced a draft specification of an XML application called XML-Data. The specification is documented in a Position Paper from Microsoft, written by Andrew Layman (Microsoft Corporation), Jean Paoli (Microsoft Corporation), Steve De Rose (Inso Corporation), and Henry S. Thompson (University of Edinburgh), with contributions from Paul Grosso, Sharon Adler, Anders Berglund, François Chahuneau, and Edward Jung. XML-Data is an application of XML for exchanging structured data and metadata on the Internet. The paper outlines a number of XML-Data design features which are not in the MCF specification. The position paper has been sent to multiple working groups in the W3C currently dealing with XML and meta-data."

- [January 27, 1998] XML-Data. W3C Note 05 Jan 1998; [local archive copy]
- [January 27, 1998] XML Data FAQ from DataChannel
- Announcement from Jean Paoli [June 22 draft]
- Specification for XML-Data [June 20, 1997]
- The XML-Data proposal - a slightly longer version of the document, posted to XML-DEV, June 22, 1997
- W3C Member Link
- See also the Microsoft white paper on XML - which in part describes Microsoft's current "vision for the use of structured data on the web."
- XML-Data: A Schema Language for Structured Data - article in *XML Files*, by Dianne Kennedy, 199804; see similarly: "Introducing XML-Data."

Namespaces in XML

[CR: 19981111]

"XML namespaces provide a simple method for qualifying names used in Extensible Markup Language documents by associating them with namespaces identified by URI." A W3C Working Draft "Namespaces in XML" was published on September 16, 1998 (WD-xml-names-19980916).

Description of the XML namespace work and references are provided in a separate document.

Resource Description Framework (RDF)

[CR: 19990216]

The RDF section currently provides information and references for both the *Resource Description Framework (RDF) Model and Syntax Specification* and the *Resource Description Framework (RDF) Schema Specification*.

The Australia New Zealand Land Information Council (ANZLIC) - Metadata

[CR: 19980609]

The Environmental Resources Information Network (ERIN) and ANZLIC Working Group on Metadata created a version 1 draft DTD using SGML. The ANZMETA DTD Version 1.1 (19th January 1998) now "has been written to conform to the requirements of XML 1.0." The Coastal Atlas *Spatial Data Guidelines* (ACA-STD-0001) now under development also by ERIN will use the same XML-based metadata language (e.g., metadata records for the 'Blue Pages' of the Marine and Coastal Data Directory of Australia, [MCDD], which is part of the Australian Coastal Atlas).

- ANZLIC metadata XML/SGML format (or: alt. URL)
- ANZLIC Metadata DTD Version 1.1 [local archive copy]
- ANZLIC Metadata - SGML Format
- Example XML document [local archive copy]
- ANZMETA DTD Version 1.1 - Documentation; [local archive copy]
- ACA Spatial Data Guidelines

XML Metadata Interchange Format (XMI) - Object Management Group (OMG)

[CR: 19990330]

The design of the XML Metadata Interchange Format (XMI) represents an extremely important initiative. It has a goal of unifying XML and related W3C specifications with several object/component modeling standards, as well as with STEP schemas, and more. Particularly, it would "combine the benefits of the web-based XML standard for defining, validating, and sharing document formats on the web with the benefits of the object-oriented Unified Modeling Language (UML), a specification of the Object Management Group (OMG) that provides application developers a common language for specifying, visualizing, constructing, and documenting distributed objects and business models."

Information on XMI is maintained in a separate document.

Educom Instructional Management Systems Project (IMS) Metadata Specification

[CR: 19991012]

The IMS project has released XML-based technical specifications "for how learning materials will flow over the Internet, and for how organizations and individual learners will manage the learning process, [which] have broad support among industry and among leaders in higher education, training, government,

and K-12 schools." See "IMS Metadata Specification."

Legal XML Working Group

[CR: 20000927]

See the separate document for Legal XML Working Group.

Web Standards Project (WSP)

[CR: 19980811]

"Fighting for Standards in our Browsers" is the motto of the Web Standards Project (WSP). The Web Standards Project is a collective effort of web developers and end users whose mission is to stop the fragmentation of the web, by persuading the browser makers that common standards are in everyone's best interest." Its goal is to support these core standards of the World Wide Web Consortium (W3C) "and to encourage browser makers to do the same, thereby ensuring simple, affordable access to Web technologies for all." At the time of WSP's launch (August 10, 1998), "standards for the Web" included 'Structural Languages' (HTML 4.0, XML 1.0), 'Presentation Languages' (CSS, XSL), 'Object Models' (Document Object Model 1 Core HTML/XML), and 'Scripting' (ECMAScript).

- Home Page
- Mission
- Resources - directory of sites and literature
- Signup Page for members and supporters
- Pressroom
- Mailing list for announcements: wsp-announce-on@mercury.projectcool.com
- Mailing list for participants: standards-on@mercury.projectcool.com

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HTML Threading - Use of HTML in Email

[CR: 19980128]

On January 27, 1998, the submission of a proposal for "HTML Threading: Conventions for Use of HTML in Email" was made to the W3C by Microsoft Corporation, Lotus Development Corporation, and Qualcomm Corporation. Reference: W3C NOTE 05-Jan-1998. The document editor is Eric Berman (Microsoft), and authors include Pete Resnick (Qualcomm) and Nick Shelness (Lotus). According to the press release, the HTML Threading Proposal "outlines how Extensible Markup Language (XML) can be used to enable data-rich features in HTML email applications." The document abstract clarifies: "As [email] messages go back and forth between participants in a discussion, it is interesting to be able to track properties of the text in the message and properties of the message itself, such as who wrote what or what message a quoted excerpt is originally from. This proposal defines a mechanism for embedding this information within an email message in a manner that degrades gracefully to downlevel mail clients." Appendix B of the NOTE provides some sample mail messages using the HTML Threading.

- Document in HTML format, from W3C
- HTML version, local archive copy
- Press release: Microsoft, QUALCOMM and Lotus Submit HTML Threading Proposal to W3C. Will Enable Data-Rich Features in HTML E-Mail Applications. [local archive copy]

Open Software Description Format (OSD)

[CR: 19980811]

A joint submission was made to W3C on August 13, 1997 by Marimba

Incorporated and Microsoft Corporation for a proposed "Open Software Description Format (OSD)." A document 'NOTE-OSD' written by Arthur van Hoff (Marimba, Incorporated), Hadi Partovi and Tom Thai (Microsoft Corporation) bears this abstract: "This document provides an initial proposal for the Open Software Description (OSD) format. OSD, an application of the eXtensible Markup Language (XML), is a vocabulary used for describing software packages and their dependencies for heterogeneous clients. We expect OSD to be useful in automated software distribution environments." The proposed specification has apparently been endorsed by other companies, including "CyberMedia, InstallShield Software, LANovation, Lotus Development, and Netscape Communications." [from *Net.Com* article]

And: "The goal of the OSD format is to provide an XML-based vocabulary for describing software packages and their inter-dependencies, whether it is user initiated ("pulled"), or automatic ("pushed"). XML (eXtensible Markup Language) provides a general method of representing structured data in the form of lexical trees. Using this data model, markup tags in the OSD vocabulary are represented as elements of a tree. The three basic relationships between elements are parent-of, child-of, and sibling-of. Distant relationships can be formed from recursive applications of the three basic ones."

- "The Open Software Description Format (OSD)" - NOTE-OSD, Submitted to W3C 13 August 97; [archive copy]
- "MS, Marimba to work on standards," by Alex Lash and Jeff Pelline. In *News.Com* [The Net], August 14, 1997. [archive copy, text only]
- "Open Software Description (OSD)." Description on the Microsoft site, August 14, 1997.
- OSD Specification, from Microsoft
- Marimba OSD site
- OSD White Paper; [local archive copy, text only]
- "Microsoft and Marimba Propose Open Software Description Format; Leading Companies Endorse XML-Based Specification." 'OSD to Make Software Updates Easier; Lower Total Cost of PC Ownership for Corporate Users'. Press release, August 14, 1997. Or: Newswire source; [local archive copy]
- Frequently Asked Questions About Open Software Description (OSD), from Microsoft [archive copy], and from Marimba
- OSD FAQ document from ChannelWorld
- The W3C submission
- "Vendors Establish Distribution Standard." In *Windows Magazine* (CMP), November 01, 1997, Issue: 811. By Diganta Majumder.

XLF (Extensible Log Format) Initiative

[CR: 20010629]

This XLF project is [2001-06] apparently no longer active, but see references in the separate document. See also "Log Markup Language (LOGML)."

WAP Wireless Markup Language Specification (WML)

[CR: 19990324]

The Wireless Application Protocol (WAP) Wireless Markup Language (WML) is a markup language based on XML, and is intended for use in specifying content and user interface for narrowband devices, including cellular phones and pagers. . . 'A tag-based display language providing navigational support, data input, hyperlinks, text and image presentation, and forms. A browsing language similar to Internet HTML.'

HTTP Distribution and Replication Protocol (DRP)

On August 25, 1997 a submission entitled *The HTTP Distribution and Replication Protocol* was tendered to the W3C by representatives of Marimba Inc., Netscape Communications Inc., Sun Microsystems Inc., Novell Inc., and At Home Corporation. "The goal of the DRP protocol is to significantly improve the efficiency and reliability of data distribution over HTTP. . . The DRP protocol uses

a data structure called an index, which is currently specified using the eXtensible Markup Language (XML). Because the index describes meta data, we anticipate using the Resource Description Format RDF), which was formerly called the Meta Content Framework (MCF), in a future versions of the DRP protocol specification. XML is used in the interim because the RDF standard was not finalized at the time of writing. . . The DRP defines the following new features: (1) Content identifiers, using the existing URI specification, which can uniquely identify a piece of content; (2) An index format which can be used to describe a set of files; (3) A new HTTP header field, Content-ID, which is used to obtain the correct version of a file by specifying a content identifier; (4) A new HTTP header field, Differential-ID, which is used to obtain a differential update for a file."

Links:

- Text: "HTTP Distribution and Replication Protocol (DRP)", August 25, 1997. NOTE-drp-19970825. By Arthur van Hoff, Marimba Inc., John Giannandrea, Netscape Inc., Mark Hapner, Sun Microsystems Inc., Steve Carter, Novell Inc., Milo Medin, At Home Corporation. [archive copy]
- HTTP Distribution and Replication Protocol (DRP) [Submission notice]
- DRP press release; [archive copy]
- Related: Generic Diff Format Specification (GDIFF); [archive copy]
- W3C Staff Note on Generic Diff Format Specification Submission

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Chemical Markup Language (CML)

[CR: 19990724]

The Chemical Markup Language was documented (July 1998) as "an application of XML" and was demonstrated at WWW6 with the Jumbo Java-based browser for XML documents. One of the first interesting XML appliations. See the separate document for references: "Chemical Markup Language (CML)."

Bioinformatic Sequence Markup Language (BSML)

[CR: 20010110]

Information on BSML is provided in a separate document, "Bioinformatic Sequence Markup Language (BSML)."

BIOpolymer Markup Language (BIOML)

[CR: 20020122]

See now the separate document: "BIOpolymer Markup Language (BIOML)."

Virtual Hyperglossary (VHG)

[CR: 20000512]

Description and references for the Virtual Hyperglossary (VHG) project are contained in a separate document "Virtual Hyperglossary (VHG)."

Weather Observation Markup Format (OMF)

[CR: 19980914]

The Weather Observation Markup Format [or: Weather Observation Definition Format] is an application of XML used to encode weather observation reports. The goal of the OMF system is to annotate and augment standard weather reports with derived, computed quantities, and to re-cast the essential information in a markup format that is easier to interpret, yet completely accurate.

The data formats typically used in weather reports ("FM 15-X Ext. METAR, FM 16-X Ext. SPECI, FM 51-X Ext. TAF, etc. [constituting] KAWN, WMO feeds . . .") are both incomplete and suboptimal for some processing objectives. According to a summary from one of OMF's designers, the OMF application thus "uses XML for annotating weather observation reports, forecasts and advisories as issued by Weather Meteorological Organization (WMO), the National Weather Center and Air Force Global Weather Center. Currently, METAR/SPECI observational reports, Terminal Aerodrome Forecasts (TAFs) and SIGMET significant weather aircraft advisories are being analyzed and marked up. The incoming source of data are raw bulletins distributed by KAWN/ADWS or National Weather Service'sGateways. The bulletins are parsed, reports are decoded and stored into a database, which can then be queried. The results of the queries are XML-formatted into OMF documents. It is always possible to reconstruct original reports by stripping away the XML markup. The designers are also working on adding other types of reports - Upper Air reports, regional SIGMETs, AIRMETS, Bathythermographs, PIREPS, etc. The markup system is in actual use "to distribute the most current annotated weather observations, forecasts and advisories; the Navy's Joint Metoc Viewer is one application that can ingest OMF documents and display the corresponding data."

Links:

- Weather Observation Markup Format. A Description.
- OMF DTD Version 4.1. 2000/04/12.
- SIGMET Advisories
- Terminal Aerodrome Forecasts (TAF)
- Sample OMF SIGMET document
- Sample OMF document
- Sample OMF TAF document
- Form for Retrieving Observation Reports
- OMF DTD; [local archive copy]
- Form for Retrieving TAF Forecasts
- Weather Observation Markup Format. A Description. Date: June, 1998.
- Contact: oleg@pobox.com

Open Financial Exchange (OFX/OFE)

[CR: 20001014]

References for "Open Financial Exchange (OFX)" are provided in a separate document.

Interactive Financial Exchange (IFX)

[CR: 20000121]

Information on the Interactive Financial Exchange (IFX) is provided in a separate document.

Open Trading Protocol (OTP)

[CR: 19990118]

"The Internet Open Trading Protocol (OTP) provides an interoperable framework for Internet commerce. It is payment system independent and encapsulates payment systems such as SET, Mondex, CyberCash, DigiCash, GeldKarte, etc. OTP is able to handle cases where such merchant roles as the shopping site, the payment handler, the Delivery Handler of goods or services, and the provider of customer support are performed by different parties or by one party. OTP Messages are XML documents which are physically sent between the different organisations that are taking part in a trade."

Information on the [Internet] Open Trading Protocol (OTP) is contained in a separate document.

XML Digital Signature (Signed XML - IETF/W3C)

[CR: 19991012]

The XML-Signature WG is a joint Working Group of the IETF and W3C. References are provided in a separate document.

Digital Receipt Infrastructure Initiative

Information on the Digital Receipt Infrastructure Initiative and the Digital Receipt Consortium is referenced in a separate document.

Digest Values for DOM (DOMHASH)

[CR: 19990419]

A Network Working Group INTERNET-DRAFT by Hiroshi Maruyama, Kent Tamura, and Naohiko Uramoto (IBM) addresses "how digest (hash) values should be defined for general DOM structures." The document is intended to become a Proposed Standard RFC. Compare 'XHASH'.

- Digest Values for DOM (DOMHASH) draft-hiroshi-dom-hash-00.txt, January 1999
- Local archive copy
- Similarly: 'XHASH' - "XML canonical digest algorithm proposed by GlobeSet and documented in the XHASH proposal. This algorithm has been inspired by the DOM-HASH proposal, but operates closer to the surface string of the document. Elements and attributes are subject to formalization in a way quite similar to the one proposed by DOM-HASH - XML delimiters are represented by binary values and entities are replaced by their actual values. However, formalization happens as elements are acquired. Furthermore, this algorithm has been tailored for explicit support of the XML Namespaces and it takes into account some specifics of this specification (*e.g.*, dsig:eval attribute).
- See also: "Digital Signatures for XML." By Richard D. Brown (GlobeSet, Inc.). January 1999. "A syntax and procedures for the computation and verification of XML digital signatures is specified." [local archive copy]
- See also (earlier): "Digital Signatures for XML." From the IETF TRADE Working Group. Richard D. Brown, GlobeSet, Inc. November 1998. - "The objective of this document is to propose syntax and procedures for the computation and verification of digital signatures applicable to general XML documents." [local archive copy]

Signed Document Markup Language (SDML)

[CR: 20011026]

See the separate document: "Signed Document Markup Language (SDML)."

Bank Internet Payment System (BIPS)

[CR: 19980824]

"The BIPS specification includes a protocol for sending payment instructions to banks safely over the Internet and a payment server architecture for processing those payment instructions." On August 24, 1998, a specification for the Bank Internet Payment System (BIPS) was published: *Bank Internet Payment System Specification Version 1.0. Public Review Draft, August 24, 1998*. Appendix G of the specification supplies the 'XML Structure and Document Type Definition (DTD)'. "BIPS instruction messages and their responses conform to the Extensible Markup Language (XML) standard which can be verified and interpreted by freely available XML parsers." The Bank Internet Payment System (BIPS) is a project of The Financial Services Technology Consortium (FSTC). "FSTC is a not-for-profit organization whose goal is to enhance the

competitiveness of the United States financial services industry; members of the consortium include banks, financial services providers, research laboratories, universities, technology companies, and government agencies."

Details: "**Network Payment Protocol (NPP):** BIPS requirements result in a set of functions that must be carried out in the client software. In order to ensure that the client software interfaces with the payment processing systems at each bank in a standard manner, the NPP has been defined and is described in this chapter. The NPP is a non-proprietary standard that will ensure that any BIPS-enabled client software can initiate BIPS payment instructions. The BIPS model is shown in Figure 4.1. All BIPS messages conform to the World Wide Web Consortium's (W3C's) XML specification. **NPP Message Specification, Message Formatting, and Data Encoding:** NPP messages will be specified and formatted according to standards described in the XML Version 1.0 specification. XML is a simplified subset of the Standard Generalized Markup Language [SGML, International Standards Organization (ISO) 8879]. XML provides a standard format to describe different types of data so that the information can be decoded, manipulated, and displayed consistently and correctly. XML also provides a file format for representing data, a schema for describing data structure, and a mechanism for extending and annotating Hypertext Markup Language (HTML) with semantic information. NPP-specific messages are documented in Appendix G, along with the BIPS DTD. Some characteristics of NPP messages are: 1) all messages are in XML; 2) all messages start with a BIPS XML header; 3) all fields are self-identifying; 4) all messages are signed; 5) all messages include the originator's certificate; 6) all request messages include a user-supplied transaction number; 7) all response messages include the signature of the user on the original request, and 8) all response messages include both a bank-supplied transaction number and the user-supplied transaction number. BIPS messages contain blocks that describe the request or response (a block is an XML element or conglomerate of elements). Each BIPS message begins with an XML header that includes the XML version number, document type, a reference to the BIPS DTD file, and the BIPS version number. A sample BIPS message is shown in Appendix G."

- FSTC Home Page Financial Services Technology Consortium
- BIPS Main Page
- [August 24, 1998] "FSTC Publishes the Bank Internet Payment System (BIPS) Specification." - "FSTC announced today that its Bank Internet Payment System (BIPS) specification has been released for public review and comment. . . BIPS instruction messages and their responses conform to the Extensible Markup Language (XML) standard which can be verified and interpreted by freely available XML parsers."
- Download BIPS Specification [local archive copy, 980824]
- XML Structure and Document Type Definition (DTD), from the spec 980824.

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smartX ['SmartCard'] Markup Language (SML)

[CR: 19990622]

"The goal of SML (smartX Markup Language) is to enable automation of all interactions with XML documents providing general methods to represent a set of smart device functions. XML supports the creation of marker content that preserves data structure and promises web documents to be "machine-readable". The SML is an implementation of XML for the smart card industry. SML also brings to the smart device applications many IDL features that have been implemented in distributed computed and transaction processings.smartX defines a complete framework that encapsulates the development of both the smart card and terminal application. By separating the application process from the application protocol that is card-specific, smartX makes possible to port quickly an application to a new smart card. The innovation of smartX technology relies on a strong description of the smart device data and attached processes. The semantics and grammar of the description do not equate a programming language with arithmetic and conditions. On the contrary, the data and protocol description is built upon the familiar foundations of the smart card industry, which simplifies programming for the developer. smartX introduces a new description language to describe the application protocol: SML (Smart Markup Language) that implements the Extensible Markup Language (XML) for the smart card industry."

- Home Page
- SML announcement
- SML Tutorial
- SML Demo
- Articles on smartX and smart cards

OpenMLS and RELML - Real Estate DTD Design

[CR: 20000619]

Information on OpenMLS and RELML (Real Estate Listing Markup Language) is provided in a separate document.

Customer Support Consortium

[CR: 19980515]

Founded in 1992, the Customer Support Consortium is "a group of over 70 leading technology companies who work together to significantly improve customer support by developing innovative new strategies, standards, and programs. Its mission is to develop ways to leverage and share knowledge within and among support organizations." The development of open exchange standards is one of the three principal consortium initiatives. A subgroup is developing a set of mappings from standards specifications to XML.

- Home Page
- Exchange Standards Page
- CSC Members

XML for the Automotive Industry - SAE J2008

[CR: 19990309]

In response to requirements from the 1990 US Clean Air Act, The Society of Automotive Engineers (SAE) has adopted a number of standards under the 'SAE J2008' family of standards designed to "provide easy access to emission-related automotive service information. At the heart of this SGML standard is a relational Data Model for Automotive Service Information rather than any particular document model. The SGML definition set forth within J2008 provides a hierarchical representation of the Data Model. In addition, this standard provides models for common text constructs such as tables, paragraphs, lists, and procedures which are found within automotive service information." Recently, as explained by Dianne Kennedy in the presentation "XML and the Automotive Industry" (XML the Conference 98, Seattle 1998), effort has been made to convert the SGML DTD into a version compatible with XML. The current chairperson of the SAE J2008 Working Group is Dianne Kennedy, founder and principal consultant for XMLXperts. [adapted from Dianne Kennedy's overview]

[March 09, 1999] A communiqué from Dianne Kennedy reported on recent efforts by the DTD Working Group for SAE J2008. The Society of Automotive Engineers (SAE) J2008 DTD Working Group met on March 3, 1999 in Detroit. Among the work items was the development of an official" XML version of the SAE J2008 DTD for posting automotive service information on the Web. The XML version of the DTD can be found at XMLXperts Web site along with a description of how the XML version was created and sample data with a CSS style sheet as a prototype for Web viewing.

- SAE J2008 Main Page - XMLXperts Web site.
- Creating an XML Version of SAE J2008, by Dianne Kennedy. [local archive copy]
- An XML Version of SAE J2008 March 3, 1999. [local archive copy]
- An early XML Version of SAE J2008; [local archive copy]
- An XML-Data Schema for SAE J2008
- See also: "Converting SAE J2008 to an XML DTD Using Near & Far Designer 3.0," by Dianne Kennedy.

X-ACT - XML Active Content Technologies Council

[CR: 19980504]

[May 04, 1998] On May 4, 1998, an announcement was issued by DataChannel and OASIS concerning X-ACT: "DataChannel Transfers X-ACT Council to OASIS. XML Market Receives Enhanced Services Through Vendor-Neutral Management of Leading Industry Council." According to the press release, "OASIS, the Organization for the Advancement of Structured Information Standards (formerly SGML Open), announced today that it will take the helm of the XML Active Content Technologies Council (X-ACT) to provide vendor-neutral management and enhanced industry services."

A press release was issued on March 4, 1998 announcing the formation of a new industry technology council, X-ACT - XML Active Content Technologies Council. "X-ACT is an industry council formed to provide a communications venue for corporations working to develop real-world XML-based solutions to meet today's business needs, increase awareness about Active Content Technologies and their benefits, and maintain an index to Active Content software. Aligned with all standards bodies, X-ACT specifically focuses on promoting the usage and adoption of XML in real-world applications. . . Active Content represents all the possible forms of XML as documents, data and meta-data, and the new class of information systems that will allow data or objects to be re-used and re-purposed by any application." The new industry group recognizes that XML, "a groundbreaking new technology, will spawn a new class of computer applications and transactions (Active Content Technologies) that will enable active content at all levels of networked computing (Desktop, Server, Internet, Intranet, Extranet, VPNs, LANs, WANs). The eighteen (18) members include, to date: Allaire, Andersen Consulting, Arbor Text, BTG, DataChannel, Daylight Software, Informix, Inso, NexGen SI, OmniMark Technologies, Online Computing Library Center, PLATINUM Technology Solutions, Poet Software, NC Focus, Sybase, Thomson Corporation, Wall Data and WebMethods.

- X-ACT Home Page
- About X-ACT
- March Press Release - formation
- [May 04, 1998] "DataChannel Transfers X-ACT Council to OASIS. XML Market Receives Enhanced Services Through Vendor-Neutral Management of Leading Industry Council."
- X-ACT Members
- "Group to Build Common Interface Using XML." By Jeffrey Schwartz. In *InternetWeek* [CMPnet] Posted Tuesday, March 3, 1998, 2:45 p.m. ET.
- Contact: Jeff Coon, also at Tel +1 (425) 462-1999 x125.

Mathematical Markup Language (MathML)

[CR: 19990520]

See also the separate (updated) document Mathematical Markup Language (MathML)

The Mathematical Markup Language (W3C Working Draft) is a specification which "defines the Mathematical Markup Language, or MathML. MathML is an XML application for describing mathematical notation and capturing both its structure and content. The goal of MathML is to enable mathematics to be served, received, and processed on the Web, just as HTML has enabled this functionality for text. The document begins with background information on mathematical notation, the problems it poses, and the philosophy underlying the solutions MathML proposes. MathML can be used to encode both mathematical notation and mathematical content. About 25 of the MathML tags describe abstract notational structures, while another 75 provide a way of unambiguously specifying the intended meaning of an expression. Additional chapters discuss how the MathML content and presentation elements interact, and how MathML renderers might be implemented and should interact with browsers. Finally, the document addresses the issue of MathML entities (extended characters) and their relation to fonts."

[February 24, 1998] MathML (Mathematical Markup Language) specification issued by W3C as a Proposed Recommendation. Editors: Patrick Ion and Robert Miner. Reference: PR-math-19980224. Abstract: "MathML is a low-level syntax for representing structured data such as mathematics in machine-to-machine communication over the Web, providing a much-needed solution for including mathematical expressions over the Web. In developing MathML, the goal was to define an XML-compliant markup language that describes the content and presentation of mathematical expressions. This was achieved with MathML. As an effective way to include mathematical expressions in Web documents, MathML gives control over the presentation and the meaning of such expressions. It does this by providing two sets of markup tags: one set presents the notation of

mathematical data in markup format, and the other set relays the semantic meaning of mathematical expressions, enabling complex mathematical and scientific notation to be encoded in an explicit way. As an XML application, MathML capitalizes on XML features and benefits from the wide support of XML. Unlike HTML which was intended as a markup language for use by people, MathML is intended to be used by machines, facilitating the searching and indexing of mathematical and scientific information. Software tools that work with MathML render MathML into formatted equations, enabling users to edit mathematical equations much as one might edit HTML text. Several early versions of such MathML tools already exist, and a number of others, both freely available software and commercial products, are under development." See the press release.

Links:

- [April 07, 1998] Announcement for MathML as a W3C Recommendation
- Mathematical Markup Language (MathML) specification as Recommendation - REC-MathML-19980407, W3C Recommendation 07-April-1998. [local archive copy, .ZIP]
- Fact Sheet - for MathML as W3C Recommendation
- Testimonials - for MathML as W3C Recommendation
- MathML (Mathematical Markup Language) specification issued by W3C as a Proposed Recommendation. February 24, 1998.
- Mathematical Markup Language - W3C Working Draft. January 06, 1998. WD-math-980106.
- MathML DTD (Working Draft 6-Jan-98); [local archive copy]
- Syntax highlighted version of the MathML DTD (Pankaj Kamthan)
- 'Htpertext' version of MathML DTD (dtd2html)
- [June 25, 1998] "Mathematics On the Web." By Rockford J. Ross [Computer Science Department, Montana State University]. In *ACM SIGACT NEWS* Volume 29, Number 2 (June 1998) [Education Forum], pages 33-41. Review of MathML from the ACM Special Interest Group on Algorithms and Computation Theory. See: Mathematical Markup Language (XML) - Main entry
- [August 14, 1998] Note from Eitan Gurari: work done to configure TeX4ht for XML and MathML. See: http://www.cis.ohio-state.edu/~gurari/temp/xml/ml.html; [local archive copy] Also, the collected documentation.
- MathML Files: DSSSL style sheet for MathML MathML Files: DSSSL style sheet for MathML. (David Carlisle)
- MathML in Mozilla (Roger B. Sidje, David Fiddes, P. S. Karthikeyan). "The priority of the project will be to provide a compact and fast engine that will process MathML and enable Gecko to render mathematical expressions. Another goal is to provide a WYSIWYG interface to MathML. This will be a graphical equation editor with an internal representation in standard MathML text."
- TtHMML, a TeX to MathML translator. See "Try out TtHMML." NB: 'You need a browser such as Amaya, with MathML support, to see equations.'
- See: "OpenMath Standard."

OpenTag Markup

[CR: 20011109]

See now: "OpenTag Markup Format."

Metadata - PICS

- PICS-NG Metadata Model and Label Syntax (W3C WD-pics-ng-metadata-970514.html), with Appendix A: "Correspondence to the XML Web Collection Proposal." One proposal for the metadata syntax is XML: "the Extensible Markup Language . . .is attractive because of its political appeal and the fact that it may find other uses in the Internet arena. The full definition of an XML syntax for PICS-NG will be included in a future version of this document." [mirror copy]

CDIF XML-Based Transfer Format

[CR: 19980623]

"CDIF (CASE Data Interchange Format) attempts to address a problem faced by both users and vendors of Visual Modeling tools and Computer Aided Software and Systems Engineering (CASE) tools: interoperability. Users need to be able to move information from one CASE tool to another in order to develop systems efficiently. They need to move information from a tool to a repository and back. They need to exchange data between repositories."

"CDIF is a Family of Standards that lays out a single architecture for exchanging information between modelling tools, and between repositories, and defines the interfaces of the components to implement this architecture. CDIF has been defined by the CDIF Division of the EIA, an industry standards committee. CDIF is also being standardized at an international level through ISO/IEC JTC1/SC7/ WG11. Many of the major modeling, CASE and repository vendors, and some large user organizations have pooled their expertise and resources to develop this Family of Standards. Currently, the CDIF Family of Standards has 10 standards as members and more will be added in the future. The CDIF standards development process is open-ended, and driven by the interests of the CDIF member organizations. Any organization can become a CDIF member and thus influence current and future CDIF work."

The CDIF Technical Committee is preparing a specification called the *CDIF XML-based Transfer Format*. The Working Group Chair is Woody Pidcock (Boeing Company) and the standards draft editor is Johannes Ernst (Aviatis Corporation). A June 1998 draft (CDIF-DRAFT-XML-V3, EIA-PN-XXX, CDIF XML-based Transfer Format, EIA/CDIF 1998) edited by Johannes Ernst outlines the ongoing work of the CDIF Technical Committee on the transfer format. "The CDIF (CASE Data Interchange Format) family of Standards is primarily designed to be used as a description of a mechanism for transferring information between CASE tools. It facilitates a successful transfer when the authors of the importing and exporting tools have nothing in common except an agreement to conform to CDIF. The language that is defined for the Transfer Format also has applicability as a general language for Import/Export from repositories. The CDIF Integrated Meta-model also has applicability as the basis of standard definitions for use in repositories." The XML-based CDIF Syntax which "allows the exchange of meta-models and models using the emerging XML standard" is being provided in addition to the CDIF Transfer Format based on SYNTAX.1 and ENCODING.1."

In the version 3 draft document, (Section 5.2 of the Transfer Format Overview), the relationship of the CDIF Transfer Format to XML is explained: "The primary application of the XML standards is document markup. Compared to the HTML document type definition, XML-based document type definitions allow for a more strict definition of the content and content structure. On the other hand, the exchange of modeling information according to the CDIF architecture requires an even stricter set of rules to be followed than even in a strict application of XML. This has two consequences: (a) any CDIF Transfer file employing the XML-based CDIF Transfer Format is also a legal XML file; (b) the rules to be followed by files employing the XML-based CDIF Transfer Format cannot be fully captured in an XML DTD alone; instead, this standard defines rules that are mandatory for such an XML-based CDIF Transfer beyond those defined in the DTD. As an example for the latter, consider the rich set of data types for meta-attributes and meta-meta-attributes required to exchange modeling information, and compare them to the significantly smaller set of data types provided by XML. When exchanging models with the XML-based CDIF Transfer Format that employ any of the richer data types, additional rules have to be obeyed."

- CDIF Man Page
- "Introduction to CDIF." July 1998. By Johannes Ernst, Aviatis Corporation.
- Draft 3 of XML-based CDIF Transfer Format. The XML-based CDIF Syntax allows the exchange of meta-models and models using the emerging XML standard. This is in addition to the CDIF Transfer Format based on SYNTAX.1 and ENCODING.1.
- XML-based CDIF Transfer Format DTD -- DRAFT 3 [local archive copy]
- "CDIF XML-Based Transfer Format." Draft 'standard' version 3. CDIF-DRAFT-XML-V3, EIA-PN-XXX, CDIF XML-based Transfer Format, EIA/CDIF 1998. [local archive copy, 980622]
- Draft version 2

Synchronized Multimedia Integration Language (SMIL)

[CR: 20000804]

Synchronized Multimedia Integration Language (SMIL) references are provided in a separate document.

Precision Graphics Markup Language (PGML)

[CR: 19980415]

On April 03, 1998, a submission was made to the World Wide Web Consortium concerning a proposed *Precision Graphics Markup Language (PGML)*. References: W3C NOTE-PGML-19980410, World Wide Web Consortium Note 10-April-1998, URL http://www.w3.org/TR/1998/NOTE-PGML-19980410. The W3C NOTE was submitted by representatives of Adobe Systems Incorporated, International Business Machines Corporation, Netscape Communications Corporation, and Sun Microsystems, Inc. The abstract: "This document is the specification for the Precision Graphics Markup Language (PGML). PGML is a 2D scalable graphics language designed to meet both the simple vector graphics needs of casual users and the precision needs of graphics artists. PGML uses the imaging model common to the PostScript(R) language and Portable Document Format (PDF); it also contains additional features to satisfy the needs of Web applications." The NOTE is characterized as "a working document. It is not meant to be a complete definition for PGML. Many sections have been left open or have been labeled *Ideas for Consideration* so that the working group can develop the strongest possible language specification and ensure that it is fully compatible with other W3C standards efforts."

Among the 'Design Principles': PGML should be an XML application and the imaging model is an instance of the RDF data model. . . PGML should be compatible with and fully leverage all related W3C standards efforts. . .in particular, PGML will be an application of XML. . .[provision for] exporting the imaging model to the DOM." A W3C 'Comment on PGML Submission' asserts: "PGML is expressed in XML, which allows PGML graphics to be modified with style sheets along with the document in which they are contained." A sample from Appendix B (minus the pretty-printing):

```
<?XML version="1.0"?><!DOCTYPE PGML SYSTEM
"pgml1.0.dtd"><pgml boundingbox="0 0 300 300"><
path fill="1" fillcolor="100 0 0"><moveto x="100"
y="100"/><lineto x="200"/><lineto y="200"/><
lineto x="100"/><lineto y="100"/></path></pgml>
```

. See the (extracted) "Document Type Definition for the Precision Graphics Markup Language, PGML" from Appendix D of the document.

- Submission; [local archive copy]
- The W3C NOTE
- W3C Comment on PGML Submission
- "Document Type Definition for the Precision Graphics Markup Language, PGML"
- "Precision Graphics Markup Language (PGML) Questions & Answers [From Adobe]."

Vector Markup Language (VML)

[CR: 19980528]

On May 28, 1998, the W3C acknowledged receipt of a submission for a proposed Vector Markup Language (VML) from Autodesk Inc., Hewlett-Packard Company, Macromedia, Inc., Microsoft Corporation, and Visio Corporation. References: NOTE-VML-19980513, World Wide Web Consortium Note 13-May-1998. The submission defines the Vector Markup Language (VML), which "is an application of Extensible Markup Language (XML) 1.0 which defines a format for the encoding of vector information together with additional markup to describe how that information may be displayed and edited." According to the Introduction in the NOTE, "The Vector Markup Language (VML) supports the markup of vector graphic information in the same way that HTML supports the markup of textual information. Within VML the content is composed of paths described using connected lines and curves. The markup gives semantic and presentation information for the paths. VML is written using the syntax of XML just as HTML is written using the syntax of SGML (the Standard Generalized Markup Language, [ISO 8879]) - XML is a restricted form of SGML. VML uses Cascading Style Sheets, Level 2 in the same way as HTML to determine the layout of the vector graphics which it contains." Normative references cited in the NOTE include HTML 4.0, CSS1/2, XML 1.0, XML Namespaces, XLink, IEC 61966-2, PNG, and

ISO 10918-1 (JPEG); VML is said to be based on well-established vector graphical techniques.

From the W3C Comment on the VML Submission: "VML is expressed in XML, which allows VML graphics to be modified with style sheets along with the document in which they are contained. The submitters have clearly given thought to style sheet binding, to the necessary stylistic differences between editors and viewers, and to containment in HTML; they have also taken care to address the points in the W3C Requirements document."

Links:

- Vector Markup Language (VML); [local archive copy, now lacking essential graphics]
- W3C Comment on VML Submission (Chris Lilley, W3C Graphics Activity Lead). [local archive copy]
- A Comparison of VML and the W3C Scalable Graphics Requirements
- W3C Scalable Graphics Requirements
- Submission request, dated May 13, 1998
- Press release: "Autodesk, HP, Macromedia, Microsoft and Visio Submit Vector Markup Language Specification to W3C. Enables Authors to Easily Exchange, Edit and Deliver High-Quality Vector Graphics To the Web." [local archive copy]

WebBroker: Distributed Object Communication on the Web

[CR: 19980512]

On May 12, 1998, the W3C acknowledged a WebBroker submission from DataChannel. DataChannel, Inc. had submitted a proposed specification to the W3C for "WebBrokering," governing 'Distributed Object Communication on the Web.' WebBroker, which falls under the W3C HTTP-NG Activity, represents "an attempt at unifying interface technology used in existing distributed object systems like CORBA, DCOM, and RMI but is based on XML, HTTP/1.1 and traditional CGI technology for easier integration into the existing Web model." The submission is composed of five separate documents:

1. "WebBroker: Distributed Object Communication on the Web" (NOTE-webbroker-19980511, authored by John Tigue and Jon Lavinder)
2. "ObjectMethodMessages DTD"
3. "AnonymousData DTD"
4. TerseAnonymousData DTD
5. "InterfaceDef DTD."

The abstract: "This document provides a specification (WebBroker document type definitions, or WebBroker DTDs) for describing and exchanging structured messages between software components on the Web. Such exchange is facilitated by the DTDs which describe the structure of the messages (method requests and method responses) and which also describe the interfaces of the software components themselves. The AnonymousData DTD describes a simple way of expressing the data type of structures which works within XML 1.0 and is designed to work with XML-Data. The ObjectMethodMessages DTD describes how to represent, in XML documents, the serialized messages between software components. ObjectMethodMessages uses the AnonymousData DTD and is modeled after DCE RPC Request and Response PDUs. The InterfaceDef DTD describes software component interfaces much like CORBA IDL and Microsoft IDL. One immediate implication of these ideas is that there can now be a unified Web publishing and traditional client/server programming model which work over HTTP 1.1. We expect the WebBroker DTDs to be useful for enabling many organizations to implement a mature yet simple and easy to reproduce model of distributed computing on the Web."

Links:

- WebBroker submission, main text
- WebBroker submission request. Date: March 26, 1998.
- W3C Staff Comment on the WebBroker submission
- [May 12, 1998] "W3C Formally Acknowledges DataChannel's Submission of WebBroker Specification for Application Linking. Unified XML Component Object Model for the Web Takes an Important Step toward Reality."
- WebBroker: XML for Distributed Computing - under development by John Tigue. The goal is "to come up with a unified software object model for the

Web." See slides from XML '98 in Seattle.

Web Interface Definition Language (WIDL)

[CR: 20000703]

"The Web Interface Definition Language (WIDL) consists of six XML-compliant HTML extenders that define a universal schema for HTML documents based on the Document Object Model (DOM) as it is being defined by the World Wide Web Consortium."

- Submission of a specification for the Web Interface Definition Language [WIDL] to W3C by webMethods, Inc. According to the abstract, the document "provides the specification for the Web Interface Definition Language (WIDL), a metalanguage that implements a service-based architecture over the document-based resources of the World Wide Web. WIDL is an application of the eXtensible Markup Language (XML); it allows interactions with Web servers to be defined as functional interfaces that can be accessed by remote systems over standard Web protocols, and provides the structure necessary for generating client code in languages such as Java, C/C++, COBOL, and Visual Basic. WIDL enables a practical and cost-effective means for diverse systems to be rapidly integrated across corporate intranets, extranets, and the Internet."
- "Short Take: WIDL submitted to W3C as standard." By Tim Clark. *CNET News.com*, October 13, 1997, 2:15 p.m. PT.
- [August 29, 1997] Announcement from webMethods Inc. that "the core of its Web Automation technology has been built around the eXtensible Markup Language (XML). webMethods' Web Automation product suite now uses XML to define automated access to Web data and services, and can be used against existing HTML or new XML-based Web resources. . . Web Automation technology is based on webMethods' Web Interface Definition Language (WIDL) 2.0, an XML application that defines Application Programming Interfaces (APIs) to Web data and services." [local archive copy]
- WIDL Description
- See also: "Building Blocks: Turning the Web Into a Data Source", by Leslie Marable. From *Web Week*, Volume 3, Issue 11, April 21, 1997. [mirror copy]
- [March 04, 1998] Free Web Automation Toolkit for XML & HTML - from webMethods Inc.
- Submission - local archive copies

XML/EDI

[CR: 20000704]

XML and EDI (Electronic Data Interchange). "EDI works by providing a collection of standard message formats and element dictionary in a simple way for businesses to exchange data via any electronic messaging service. . . XML/EDI provides a standard format to describe different types of data -- for example, a loan application, an invoice, healthcare claim, project status -- so that the information can be decoded, manipulated, and displayed consistently and correctly by implementing EDI dictionaries. Thus by combining XML and EDI we create a new powerful paradigm!" (Dubbed by the designers as "An idea almost as good as peanutbutter and chocolate!")

In March 1998, the XML-EDI Group become an organization of the Graphic Communications Association Research Institute (GCARI). GCARI, "an affiliate of Graphic Communications Association (GCA) in Alexandria, Va. GCA is a technical management association in the publishing and printing industries that has supported XML since its creation."

- XML/EDI Overview
- Main XML/EDI Page for the XML/EDI Group -- an ad hoc group of professionals and volunteers in various industries.
- Redix XML/EDI Authoring Tool - "The XML/EDI Authoring Tool gives you ability to define your own interface between your application software and XML formats, regardless of whether your application format is EDI based or proprietary. Several examples are provided in this tool. These include X12, EDIFACT, HIPAA (Health Insurance Portability and Accountability Act of 1996), Oracle ERP, and SAP. We also provide a tutorial that guides you through the steps to interface with the XML/EDI Authoring Tool."

- Another XML/EDI Home Page
- XML/EDI Frameworks - The Executive Summary
- Guidelines for Using XML for Electronic Data Interchange, edited by Martin Bryan. Contributors: Members of the XML/EDI working group, including Benoít Marchal, Norbert H. Mikula, Bruce Peat, and David R. R. Webber. Version 0.04, 23rd December 1997. [local archive copy, version 0.04]; [archive copy, version 0.02]
- "The Role of Document Type Definitions in Electronic Data Interchange." By Martin Bryan.
- "Internet Explorer 5.0 XML/EDI Demonstration using Intelligent XSL Stylesheets." By Martin Bryan.
- "Guidelines for using XML for Electronic Data Interchange" [variant of preceding document]
- Answers to Frequently Asked Questions, by Martin Bryan. [archive copy]
- EDI and XML time for a dual approach?, by Bruce Peat; [archive copy]
- "Advantages of including Electronic Data Interchange (EDI) entities with eXtensible Markup Language (XML)," by Bruce Peat with XML assistance from Richard Light. [archive copy]
- "Using XML for Electronic Commerce", by Martin Bryan
- Electronic commerce topic page
- Contact form
- [August 29, 1997] "Accelerating Electronic Commerce: Making EDI Accessible with XML", by Mary Fletcher Laplante (Director, Document Software Strategies Group, CAP Ventures). Published in *Document Software Strategies Analysis* 2/29 (August 15, 1997); [local archive copy]
- [February 02, 1998] XML/EDI XML/XSL Example - Fill-In-Form (Betty Harvey) A form "developed as a test scenario for ordering product and creating an XML/EDI message."
- [March 11, 1998] "XML-EDI Group Becomes a GCARI Organization. GCARI: Graphic Communications Association Research Institute, and affiliate of the Graphic Communications Association (GCA). [local archive copy]

XML/EDI Repository Working Group

[CR: 19981008]

According to a press release of July 27, 1998, the objectives of the working group are to: "1) Develop draft standards on repositories for submission to the World Wide Web Consortium (W3C), Object Management Group (OMG), and UN/EDIFACT working groups; 2) Establish a formal working group to coordinate proposal development; 3) Provide a technical forum for individuals involved in repository development to participate; 4) Offer links among disciplines and standards such as W3C's XML, as well as OMG's UML (Unified Modeling Language) and MOF (Meta-Object Facility); 5) Provide a means for vendors who have announced products based on open standards on this topic to offer their ideas. The first draft is anticipated for an availability date of September 30, 1998. For the purposes of this discussion group, the term "EDI" shall include business-to-business, business-to-consumer, and consumer-to-business exchanges of XML formatted and structured data or information."

- Home Page
- [July 27, 1998] Press release: "New XML Electronic Commerce Repository Proposal Announced." Adapted from the press release in RTF format
- Announcement - Press release from GCA
- Project Overview and Focus [local archive copy]
- Project Goal, Objectives, and Discussion Topics; [local archive copy]
- Press releases
- "Position Statement on Global Repositories for XML." - By The XML/EDI Group. Version: 0.98, July, 1998. Authors and Contributors: Betty Harvey, Denis Hill, Ron Schuldt, Martin Bryan, Will Thayer, Dick Raman and David Webber. "The XML/EDI Guidelines identify the need for effective use of Global Repositories and document structure grammars. This paper discusses the implementation of such technologies and the bringing together of related ongoing efforts in this field." See also http://www.xmledi.com/repository/xml-rep.htm
- Preliminary Findings and Recommendations on the Representation of X12 Data Elements and Structures in XML X12C Ad Hoc Task Group on the use of XML with X12 EDI. DRAFT Version 0.03a, July 31, 1998. Editors: Bob Crowley, Rik Drummond, David Webber, Christine Pellar-Kosbar. Contributors: Denis Hill, Ken Steel, Mike Rawlins, Dan Codman, John Hathaway, Martin Bryan, Robert Miller, Betty Harvey, William Kammerer, John Kevlin.
- UN/CEFACT/TMWG OO-Edi Compatibility With XML/EDI." The XML/EDI Group. Version: 0.92. July, 1998. Authors and Contributors: David Webber, Klaus-Dieter Naujok. "The international EDI community has developed OO-

edi over the past three years as an implementation neutral framework for the future architecture of EDI. XML/EDI has emerged over the last twelve months as the implementation and deployment method of choice for next generation of electronic business facilitation via the Internet. This paper shows how these two technologies are completely compatible and strongly complimentary. XML/EDI emerges as the implementation method of choice for FVS (Functional Service View) of Open-edi, and Open-edi BOV (Business Operational View) provides the means to underpin the physical implementation methods of XML/EDI with design, process and logic verification to ensure robust and efficient systems development and architectures. Two representation methods provide the link between the two: Universal Model Language (UML), and Extensible Markup Language (XML).

- UN/CEFACT/TMWG OO-edi Compatibility With XML/EDI. From the XML/EDI Group. July 1998. [local archive copy]

European XML/EDI Workshop

[CR: 19981028]

The European XML/EDI Pilot Project "is being run as part of the Information Society Standardization System within the European Committee for Standardization (CEN/ISSS) open workshop on Electronic Commerce. [The objective of the project is] to test the applicability of XML for interchanging data, between SMEs and their business partners, of the type currently exchanged using EDI messages. The project will build on the findings of existing and proposed European initiatives on the use of XML for EDI data interchange."

- Home Page
- European XML/EDI Pilot Project Mission Statement Version 1.0, 98-07-10. [local archive copy]
- [October 27, 1998] "The Need for a European XML/EDI Pilot Project." October, 1998. By Martin Bryan. From the SGML Centre. [local archive copy]
- XML/EDI Pilot Project Terms of Reference; [local archive copy]
- XML/EDI Pilot Project Project Plan; [local archive copy]
- CEN/ISSS XML/EDI Workshop - Document Register 2000

- CEN/ISSS XML/EDI Workshop Document Register 1999
- European XML/EDI Project Document Register
- CEN/TC251 Task Force - XML for messaging and communicated documents - data repositories

EEMA EDI/EC Work Group - XML/EDI

[CR: 19981020]

"The EEMA EDI Work Group would like to propose to CEFACT the establishment of a Global Repository for the translation of XML tags in UN/EDIFACT and human language on the Internet. The EEMA EDI Working Group is prepared to assist in the set up and operation of such a repository, which could be crucial in the advancement of the use of EDI over the Internet. . . . When the fusion between ANSI X12, EDIFACT and all other EDI standards takes place in a proper way it should be under the auspices of the UN so it is global, public domain, open and available for anyone. Today this is not the case with the ANSI standards and many other EDI standards that are only available at considerable cost. Of course today the EDIFACT standard is already in the public domain and can easily be obtained through the Internet."

". . .there could be a relatively easy fusion between EDIFACT and ANSI X12. Essentially every data-element one can find in ANSI or in EDIFACT could be placed inside the XML/EDI file. What would be required is to set up a repository in which the tags for the XML files are listed with the corresponding EDIFACT data-element number, the corresponding ANSI X12 element number, and a description. . . By setting up one global repository on the Internet, CEFACT can assume responsibility for the creation of new tags based on a corresponding EDIFACT data-element number and the standard description, while other organizations can assume responsibility for a language code or the corresponding element number in different standards. Even if XML/EDI is not the ultimate solution, a global repository would be extremely useful for conventional EDI and other forms of EC, because it would provide an independent Data

Dictionary which could be used by applications."

References:

- EEMA EDI/EC Work Group Home Page
- Proposal for a UN Repository for XML/EDI [local archive copy]
- Slide Presentation on XML/EDI. By Dick Raman. June 19, 1998. - CEFACT-SIMAC - Geneva
- [Trial] XML/EDI Repository Viewer

ANSI ASC X12/XML and DISA

[CR: 19991019]

As of Fall 1999, there was a "proliferating activity of X12-XML initiatives [which] reflects the essential foundation the X12 standard provides to a multitude of emerging e-commerce technologies..." See the separate document.

Information and Content Exchange (ICE)

[CR: 19990315]

On October 26, 1998, the W3C acknowledged receipt of a submission from Adobe Systems Incorporated, CNET Incorporated, Microsoft Corporation, Sun Microsystems Inc., and Vignette Corporation, in the form of a NOTE: "The Information and Content Exchange (ICE) Protocol."

Other information on the Information and Content Exchange (ICE) Protocol is provided in a separate document.

CommerceNet Industry Initiative

[CR: 19980717]

"In an announcement made today by Patrick Gannon, Executive Director of CommerceNet's Information Access Portfolio, at the XML Developers' Day program being held in Montreal, Quebec, Canada, CommerceNet gave its full support to the World Wide Web Consortium (W3C) development of the Working Draft Requirements for the Extensible Markup Language (XML) and launched its international industry initiative to demonstrate commercial viability of XML in Internet Commerce. The CommerceNet initiative is designed to close the time gap between the development of industry standards and implementation of open, interoperable applications in the electronic commerce arena. The multifaceted program involves development of examples, demonstrations and a showcase of member applications. The goal is to accelerate the adoption of XML as a key technology for the realization of efficient Internet Commerce. . . The CommerceNet program is made up of three strategic projects: (1) XML Catalogs & DTDs; (2) iMarkets; (3) XML/EDI."

- [July 17, 1998] "CommerceNet Acquires XML Exchange From XMLSolutions. Foundation for Global eRegistry Service Vital to XML-based Electronic Commerce." - "Only ten weeks after its initial launch, the XML Exchange (http://www.xmlx.com) has been acquired [by CommerceNet]." CommerceNet's XML Exchange will be 'a component of its eRegistry Service'. See press release from XMLS, or [local archive copy]
- "XML TOUTED AS CURE FOR EDI ILLS. New Markup Language Extends Web Capabilities Beyond HTML's Limits."
- Press release: CommerceNet Advocates XML. Industry-Leading Consortium Launches XML Demonstration Program for Internet Commerce [August 21, 1997]; [local archive copy]
- [September 05, 1997] "XML Grabs Markup Baton. CommerceNet Pilot Aims Push Enabler at EDI, Web Catalogs", by Richard Karpinski. InternetWeek (September 1, 1997) 31, 34. [archive copy, or [search XML]]
- XML/EDI Taskforce Reference Area
- "Joint Venture Awarded $5 Million to Develop Next-Generation Infrastructure For Electronic Commerce". "CommerceNet and three Silicon Valley startups -- CNgroup, Tesserae Information Systems, and BusinessBots -- have received a $5 Million award from the US Department

of Commerce's Advanced Technology Program (ATP) to develop an open component-based architecture for Internet commerce."

RosettaNet

[CR: 19990413]

RosettaNet is a "global business consortium creating the electronic commerce framework to align processes in the IT supply chain." See the independent document for references.

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vCard Electronic Business Card

[CR: 20020318

See: vCARD in XML and RDF (Electronic Business Card).

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iCalendar DTD Document (xCal)

[CR: 20011103]

See the separate document "iCalendar DTD Document (xCal)."

XML Encoded Form Values

[CR: 19990202]

IETF Internet Draft draft-kristensen-xml-map-00.txt. By Anders Kristensen. Hewlett-Packard Laboratories. "This document proposes an XML encoding for sets of named values. The primary application is as a transmission format for form values being submitted to a processing agent over the Web. The main advantage over other form value encodings is that it allows field names to be associated with structured values without resorting to non-XML encodings. The multipart/related MIME type is used for carrying non-XML media."

- IETF Source. Document date: 18 November 1998.

Capability Card: An Attribute Certificate in XML

[CR: 19990204]

This IETF INTERNET DRAFT for a 'Capability Card' "describes basic ideas and data components of 'Capability Card,' which is a kind of attribute certificates designed from the standpoint of a secure communication framework on the Internet. Similar to the SPKI certificates, a capability card can be used to grant a person particular access privileges to resources like WWW pages, IRC channels, and message boxes. In addition, it can carry a variety of descriptive information about the issuer, the resources, and the privileges specified in it. A capability card is written in XML, which is becoming a standard format rapidly for the internet data exchange. Consequently, users can handle various information in capability cards visually with an XML viewer. This is a fairly desirable feature for the existing internet services. In this document, following the motivation and the basic concepts, the elements of XML DTD of capability cards are described."

- Capability Card: An Attribute Certificate in XML Koji Otani, Hiroyasu Sugano, and Madoka Mitsuoka (Fujitsu Laboratories Ltd.) draft-otani-ccard-00.txt, November 18, 1998.
- IETF Draft, local archive copy.

Telecommunications Interchange Markup (TCIF/IPI)

[CR: 19980421]

The recent revision of the TIM DTD toward version 2 has been motivated, in part, by a desire of the subcommittee to make this news industry DTD XML compliant. "Information Products Interchange (IPI) is a working committee of the Telecommunications Industry Forum. IPI was established to select standards and guidelines capable of allowing the interchange of a variety of information products for the telecommunications industry . . . Most of the IPI Committee's published work has to do with the Telecommunications Interchange Markup (TIM, an SGML DTD) and the Telecommunications Electronic Document Delivery Package (TEDD)."

"The TIM Document Type Definition (DTD) is a specification for describing the structure of telecommunications and other technical documents . . . based largely on early versions of the DocBook DTD developed by the Davenport Group. TIM 1 was approved as a TCIF Guideline in December 1995, and revisions for TIM 2 were begun in December 1996. As described in the TCIF Information Publication TCIF-IPI-97-004 (Issue 1, 10/24/97), several of the DTD changes were aimed at making the TIM 2 specification XML compliant. These included changes to the SGML declaration, removal of inclusion and exclusion exceptions from content models, implementation of external cross-references through URLs, restricting the attribute data types to the XML-valid AttType values ('TokenizedType' -- in particular, NMTOKEN for NAME, NUMBER, and NUTOKEN), and restriction of PCDATA to content models having repeatable 'OR groups'. Thus: "except for changes to adapt to the not-yet-finished XLL linking specification, TIM is already XML-complaint and ready for the next generation of browsers."

- Main database entry, with summary and bibliographic references: TCIF/IPI (Telecommunications Industry Forum Information Products Interchange)
- Telecommunications Industry Forum Information Products Interchange (TCIF - IPI) Committee Home Page
- TIM DTD Telecommunications Interchange Markup, *alias* Technical Information Markup DTD
- [March 06, 1998] Comments from Don Pratt, Technical Team Leader on the XML DTD issues (v. 203, 204). Version 2.0.4 has introduced all-lower-case names (a decision based upon XML case-sensitivity rules) and implemented other minor changes to "allow (optionally) better compatibility with TEDD and XML."
- [March 06, 1998] See http://bigbird.bellcore.com/TCIF/lib/sgml/ as of this date for TIM DTD draft version 2.0.4. Alternate locations: ftp://ftp.bellcore.com/pub/world/TCIF/ or http://www.atis.org/atis/tcif/. The change history describes the `XML compliance' issues in 2.0.4. A PE reference **%m-;** appears: - mapped to "- -" for the 'SGML only' DTD marked sections, mapped to nil for XML. The ZIP archive for the DTD.
- [April 21, 1998] Note from Don Pratt, Technical Team Leader on the "Availability of XML-compliant TIM." Dated 1998-03-06. Further details on XML-compliant version of TIM (2.1.1) as of April 21, 1998; [2.1.1 local archive copy, 19980421]

Electronic Component Information Exchange (ECIX) and Pinnacles Component Information Standard (PCIS)

[CR: 19990622]

ECIX - 'For Internet and XML-based Component Information Exchange'. "The Electronic Component Information Exchange (ECIX) project is dedicated to designing standards for creation, exchange and use of electronic component information, including ASIC cores. The ECIX architecture and standards are extensible, unambiguous, well documented and are maintained under the direction of Si2. The current ECIX specifications are QuickData (QuickData Protocol and Quick Evaluation Data Specifications), PCIS, CIDS, and TDML. Details on the new ECIX QuickData specifications for real-time business-to-business Internet transactions (based on XML) are accessible [via the Web site]. A new, XML-based version of PCIS (Version 1.5) was announced in June at DAC '99."

- ECIX Home Page
- See: Electronic Component Information Exchange (ECIX) - Pinnacles Component Information Standard (PCIS)

- ECIX QuickData Specifications
- ECIX Component Information Dictionary Standard (CIDS)
- Timing Diagram Markup Language (TDML)

ECIX Component Information Dictionary Standard (CIDS)

[CR: 19990623]

"The aim of the Component Information Dictionary Standard is to provide authors and users of component information with a computer sensible dictionary of characteristic properties of components, allowing for a common and unambiguous understanding of those characteristics. ECIX has created a CIDS dictionary in support of the ECIX Quick Evaluation Data Specification, and is working with NIST, IEC (61360) and JEDEC organizations to realize CIDS dictionaries for those industry standard dictionaries. A new XML-based version of CIDS (Version 1.9) was announced in June at DAC '99."

- CIDS Information Page
- CIDS XML DTD, [local archive copy]
- SGML DTDs
- CIDS Documentation Set (first draft)

Encoded Archival Description (EAD)

[CR: 19981029]

The US Library of Congress and several research level institutions have been engaged in the collaborative work of the EAD (Encoded Archival Description) initiative for several years. These institutions use the EAD DTD, and currently encode their archival finding aids using the Standard Generalized Markup Language (SGML) or in XML. The EAD Document Type Definition (DTD) represents the formal part of a standard for encoding archival finding aids using the Standard Generalized Markup Language (SGML) and the Extensible Markup Language (XML). This standard is maintained by the Network Development and MARC Standards Office of the Library of Congress (LC) in partnership with the Society of American Archivists

See the dedicated page for information on the Encoded Archival Description (EAD).

UML eXchange Format (UXF)

[CR: 19990916]

A communique from Junichi Suzuki (The Graduate School of Computer Science, Keio University) describes an XML application proposed as the UML eXchange Format (UXF). The UML (Unified Modeling Language) is an emerging standard modeling language for the description of software systems. "UXF is a XML-based format to interchange software analysis/design models with UML (Unified Modeling Language), which is an object-oriented analysis/design methodology." According to the description on the UXF Web site, the project "addresses how UML (Unified Modeling Language) models can be interchanged and proposes an application-neutral format called UXF (UML eXchange Format), which is an exchange format for UML models based on XML (Extensible Markup Language). It is a format powerful enough to express, publish, access and exchange UML models, and a natural extension from the existing Internet environment. It serves as a communication vehicle for developers, and as a well-structured data format for development tools. With UXF, UML models can be distributed universally." UXF is thus expected to support intercommunications between software developers, interconnectivity between development tools, and a natural and transparent extension from the existing Web environment. Several related DTDs are now available or in draft: Parent DTD for all subset DTDs, DTD for class diagrams, DTD for collaboration diagrams, DTD for statechart diagrams, UXF DTD for sequence diagrams. The designers are using 'XSL' stylesheets for UXF data.

Links:

- UML - Unified Modeling Language Version 1.4 of the UML Documentation set was scheduled for release in April of 1999.
- Main UXF Page
- UXF Frequently Asked Questions (FAQ)
- "Making UML Models Exchangeable over the Internet with XML: UXF Approach." By Junichi Suzuki and Yoshikazu Yamamoto. Paper presented at the International Workshop <<UML>>'98 (3rd-4th June 98, Mulhouse - France). Available in Word97, PDF, and Postscript formats. [local archive copy]
- "Managing the Software Design Documents with XML." By Junichi Suzuki and Yoshikazu Yamamoto, Keio University. Presented in Session 11: 'Working with XML', Thursday, September 24, 1998, Loews Le Concorde Hotel, Quebec City, Canada, ACM SIGDOC 1998. "In the software engineering community, Unified Modeling Language (UML) has been widely accepted as an object-oriented software analysis/design methodology, since it provides most of the concepts and notations that are essential for documenting object oriented models. UML, however, does not have an explicit format for interchanging its models intentionally. This paper addresses this lack and proposes UXF (UML eXchange Format), which is an exchange format for UML models, based on XML (Extensible Markup Language)." [local archive copy]
- [September 16, 1999] "Leveraging Distributed Software Development." By Junichi Suzuki and Yoshikazu Yamamoto. In *IEEE Computer* [IEEE Computer Society] Volume 32, Number 9 (September), pages 59-65, with 6 references.
- "Toward the Interoperable Software Design Models: Quartet of UML, XML, DOM and CORBA." By Junichi Suzuki and Yoshikazu Yamamoto. Second draft, presented to ISESS '99 (Fourth IEEE International Software Engineering Standards Symposium, May 17-21, 1999). "This paper addresses a standard-based UML model interchange and presents our effort to make UML interoperable. We developed a XML-based exchange format called UXF (UML eXchange Format) and a distributed model management system for UML. The system leverages the team development, reuse of design models and tool interoperability by interchanging the model information with XML through the Document Object Model (DOM) interface that is implemented on top of CORBA (Common Object Request Broker Architecture). DOM provides a platform and programming language neutral interface to manipulate the content, structure and style of documents." [local archive copy]
- "Making UML Models Interoperable with UXF." By Junichi Suzuki and Yoshikazu Yamamoto. "This paper addresses the UML model interchange and presents our efforts to make UML highly interoperable. We developed an interchange format called UXF (UML eXchange Format) based on XML (Extensible Markup Language)." [local archive copy]
- Archived Samples (DTDs, instances, stylesheets) in a .ZIP collection, 19980528
- Contact: Junichi Suzuki. Email suzuki@yy.cs.keio.ac.jp; WWW: http://www.yy.cs.keio.ac.jp/~suzuki/jsuzuki.html
- Compare: UML-Xchange from Normand Rivard, 07-09-98. "UML-Xchange is a SGML DTD for exchanging data models between CASE tools that use the UML language. All of the six kinds of UML diagrams are supported." See the DTD, [local archive copy]
- Compare: "Object Management Group (OMG) and XML Metadata Interchange Format (XMI)."
- Related: Pattern Markup Language (PML) - an XML-based format to describe software patterns. . . PML internally uses UXF.

Translation Memory Exchange

[CR: 20010908]

Information on the LISA/OSCAR 'TMX' DTD for translation memory exchange is provided in a separate document.

P3P Syntax Specification: Platform for Privacy Preferences

[CR: 20000511]

See the separate document: "Platform for Privacy Preferences (P3P) Project."

Scripting News in XML

[CR: 19980330]

[March 23, 1998] "Frontier 5 is now an XML database with a programming and storage model. . .; see http://www.scripting.com/frontier5/xml/code/.

[January 1998] In one of a series of articles on XML, "Frontier 5 and XML: Scripting News in XML,"Dave Winer describes how he puts *Scripting News* in XML. "The [publication] format is regular enough so that with a reasonable script I can also generate a new format called <scriptingNews> format, that could be read by a new kind of browser, specially designed to carry news items with links, a possible picture, and a rare comment from my evilTwin. [...] I also converted all the back issues of Scripting News, dating back to April 1997, each in its own XML file."

- Frontier 5 and XML: Home Page
- Frontier 5 and XML: The Plan
- Frontier 5 and XML: Scripting News in XML
- Sample
- DTD
- *Scripting News* Home Page
- See also: Frontier 5 and XML: XML Parser in UserTalk

InterX.org

[CR: 19970923]

"Through the InterX.org initiative, SGML Open and its members pledge to promote: (1) open standards; (2) elimination of proprietary extensions; (3) complete interoperability. The name 'InterX.org' embodies the concepts of XML and serves as an abbreviation for interchange, interactivity, interoperability, internet and international."

- Press Release: "SGML Open Launches InterX.org Initiative in Support of XML." Monday September 22 3:14 PM EDT. Lead paragraph: "SGML Open, the international consortium dedicated to promoting structured document and data interchange based on the SGML family of standards, today announced the adoption of a new initiative, InterX.org. Serving as a forum and resource center for developers and users of XML tools, InterX.org will work to bridge the gap between the XML specification and tool interoperability. 'InterX.org' represents the concepts of interchange, interactivity, interoperability, internet and international -- together with XML."
- Information on 'InterX.org' from SGML Open

NuDoc Technology (Bitstream Inc.)

[CR: 19980513]

"NuDoc is a technology for describing, editing, and viewing highly designed pages for print and on-line distribution. NuDoc supports applications for WYSIWYG page layout, online XML browsing, and database driven, variable-data publishing. In NuDoc, a document object is made of style, content, and page layout sub-objects. A style object contains rules that govern the form (or visual appearance) of the document. Content elements such as words, images, movies, etc. are organized into a tagged tree structure that represents the logical organization of the information (sections, sub-sections, etc.). The W3C's Extensible Markup Language (XML) is the default content data representation."

"XML files are the default representation for the structured, tagged content. NuDoc reads and writes XML content files during the authoring process. NuDoc's TSL files are used to define the style sheets. For rapid saving and restoring of the entire document object's state, NuDoc can save to disk (and re-read) the post-composition document containing the style, content, and resulting page layouts (including all user edits and mark-up) to an external XML-format checkpoint file. Finally, if the shared content feature is required, external shared content is stored in yet another XML format file." [from the Technology Briefing, August 1997]

PageFlex is a NuDoc-based Application under development as of mid-1998.

"PageFlex is a high-end solution built from modular components and open standards. It is the first solution to use XML as the intermediate data format between databases and the page composition process. The output formatter is based on Bitstream's revolutionary NuDoc page composition engine, NuDoc offers unprecedented control over the graphic design of page templates while maintaining a strict separation of form from the input XML content."

- Technology Briefing; [local archive copy, text only, 980513]
- PageFlex information

Coins: Tightly Coupled JavaBeans and XML Elements

[CR: 19980622]

Coins is a programming project undertaken by Bill la Forge. Description: "A coin has two faces, an XML element and an instance of a JavaBean: a) the XML element is the persistent form, an b) the JavaBean instance is the runtime form. One of the primary operations of a coins program is the binding of XML element types to specific Java classes. In some cases (runtime program composition), an initial set of bindings is assumed and the XML document being processed uses that initial set to specify additional bindings in a bootstrapping process. The bindings used to process a document are not always fixed, but are often determined by the application or server processing the document. In these cases, the XML document is simply a vehicle for moving information between applications, and the coins technology simply provides the means for processing that document. A particularly interesting feature of coins is its use of hyper-links. Java serialization has no equivalent capability, forcing the .ser files generated by Java serialization to be self-contained. . ."

- Coins Web site: http://www.jxml.com
- Coins Overview
- "XML-Based Components: Coins." Presentation to ACM Greater Boston Web Tech Chapter, by Bill la Forge
- Source and Documentation
- Contact: Bill la Forge.
- [June 21, 1998] "Two-faced Coins Catching On." By Jeff Walsh. In *InfoWorld Electric* (June 19, 1998) Posted at 4:56 PM PT. "A new programming paradigm called Coins is gaining momentum with developers as a way to deliver JavaBeans using the Extensible Markup Language (XML) without the need for Java serialization."

DMTF Common Information Model (CIM)

[CR: 19990115]

On October 19, 1998, The Desktop Management Task Force, Inc. (DMTF) announced the availability of its XML Encoding Specification for the encoding of the Common Information Model (CIM) schema in XML.

Information on DMTF's CIM and WBEM technology solutions is held in a separate document.

Process Interchange Format XML (PIF-XML)

[CR: 19980613]

On June 12, 1998, Jeffrey Ricker posted an announcement for an initial design of PIF-XML (Process Interchange Format XML). PIF is "an interchange format designed to help automatically exchange process descriptions among a wide variety of business process modeling and support system such as workflow software, flow charting tools, process simulation systems, and process repositories." PIF itself "is based on the Knowledge Interchange Format (KIF), which is in turn based on LiSP. Since both LiSP and XML are text-based and nested trees, the translation is relatively straightforward. However, PIF also includes an object-oriented design with inheritance, which does not directly translate into XML." The initial work attempts a direct translation of PIF version 1.2,

and is not optimized for economy in XML; a provisional DTD and example encoded PIF-XML document are available.

- PIF-XML Main Page
- Announcement from Jeffrey Ricker
- PIF-XML document type definition (DTD) [local archive copy]
- PIF-XML example document [local archive copy]
- Process Interchange Format Home Page

Ontology and Conceptual Knowledge Markup Languages

[CR: 20001125]

See the separate document "Ontology and Conceptual Knowledge Markup Languages."

QAML - The Q&A Markup Language

[CR: 19991007]

"QAML is a new language created using XML. The purpose of QAML is to provide a more specific format for documents dealing with questions and answers. Why use QAML instead of HTML? Because unconstrained HTML is too powerful and loose! In particular QAML is meant for FAQs, or Frequently Asked Questions. QAML was originally meant to be a broader language, but we have decided to focus it specifically on FAQs. We are programming a CGI which will format QAML documents and convert them to HTML, so it will be possible to implement QAML without having to worry about when XML browsers are commonplace. Rick Jelliffe (ricko@gate.sinica.edu.tw) has helped us to make QAML fully XML-compliant. We have posted the new, full XML QAML DTD.

[October 07, 1999] New version of the DTD.

[February 26, 1999] A recent communiqué from Rick Jelliffe (Academia Sinica Computing Centre) announces a 'Call for Comments' on a proposed XML DTD for 'Frequently Asked Questions' documents. The new QAML 2.0X XML DTD is "based on the QAML 1.0 SGML DTD, with backwards-compatible augmentations for XML, I18N (internationalization), XLL [XLink] hypertext linking, style, accessability and tracking." Comments on the proposed DTD are solicited by the authors, Justin Higgins of digitalNation Network Services, and Rick Jelliffe. The XML DTD is available online from the FAQ.org website (http://www.faq.org/qaml/) and from the 'Chinese XML Now!' website (http://www.ascc.net/xml/).

References:

- http://www.faq.org/qaml/qaml.dtd
- [October 07, 1999] QAML DTD, [local archive copy]
- QAML Version 2.X created February 1999 [local archive copy, 1999-02]

LACITO Projet Archivage de données linguistiques sonores et textuelles [Linguistic Data Archiving Project]

[CR: 19980609]

Boyd Michailovsky (LACITO/CNRS, project coordinateur) forwarded a communique concerning a linguistic data archiving project which uses XML and SGML encoding. Principal investigators include Boyd Michailovsky, John B. Lowe, and Michel Jacobson. The 'Projet Archivage de données linguistiques sonores et textuelles', under the auspices of the larger LACITO programme (Laboratoire de langues et civilisations à tradition orale) and direction from CNRS, concentrates on the encoding, archiving, and distribution of speech data, particularly for rare languages that are researched within the unit. "The main source of data for the project is the mass of documents recorded and transcribed in the field by members of the LACITO over the last thirty years. These unique recordings, mainly of spontaneous speech in unwritten languages, serve as the

basis for research on the languages and the cultures concerned. Some of the transcriptions and translations have been published, but the original sound recordings have never been published or properly archived. . . An explicit XML (Extensible Markup Language) markup has been adopted for the text materials. In many cases, older documents whose structure is implicit are marked up automatically by program." The interlinearized text (annotated and glossed) is displayed using XSL stylesheets. Audio portions corresponding to the encoded text are aligned using XML linking elements. . .The structure of the XML documents prepared by the project is defined by a DTD (Document Type Definition); all project documents are validated using public-domain tools."

- Project Home Page (French)
- Home Page (English) [local archive copy, text only]
- Sample DTD [local archive copy]
- Demo: Bac and Dangem, the two fresh-water fish - Uses XML and three XSL stylesheets; (French version)

Addresses:
LACITO
c/o Boyd Michailovsky
44 rue de l'Amiral Mouchez
75014 Paris, FRANCE
Tel: 01.45.80.96.73
FAX: 01.45.80.59.83

Astronomical Markup Language

[CR: 20010130]

See: Astronomical Markup Language.

GedML: [GEDCOM] Genealogical Data in XML

[CR: 20021227]

GedML is "a way of encoding genealogical data sets in XML. It combines the well-established GEDCOM data model with the new XML standard for encoding complex information. The result is a representation that can easily be converted to and from GEDCOM, but can be manipulated much more easily using standard tools." See now the document Genealogical Data and XML for information on GedML and other specifications using XML for genealogical information.

Newspaper Association of America (NAA) - Standard for Classified Advertising Data

[CR: 19990115]

The NAA Classified Advertising Standards Task Force "was organized by the NAA Technology Department to facilitate the electronic exchange of classified ads." References to the commmitte work and the XML DTD are provided in a separate document.

News Industry Text Format (NITF)

[CR: 19990318]

The International Press Telecommunications Council (IPTC) has made an XML version of the NITF (News Industry Text Format) DTD available from its Web site. Description and references are found in a separate document.

News Markup Language (NML)

[CR: 19990504]

As of January 1999, a News Markup Language (NML) was under development through the effort of the American Press Institute's Media Center. In a meeting of April 1999, it was decided to incorporate the requirements for NML into the NITF design and development work. Further information is provided in a separate document.

Notes Flat File Format (NFF)

[CR: 19980515]

An announcement for a new XML application initiative (Notes Flat File Format Initiative) was posted by Sean McGrath on May 14, 1998. "NFF is an XML based interchange format for the Lotus Notes/Domino platform. The NFF DTD supports the majority of the constructs that can occur in Lotus Notes data such as structured fields, rich text, doclinks, import objects and so on. Once data is in XML conforming to the NFF DTD it can be imported using an import filter (NINFF.DLL) into Lotus Notes using a simple 'File-Import'. The download package includes the necessary software along with a sample application - *Timon Of Athens* by William Shakespeare in NFF format."

- Announcement from Sean McGrath
- Download page with XML import filter
- XML Import Filter for Lotus Domino

Java Help API

[CR: 19980425]

Java Help API: "The structure of a HelpSet is XML-encoded (Extensible Markup Language) data. . ." See *Byte Magazine* (May 1998) page 108, sidebar "So, Help Me, Java." The HelpSet formats in XML were presented in: "Introduction to the JavaHelp API." By Eduardo Pelegrí-Llopart, Roger Brinkley, and Nancy K. Lee (Sun Microsystems, Inc.) Presented at JavaOne (Sun's 1998 Worldwide Java Developer Conference).

"So, Help Me, Java." From *Byte*, May 1998: ". . . The new Java Help API, currently in beta testing, is an all-Java 'über alles' help system for JavaBean components, applications, desktops, and HTML pages. . . [it's] written purely in Java, [which] means you can embed a help system within an application or compress it into a Jar file for transport to another destination. . . Java Help permits a single help system to support varying "navigational views" of help content. . . The data structure that carries all the information needed to provide a view into a help system is bundled into a HelpSet file. Note that there are two "loose" terms at use here. First, a HelpSet file isn't necessarily a file, in the same sense as files that you store on your hard disk. A HelpSet file could be bound into an application, for example. Second, it's probably more accurate to say that the information is rooted in the HelpSet file. The structure of a HelpSet is XML-encoded (Extensible Markup Language) data. The data points to the URLs from which you can find the info necessary to build the help system."

- See the samples: XML HelpSet Format;　XML based index format;　XML based TOC format;　Formats.

Cold Fusion Markup Language (CFML)

[CR: 19970918]

"Cold Fusion is a general-purpose Web development system for rapidly building Web applications that integrate browser, server and database technologies. It consists of the Cold Fusion Markup Language (CFML), the Cold Fusion Application Server (NT & UNIX) and the forthcoming Cold Fusion Studio, a visual tool for building dynamic Web applications. . . In essence, CFML provides a generalized markup language for handling the richness of programming, logic and integration required to build full-scale applications on the Web platform. It achieves this based on the same inspiration that is driving interest in XML --

simplicity and power. . . Syntactically, Custom Tags are XML compliant custom markup language elements that allow developers to build reusable components that can be easily dropped into a dynamic Web application. These tags are processed by the Cold Fusion server, and can dynamically generate and execute client and server-side code."

- Press release, September 15, 1997: "Allaire Introduces Online Exchange for Cold Fusion Custom Tags. Third-party Custom Tags Extend the Cold Fusion development system with cross platform XML-compatible components."
- Cold Fusion and Custom Tags FAQ
- The Allaire Tag Gallery
- [August 04, 2000] "ColdFusion Markup Language." By Mark Cyzyk. In *WebTechniques* Volume 5, Issue 8 (August 2000), pages 74-77. "Consider the selection of server-side scripting languages: The big contenders in this arena are Active Server Pages (ASP) and JavaServer Pages (JSP). Hypertext Preprocessor (PHP) is also starting to edge in on the market. While each is powerful in its own way, neither of the environments is particularly aesthetic by Gelernter's definition. Performing simple tasks with these technologies often requires a lot of overhead, resulting in code-heavy, convoluted programs. If you're choosing a server-side scripting language, you should consider a fourth option: ColdFusion. Because it acts more like a markup language than a programming language, ColdFusion is an elegant solution for embedding code in HTML files. Allaire, the company that also makes the popular HomeSite HTML editor, has a whole suite of ColdFusion technologies consisting of an application server, an integrated development environment, and of course, the markup language. It is this ColdFusion Markup Language (CFML) that competes directly with ASP and JSP. Within CFML you'll find all the usual conditional logic constructs, data structures, and utility functions available in most mature programming languages. Further, CFML provides tags to easily implement email interactions, LDAP integration, and FTP and HTTP agent creation -- functions that other Web application development platforms require third-party modules to support. Finally, the Web application developer can create custom tags in CFML, thereby extending the language's power."
- Contact: Jeremy Allaire

Document Content Description for XML (DCD)

[CR: 19980811]

[August 10, 1998] International Business Machines Corporation (IBM) and Microsoft Corporation have submitted a proposal to the World Wide Web Consortium defining a vocabulary for describing constraints upon XML documents: "Document Content Description for XML." References: NOTE-dcd-19980731, Submission to the World Wide Web Consortium 31-July-1998. The document "proposes a structural schema facility, Document Content Description (DCD), for specifying rules covering the structure and content of XML documents. The DCD proposal incorporates a subset of the XML-Data Submission and expresses it in a way which is consistent with the ongoing W3C RDF (Resource Description Framework) effort; in particular, DCD is an RDF vocabulary. DCD is intended to define document constraints in an XML syntax; these constraints may be used in the same fashion as traditional XML DTDs. DCD also provides additional properties, such as basic datatypes. The abbreviation 'DCD' is used to describe both the general facility described in this document and individual schema instances that conform to it." Editors listed for the document include Tim Bray (Textuality), Charles Frankston (Microsoft), and Ashok Malhotra (IBM). Other credits: The specification "has benefited greatly as a result of input from David Fallside and David Singer, both of IBM, Andrew Layman and Jean Paoli both of Microsoft, and from Lauren Wood of SoftQuad. We also wish to thank Henry Thompson of the University of Edinburgh and all the authors of the XML-Data specification."

- "Document Content Description for XML." NOTE-dcd-19980731, 31-July-1998.
- The submission acknowledgement
- W3C Staff Comment
- XML-Data
- Resource Description Framework (RDF)

XSchema

[CR: 19990120]

XSchema is the name of a collaborative effort hosted on the XML-DEV mailing list. The principal goal of the XSchema project is to produce an XSchema specification which, "when complete, will provide a means for XML developers to describe their XML document structures using XML document syntax." The target date for a complete initial XSchema 1.0 proposal is June 30, 1998. As of June 1, 1998, discussion had resulted in the creation of a list of twelve XSchema Goals, as refined through four draft documents. This XSchema work was initiated by Simon St.Laurent with the publication of a paper "A Proposal for the Representation of XML DTDs as XML Documents" and by several supportive postings, including a position paper authored by Paul Prescod. During the initial period of discussion on XML-DEV, the project proposal went under the name XSD (Extensible or XML Structure Definitions).

[November 03, 1998] Simon St.Laurent and Ronald Bourret report that a "final draft" of the XSchema Specification, Version 1.0 is now available (November 1, 1998). Public comments on the draft should be posted to the XML-DEV mailing list. General information on the XSchema project is available at http://purl.oclc.org/NET/xschema.

Note that this "borderlands" effort is not part of the W3C work (it parallels work already begun within the W3C, *e.g*., XML Data). Its authors declare that "XSchema is not intended to compete with proposals from the World Wide Web Consortium," and they envision that the results may profitably feed into the W3C activity on XML schemas. According to Jon Bosak (XML WG Chair), design work by the XML WG on XML schemas using instance syntax is likely to be re-chartered. Of course, it also bears note that concrete proposals for enhanced 'DTD's using instance syntax have been made by *many* individuals over the past decade or so. See, for example, references in chapter 8 of *The SGML FAQ Book: Understanding the Foundation of HTML and XML* by Steve DeRose: "SGML: It's 3, 3, 3 Languages in One."

Links:

- XSchema Main Page (PURL) [description local archive copy, 980601]
- XSchema Main Page (direct link)
- XSchema Specification, Version 1.0 'Final Draft' 1998-12-09, spec-v6. [local archive copy]
- [November 03, 1998] XSchema Specification, Version 1.0 'Final Draft (1 Nov, 1998)'. [local archive copy]
- XSchema - Goals [local archive copy]
- "A Proposal for the Representation of XML DTDs as XML documents." By Simon St. Laurent. Date: 19 May 1998. [local archive copy, 980527]
- [June 07, 1998] Ron Bourret's XSchema Page with a Proposed XSchema DTD and a Proposed Schema for XSchema (in XML)
- [June 07, 1998] XML XSchemas: Language/Metalanguage Unification, from John Cowan. 1998-06-05. Previous version: 19980601, [local archive/snapshot copy, 980601]
- [July 22, 1998] XSchema Specification - Outline. Jack Bolles created a single-document version of the XSchema specification, as of July 18, 1998. [local archive copy]
- [September 25, 1998] XSchema <--> DTD conversion. From Ron Bourret, Java classes that convert XSchema-> DTD and DTD-> XSchema.

Document Definition Markup Language (DDML)

[CR: 19990120]

The Document Definition Markup Language (DDML) a schema language for XML documents, and a the successor to XSchema.

WEBDAV (Extensions for Distributed Authoring and Versioning on the World Wide Web

[CR: 19990510]

WebDAV stands for 'Web-based Distributed Authoring and Versioning". It is a set of extensions to the HTTP protocol which allows users to collaboratively edit and manage files on remote web servers. WebDAV uses XML. See references in

a separate document.

Graphic Communications Association - GCA 'Paper' DTD

[CR: 19990514]

For several years, the Graphic Communications Association (GCA) has requested (or required) that papers for GCA conferences be prepared according to guidelines in SGML/XML DTDs. Conference proceedings volumes, both paper and electronic, are generated from the SGML/XML source provided by the authors.

- GCA Paper SGML DTD documentation
- GCA Paper XML DTD documentation
- GCA Paper SGML DTD Collected in this package are the DTD and an SGML declaration for a Markup Technologies paper. [local archive copy]
- GCA Paper XML DTD for MT '99 Collected in this package are the DTD and external entity sets for a Markup Technologies paper, in an XML version. [local archive copy]
- DSSSL stylesheet - DSSSL style sheet for the MTPaper document type. [local archive copy]

DocBook XML DTD

[CR: 20000830]

"DocBk XML is an XML version of the DocBook DTD. DocBook is an SGML DTD maintained by the DocBook Technical Committee of OASIS. It is particularly well suited to books and papers about computer hardware and software (though it is by no means limited to these applications)." References are provided in a separate document.

Tutorial Markup Language (TML)

[CR: 19971012]

- Question Delivery over the Web using TML
- Tutorial Markup Language and NetQuest
- TML Language Specification

SABLE: A Standard for Text-to-Speech Synthesis Markup

[CR: 19990303]

"SABLE is an XML/SGML-based markup scheme for text-to-speech synthesis, developed to address the need for a common TTS control paradigm. The SABLE specification evolved as an initiative to combine three existing speech synthesis markup languages: 1) SSML, the Speech Synthesis Markup Language; 2) STML, the Spoken Text Markup Language; 3) JSML, the Java Synthesis Markup Language. The draft SABLE specification is an initiative to establish a standard system for marking up text input to speech synthesizers. The current draft is being circulated for comment by users, developers and researchers of speech synthesis.

Java Speech Markup Language (JSML/JSpeech)

[CR: 20000620]

The JSpeech Markup Language is referenced in a separate document.

SpeechML

[CR: 19990218]

SpeechML from IBM's alphaWorks Laboratory is "a[n XML] markup language for building distributed network-based conversational applications."

TalkML

[CR: 19990629]

Together with Guillaume Belrose, W3C's Dave Raggett (on assignment from HP Labs) "is developing a voice browser to test out ideas for using context free grammars for more flexible voice interaction dialogs. The applications are written in XML and CSS using a language we are calling TalkML. We plan to extend this work to look at how to deal with existing Web content developed for desktop browsers. Some ideas for this are covered in a W3C NOTE ['Voice Browsers'] I wrote last year with Microsoft's Or Ben-Natan. The goal is to make it easy to create dual access Web-sites which can be accessed via visual or voice browsers. See also my talk on Style sheets for Voice Browsers, as presented at the Developer's Day at WWW8.

"TalkML is an experimental XML language for voice browsers, and is being developed by HP Labs for use in the following markets: (1) Call centers (IVR++) -- sales and support services accessed via 800 numbers, adding speech recognition to today's DTMF (touch tone) systems; (2) Smart phones with displays; (3) Access to email, appointments, news and travel services etc. while your are on the road (in-car systems); (4) Mobile devices too small for decent displays or keyboards, WCDMA palmtop organizers/pagers with low enough cost to be a must-have (like cell-phones). Guillaume Belrose helped to devise TalkML and develop the sofware."

- Introduction to TalkML
- Example of a TalkML Application
- W3C Voice Browser Activity
- Style Sheets for Voice Browsers - By Dave Raggett

XML and VRML

[CR: 20001114]

See now: "VRML (Virtual Reality Modeling Language) and X3D."

XML for Workflow Management [NIST]

[CR: 19981113]

A NIST project cordinated through MEL (The Manufacturing Engineering Laboratory) at the National Institute of Standards and Technology, under Project Leader Joshua Lubell. The objective of this NIST-sponsored project is to "explore the use of XML (eXtensible Markup Language), a standard for structured document interchange on the Web, for exchanging complex data objects between tasks in a distributed workflow application." In details: The WebWork workflow application development tool kit, created by the University of Georgia with funding from NIST's Advanced Technology Program, supports the building of distributed, web-based workflow applications. NIST has demonstrated the benefits of XML for representing highly structured documents such as product data standard specifications and has shown that WebWork can be integrated with an XML repository. Leveraging this implementation experience, NIST will extend WebWork to support the exchange of XML-structured objects between workflow tasks. NIST will demonstrate the efficacy of this approach by building a small application to manage a subset of the workflow in ISO TC184/SC4 (International

Organization for Standardization Technical Committee 184, Subcommittee 4), an international standards body developing specifications for the representation and exchange of industrial data for which NIST serves as Secretariat."

- Project Description - XML for Workflow Management [local archive copy]

SWAP - Simple Workflow Access Protocol

[CR: 19981113]

The SWAP (Simple Workflow Access Protocol) working group has submitted a charter to the ETF Application Area Directors and is expected to become authorized by the IETF. SWAP is "a protocol designed to allow for interoperability between workflow systems and between workflow systems and other applications. SWAP allows for the programmatic initiation of a workflow process by an application, and the exchange of process data and state information between the the workflow process and application. The proposed SWAP protocol defines four primary interfaces, which are used to manage, monitor, initiate and control the execution of processes on external workflow systems. . . SWAP is not intended to overlap with the WebDAV in any way. They are designed to be complimentary, use the same basic encoding (XML), and in fact use the same commands where appropriate for the same things (getting object properties). The goals of the two specs are different. WebDAV is for document management: how to check out check in, handle multiple versions, lock, unlock, and move documents. There is nothing in WebDAV about applications. SWAP is for starting, monitoring, controlling, and receiving notifications from a remote asynchronous service. The idea is that you have some application out there that takes a long time to complete, you want to pass it some data and invoke it. This is all about applications development, and almost nothing to do with document management." [adapted from the FAQ and main Web page, by Keith Swenson]

- See: SWAP references in "Asynchronous Transactions and Web Services."
- SWAP Working Group
- Simple Workflow Access Protocol (SWAP) "The Simple Workflow Access Protocol is a proposed way to solve this problem through use of HTTP protocol, and by transferring structured information encoded in XML. A new set of HTTP methods is defined, as well as the information to be supplied and the information returned in XML, that accomplish the control of generic asynchronous services." - draft-swenson-swap-prot-00.txt
- SWAP Main Page
- SWAP FAQ document
- SWAP Issues and Action Items

Theological Markup Language (ThML)

[CR: 20000807]

Theological Markup Language (ThML) is described in a separate document.

XML-F ('XML for FAX')

[CR: 19990215]

VSI (V-Systems Inc.), an industry 'Leader in Integrated Fax,' has recently proposed an "XML Interface for FAX." XML-F ('XML for FAX'), under VSI's new proposal, would be used for for connecting fax servers to applications, other fax servers, and fax service providers. "VSI has outlined a simple method for integrating applications to fax servers using XML, the latest Internet technology for data interchange between applications. Launched at a time when both network fax and XML are coming into the mainstream, VSI believes that their proposal, called 'XML-F', has the potential to solve a major issue facing the fax service community." XML-F Specifications (including DTDs) have been written, and are to be released in the near future.

"The XML-F interface provides a simple framework for software applications to use in employing a network fax service to send an electronic document to a

terminating fax machine. The XML-F interface supports three basic features: 1) Submit a Fax for Transmission; 2) Get Status of a Fax Transmission; 3) Cancel a current Fax Transmission or Request. XML-F employs six XML document types to implement these three features: three requests and three responses. Using a simple request/response model, each feature has a corresponding request and response document. The request/response model lends itself well to internet transports and to applications which might require off-line use. All data is formatted as text and binary data is encoded using Base64 encoding. XML-F can be coupled with internet transports such as TCP/IP and HTTP and security mechanisms such as SSL to provide secure transactions over public networks. XML-F does not imply or require any particular transport, however. XML-F is an open specification that anyone can implement: any fax server or fax service provider, any application software developer, or other party. It is recommended that any public implementation of a server representing this interface fully implement all of the interface, while client systems might opt to implement only those portions which are relevant to the application." [from the 0.1.90 draft]

- VSI (V-Systems Inc.) Home Page
- Press release: "VSI Proposes New XML Interface for Fax. Fax over XML Could Solve Key Issues in the Fax Service Community." - Announcement for XML-F. [also from VSI]
- "Fax Integration using XML." August, 1998. 6 pages. - "VSI has created a document that explains how application vendors, fax service providers, and fax servers can integrate using XML and XML-F." [local archive copy]
- XML-F Specifications. "XML-F Preliminary Specification." Revision 0.1.90, August 1998. 23 pages. - "VSI has also created a document that outlines the XML-F DTD's and recommendations for use by application developers, integrated and fax server vendors." [local archive copy]
- Email discussion forum: discussion@xml-f.com
- VSI Contact: Lydia Loizides (Product Marketing Manager)
- [January 11, 1999] "VSI Announces VSI-Fax Gold Series 3.5 -- Introduces Faxing From Outlook. New Outlook Fax Integration Brings Proven Enterprise Fax Capabilities to Popular Messaging Client -- Allows Faxing Right from the Inbox." - "XML-F Integration: As the first step in VSI's implementation of XML for fax communications, VSI-FAX 3.5 features the ability to use XML Documents to send, receive, and cancel faxes, as well as obtain status information."
- "What is XML?" - From VSI. [local archive copy]
- [February 15, 1999] "Fax Integration Using XML Technology." By Dave Droman and Gila Jones [V-Systems, Inc.]. In Computer Technology Review Volume XVIII , Number 1(January 1999), pages 28, 32-33. "As it stands today, there is no standard means of communicating between (1) fax servers and the applications that need faxing services and (2) among various fax servers or fax service providers across a network, including the Internet. . . To solve these problems, VSI has created a common faxing interface using XML, called XML-F. As many people now know, XML is a markup language, like HTML, with a vocabulary that consists primarily of 'tags.' HTML was specifically designed for marking up documents to communicate how they should be formatted for display on the World Wide Web. The purpose of XML is far more open-ended, but in general it is a 'meta-language' intended to be used to define other standard markup languages (known as Document Type Definitions or DTDs) that can be used to allow different systems to exchange information in a standard, process-readable format. Businesses can define their own vocabulary of XML tags and rules that are embedded within the DTD inside the XML document or made publicly available to any program that wants to comply with the agreed-upon information exchange format. The use of XML-specific parsers eliminate the burden of parsing and validating XML interchange documents, reducing the work and support required to implement an application reading XML." [local archive copy]

Extensible Forms Description Language (XFDL)

[CR: 19981005]

The main entry for the Extensible Forms Description Language (XFDL) is found in a separate document.

Broadcast Hypertext Markup Language (BHTML)

[CR: 19990520]

"The ATSC T3/S17 specialist group is in the process of defining the application programming interfaces for a Digital Television Application Software Environment (DASE) compliant receiver. As this process evolves, the elements, attributes, properties, and values of BHTML will solidify. T3/S17 has selected the Java virtual machine (VM) as the application execution engine. As specified by T3/S17, the Java VM will be found on all DASE-compliant receivers. Aninda DasGupta, the T3/S17 chairman, proposed [what] he called 'Broadcast HTML' [which] uses Internet technologies favored by many T3/S17 members: it is written in XML, scales back HTML elements and attributes, and integrates synchronization functionality as new elements, attributes, and style properties. BHTML is an XML compliant language based on a reduced set of HTML 3.2 elements and attributes. Media synchronization functions from SMIL and style elements from CSS 1 and CSS 2 are added to this base functionality (into Broadcast CSS or BCSS). Appendix C of the August 6, 1998 draft ("XML-Data Specifying BHTML using the XML-Data Syntax") represents 'a first pass at defining the BHTML elements and attributes using the XML-Data (XMLD) notation'."

"xHTML specifies a collection of document type definition (DTD) sets that can be combined to specify an xHTML-based platform. Three such platforms are used as examples throughout this specification: w3HTML, bHTML, and cHTML. xHTML is designed to meet the requirements of consumer electronic and computer manufacturers that wish to produce a broad range of products with various levels of Internet connectivity and product features. xHTML started with HTML 4.0 and HTML 3.2. These elements and attributes were converted to XML, in line with the stated goals of the W3C for future HTML. The XML-based markup language was partitioned into DTD sets that correlated with the needs of platform developers to differentiated based on internet connectivity, memory footprint, and power management. xHTML is written in XML, therefore element names are case-sensitive."

- Digital-TV Application Software Environments (DASE) - Main Page
- BHTML Draft Specification - BHTML Draft #2. Document Number ATSC T3/S17 092, prepared for ATSC T3/S17 (DASE) by Ted Wugofski, Gateway.
- A Modular Hypertext Markup Language for Broadcast Applications.. Prepared by Ted Wugofski. 1 Oct 98, Draft #4. [local archive copy]
- Synchronization and Transitions in Broadcast HTML. Ted Wugofski, Over the Moon Productions. "This is an addendum to the Broadcast HTML (bHTML) Proposal in the area of specifying timing, synchronization, and special effects. The design is based on functional requirements specified in the Advanced Television Systems Committee (ATSC) specialist group (T3/S17) that is defining the digital television application software environment (DASE)." [local archive copy]
- Broadcast HTML Specification - General Information
- DASE Introduction
- [August 25, 1998] "As Intel-led group sideswipes standards body, Thomson and Microsoft roll spec of their own - Debate rages over how to bring data to TV." By Junko Yoshida. In *EETimes* Issue 1022 (August 24, 1998). Excerpt: "The debate over how to bring data and Internet technologies to digital television will bubble up this week, as a key industry group reconvenes here to discuss a set of proposals that has come under fire. . . Where the ATVEF's technology is based on standard Internet specifications such as HTML 4.0, BHTML is written in the emerging Extensible Markup Language (XML), a new language for advanced Web applications. BHTML scales back HTML elements and attributes by using parts of HTML 3.2, while it integrates synchronization functionality. The biggest difference between the two lies in the use of the Java software technology. BHTML is designed to be tightly integrated with the Application Execution Engine, or Java Virtual Machine, and with the Java framework." See the database entry, "Broadcast Hypertext Markup Language (BHTML)."
- [September 24, 1998] "Group Seeks Integrated Multimedia, DTV." By Junko Yoshida. In *CMPNet TechWeb News* (September 20, 1998). "With a goal to integrate 2-D, 3-D, and streaming content for digital TV (DTV) programming, leaders from key international technology-development forums gathered [in Leidschendam, Netherlands] last week to launch a new initiative to harmonize the various multimedia streams. Taking part in the AIC meeting were representatives from the Motion Picture Experts Group, Virtual Reality Modeling Language organization, and Advanced Television Systems Committee (ATSC). The initiative will 'write an open specification to integrate and harmonize VRML, MPEG-4, and Broadcast HTML BHTML into a seamless stream,' said Rob Glidden, co-chairman of VRML 3-D Integrated Media Working Group and one of 12 founding members of AIC. BHTML, written in the emerging Extensible Markup Language (XML), is designed for tight integration with the Java framework. Pointing to longstanding integration efforts between VRML and XML, as well as between MPEG-4 and VRML, Glidden said, 'This is a natural extension of what we have been doing at each of the groups'."

Clinical Trial Data Model

[CR: 20001129]

See now: "Clinical Data Interchange Standards Consortium."

ISO 12083 XML DTDs

[CR: 20001106]

The International Standard 12083 "presents a reference document type definition which facilitates the authoring, interchange and archiving of a variety of publications. This document type definition is deliberately general. It is a reference document type definition which provides a set of building blocks for the structuring of books, articles, serials, and similar publications in print and electronic form. This International Standard is intended to provide a document architecture to facilitate the creation of various application-specific document type definitions."

[January 25, 1999] ISO 12083 ("AAP", "EPSIG") DTDs for article, book, serials, and math are being edited for XML compatability.

[November 06, 2000] ISO 12083 is available free in PDF format from NISO: ANSI/NISO/ISO 12083 Electronic Manuscript Preparation and Markup ("The standard specifies the SGML declaration defining the syntax used by the document type definitions [DTD] and document instances, and a definition for mathematics which may be embedded in other SGML applications").

References:

- XML DTDs - Main Index Page
- General ISO 12083 Information
- Proposed XML DTDs, in local archive copy, as of 1999-01-25. See the source URLs for updated versions.
  - ISO 12083 Article XML DTD [local archive copy]
  - ISO 12083 Book XML DTD, [local archive copy]
  - ISO 12083 Serial XML DTD, [local archive copy]
  - ISO 12083 Math XML DTD,[local archive copy]
- Notes on the XML Conversion (ISO 12083 Minutes Nov. 15 - 18, 1998, Chicago, [local archive copy]
- See also: ISO 12083 [SGML] DTDs
- [May 19, 1999] ISO 12083: New Revision to Support XML. By Dianne Kennedy. In *XML Files: The XML Magazine* Issue 14 (May 31, 1999). "The working group for ISO 12083, The Electronic Manuscript Standard, hosted by GCA, met on May 1, 1999 in Granada Spain. Dianne Kennedy from GCA served as convener. This meeting was called to resolve issues for the next revision of this ISO standard."

Extensible User Interface Language (XUL)

[CR: 19990204]

"XUL stands for 'extensible user interface language'. It is an XML-based language for describing the contents of windows and dialogs. XUL has language constructs for all of the typical dialog controls, as well as for widgets like toolbars, trees, progress bars, and menus."

User Interface Markup Language (UIML)

[CR: 19990526]

The User Interface Markup Language (UIML) "allows designers to describe the user interface in generic terms, and then use a style description to map the interface to various operating systems (OSs) and appliances. Thus, the universality of UIML makes it possible to describe a rich set of interfaces and reduces the work in porting the user interface to another platform (e.g., from a

graphical windowing system to a hand-held appliance) to changing the style description." See the separate document.

Commerce XML (cXML)

Commerce XML (cXML) is "an open Internet-based standard for e-commerce. cXML reduces on-line business trading costs by facilitating the exchange of content and transactions over the Internet. Developed in concert with more than 40 leading companies, cXML is a set of lightweight XML DTDs -- based on the World Wide Web Consortium's XML standard -- with their associated request/response processes."

XML DTD for Phone Books

[CR: 19990309]

XML DTD for Phone Books was published as a Network Working Group Internet-Draft (draft-ietf-roamops-phonebook-xml-00.txt) in February, 1999. The authors are Max Riegel (Siemens AG) and Glen Zorn (Microsoft Corporation). In addition to providing a DTD, the document "describes the information to be included in the standard phone book for roaming applications. All data is described in XML (Extensible Markup Language) syntax leading to a concise XML DTD (Document Type Declaration) for the phone book. The goals of this document include: 1) Creating a flexible, extensible and robust framework upon which to build a standard phone book; 2) Promoting a standard phone book format, to enhance interoperability between ISPs and roaming consortia."

- XML DTD for Phone Books. Proceedings URL.
- XML DTD for Phone Books, February 1999. This version expires on August 15, 1999.
- Local archive copy, draft-ietf-roamops-phonebook-xml-00.txt
- See also: "XML DTD for Roaming Access Phone Book." IETF RFC 3017. December 2000. "This document defines the syntax as well as the semantics of the information to be included in the phone book for roaming applications. It comprises the information necessary to select the most appropriate ISP and to configure the host to get access to the network of the provider. The specification consists of a small set of required information elements and a variety of possible extensions. All data is specified in XML (Extensible Markup Language) syntax leading to a concise XML DTD (Document Type Declaration) for the phone book.

Using XML for RFCs

[CR: 20000702]

See the separate document for XML and RFCs.

The Data Documentation Initiative

[CR: 20000627]

The Data Documentation Initiative is "a Project to Develop an XML Document Type Definition for Data Documentation" [germane to datasets in the social and behavioral sciences.] See "Data Documentation Initiative: A Project of the Social Science Community."

XML General Articles and Papers: Surveys, Overviews, Presentations, Introductions, Announcements

[CR: 19980831] [Table of Contents]

References to general and technical publications on XML/XSL/XLL are available in the following sections:

- Current XML Articles/Papers
- Articles written before June 1998
- Articles Introducing XML
- Articles/Press Releases - XML Industry News
- Comprehensive SGML/XML Bibliographic Reference List

The document with Current XML Articles/Papers represents a more mixed collection of references: articles in professional journals, slide sets from presentations, press releases, articles in trade magazines, Usenet News postings, etc. Some are from experts and some are not; some are refereed and others are not; some are semi-technical and others are popular; some contain errors and others don't. Discretion is strongly advised. The articles are listed approximately in the reverse chronological order of their appearance. Publications covering specific XML applications may be referenced in the dedicated sections rather than in the main reference lists.

XML Books

[CR: 19990729] [Table of Contents]

Books on XML are referenced only briefly in the following section. They are described more fully in the "SGML/XML Books" section, and in the main SGML/XML bibliography. For now, only books *already published* are listed. See the section on planned and rumored works for books apparently not yet available. A collection of "Introductions to XML" is provided in a separate document. A more complete XML book list is maintained by Charles F. Goldfarb in "All the XML Books in Print".

- Henning Behme and Stefan Mintert. *XML in der Praxis: Professionelles Web-Publishing mit der Extensible Markup Language.* Bonn: Addison Wesley Longman, [June] 1998. Extent: 328 pages, CD-ROM. ISBN 3-8273-1330-9. Price: DM 69,90.

- Neil Bradley. *The XML Companion.* Harlow, Essex: Addison Wesley Longman, 1998. Extent: 464 pages. ISBN: 0-201-41999-8.

- Dan Connolly (guest editor). *XML: Principles, Tools, and Techniques.* World Wide Web Journal [edited by Rohit Khare] Volume 2, Issue 4. Sebastopol, CA: O'Reilly & Associates, Inc., Fall 1997. Extent: xii + 248 pages. ISBN: 1-56592-349-9. ISSN: 1085-2301.

- Steven J. DeRose. *The SGML FAQ Book: Understanding the Foundation of HTML and XML.* Electronic Publishing Series, Number 7. Dordrecht/Boston/London: Kluwer Academic Publishers, 1997. Extent: xxiv + 250 pages, appendices. ISBN: 0-7923-9943-9. [Chapter 8. "XML: A Simple, Standard Subset."]

- Bob DuCharme. *XML: The Annotated Specification.* The Charles F. Goldfarb Series on Open Information Management. The Definitive XML Series from Charles F. Goldfarb. Upper Saddle River, NJ: Prentice Hall PTR, 1999. Extent: xx + 339 pages. ISBN: 0-13-082676-6.

- Peter Flynn. *Understanding SGML and XML Tools. Practical Programs for Handling Structured Text..* Foreword by Steve DeRose. Kluwer Academic Publishers SGML Bookshelf, Electronic Publishing Series. Dordrecht, Boston, & London: Kluwer Academic Publishers, 1998. Extent: xxvi + 432 pages, CDROM. ISBN: 0-7923-8169-6. [description]

- Charles F. Goldfarb and Paul Prescod. *The XML Handbook.* Foreword by Jean Paoli. The Charles F. Goldfarb Series on Open Information Management. The Definitive XML Series from Charles F. Goldfarb. Upper Saddle River, NJ: Prentice Hall PTR, 1998. Extent: xlvi + 642 pages, CDROM. ISBN: 0-13-081152-1.

- Ian S. Graham and Liam Quin. *XML Specification Guide.* New York, NY: John Wiley & Sons, 1999. Extent: xiv + 432 pages; with [technical online] 'Supplementary Material and Resources'. ISBN: 0-471-32753-0. Has a supporting Web site.

- Elliotte Rusty Harold. *XML: Extensible Markup Language. Structuring Complex Content for the Web.* Foster City/Chicago/New York: IDG Books

Worldwide, 1998. Extent: xxiv + 426 pages, CDROM. ISBN: 0-7645-3199-9.

- Rick Jelliffe. *The XML and SGML Cookbook. Recipes for Structured Information.* The Charles F. Goldfarb Series on Open Information Management. Upper Saddle River, NJ: Prentice Hall PTR, May 1998. Extent: 650 pages, with CD-ROM. ISBN: 0-13-614223-0. [provisional description]

- Michael Leventhal, David Lewis, and Matthew Fuchs; with contributions from Stuart Culshaw and Gene Kan. *Designing XML Internet Applications.* The Charles F. Goldfarb Series on Open Information Management. [Subseries:] The Definitive XML Series from Charles F. Goldfarb. Upper Saddle River, NJ: Prentice Hall PTR, [May] 1998. Extent: xxxii + 584 pages, CD-ROM. ISBN: 0-13-616822-1. Price: $44.95 U.S./$63.00 Canada.

- Henning Lobin. *Informationsmodellierung in XML und SGML.* Berlin/Heidelberg: Springer-Verlag, [May] 1999. 250 pages. ISBN: 3-540-65356-2.

- Richard Light, Simon North, Charles Allen (*et al.*). *Presenting XML.* Indianapolis, IN: SAMS.NET [Sams Publishing, Macmillan Publishing USA], 1997. Extent: 400+ pages. ISBN: 1-57521-334-6.

- Sean McGrath. *XML by Example. Building E-Commerce Applications.* The Charles F. Goldfarb Series on Open Information Management. The Definitive XML Series from Charles F. Goldfarb. Upper Saddle River, NJ: Prentice Hall PTR, [June] 1998. Extent: xlviii + 476 pages, CDROM. ISBN: 0-13-960162-7.

- David Megginson. *Structuring XML Documents.* Charles F. Goldfarb Series on Open Information Management. The Definitive XML Series from Charles F. Goldfarb. Upper Saddle River, NJ: Prentice Hall PTR, [March] 1998. Extent: xxxviii + 425 pages, CDROM. ISBN: 0-13-642299-3.

- Murata Makoto, Atsuhito Momma, and Kyoichi Arai. *XML Nyuumon [Introduction to XML. In Japanese].* Tokyo: Nihon Keizai Shimbunsha, 1998. Extent: 224 pages. ISBN: 4-532-14610-0. Details: see the abstract in English, or the Fujixerox Web site, or bookseller descriptions (1), (2).

- Simon St. Laurent. *XML: A Primer.* Foster City, CA: MIS Press/IDG Books, 1998. Extent: xx + 348 pages. ISBN: 1-5582-8592-X. Also in Korean, Japanese, and Italian translation.

- Simon St. Laurent and Robert Biggar. *Inside XML DTDs: Scientific and Technical.* New York, NY: McGraw-Hill, 1999. Extent: xii + 468 pages, CDROM. ISBN: 0-07-134621-X.

- Simon St. Laurent and Ethan Cerami. *Building XML Applications.* New York, NY: McGraw-Hill, (May) 1999. Extent: 512 pages, 150 illustrations. ISBN: 0-07-134116-1.

- Ed Tittel, Norbert Mikula, and Ramesh Chandak *XML for Dummies.* Foreword by Dan Connolly. [Series: For Dummies.] Foster City, CA: IDG Books Worldwide, Inc., 1998. Extent: xxviii + 367 pages, CDROM. ISBN: 0-7645-0360-X.

XML Mailing Lists, Discussion Groups, Newsgroups

[CR: 19981202] [Table of Contents]

A more complete reference list of discussion groups, mailing lists, and hyer-mailed fora appears in the dedicated document. Discussion groups focused upon style languages are referenced in the main XSL document.

- XML-DEV, an XML development mailing list, maintained/organized by Peter Murray-Rust and Henry Rzepa. See the text of the announcement. To subscribe to the digest, mailed on Monday of each week, send email to majordomo@ic.ac.uk with the message line 'subscribe xml-dev-digest'.

- XML-DEV archives - the WAIS-indexed searchable archives from the XML-

DEV forum.

- [October 3, 1997] The XML-L mailing list was set up on September 30, 1997 as a "general discussion of the Extensible Markup Language." The list owner is Peter Flynn, University College Cork. To subscribe to the list, send email to listserv@listserv.hea.ie with the command 'subscribe xml-l [your name]' in the body of the message. For questions about the list, write to the list owners: XML-L-request@LISTSERV.HEA.IE.

- Usenet Newsgroup: *comp.text.sgml*. More information on CTS is available in the News page.

- [July 15, 1998] [Provisional/planned Usenet Newsgroup], *comp.text.xml*. See the draft RFD (Request for Discussion): http://www.jtauber.com/xml/CTX_RFD.txt, [local archive copy, 980408.] The first call for votes was issued on June 23, 1998. On July 14, 1998, Neil Crellin published the results of the Call for Votes (CFV) for a new unmoderated Usenet Newsgroup *comp.text.xml*. The voting period closed at 23:59:59 UTC, July 14, 1998. The vote passed, "365:22".

- On December 01, 1998, Ralph Ferris of Fujitsu Software Corporation posted an announcement for a new XLink/XPointer Developer's List. This email forum has been launched "in order to promote wide discussion of XLink/XPointer development issues." To subscribe to the new xlxp-dev list, send an email message to majordomo@fsc.fujitsu.com with the following in the body of the message: subscribe xlxp-dev. Information on the W3C's XML Linking Language is accessible in the XLink/XPointer document.

- [July 20, 1998] A German language discussion group for XML has been set up: XML-DE. The list is hosted by GMD and DFN, two German national research institutes; this host arrangement is meant to help ensure "neutrality in commercial questions and professional maintainance." The goals of this group are to "provide a native German language forum for general XML discussion, to promote XML in the German industry, and to build a pool of experts for know-how transfer." Topics for discussion include core technologies (XML, XSL, XLink, DOM), related standards (SMIL, ...) and software (browsers, parsers, ...). To subscribe to the group, send a mail to listserv.gmd.de with the message "subscribe xml-de [firstName lastName]" in the body of the message. See further information in the main entry: XML-DE.

- xml-litprog-l: "Literate Programming with XML" List. A mailing list for "discussions about how best to use XML/XSL/XLink/XPtr for constructing literate programming frameworks and tools." Organized initially by Anthony B. Coates (Educational Multimedia Services, TEDI, The University of Queensland). As of September 25, 1998, the list moved to an Allette server. See: http://www.allette.com.au/xml-litprog/. To subscribe, send email to xml-litprog-l-subscribe@egroups.com. See [the database entry "XML and Literate Programming", the list entry xml-litprog-l - "Literate Programming with XML" List and] the document "SGML/XML and Literate Programming."

- JXML: Java<-->XML, the Java and XML mailing list. "This list is intended for discussions relating to Java and XML, particularly with reguard to the following: 1) Java Class and Bean metadata expressed as XML documents; 2) Conversion of Java Class metadata to bytecodes defining simple, data-only classes; 3) Reversable conversion of Java Object Streams to XML documents while maintaining type safety (JSXML); 4) Description of Jar Resources as an XML document; XML document-driven construction of Jar files (etc.)." See the more complete description: http://www.camb.opengroup.org/~laforge/jxml.html. To subscribe, send email to: java-xml-interest@opengroup.org.

- Related discussion and development forum: DSSSList, with the DSSSList Archive, sponsored by Mulberry Technologies, Inc. and managed by Tony Graham.

- XSL-List is provided by Mulberry Technologies as a service to the XSL user community and the XSL standardization effort. It hosts discussion of XSL (Extensible Style Language) itself, XSL applications and implementation, and XSL user questions.

- Python XML-SIG: A Special Interest Group for XML Processing in Python. The SIG was created "to provide a forum for discussion and implementation of tools to make Python an excellent choice for XML processing. The goal of this SIG is to decide what software is required for this purpose, and

coordinate its implementation and documentation."
See the announcement and the main list entry for details. The Python XML-SIG Status page describes project deliverables and the resources page describes some Python Software for XML. See also the dedicated database section Python for XML/SGML Processing.

- Perl-XML list, "a mailing list is dedicated to the discussion of enhancing Perl's ability to work with XML and for using Perl with XML documents." Send 'SUBSCRIBE Perl-XML' to listmanager@activestate.com. Send list contributions to: Perl-XML@ActiveState.com.

XML: Working Groups, SIGS, Design and Development Initiatives

[CR: 20000413] [Table of Contents]

Contents

SAX - Simple API for XML

[CR: 20000810]

[January 28, 2000] SAX 2/Java (beta). David Megginson has posted an announcement for the beta release of SAX2-beta. "SAX is the Simple API for XML, a very-widely implemented event-based interface for processing XML documents. The beta release of SAX2/Java is now available for download at http://www.megginson.com/SAX/SAX2/. Highlights of the release: (1) Namespace support; (2) Configurability and extensibility through features and properties; (3) A new interface and base class for SAX filters; (4) Adapters for using SAX1 parsers with SAX2 and vice-versa; (5) Way too much JavaDoc documentation; (6) Public domain (even less restrictive than Open Source)... SAX2 adds standard methods to query and set features and properties in an XMLReader. It is now possible to request an XML reader to validate (or not to validate) a document, or to internalize (or not to internalize) all names, using the *getFeature*, *setFeature*, *getProperty*, and *setProperty* methods. There is no fixed set of features or properties available for SAX2: implementors are free to define new features and properties as needed. All feature and property names are fully-qualified URIs (often URLs), such as "http://www.acme.com/features/foo"; as with Namespace URIs, people should always define feature and property names based on URIs that they control. All XML readers are required to recognize the "http://xml.org/sax/features/namespaces" and the "http://xml.org/sax/features/namespace-prefixes" features (see below), and to support a *true* value for the namespaces property and a false value for the *namespace-prefixes* property: these requirements ensure that all SAX2 XML readers can provide the minimal required Namespace support for higher-level specs such as RDF, XSL, XML Schemas, and XLink. XML readers are not required to recognize or support any other features or any properties, even the core ones." [...] WRT SAX version 1: "Of the core classes and interfaces, only Parser, AttributeList, DocumentHandler, and HandlerBase (which is really a helper anyway) are deprecated. All of the rest -- InputSource, Locator, EntityResolver, DTDHandler, ErrorHandler, SAXException, and SAXParseException -- are left untouched."

[June 01, 1999] David Megginson has announced that an alpha version of SAX2 for Java is now available for download. SAX2 is "an update to the widely-implemented SAX 1.0 interface for XML parsers. SAX2 consists of two parts: (1) a new, extensible mechanism for querying and setting features and properties in SAX parsers in a standard way; and (2) a set of recommended core feature and property names.

- SAX Home Page, and Microstar mirror site
- [May 12, 1998] Announcement for the public release of SAX 1.0. See: http://www.megginson.com/SAX/.
- [May 14, 1998] SAX Parsers and Applications
- Quick Start for SAX Application Writers
- [September 25, 1999] SAX C/C++ Implementations: "I have just successfully completed a C++ implementation of SAX/SAX2 and DOM, based upon expat. Currently I'm in the process of testing the whole thing ;). Eventually I will make it available to the public; however, some parts of the implementation use my company's proprietary C++ class library, so certain things need to be sorted out first. Feel free to contact me for more information." Guenter Obiltschnig, Sat, 25 Sep 1999 20:11:21 +0200, XML Developers' List. Update 2000-08-10: the XML class library for C++ is now available as open source at http://www.cpointc.com/XML.
- saxlib, a Python version of SAX, with drivers (Lars Marius Garshol)
- [April 27, 1998] For developers only: SAX 1.0 beta, almost ready for announcement.
- [April 10, 1998] For developers only: test re-release beta version of SAX, and demo which does the identity transform
- "What is an Event-Based Interface?" By David Megginson.
- Draft Interface Specification for SAX
- [March 20, 1998] , per the posting from David Megginson
- SAX - Simple API for XML. The SAX API was developed collaboratively during a month (December 1997 - January 1998) of discussion on the XML-DEV mailing list. SAX "is a simple, common, event-based API for XML parsers written in object-oriented languages like Java, C++, or Perl5 (the reference implementation is in Java). SAX is similar in philosophy to JavaSoft's JDBC -- it allows you to write an application once, then plug in any XML parser that has a SAX driver, just as the JDBC allows you to plug in any SQL database that has a JDBC driver." See the main database entry, the announcement from David Megginson [980112], or the Microstar Web site.

XML and Literate Programming

[CR: 19980512][Table of Contents]

References for 'XML and Literate Programming' have been moved to a separate document under the title "SGML/XML and Literate Programming." This document provides a collection of references for literate programming techniques and style in the context of descriptive markup languages, *e.g.*, SGML, XML, DSSSL, HyTime, etc. Numerous researchers have observed that the goals of information re-use and data normalization embraced by both literate programming and SGML-based markup languages provide the basis for using the two technologies together.

GNOME (GNU Network Object Model Environment) XML Library

libxml (alias: gnome-xml) is an XML library being developed within the framework of the GNOME environment.

- Main Page

XML and Perl

[CR: 20001110][Table of Contents]

See "XML and Perl."

XML and Python

[CR: 20000623][Table of Contents]

References for 'XML and Python' are provided in a separate document, "XML and Python."

XML in Mozilla

[CR: 20020606] [Table of Contents]

See now: "XML in Mozilla."

XML in Microsoft Internet Explorer

[CR: 19981015] [Table of Contents]

A press release of October 13, 1998 clarified Microsoft's plans for XML support in the MS Windows operating system and in Microsoft Internet Explorer 5. 'XML 1.0, XSL, XML DOM, and XML Namespaces'. Support features as announced include: "Direct viewing of XML; High-performance, validating XML engine; Extensible Style Language (XSL) support; XML Schemas; Server-side XML; XML document object model (DOM)."

Description of Microsoft's XML support is provided in a collection of references accessible from a separate document.

Java Project X [Sun XML Library]

[CR: 19981214]

[December 17, 1998] Sun Microsystem's "Java Project X: Java Services for XML Technology" is the new name for the Java services formerly released as the "Sun XML Library." On December 01, 1998, this development project was renamed Java Project X, and moved to "Early Access 2" with API updates, some speedup, and minor bug fixes. Java Project X is the codename for a set of core XML-enabling services written completely in the Java programming language. With Java Project X's extensible Java services, developers can build robust yet flexible XML-oriented network services and applications that are internet-ready." This release requires JDK 1.1.6 or later or JDK 1.2, and approximately 3.5M bytes of disk space. Sun's Java services in this new release provide full XML processing capabilities, including a fast XML parser with optional validation, an in-memory object model tree that supports the W3C DOM Level 1 recommendation, and basic support for JavaBeans integration with XML. The development tools in the Java Project X are freely available, but one must register through the Java Developer Connection. The second early access release is addressed to Java developers who want access to Sun's fast and fully conformant core XML software for their development. The library supports an optional in-memory object model tree for manipulating and writing XML structured data. The library is 'core' in the sense that significant XML based applications can be written using only this functionality, and that it is intended that other XML software be layered on top of it. That is, it is a building block for developers." According to the Release Notes, the Java Project X library conforms fully with open standards: "1) the parsers conform to the W3C's XML 1.0 recommendation; 2) the parse tree supports the XML (core) part of W3C's DOM Level 1 recommendation; 3) in combination, the two also support the current W3C XML Namespaces proposed recommendation; 4) the parser supports the SAX 1.0 API; 5) the entity resolution used within the parser normally conforms to the IETF's RFC 2376 registration for XML-related MIME content types, [but] this can be overridden as required."

[September 25, 1998] On September 16, 1998, Sun Microsystems, Inc. released an 'Early Access 1' version of The Sun XML Library. As described by David Brownell at the Montréal XML Developers' Conference, the XML Library is "a highly modular XML library that has been developed by the Java Software Division of Sun. The XML library is written in the Java programming language and provides support for the latest version (July) of the W3C DOM APIs and for the SAX 1.0 API. The XML package includes fast validating and nonvalidating XML parsers, preliminary support for *XML Beans*, and examples, including an *XML Validation Service*." The September 16th version is the first early access release, "addressed to Java developers who want access to Sun's fast and fully conformant XML library core for their development of extensible, conformant XML-enabled services and applications. That library supports fast parsing of XML

documents, including optional validation, and supports an optional in-memory object model tree for manipulating and writing XML structured data. In addition, the core functionality supports an implementation of the W3C DOM APIs and the XML Namespaces proposal. The library is 'core' in the sense that significant XML based applications can be written using only this functionality, and that it is intended that other XML software be layered on top of it. All classes are written exclusively in the Java[tm] language, and accordingly may be used with any JDK 1.1 conformant system, including JDK 1.2 conformant systems. Developers have expressed strong interest in seeing XML enabling technology emerge from Sun because of the key role Sun has played in developing the XML specification and in creating the Java platform. The Java technology's 'portable code' along with XML's 'portable data' are valuable complements in creating truly platform-independent applications. Through the early access release, developers have an unique opportunity to participate in defining and evolving the XML Library." [adapted from the XML Library 'README' and 'FAQ' documents]

References:

- Java Project X Early Access 2 Release Notes
- Introduction
- README document
- FAQ Document. [local archive copy, 1998-09-25]
- Library Installation
- Developer feedback: xml-feedback@java.sun.com
- "The Sun XML Library." Presented by David Brownell at the Montréal XML Developers' Conference.
- How fast is Sun's XML parser included in the core toolkit? "In Sun's testing using JDK 1.1.6, the validating parser (doing lots of error testing) was significantly faster than the majority of the non-validating parsers tested and was an order of magnitude faster than other validating parsers. Of course, Sun's non-validating parser is faster still."
- [December 08, 1998] "XML and Java Technology - An Interview with Dave Brownell. [Part One]" From java.sun.com ['The Source for Java Technology']. December, 1998. "XML, the eXtensible Markup Language, is the universal syntax for describing and structuring data independent from application logic. This past February, XML 1.0 became a Technical Recommendation of the World Wide Web Consortium (W3C). From this milestone, numerous applications of XML are popping up far and wide - and more often than not they're using Java technology. We asked David Brownell, designer of Sun's Java Project X, for some perspective." [Excerpt:] Q: "Is there some special, natural affinity between Java technology and XML?" A: "You bet. Java software is portable code ... XML is portable data. By themselves, neither of these technologies provides such a solution. To get portable data, you need to pick a representation that is usable in most programming languages ... like XML, which is structured text. To get portable behavior, you need a maintainable program standard that runs on most computer systems ... like Java language class files. Use Java and XML together, and you get both. . ."

A Standardized XML API in Java (Xapi-J)

Collaborative project for A Standardized XML API in Java (Xapi-J). Includes: (1) "Statement" on Informal Work on a Standardized XML API in Java (Xapi-J), and (2) "Collected Suggestions" -- ideas for post XAPI-J 1.0"

W3C XML/XLL/XSL Working Groups and SIGs

Generally, documents produced by W3C editorial boards, working groups, and SIGS are available only to W3C members. See, however:

- W3C XML Working Groups - 1999
- SGML WG archive - [1996-1997] The hypertext version
- Text Archives of the W3C SGML Working Group [1996-1997]

XML Development: Technical Documents and Development Resources

[CR: 20000210] [Table of Contents]

- "Comparison of SGML and XML." By James Clark. Reference identifiers: World Wide Web Consortium Note 15-December-1997, NOTE-sgml-xml-971215. The document provides a detailed comparison of SGML (ISO 8879) and XML under three section headings: 1) Differences Between XML and SGML; 2) Transforming SGML to XML; 3) SGML Declaration for XML. [local archive copy]

- Annotated Version of the XML specification, from XML co-editor Tim Bray. This resource presents the unaltered text of the XML specification in one pane (frame) of the display, augmented by graphically distinct note markers of five types: "(1) Historical or cultural commentary; some entertainment value; (2) Technical explanations, including amplifications, corrections, and answers to Frequently Asked Questions; (3) Advice on how to use this specification; (4) Examples to illustrate what the spec is saying; (5) Annotations that it's hard to find a category for." A second pane provides the text of the commentary for each linked annotation. The resource also features a linked list of "Terms Defined in XML 1.0", and links to relevant sections of the XML specification from a list of EBNF productions. The annotations (some 308) are accessible from their titles as well.

- [March 26, 1999] Supplementary Resources and Tools - A collection of additional resources, not found in the book [*The XML Specification Guide*], that are useful for understanding the XML specifications and using XML. These include [1999-03-26]: (1) A searchable index of all XML specifications (2) A searchable index of EBNF productions (3) A set of XML design patterns -- based on the approach of the same name introduced in object oriented design -- applied here to modeling document architecture; (4) Extracted EBNF for XML - defines, along with the well-formedness and validity constraints, the rules for writing well-formed or valid XML documents; (5) A list of useful online resources."

- [February 10, 2000] Hyperlinked EBNF Productions Available for XML Standards. A recent posting from Dan Vint reports on a new Web site which contains all the EBNF productions, validation and well-formedness constraints for the following specifications: XML, Namespaces, XPath, XSLT, XPointer, XML Stylesheet PI, and XML Fragments. "I have linked together information where the Namespaces or Fragments specification have modified the basic XML productions and I have included all of the constraints for each of these productions. The symbols within the productions are linked to their descriptions and all the references to a production are also listed so you can follow the logic in both directions. The menu on the left side needs a little time to build, but once available you can get to any production in alphabetical order by the specification. Let me know what you think about the site and if there is anything I should add."

- [October 01, 1998] Stylesheet Linking. *Associating Stylesheets With XML Documents*. Version 1.0 WD-xml-stylesheet-19981001. Edited by James Clark. World Wide Web Consortium Working Draft 1-October-1998. "This document allows a stylesheet to be associated with an XML document by including one or more processing instructions with a target of xml-stylesheet in the document's prolog." Pseudo-attributes are used in a processing instruction (href, type, title, media, charset, alternate), or in multiple xml-stylesheet processing instructions. Examples: `<?xml-stylesheet href="mystyle.css" type="text/css"?>` and `<?xml-stylesheet alternate="yes" href="mystyle.css" title="Medium" type="text/css"?>`. [local archive copy]

- XML Catalog proposal. By John Cowan. "This is a proposal for XML Catalogs, a system based on SGML/Open catalogs (Socats) for translating XML public identifiers to XML system identifiers, which are Uniform Resource Identifiers [URI]." Note (1999-04-06): 'XCatalog' is now called 'XML Catalog'.

- [May 11, 1998] An earlier proposal [see preceding item] for a standard mechanism to associate a stylesheet with an XML document by means of an XML processing instruction is documented in a recent W3C NOTE, "Associating Stylesheets with XML Documents." The NOTE, authored by James Clark, has been submitted to the W3C at the request of the XML Working Group. The proposed syntax and semantics are analogous to the HTML LINK element used to identity stylesheets, as illustrated in the following example:

  ```
  <LINK rel="stylesheet" href="mystyle.css" type="text/css">
  <?xml:stylesheet href="mystyle.css" type="text/css"?>.
  ```
  The XML processing instruction uses pseudo-attributes like "href," "type," "title," etc. The examples shown in the NOTE are for CSS client-side

stylesheets. Document identifier: NOTE-xml-stylesheet-19980405, W3C Note 5 Apr 1998. [local archive copy]

- Collection of "XML-DEV Jewels" from Peter Murray-Rust. URL: http://www.vsms.nottingham.ac.uk/vsms/xml/jewels.html. [see the original announcement]

- [December 01 [13], 1997] Announcement from James Clark for a test suite of files for XML processors. The collection of XML test cases in the ZIP archive "contains 141 small files that (in my view) fail to be well-formed XML documents, and should therefore cause any conforming XML processor to report a fatal error." See: ftp://ftp.jclark.com/pub/test/xmltest.zip. **Updated** December 13, 1997 to bring the test suite into alignment with the Proposed Recommendation of 1997-12-08. Also updated apparently February 9, 1998; [local archive copy]

- [April 03, 1998] David Megginson's book *Structuring XML Documents* (1998) devotes all of Part 4: DTD Design with Architectural Forms to architectural forms. Specifically: "Chapter 9. Architectural-Forms Concepts; Chapter 10. Basic Architectural-Forms Syntax; Chapter 11. Advanced Architectural-Forms Syntax."

- [June 10, 1998] XAF is XML Architectural Forms Processor. Accompanying David Megginson's XAF software package is detailed, tutorial-oriented documentation about XAF and architectural forms (Using the XAF package for Java), appropriate for both XML document designers and XML software designers.

- "Adding Strong Data Typing to SGML and XML", by Tim Bray. May [21,] 1997. archive copy, May 21, 1997; or: previous archive copy, May 15, 1997]. Note: Jean Paoli of Microsoft has submitted a related proposal in connection with the XML discussion "XML for Structured Data"

- [December 06, 1997] "Why I Demand Schemata: Element Type Hierarchies for Transparent Document Structure Definition." By Henry S. Thompson (Language Technology Group, University of Edinburgh). Draft date: October 15, 1997. Overview: "In this paper I describe the XML-Data schemata proposal, concentrating on the motivation for and nature of the provision of an element-type hierarchy, in which element types can inherit attribute declarations and positions in content models from ancestors in the hierarchy. I argue that this represents a major improvement over the use of parameter entities to structure and maintain DTDs." [local archive copy]

- [April 08, 1998] "SGML/XML: Elements *versus* Attributes. When Should I Use Elements, and When Should I use Attributes?". Under preparation by Robin Cover.

- [April 24, 1998] xml:lang resources for parser writers. Contributed by Murray Altheim (Sun Microsystems, SunSoft). Currently there are XML versions of files providing the ISO 639 (language), ISO 3166 (country), and IANA charset values required for support of the `xml:lang` attribute values in XML 1.0. Please direct comments and corrections to Murray Altheim. These 'xml:lang resources' will be made available later on Sunsite. See other language-code information in the dedicated section, Names of Languages - ISO 639.

- [May 08, 1998] The 'standalone document declaration' in XML 1.0. Some questions were raised about its design/use in the XML 1.0 specification. See the collection of XML-DEV postings.

- [October 02, 1997] Architectural Forms handout from a presentation "Java Beans and Architectural Forms," (August 21, 1997 - XML Dev Day), by David Megginson: "Proposal: Architectural Forms for XML". See the accompanying XML-DEV posting (October 2, 1997); [archive copy]

- [December 13, 1997] Architecture processing in XML: at the WG4 meeting in Alexandria, Virginia (December 1997), WG4 N1957 was accepted as the proposed text of an amendment to ISO/IEC 10744:1997 (HyTime). As a subclause to Annex A.3 ("A.3.4.4 Architecture Use Declaration Processing Instruction"), the proposed architecture use declaration (arch) processing instruction would provide "an alternative form of architecture use declaration for use in environments where notations or data attributes are not supported." The amendment was sponsored by Charles F. Goldfarb, Steven R. Newcomb, W. Eliot Kimber, and Peter Newcomb. See the related posting by Eliot Kimber "Architectures, Schemas, and XML: Proposed Amendment to ISO/IEC 10744:1997," with followup by David Megginson. [N1957, local archive copy]

- [November 01, 1997] A new submission to the W3C from Electricité de France, Research and Development Division. The "STTS2" submission for "Simple Tree Transformation Sheets 2" would in principle govern the transformation of well-formed XML documents in order to render them in a HTML browser. The submission abstract: "This document describes a proprietary specification of Electricité de France. It specifies the format of STTS2 transformation rules that can be applied to a HTML document (without CSS styles) in order to take advantage of the Cascading Style Sheets and remove deprecated HTML elements or attributes in favor of CSS. Even if the specification deals only with HTML, this kind of transformation, or an extension of this specification, can be easily applied on the fly to well-formed XML documents in order to render them in a HTML browser without any XML plug-in or internal knowledge. The grammar of this specification is mainly based on the CSS2 grammar and extends it in some ways."

- [October 07, 1997] "Ideas about Subclassing and Inheritance in generic documents", by Paul Prescod - on inheritance, subclassing, architectural forms and SGML documents. See also http://www.geocities.com/ WallStreet/Floor/5815/ooxmledi.htm (nicer version, has comments from Martin Bryan), [archive copy].

- [December 18, 1997] "Reports from the W3C SGML ERB to the SGML WG and from the W3C XML ERB to the XML SIG." Complied by C. M. Sperberg-McQueen for the use of the WG and SIG. Covers October 9, 1996 through December 1, 1997. Date: "4 December 1997." [local archive copy]

- [June 19, 1997] A proposal written by John Tigue of DataChannel for collaborative effort toward XML Java API Standardization. The document title is "Informal Work on XML API Standarization for Java". Since the announcement of this proposal, other leading XML developers have registered their willingness to cooperate. The proposal's "first goal is to find a lowest common denominator for the current implementations and abstract that to a set of interfaces such that a developer could use this new API independent of an underlying implementation of the XML processor and/or invest in learning the particular benefits a specific implementation provides." See: http://www.datachannel.com/ChannelWorld/XML/dev/.

- [January 23, 1998] SGML Exceptions and XML," by Eve Maler (ArborText) - "briefly describes SGML exceptions (inclusions and exclusions) and discusses how 'exception users' can handle their DTDs and data in XML, which does not allow exceptions." See the database section: Use (and Non-use) of Exceptions in DTDs.

- [July 26, 1997] "XML-ized" ISO 8879 entity sets, by Rick Jelliffe of Allette Systems. The postings were made to the XML Development list. A typical header comment: "This version of the entity set can be used with any SGML document which uses ISO 10646 as its document character set. This includes XML documents and ISO HTML documents. This entity set uses hexadecimal numeric character references." Please report any errors to Rick: ricko@allette.com.au. The entities mapped to hex are in the following files: ISOgrk4.pen, ISOtech.pen, ISOdia.pen, ISOlat1.pen, ISOgrk1.pen, ISOlat2.pen, ISOgrk2.pen, ISOnum.pen, ISOgrk3.pen, ISOpub.pen. Available in a concatenated file, or archived as separate files in a .ZIP package. Note the disclaimer. See also the alternate source for XML entity sets, from James Tauber.

- XML BNF, generated by Henry S. Thompson [March 7, 1997]

- [August 29, 1997] David G. Durand's "Five Paragraphs" on 'Whitespace in XML', posted to XML-DEV. See also the discussion thread: http:// www.lists.ic.ac.uk/hypermail/xml-dev/9708/0147.html

- Revised SGML Declaration for XML 1.0, submitted by Rick Jelliffe [June 27, 1997]. Probably out-of-date.

- (Mini-) Tutorial on XML Extended link, by C. M. Sperberg-McQueen [June 19, 1997]

- TEI Extended Pointers (Links) tutorial, by Lou Burnard. February 4, 1997. Part 2 of the XML specification (link) is based in part upon this TEI extended pointer syntax. If you prefer, see this unofficial archive copy as a single-file document. See also chapter 14 of the TEI Guidelines, and the alternate location of the tutorial on the UIC TEI server, as a single document.

- (Meta-) DTD for extended pointer syntax tree (XPS-tree), from Arjan Loeffen. [local archive copy]

- [August 28, 1997] Steve DeRose on TEI Extended Pointers vs. XML-LINK. Clarifies the relationship.

- "Hyperlinking and XML: Minimum Progress Required to Declare Victory", by Tim Bray. [archive copy]

- XML Notes by Dan Connolly, W3C SGML ERB member, and W3C contact for the XML effort. Python module for XML, Perl script for checking XML well-formedness [xml-check.pl], Converting XML to Lout, XML Typing, XML Modules, etc. Date: 1997/05/22.

- "XML representation of a relational database." By Bert Bos. [local archive copy]

- W3C Notes - "Some thoughts and software on XML", by Bert Bos. A simpler XML. Date: May 23, 1997.

- [August 09, 1997] "ADT and Marshalling for XML", by Bert Bos. Abstract: "This is an attempt at defining XML (*i.e.*, XML proper, not the meta-grammar for defining XML applications, nor the hyperlinking conventions) in a formal, mathematical way, that hopefully takes away all ambiguity as to what an XML document contains, or what the relation is between the document and its linearized, textual representation." [archive copy]

- [October 23, 1998] XML and Semantic Transparency." By Robin Cover. [op - comments requested]

XML Conformance

[CR: 19990916] [Table of Contents]

The notion of XML "conformance" is addressed directly in the XML specification (Version 1.0, REC-xml-19980210) section "5. Conformance," which includes a discussion on "5.1 Validating and Non-Validating Processors" and another on "5.2 Using XML Processors." Information on the OASIS XML Conformance Subcommittee and Testing and Validation Resources is provided in a separate document.

XML/XSL/XLink Software Tools

[CR: 20011019] [Table of Contents]

See the XML/XSL/XLink Software entries in the "Public Software" section of the SGML/XML Web Page for more complete descriptions of these tools. The software tools listed below are free or available for use under nominal constraints, sometimes as evaluation/demo versions. Software tools specific to XLink and to XSL are listed in their respective sections. Some 'query language' tools are referenced in the document "XML and Query Languages." Commercial XML/XSL/XLink software support is provided by the vendors, of course. For other listing of XML software tools, see also: Steve Pepper's *Whirlwind Guide to SGML Tools and Vendors*, the Free XML Tools and Software from Lars Marius Garshol [ANN], and the "XML Software Guide" from WDVL. A list of "SAX 1.0 Parsers and Applications" is available on David Megginson's Web site. [**This section under revision**]

XML Parsers and Parsing Toolkits

[CR: 20020321]

- [January 14, 2001] "How to validate XML." *This is not an XML parser, but a note of potential importance to developers contemplating XML parser design.* From Joe English. "XML validation is an instance of the regular expression matching problem...The most commonly-used technique to solve this problem is based on finite automata. There is another algorithm, based on derivatives of regular expressions, which deserves to be more widely known..." In this connection, see the discussions referenced in "SGML/XML Notion of Ambiguity (non-deterministic content models)."

- [March 31, 2001] XSV and XSU: see PR 2001-0-316 version of XSV and

XSU.

- [See previous entry for update.] XSV - Validator for XML Schema. Schema validator by Henry S. Thompson and Richard Tobin (both of HCRC Language Technology Group; Web interface by Dan Connolly (W3C). See also (1) Coverage report for XSV; (2) source code for XSV schema checker (3) resource page to 'Validate/Check XML'.

- Ælfred XML Parser. From Microstar. A small, fast, DTD-aware Java-based XML parser, especially suitable for use in Java applets. Free for both commercial and non-commercial use. Updated to version 1.2 May 02, 1998. [Updated to version 1.1: 980309]. [cache copy]

- Lark, a non-validating XML processor. From Tim Bray, Textuality. The name 'Lark': "Lauren's Right Knee" [ask Tim]. With an online WF checker application. [Updated 980105]

- Larval. Larval is a validating XML processor built on the same code base as Lark. From Tim Bray.

- [October 06, 2000] expat - XML Parser Toolkit. See the announcement for the release of version 1.2 [2000-10-06]; see also two entries following. "expat is a high-performance, fully conforming, non-validating XML 1.0 parser toolkit written C." Described by Clark Cooper 1999-09-03. Comes with Win32 binaries and an *xmlwf* application. Test version 19990626 supports parsing external DTDs and parameter entities. Updated to version 1.1 29-May-1999. Pre-1.1 test release 1999-04-25. From James Clark, released 980405. Updated to version 1.02, January 11, 1999. Version 1.0, August 14, 1998 (first production release). Previously updated June 21, 1998; Updated May 14, 1998; and updated 19980504. expat is the successor to xmltok. See the description on Clark's server, or in the software page. Note 2000-07, The Thai Open Source Software Center as a source for expat.

- [July 02, 2000] expat - "12-May-00 01:11 145k" [cache]

- [October 05, 2000] expat development on SourceForge. According to a note from Clark Cooper: Maintenance of the expat XML parser has been delegated by James Clark to a team that includes James, Fred Drake, Paul Prescod, and [Clark Cooper]. SourceForge is hosting this project.

- XP - James Clark's XML parser in Java. Version 0.4, released 1998-08-13. Updated May 14, 1998; previously updated: 980306, bug fixes. See also XML parser support in SP and in XMLTok (below), and Clark's other XML Resources.

- [March 21, 2002] A posting from Dare Obasanjo of Microsoft announces the release of MSXML 4 SP 1 (Microsoft XML Core Services). This version 40SP1 (14-March-2002) release offers a number of new features and improvements over the MSXML 3.0, including support for the XML Schema language and substantially faster parser and XSLT engine. MSXML 4.0 SP1 is a complete replacement for MSXML 4.0 RTM.

- [July 21, 2001] Microsoft XML Parser (MSXML) 4.0 July 2001 Technology Preview. The Beta 2 release offers a faster SAX and XSLT, complete XSD, etc. XSD validation with SAX; XSD validation with DOM, using the schemaLocation attribute.

- [October 11, 2000] See preceding. Microsoft XML Parser (MSXML). See (1) Joshua Allen's "Unofficial MSXML XSLT FAQ." (2) "What's New in the September 2000 Microsoft XML Parser Beta Release." (3) "Internet Explorer Tools for Validating XML and Viewing XSLT Output" (March 15, 2000 or later). (4) "Installing Msxml3.dll in Replace Mode" (September 2000 or later).

- See previous entry. Microsoft XML parser in Java (MSXML) [cf. Java XML parser in MSIE 4.0] Updated: 971204.

- DOCTYPE replacement using a Java FilterReader/FilterStream. From Simon St.Laurent. "DOCTYPEChanger and DOCTYPEChangerStream are Java classes that allow you to change the DOCTYPE declarations as a document is being read into an XML parser. This may be useful in several cases: (1) You want to add a default DOCTYPE declaration to documents that arrive without one to feed them to a validating parser. (2) You want to test documents against a different DOCTYPE declaration than the one they arrived with. (3) You want to prevent document creators from making changes to the DOCTYPE your application

understands. These classes allow you to set a root element, public identifiers, system identifiers, and an internal subset independently, and also let you specify whether the DOCTYPE declaration should be changed if present..." ['It's not real sophisticated, but you might want to check out my DOCTYPEChanger, which lets you specify a DOCTYPE. It's a Java FilterReader (or FilterStream) which strips out the old DOCTYPE (if you insist) and puts in a new one. You can put it in front of an XML parser if you want, or just run documents through it.']

- ElCel Technology XML Validator. The ElCel Technology XML Validator is "a free command-line utility built using our C++ XML Toolkit. As its name implies, this is a validating XML processor. It contains complete and up-to-date support for XML 1.0 (second edition and errata) and XML Namespaces. It has been designed to highlight some of the strengths of the underlying XML Toolkit, allowing you to judge its speed and accuracy for yourself. Features include: fast and accurate, proven against the OASIS/NIST conformance suite; XML catalog support for resolution of public identifiers; any number of files can be validated in one go; validating or well-formedness mode; will report and recover from multiple errors, even 'fatal' ones; user-friendly error messages with optional location arrow; options to support batch processing; input can be via pipes, the local file system or HTTP URLs; freely available for both Windows and Linux. See the online manual.

- Canonical XML Processor. The ElCel Technology Canonical XML Processor "is a free command-line utility built using the SAX 2.0 interface of our C++ XML Toolkit. It implements the canonicalization algorithm as described by the W3C's Canonical XML recommendation. It also implements the original Canonical XML specification from James Clark. This is a very useful program for converting valid XML with a DTD into a standalone document. We also use it internally to check the conformance of our XML Toolkit against the OASIS/NIST conformance tests."

- ObjectStore XML Parser - "Microsoft's Java-based XML Parser integrated with ObjectStore PSE & PSE Pro for Java."

- XML parser in Ada. In the 'Adalib' programming library. From Mário Amado Alves.

- XJParser From DataChannel. Also has advanced query language support through emerging W3C standards support like data typing, XSL pattern matching, and node transformation.

- The DataChannel - Microsoft XML Parser for Java (Beta 2). Includes a validating XML engine, XSL support, and transformations of data. December 1998 and later. See the FAQ document.

- [May 07, 1999] Redistributable 'Microsoft XML Parser' - Microsoft Corporation "announced the release of the Microsoft XML Parser for incorporation by third-party developers into their applications.

- DataChannel XML Development Environment (DXDE) and DXP XML Parser. DXP is a validating XML parser written in Java. It is "specifically aimed at providing a utility for server-side applications that need to integrate XML capabilities into existing systems and for out-of-the-browser Java-based software." Updated 980211 or later.

- IBM XML for Java. "XML for Java is a validating XML parser written in 100% pure Java. The package (com.ibm.xml.parser) contains classes and methods for parsing, generating, manipulating, and validating XML documents." Last updated 1999-02-10 (version 2.0.0). Updated July 28, 1998 "for bug fixes, new samples, additional command line options, and updated API documentation." Released with a free commercial license Version 1.0.0 June 23, 1998. Updated 19980612. Previously updated May 13, 1998, and updated 1998-04-16.

- [December 07, 2000] "miniXML" parser. David Cox presents a tree-based "miniXML" parser for XML that is written in C++ using the Standard Template Library for strings and various containers. The parser works with canonical XML, and is very fast, though limited to smaller XML documents. See the January 2001 issue of Dr. Dobb's Journal. With code listings and the complete and source code; [cache listings, [cache sources]

- [June 29, 1999] XML Parser for the C++ Language (XML4C). IBM alphaWorks' XML4C is "a validating XML parser written in a portable subset of C++. XML4C makes it easy to give an application the ability to read and write XML data. It is a single shared library that provides classes for parsing,

generating, manipulating, and validating XML documents. XML4C is faithful to the XML 1.0 Recommendation and associated standards (DOM 1.0, SAX 1.0). Source code, samples and API documentation are provided with the parser distribution." Version 2.2.0 released 1999-06-25. Version 2.3.1 released August 26, 1999.

- Gnome XML parser. See further: The XML library for Gnome and Gnome XML Library (alias "libxml").

- SP Parser. SP 1.3.4 released 1999-10-13. SP version 1.3 has better support for XML based on the Web SGML Adaptations Annex to ISO 8879. SP "adds support for (XML) documents that are merely well-formed. This is enabled by using `-wno-valid`. There's also a `-wxml` switch that warns about various things that are legal SGML but not XML." Update 971013: test release of SP with much more XML support.

- [XMLTok - James Clark's XML parser in C. - As of April 05, 1998, XMLTok has become **expat**]

- **xmlwf** - Clark's XML well-formedness checker, [now] part of XMLTok. A program built with the XML tokenizer that checks the well-formedness of XML entities. See: ftp://ftp.jclark.com/pub/test/xmltok.zip. [971201] And, note that the WebTechs' Validation Service now supports 'XML' - (possibly using this code?).

- [February 28, 2000] "xmltex: A non validating (and not 100% conforming) namespace aware XML parser implemented in TeX." From David Carlisle, Numerical Algorithms Group: NAG. "xmltex implements a non validating parser for documents matching the W3C XML Namespaces Recommendation. The system may just be used to parse the file (expanding entity references and normalising namespace declarations) in which case it records a trace of the parse on the terminal. Normally however the information from the parse is used to trigger TeX typesetting code. Declarations (in TeX syntax) are provided as part of xmltex to associate TeX code with the start and end of each XML element, attributes, processing instructions, and with unicode character data." [manual, local archive copy]

- XXX: eXperimental Xml leXer - from Rick Jelliffe (Academia Sinica). "experimental software... the basic idea of XXX is that XML can be parsed using a recursive descent parser made from a highly parameterized general-purpose lexical analyser... See also XXX Notation Processors

- PXP, or 'Polymorphic XML Parser', in Objective Caml. From Gerd Stolpmann.

- NXP - Norbert's XML Parser

- Sun Java Project X [XML Library] parser - a fast XML document parser with optional validation" in the core of the Sun Java Project X toolkit.

- Tcl XML Parsing Package. From Steve Ball.

- OpenXML Parser - Version 1.0.5 introduces the X3P Publisher API, provides support for XHTML 1.0, and offers and major performance improvements.

- [February 24, 2000] Java pull parser built on SAX. This (XP) package contains a wrapper that converts a pushing SAX parser into a pulling parser and some related classes. Namespace support added 2000-01. From Stefan Haustein.

- fxp - A Validating 'Functional XML Parser'. From Andreas Neumann. Written completely in the functional programming Standard ML (SML). Version 1.2 1999-06-7. Version 1.1 1999-03. Version 1.0: 1999-02-23.

- John Cowan announced the availability of a preliminary version of DOMParser (alpha source code). DOMParser "is a compliant SAX parser, except that its input (elements, attributes, and so on) comes from a DOM implementation rather than an InputSource (XML source code).

- Silfide XML Parser (SXP), a parser and a complete XML API in Java. Withe other client.server components. XSilfide is a client/server. P. Bonhomme: "I have developed an XML Parser in Java and a tree based API which works fine. I have implemented the whole XML 1.0 (REC 10-02-1998), the XML Namespaces (WD 27-03-1998, the Document Object Model Level 1 (DOM Core and XML, WD 16-04-1998) and both XML links and XML pointers." Updated 980731.

- xmlproc: A Python XML parser - from Lars Marius Garshol. See also his "Tools for parsing XML with Python." Version 0.52 released September 12, 1998.

- RXP - "RXP, a GPL'd validating XML parser in C." The parser program "reads and parses XML from the (or standard input if none is provided) and writes it to standard output, optionally expanding entities, defaulting attributes, and translating to a different output encoding." Available also with MSDOS/ Windows32 binaries. Version 1.0.7 released May 1999. Version 1.0 released 1999-02-17. See also the LT XML entry. Updated 980526, and previously 980216.

- Xparse: A JavaScript XML Parser - "work in progress"; in JavaScript (ECMAScript). Watch for 'Sparse, a companion XSL parser.' Updated 980219.

- HXP - Hubick's XML Parser. 'Work in progress' by Chris Hubick as of July 23, 1998. See the associated 'HXA - Hubick's XML Analyzer' tool.

- Sam Blackburn's freeware C++ XML parser. In the WFC package (Win32 Foundation Classes). In Release 35, entity resolution was added to the XML classes. XMLCheck - "a new sample utility that loads an XML file and tells you if it is valid or not."

- XMLParser class and xmllib module in the Python distribution.

- Expat (XML Parser Toolkit) Module for Ruby. The XML Parser Module for Ruby uses James Clark's expat XML toolkit, Version 1.0. It has two kinds of interfaces (event handler and iterator) and supports several encodings (UTF-8 and UTF-16, and with the 'Uconv' module, EUC-JP, Shift_JIS, and ISO-2022-JP). Version 0.3.3 description.

- RUWF - XML "well-formedness" Syntax Checker with HTML interface, from XML.com. Built with Tim Bray's Lark parser.

- STG XML Validation Form [Beta version, 1998-08-12]. Documentation.

- XML Syntax Checker - from Frontier 5. Use the **blox** XML parser based on expat, or the Frontier 5.1.3 built-in XML parser to check well-formedness of an XML document.

- XML 'Validation Service' (WF) from WebTechs.

- XML validation service from the Korean Techno 2000 Project site.

- 'XML-by-hand' (a (non-validating) XML parser written in Java) and parser take two (variant of the earlier parser above which may be more suitable for certain kinds of XML data . . ."). XML software from Bert Bos.

- ISO-to-UTF [UTF-8 or UTF-16] XML Conversion Tool. From Richard Goerwitz, Brown University, STG. "Use this utility to convert an existing XML document in an ISO format (*e.g.*, ISO-8859-1) to UTF-8 or UTF-16. To facilitate autodetection of the document's existing format (as per appendix F to the W3C XML spec), please be sure to prepend a valid XML declaration to your document..." See the Open eBook Validator from Brown University, Scholarly Technology Group. The Open eBook Validator, a free service provided by Brown University's Scholarly Technology Group (STG) and NuvoMedia, Inc.

- HEX - The HTML Enabled XML Parser. From Anders Kristensen (HP Labs, Bristol). "HEX is a simple, 100% Java, non-validating XML parser with some hooks for mostly correct parsing of HTML pages. It doesn't understand either SGML or XML DTD's but the parser API allows the application to control its operation in ways that facilitate HTML parsing. It implements the DOM core level one API and the SAX event-driven API. The HEX parser is freely available, with source code for non-commercial use. It comes with a couple of sample applications." See: the HEX main page.

- "Production Release of Oracle's XML Parser for Java." - 'Free Oracle XML Parser for Java'. Version 2, 1999-09-15.

- Delphi XML parsers. 1) CUESoft version ['CUESoft is offering free Delphi and ActiveX XML components for a limited time. . . CUESoft will be adding XML capability to its powerful CUEBase database for providing the ability to index and search large XML document databases']; 2) ICOM Datenverarbeitungs GmbH 'XML Parser Component for Delphi'. . . the first

version of a XML Parser component for the Borland Delphi development environment. The current version supports all major features of the XML standard. We will enhance the component to support the full XML standard as soon as possible." Contact: xml@icom-dv.de.

- Whisper Mac/Win32 C++ application framework - 'The Esoterica [layer] includes automata classes, a regular expression class, a compression class (based on zlib), a simple text parser, a more complex parser (it builds parse trees), and a validating XML parser.'

- MuXML - An XML Document Multiplexor. "MuXML is a prototype Perl module that implements configurable multiplexing of XML document streams accessed via the LWPng module and parsed using the XML::Parser module. Its returns its results using the XML::Grove module. Its primary purpose is to serve as a demonstration of the use of non-blocking design approaches with XML and Perl. . . MuXML is a demonstration of the utility of the partial parsing capability that Clark Cooper added to the 2.22 release of XML::Parser. From Gabe Beged-Dov. [local archive copy]

- Tony - a XML Parser and Pretty Printer. - 'a lightweight XML parser and pretty printer written in Objective Caml'.

- PHP XML Parser Functions. PHP - Hypertext Preprocessor. "PHP Version 3.0 is an HTML-embedded scripting language. Much of its syntax is borrowed from C, Java and Perl with a couple of unique PHP-specific features thrown in. The goal of the language is to allow web developers to write dynamically generated pages quickly. See the PHP Manual [Section] XLVIII. XML Parser Functions. This PHP extension implements support for James Clark's expat in PHP. This toolkit lets you parse, but not validate, XML documents. It supports three source character encodings also provided by PHP: US-ASCII, ISO-8859-1 and UTF-8. UTF-16 is not supported. This extension lets you create XML parsers and then define handlers for different XML events. Each XML parser also has a few parameters you can adjust." See further the PHP3 Manual.

- Erlang XML parser. - "(pre) release of an experimental XML parser. . . This parser has 5 Erlang modules." By Joe Armstrong. ['Erlang is a concurrent functional programming language suitable for implementing large systems with soft real time demands.']

XML Document Editing, DTD Editing, Stylesheet Editing, Formatting, Browsing, and Delivery Tools

[CR: 20011206]

- XML in MS Internet Explorer - XML Browser support in Internet Explorer.

- XML in Mozilla - XML Browser support in Netscape.

- XED - A WYSIWYG XML instance editor. From Henry S. Thompson, 980318. Updated 1999-09-13 [FreeBSD, Linux, WIN32, and Solaris 2.5 versions]. Updated to version 0.5 1999-07-20 [local archive copy]. Updated to beta July 12, 1998. Updated to 'final alpha' 980427. Updated to alpha version 0.2.1.4 980402.

- XML Editing Mode in PSGML. XML patches from David Megginson. Version 1.2.0 (XML support, beta) 1999-10-13. See: 'PSGML Tricks', by Bob DuCharme. ". . . [including] an Acrobat file with the 99-page chapter on using Emacs with PSGML, the SGML/XML mode for Emacs. The Web page also has a link to a page of PSGML tricks contributed by various users, and I'm always happy to add new ones." [1999-10-14] Kai Grossjohann described a problem with incompatible system identifiers when using psgml to edit XML documents; David Megginson supplied the lisp code for a provisional fix. Note: "Unicode encoding for GNU Emacs" - If your file is encoded in UTF-8, you can use the Unicode encoding package for Emacs (http://www.cs.ust.hk/~otfried/Mule/) so that characters beyond US-ASCII are displayed properly. (I keep meaning to write a hook for psgml so that it can use the XML declaration to set the encoding automatically, but for now it's easy enough to use `C-x C-m c' before opening the file to set it manually..." [XSL List] See the source for PSGML version 1.2.2. [PSGML version 1.2.3, November 8, 2001, cache]

- [December 06, 1999] XFA Edit - An Advanced XML Editor. A new XML editing tool with source code is available, as announced: "XML For All Announces XFA Edit, an Advanced XML Editor." - "XML For All, Inc. today announced the release of XFA Edit, an advanced text editor for XML and

HTML documents that runs under Microsoft Windows operating systems..."

- Xeena - a new Java-based XML editing environment. Released by the IBM alphaWorks lab. 1999-03-08.

- AuthorIT - "According to the AuthorIT folks, the next version, to be released in about two weeks [ca 2001-01-19], is supposed to have full XML output implementation..."

- XRay from Architag International. "(1) Can be used to create any XML document: [XML documents, XSL Stylesheets, XML Schemas, Document type definitions (DTD)]; (2) Support for XSLT: [XSLT transformation window updates with every keystroke See changes as you type Multiple windows are allowed for each XML document Full XPath support]; (3) Fully validating XML editor: [Verifies well-formedness, Validates structure according to DTD, Validates structure and datatypes according to XML Data schema]; (4) HTML Viewing Window."

- Interactive Authoring and Display System (IADS). The IADS program distribution includes an XML DTD. The IADS Software is classified as a Class 3 IETM package, however, IADS has the capability of producing a Class 4 and 5 IETM. IADS uses SGML as its underlying text format. WYSIWYG editing is now provided which allows text entry, graphic manipulation, tag insertion, and modification within the context of the formatted display. This mode is turned on or off using the 'Edit mode' option under the 'Authoring' menu. The DTD (if specified in the DOCTYPE) is loaded, processed, and its rules stored for use when inserting or editing tags in the document. The tag editor dialog box will only allow tags and tag attributes to be inserted that are defined in the DTD. 'Currently [2001-10], IADS is the only software able to parse and display IETMs meeting MIL-STD-40051A.' Contact: Neil Frazier (IADS / Publications Services, US Army AMCOM).

- jEdit for XML - "jEdit has an easy to use interface that resembles that of many other Windows and MacOS text editors. jEdit is extremely customizable, and has an extensive feature set, that includes, among other things: Syntax highlighting for 46 file types; Auto indent with support for intelligent indent in Java, C and Python source; Search and replace with support for regular expressions, and searching in multiple files; Bracket matching; Abbreviations; Multiple clipboards; Rectangular editing; Split-window operation; Word wrap; Macro recording; BeanShell scripting." See also Thomas Passin's comments.

- XMetaL from SoftQuad Software. Is shipping as of 1999-05-26. Was in beta (1999-03).

- [October 14, 2000] [Star Division / Sun] StarOffice. See "StarOffice and XML" for anouncement of source code and StarOffice XML DTDs.

- Earlier StarOffice entry (1999): The Sun product is expected to support XML -- in light of a Webcast statement by Star Division's Marco Boerries to the effect that XML specifications created as part of the StarPortal initiative would be submitted to the W3C, and that the APIs would be submitted to ECMA. An article by Stephen Shankland in CNET News.com offers the same hint from an interview with Marco Boerries: "In line with the plan to become more open, Star Office file formats eventually will become XML, and the standard for interacting with it will become published openly and contributed to the ECMA standardization group." Possible hints of some SGML pedigree in a couple help files: one shows that the color of "SGML" can be changed for display purposes, and another shows that SGML is in the glossary. [credits kd] **Note:** As of 2000-07, OpenOffice.org is "the open source project through which Sun Microsystems is releasing the technology for the popular StarOffice productivity suite... a principal goal is the establishment of open, XML-based standards for office productivity file formats and language-independent bindings to component APIs."

- [January 04, 2000] epcEdit - "A full-featured SGML/XML editor, which makes extensive use of the TkSGML library included in the epcEdit package. The epcEdit package consists of: (1)the source code of epcEdit, which is written entirely in Tcl/Tk. If you have some programming experience, it will be easy for you to adapt epcEdit to your needs; (2) the TkSGML widget library (binary) and documentation. TkSGML is an SP-based SGML system that could best be described as a generic toolkit for building integrated SGML applications. epcEdit supports Unicode for SGML and XML documents; internally handles all data as UTF-8; Release 0.92 contains a very early version of a WYSIWYG editor for CALS tables. Support for HTML tables will be added later." See the technical description.

- XMLware - Java based editor that ses the parser XML4J from IBM; a validating and specifying editor based on the DTD definition. Download evaluation version

- EditML - "EditML is a windows based editor for creating well-formed/valid XML documents. The document can be a data file, schema file or a stylesheet. It is based on Microsoft's MSXML parser conforming to XML specification 1.0 (W3C standard)." By Saravanan Lakshmanan.

- DocZilla XML/SGML Browser. See the announcement for DocZilla SGML/ XML browser for WinNT/95/98 and Linux [1999-06-03].

- Envision XML - "An industrial strength XML schema development tool. Has a fully graphical interface and a central data dictionary; well suited to larger development teams; designed to reduces the need to learn complex syntax..." Contact: James Knowles

- GO. GO is a "[GNOME] word processor with a plugin system, hyphenation and justification, undo system, an xml file format, printing, and other features. From Chris Lahey.

- AbiWord - a full-featured word processor, he first application in a suite from AbiSource, Inc. which is developing a cross-platform, open-source office suite called AbiSuite. 'Why does AbiWord use XML as its native file format? Because we like XML.' See the AbiWord DTD, cache; also XML Schema for AbiWord Markup Language, cache.

- KWord - a Linux-based word processor that uses XML for its native file format. A FrameMaker-like wordprocessor of the KOffice. Frame oriented, not page oriented.

- XMLwriter - provides "validation of XML documents against a DTD or XML Schema, and the ability to convert XML to HTML using XSL stylesheets."

- Morphon XML Editor, based on Java. From Lunatech Research. Beta 1 version 1999-06-28. Also: http://www.morphon.com/.

- Documentor from Excosoft AB. Evaluation version available for download. See screenshots.

- [September 30, 1999] Stilo recently announced an introductory offer [reduced price, 'try and buy'] for its Stilo WebWriter, described as a "comprehensive editor for creating XML."

- sxml-mode for (X)Emacs. From Philippe Le Hégaret. This emacs mode uses psgml-1.0.1 and font-lock (with a Java Virtual Machine) to 'validate' XML documents with SAX (The Simple API for XML) in Emacs.

- XML <PRO> - Beta2 testware XML editor.

- LiveDTD. "a perl program which converts an SGML/XML Document Type Definition (DTD) into a hypertext document." See the announcement.

- Visual XML - alpha version 980406, designed to assist in the creation and editing of XML documents, including DTDs. From Pierre Morel. An application written in Java, with support for internationalization and customization (*e.g.*, Metal, Windows, Motif interfaces) features.

- Adobe 'ReadXML' for FrameMaker "Sample Code. 'ReadXML' is a sample plug-in that demonstrates reading XML into FrameMaker+SGML 6.0. This plug-in parses XML and outputs an SGML document. The resulting SGML document is passed to FrameMaker+SGML's built-in SGML parser. Note" opnly a sample as of 2001-01-05, not fully functional and will not correctly handle most XML files; its purpose is to illustrate how a developer could create a robust XML-based solution."

- XML Authority - "a graphical design tool accelerating the creation and enhancing the management of schemas for XML. With support for data typing, solutions for data interchange and document oriented applications converge. XML Authority includes a toolset to help convert existing application and document structures to schemas, defining the basis for well formed XML documents and enabling valid XML. Beta, 1999-03-25.

- Zveno Swish XML Editor - "Swish is a non-validating XML document editor. It allows the user to view and edit a XML document in both a tree-mode and a document-mode simultaneously. Linux, Windows 95/98/NT and Macintosh PPC. Version 1.0 beta 1 released 1999-03-27.

- Emilé - XML Editor for Macintosh. Version 1.0 1999-06-10. An introductory price of $79. A demo copy of the editor can be downloaded from the company's website.

- CLIP - a Java-based XML editor with searching and validation services. See: http://xml.t2000.co.kr/product/clip.html and the announcement.

- HyBrick SGML/XML Browser. "HyBrick" is an advanced SGML/XML browser developed by Fujitsu Laboratories, the research arm of Fujitsu. "HyBrick" is based on an architecture that supports advanced linking and formatting capabilities. HyBrick includes a DSSSL renderer and XLink/XPointer engine running on top of James Clark's SP and Jade. See also the announcement.

- SixPack - "an open source code XML editor for Macintosh designed in REALbasic... includes an XML parser (that complies to the XML 1.0 specification as a well-formed processor), a set of classes that emulate the DOM, and a variety of visual components for editing and displaying XML documents... all in 100% native REALbasic."

- Microsoft XML Notepad. "A simple prototyping application for HTML authors and developers that enables the rapid building and editing of small sets of XML-based data." Validates instance against an XML DTD at load time. First released 980722.

- Plume: A WWW Browser, formerly SurfIt!. By Steve Ball. Some XML browser support is available, demonstrated at WWW7; see: "XML and the Desperate Tcl Hacker" and above.

- DTDGenerator - XML DTD Generator. From Michael Kay (ICL). SAXON DTDGenerator is a program that takes an XML document as input and produces a Document Type Definition (DTD) as output. The aim of the program is to give you a quick start in writing a DTD." [19980505.] Note 2000-01-05: DTDGen is now part of SAXON.

- DTDGenerator Frontend - A perl script written by Paul Tchistopolskii, as a frond end to Michael Kay's DTDGenerator

- Near & Far Designer. - An XML and SGML DTD authoring tool; visual, drag-and-drop interface.

- **tdtd** - Emacs Major Mode for editing SGML/XML DTDs. Updated [version 0.7] March 15, 1999 or later. Previously updated (version 0.6) 980801. Previously updated (version 0.5) 980524.

- XML Spy - "a professional validating XML editor that provides three integrated views on XML documents: an enhanced grid view for structured display and editing, a low-level source view with syntax coloring, and an integrated browser view that supports CSS and XSL style-sheets. Detailed find, replace, and print options are available in all views. Complete Unicode and character-set encoding support is included.

- Microsoft XSL Processor (msxsl) [*i.e.*, Technology Preview, 980108]

- XML Styler - ArborText tool for creating and modifying XSL stylesheets.

- MIOW browser - "miow can render XML documents, using CSS style sheets; XSL is not yet supported" [soon-to-be-released, 1998-08-26]

- XSL Authoring Studio, from ContentWare. "Soon" to be available in alpha version on the Web. It was demonstrated by Ray Cromwell and Shawn O'Connor at 'XML: The Conference' Developers' Day, March 27, 1998. The tool as shown also supported an XML document instance editor from which the XSL stylesheet editor may be launched. It uses Lark and DocProc.

- XSLJ - Henry Thompson's XSL-to-DSSSL translator. Updated: 980112.

- docproc - an XML + XSL document processor, by Sean Russell.

- IBM XML for Java - validating XML processor in Java. Updated 19980612; previously updated 1998-04-16.

- PrismEd. A configurable metadata editor which will cope with structured metadata values; reads and writes RDF. Written in Java 1.1 (1.1.6), and can be run either as an applet or as an application. Announced 1998-09-05.

- Link - The tool '*Link* is an XML-XSL-XLL browser'. "*Link* is a simple application written in Java that allows a user to view XML documents with XSL stylesheets and XLL hyperlinking.

- [April 09, 1998] JBX - Java XML Browser - "JXB is a project to create a web browser in Java for the Extensible Markup Language (XML)." Under development by Chris Hubick [now discontinued?].

- [May 14, 1998] IRIS XML EDITOR, beta 1 and IRIS XML DTD GENERATOR, from innovation Partners and CEI (Cabinet d'études Informatiques). Demo/ Beta-1-ware.

- Jade - DSSSL engine. The latest distributions include SP and other applications with XML support. "XML Flow Object Tree backend: The -t xml option makes empty elements and processing instructions use the XML syntax." Jade 1.2.1 updated October 13, 1998.

- SGML/XML Kit - The SGML/XML Kit is a browser add-on that transforms SGML/XML documents into displayable entities; [it] is based on a DSSSL script engine."

XML Application Environments, Development Toolkits, Conversion

[CR: 20000128]

- SAX - the Simple API for XML. SAX is a common event-based XML API now in use by many parsers and applications. David Megginson is the project leader. See also the references above. Version 1.0 released May 12, 1998.

- SAX 2/Java (beta). Released by David Megginson 2000-01-28.

- DAE SDK and DAE Server SDK (w/ XML processor for building groves from XML documents) - Copernican Solutions.

- [SAXDOM renamed 'FREE-DOM' as of 19980505] - see the following entry] SAXDOM - An implementation of W3C Document Object Model (DOM) API using Simple API for XML (SAX). From Don Park. See the main page. Updated 980504 to support the "04/16/98" DOM spec. Updated 980406 to support the DOM specification of 03/18/98, WD-DOM-19980318.

- Docuverse DOM SDK. Supersedes FREE-DOM, above From Don Park. Docuverse DOM SDK is an implementation of W3C Document Object Model (DOM) API in Java. Formerly 'FREE-DOM' and before that, called SAXDOM. Updated September 06, 1998. Updated July 21, 1998 to support the DOM version of 19980720.

- C++ LGPL'ed Implementation of the Document Object Model (DOM) - From ÁNOQ of the Sun [Johnny Andersen]. "980818 DOM spec, . . . written for the Berlin project. Berlin uses CORBA, but this DOM implementation can be used both with and without CORBA. . . . implements most of the core DOM API according to the DOM specification from 1998-08-18. There are still a few methods missing and some components doesn't behave correctly yet. The document type components are not implemented yet. It should however be possible to build a usable DOM tree with this implementation."

- XML Testbed. An XML application environment written in Java. From Steve Withall. ..."uses an XML configuration file to define the (Swing-based) user interface; includes its own non-validating XML parser (though it can use any SAX parser instead), a nascent XSL engine (to the old submission standard - just in time to be out of date), and a few other odds and ends."

- SAXON - a Java class library for XML Applications. The SAXON package is a Java interface for processing XML documents. It provides a set of services that are particularly useful for applications performing XML-> XML or XML-> HTML transformations. From Michael Kay. Version 4.4, 1999-07-14; Version 4.3, 1999-06-15. Updated 1999-02-16. Earlier: Updated October 20, 1998. Updated September 01, 1998. Updated 980721 to use the new Free-DOM release of July 21, 1998. Was updated 19980616. [Previously updated: 980513.]

- GNOME (GNU Network Object Model Environment) XML Library
-
  PHyLIS: Personal HyTime Link Information System. From Eliot Kimber. Supports both full SGML and XML. Announced June 22, 1998.

- XAF - an XML Architectural Forms Processor. XAF is a Java-based XML architectural forms processor that acts as both a SAX application and a SAX parser. . . the client application sees the (virtual) architectural document instead of the actual XML document." From David Megginson.

- JUMBO - XML browser/editor, from Peter Murray-Rust. A pure Java application for the demonstration of XML and CML. Updated 1998-09-04. Previously updated 980528. Previously updated 980201.

- [June 28, 1999] Cost. - Joe English has announced the release of Cost version 2.2, which now provides 'preliminary support for XML'. 'Cost is a free "structure-controlled SGML application programming tool. It is implemented as a Tcl extension, and works in conjunction with James Clark's nsgmls and/ or sgmls parsers.'

- ExCost. ExCost is for 'Expat and Cost'. Uses an extension to TCL that allows it to parse ESIS file and handle output in a event or tree driven behaviour. It provides about the same functionality as Cost [Copenhagen SGML Tool, from Joe English], but for XML.

- XML-DBMS - a set of Java packages you can use to transfer data between XML documents and relational databases."

- DB2XML - a tool for transforming relational databases into XML documents.

- Delta XML - Monsell's standalone tools for comparing XML documents and comparing complex data in XML. identify and monitor changes to XML documents and data files. Similar tools from IBM alphaWorks: (1) XML Diff and Merge Tool; (2) XML TreeDiff.

- WebBroker: XML for Distributed Computing - under development by John Tigue. The goal is "to come up with a unified software object model for the Web." See slides from XML'98 in Seattle and the database entry.

- PLSXML From Oracle. "a set of PL/SQL-based XML utilities and demonstrations. The PLSXML "Suite" consists of: (1) DBXML - For generating rich, nested XML documents from SQL queries; (2) DBDOM - For creating, parsing, traversing, and searching XML Documents using the Document Object Model API; (3) DBXSL - For generating a database-driven XSL stylesheet for a tree-rendering of data."

- LT XML - XML toolset. LT XML is "a set of C programs for manipulating XML files and a C application program interface (API) designed to ease the writing of C programs which manipulate XML documents." Updated to version 1.0 980624. Previously updated 980508.

- OmniMark LE 4.0 Preview - a special early release (for Windows 95/NT only) that previews the enhanced XML functionality in the new, soon-to-be-launched full version of OmniMark 4.0; LE is a free product.

- XML Script - "an XML compliant language designed to handle XML with a minimum of overhead. X-Tract is a freely available XML Script processor. From DecisionSoft Ltd. Contact: Paul Warren.

- [Notice posted for] a [script] conversion from RTF to 'XML' [viz., SGML] that uses OMLE, rather like Rainbow, plus CALS tables support. The RTF2XML filter, formerly RTF2SGML, has been enhanced in version 0.4 for handling XML, "including built-in support for Unicode RTF." Requires OmniMark or OmniMark LE from OmniMark Technologies, Inc. See RTF2XML, or the local archive copy.

- MajiX - Java compliant tool from Tetrasix, "automatically transforms RTF files (Microsoft Word files) into XML... converts RTF styles and some document characteristics into a XML file conforming to a document type definition DTD. The names of the tags may be changed by the user. Majix version 1.1 is the third release; it corrects some bugs from version 1.0 and provides support for XSL through James Clark's XT." With online documentation

- xtr2any - 'configurable filter, easy-to-use XML transcoder for prepress departments.' A Linux command or as a Win32 console application. Download the (restricted) demo version.

- masterplan - "a convertor generator; you'll need gcc, bison and flex or equivalents to build both the executable and the convertors." Version 0.0.1 (1999-03-29). From: Paul Janssens

- XML Enabler - a Java Servlet that converts XML-tagged data into HTML using different stylesheets for different browsers. From IBM. See the white paper, Accessing XML on the Client.

- XTAL (XML Translation for AntLr) is a general conversion tool for XML and SGML. ANTLR and Java serve as basis and description language. From Oliver Zeigermann.

- MetaMorphosis - SGML/XML Tree Transformer. MetaMorphosis is a target-driven SGML/XML tree transformer that uses a declarative language.

- XML and Perl - Including XML::Parser

- XML and Python

- SX - an application of James Clark's SP that converts SGML into normalized XML

- Ace utility program. "Ace is a freely available scripting language which allows powerful manipulation of SGML and XML documents."

- XTL - A C++ XML toolkit with DOM & SAX support

- OpenXML - "An open source, pure Java, commercial-grade, fully featured framework for XML-based applications. OpenXML covers the entire cycle of XML documents production, processing and delivery for dynamic content publishing and application to application communication." Updated 1999-04-01

- Latex to XML Converter - This converter takes a latex file (*.tex) from your directory and outputs an XML file (*.html) to the browser. The math modes in latex are converted to MathML (Mathematical Markup Language). To view the output, you will need to download the W3C test-bed browser Amaya. From Ashes Dhanna Ganguly.

- Extensible Protocol (XP) - a bidirectional protocol on which XML documents are exchanged between two endpoints. The com.thinlink.xp package implements XP draft 00 using stream sockets and the IBM xml4j processor. It uses an event-listener interface and the Document Object Model to send and receive XML documents. From Tom harding. Implements IETF 'draft-harding-extensible-protocol-00.txt'; [local archive copy]. See: Extensible Protocol.

- See also: XML tools in Steve Pepper's *Whirlwind Guide to SGML Tools and Vendors*, "SGML TOOLS - By Tool Category"

XML/SGML and Namespaces

[CR: 19990204] [Table of Contents]

- Main entry for W3C Recommendation 'Namespaces in XML' (REC-xml-names-19990114) and its commentary: "Namespaces in XML"

- "A Proposal for Namespaces in XML", by Henry S. Thompson. Language Technology Group, HCRC, Edinburgh. May 27, 1997. Overview: ". . .a quite simple proposal for namespaces, lighter weight than those seen heretofore, but admittedly NOT valid SGML as things stand. I think its light weight, flexibility and functionality commend it." See also a "free-form XML" version submitted to the W3C SGML WG list. [HTML mirror copy]

- "Options for Implementing Namespaces in XML", by Tim Bray and Andrew Layman. Also: the mirror copy.

- [June 06, 1998] "A Proposal to Introduce 'Module' Structures into SGML." By Toru Takahashi. ISO/IEC JTC1/WG4 N1987. 98-05-15. Supersedes WG8 N1873. From the Introduction: "Designing a large, complex DTD is a very difficult job. One reason of this difficulty comes from SGML's restriction on namespaces. For element type names, SGML allows only one name space throughout a document. This restriction means, that if you intend to design a new DTD, you have to be familiar with all the element types you wish to use to construct the DTD, and have to select their names very carefully to avoid name conflicts. This lack of modularity makes difficult to use separately designed declaration sets (DTD fragments) in mixture to

build up a complete DTD. For example, if you want to use pre-defined declaration sets for 'tables' and 'math expressions' together to construct your own 'report' DTD, you have to examine whether there are any name conflicts between them or not. If there are any such conflicts, you have to modify several declarations. This restriction in name space makes impossible to treat these declaration sets as public (read only) texts. Similar problems may occur on the parameter entity names. To solve these problems, I propose to introduce the concept of 'Module' into SGML. [local archive copy]

- [See preceding entry] Relative (also) to 'namespaces' in XML: "A Proposal to Introduce 'Module' Structures into SGML" [namespaces], by Toru Takahashi. 12 November 1996. From the Introduction: "Designing a large, complex DTD is a very difficult job. One reason of this difficulty comes from SGML's restriction on name spaces. For element type names, SGML allows only one name space per document. . . " [mirror copy], also available as http://www.ornl.gov/sgml/wg8/document/1873.doc.

- "Web Architecture: Extensible Languages." W3C Note 10 Feb 1998. NOTE-webarch-extlang. By Tim Berners-Lee and Dan Connolly (W3C). "This document is meant to be a fairly explanatory synthesis of the requirements for namespace extension in languages on the web, and in particular for the general language planned to be the common basis of many future applications, XML. It was originally written as part of the 'Design Issues' series of notes. Whilst technically the personal opinion of the authors, it their best attempt as technical coordinators at outlining common architectural principles for W3C development." [local archive copy]

- "Why We Need Namespaces (Modules). An SGML/XML Feature Proposal" By Paul Prescod. Reference: Namespaces.html (02/02/1998) [local archive copy]

- "xml-bind - XLinks from Types and Names." By Rick Jelliffe. Reference: Note 13 March, 1998 (Note-xml-bind-19980313). "This document is a NOTE for discussion by the W3C XML-related groups. It is primarily an alternative to the namespace proposal and a contribution to defining XLink requirements. RDF and XML-data designers may also find it relevant. [Abstract:] Current linking systems are based on links from elements (*i.e.*, instances of element types in a document). This paper holds that several of the technologies under development by the W3C working groups are better characterized as links from types and names. Suggestions are made for a general architecture to handle this, and for how this can be integrated into XLink. Namespaces, parts of RDF, and SGML Open Catalogs are re-characterized as XLinks from types and names." [local archive copy]

- "A Cut and Paste Infrastructure for XML." By Rick Jelliffe. Reference: Note-xml-cnp-19980131, Note 1-February-1998. "This document is a NOTE for discussion by the W3C XML-related groups. It is a personal critique of XML 1.0 PR, especially in the light of the namespace proposal, RDF and XML-data. It may be seen as a contribution to user requirements for an XML 1.1. XML Cut'n'Paste is a proposal for various conventions which address many sophisticated uses in Extensible Markup Language (XML) while retaining true to its underlying model, as an application of SGML." [local archive copy]

- [August 4, 1998] Eliot Kimber on FPIs and URNs

XML and/versus SGML

[CR: 19990917] [Table of Contents]

- "Comparison of SGML and XML." By James Clark. Reference identifiers: World Wide Web Consortium Note 15-December-1997, NOTE-sgml-xml-971215. The document provides a detailed comparison of SGML (ISO 8879) and XML under three section headings: 1) Differences Between XML and SGML; 2) Transforming SGML to XML; 3) SGML Declaration for XML, in two variants: (a) one which "takes advantage of the Extended Naming Rules Technical Corrigendum to ISO 8879, but does not make use of the Web SGML Adaptations Annex"; (b) one which "takes advantage of the Web SGML Adaptations Annex to ISO 8879". [local archive copy]

- The new (informative) ISO 8879 Annex L: Added Requirements for XML "illustrates the relationship of SGML declarations to 'added requirements' by means of a real-world example, XML." The annex has a prose application summary and sample SGML declaration.

- Some of the Recent Changes to ISO 8879 (Annex K, Web SGML Adaptations; also Annex L, Added Requirements for XML) are motivated by the goal of bringing SGML and XML into alignment. See Bob DuCharme, "SGML: Changing to Accommodate XML."

- [July 19, 1998] "Converting an SGML DTD to XML." By Norman Walsh [ArborText]. Norm Walsh itemizes the steps in SGML-to-XML DTD conversion in a couple categories: "Many of these changes are straightforward and, for a large number of SGML DTDs, they will be fairly easy to accomplish. . . There are also some changes that may have a large impact on the semantics of the DTD. Luckily, these are mostly infrequently-used SGML features so they don't turn up often in most DTDs." Also at XML.com [XML Q&A] (July 08, 1998).

- [September 17, 1999] "XML/SGML: On the Web and Behind the Web." By Alfred Attipoe and Philippe Vijghen [The SGML Technologies Group]. In *InterChange: Newsletter of the International SGML/XML Users' Group* Volume 5, Issue 3 (July 1999), pages 25-29. "There is some confusion as to when [to] use SGML and when to use XML. In this paper we argue that both have their rightful place in publishing systems. We discuss the impact of the new Web technologies on publishing systems by clarifying the relationship between XML and SGML. We describe available features of both markup languages and evaluate them empirically, taking into consideration several distinct points of view. Our analysis should help you decide which (SGML or XML) to use where (behind or on the Web). . . we argue that XML, devoid of SGML complexity, is ideally suited for the exchange and publication of documents/information on the Web. However, XML lacks some features which are very useful when creating behind-the-Web systems where reqirements stress the need for expressive information models and data-processing functionality..."

- **S X**, a converter from SGML to XML. Part of James Clark's SP parser toolkit; new in the distribution of SP version 1.3 [980309]. "SX converts SGML to XML. SX parses and validates the SGML document contained in sysid. . . and writes an equivalent XML document to the standard output. SX will warn about SGML constructs which have no XML equivalent." [local archive copy]

- Using an XML Audit to Move SGML Data towards XML." By Charlie Halpern-Hamu, Incremental Development, Inc. Presented at XML'98 in Chicago. "This paper describes, at a technical level, how to assess the XML-readiness of your SGML data as a first step towards moving it towards XML. This paper suggests an 'XML audit': a technical review of current markup practice with eye towards simplification. The goal of an XML audit is to understand which portions of your current SGML application are not XML. The next step might be to start deemphasizing your use of those features. . ."

- [November 06, 1998] "Automating SGML-to-XML DTD Conversion (Part 1)." By Bob DuCharme. In *<TAG>* Volume 11, Number 10 (October 1998), pages 9-10. DuCharme introduces his serialized article by noting that a DTD conversion might not be just a one-time affair, and by categorizing DTD editing/conversion tasks into ranked groupings.

- [December 09, 1998] "Automating SGML-to-XML DTD Conversion (Part 2)." By Bob DuCharme. In *<TAG>* Volume 11, Number 11 (November 1998), pages 5-7. In this second part of a two-part *<TAG>* article, the author discusses SGML-XML DTD conversion in the case of mixed content models, RCDATA, CONREF, and SUBDOC.

- "Converting SGML DTDs to XML." - A section in the XML FAQ document.

- "SGML, XML, and HTML Document Components Compared." From a poster session, by Dennis J. O'Connor, Consultant, Mulberry Technologies, Inc.

- MicroStar Ltd. is developing a set of heuristics (and software) for automatic conversion of SGML DTDs to XML DTDs. Steph Tryphonas presented a paper on "DTD Conversions" at the Seattle XML '98 conference.

- Sean McGrath and Murray Altheim list of 'the main things to watch for' in SGML-to-XML DTD conversion

- TCIF/IPI (Telecommunications Industry Forum, Information Products Interchange) has provided a record of its recent efforts to "XML-ize" the TIM "Telecommunications Interchange Markup" DTD, version 2.0.4. See provisionally the March 06, 1998 entries.

- See: "Converting SAE J2008 to an XML DTD Using Near & Far Designer 3.0," by Dianne Kennedy.

XML and HTML

[CR: 19980725] [Table of Contents]

One now also encounters the phrase "XML-compliant HTML" . . .

- [May 13, 1998] W3C published a NOTE entitled "XML in HTML Meeting Report." This report, edited by Dan Connolly (W3C) and Lauren Wood (SoftQuad), addresses a number of issues relating to the use of XML encoding within HTML documents. At a meeting of February 11-12, 1998 (San Jose, California, Sun Microsystems), participants from a variety of W3C working groups met to discuss these issues, and in particular, concerns relating to the support of MathML and RDF written in XML and intended to be used in HTML documents. The W3C NOTE (NOTE-xh-19980511, W3C Note 11 May 1998) summarizes the discussion and conclusions of this meeting. [local archive copy]

- [July 27, 1998] IBTWSH (Itsy Bitsy Teeny Weeny Simple Hypertext) DTD - from John Cowan. "This is an XML DTD which describes a subset of HTML 4.0 for embedded use within other XML DTDs. It is by intention equivalent (within its scope) to -//W3C//DTD HTML 4.0 Transitional//EN, but is not a derived work in the copyright sense." [local archive copy, 980727]

XML/SGML Name Registration

[CR: 19990316] [Table of Contents]

The development of new vocabularies and the design of "namespace" syntaxes have increased public interest in registration authorities and authentication services which could be set up to manage name conflicts. Facilities are needed for support of globally-unique names, persistent links and resources, name (public identifier) resolution, mapping between public and system identifiers, etc. Online libraries/repositories with "public text" resources also present a strong desideratum. Several initiatives for registries and repositories have been announced. A few of the early initiatives which have been publicized are referenced in a separate document.

XML Media/MIME Types

[CR: 20000524] [Table of Contents]

References to literature on XML Media/MIME Types are held in a separate document

See also "XML Mail Transport Protocol (XMTP)."

XML: Examples and Non-Examples

[CR: 20000218] [Table of Contents]

In the following lists of XML "Examples" and "Non-Examples", a certain number of items in the former category undoubtedly will (come to) belong to the latter category, given the evolution of the XML specifications and other factors. Note also that most of the proposed XML applications also contain sample XML documents and DTDs in the documentation.

Examples

- The XML Recommendation 1.0 (February 1998) in XML format. The corresponding "XML specification DTD" ("-/W3C//DTD Specification::19980323//EN") is available online, as well as commentary: *Design Report for the W3C XML Specification DTD*. Version 2.0 of the XML Spec DTD 1999-07. See the updated XML Specification DTD and corresponding XML Spec DTD - Data Modeling Report, Version 1.2, 1998-09-10.

- See the XML versions of the XLink and XPointer specifications (*i.e.*, 3-March-1998).

- "Namespaces in XML" (WD-xml-names-19980518) is in XML format; local archive copy]

- XML version of the XSL Working Draft, 1998-08-18.

- XML source files for PR-DOM-Level-1-19980818. "The DOM specification serves as a good example of the power of using XML: all of the HTML documents, Java bindings, OMG IDL bindings, and ECMA Script bindings are generated from a single set of XML source files." [local archive copy] See the Production Notes for details.

- [July 1999] Updated Shakespeare XML documents, from Jon Bosak. See: shakespeare.2.00.xml.zip, and shaks200.zip. Also: religion.2.00.xml.zip and rel200.zip. **Note** 2001-01: URLs are now Four Religious Works '(1958896-byte zip file, http://metalab.unc.edu/bosak/xml/eg/rel200.zip)' and The Plays of Shakespeare '(2195143-byte zip file, http://metalab.unc.edu/bosak/xml/eg/shaks200.zip)'; I do not know if these are identical version 2 document sets.

- [October 12, 1998] See above. Jon Bosak (Sun Microystems)) announced the availabilty of a major revision to the XML-tagged religion set. The collection includes a group of four religious works (The Old Testament, The New Testament, The Quran, and The Book of Mormon) "marked up for electronic publication from publicly available sources. The texts were originally marked up (1992) as an exercise in SGML DTD and style sheet design, and in 1996 were released along with a companion Shakespeare set as the earliest examples of real documents marked up in XML. The current distribution conforms to the XML 1.0 Recommendation released February 8, 1998." Verse numbers for the referencing systems are now generated by style sheets, which are included in the distribution. These texts are used as benchmarks for XML parsers by some developers. Source: http://metalab.unc.edu/pub/sun-info/standards/xml/eg/rel200.zip; [local archive copy].

- Sample XML documents with DTDs (*e.g.*, Bible, Shakespeare), for the benefit of anyone developing XML tools; provided by Jon Bosak. See the updated announcement of January 30, 1998. [See also the earlier announcement for other details.]

- http://sunsite.unc.edu/pub/sun-info/xml/eg/religion.1.10.xml.zipXML Religious Texts - January 1998; [local archive copy]

- http://sunsite.unc.edu/pub/sun-info/xml/eg/shakespeare.1.10.xml.zipXML Shakespeare - January 1998; [local archive copy]

- Example XML documents in Japanese are available. "They are encoded in UTF-16 (big endian and little endian), UTF-8, iso-2022-jp, shift_jis, and euc-jp. One document is the translation of the XML PR, and it will soon be replaced with that of the XML recommendation. . ." From Murata Makoto. [local archive copy/snapshot, 19980603]

- [August 03, 1998] XML documents in UTF-8 written in Japanese. Noted by MURATA Makoto, murata@apsdc.ksp.fujixerox.co.jp.

- [April 09, 1999] xmlTree. - "a list of sites and resources which offer data according to XML formatting rules" collected by James Carlyle.

- [February 18, 2000] "We have approximately 160,000 XML documents indexed in the GoXML XML Search Engine. Many of these are in XML with XSL format. THe url is: www.goxml.com. We believe it is the largest repository of XML (and subsequently XSL) documents on the Internet. Grab a copy of Microsoft's IE 5.+ and have a blast." [Duane Nickull; Fri, 18 Feb 2000]

- XML served by the Sun Microsystems corporate

document server, **docs.sun.com**. "The docs.sun.com service from Sun stores information in a compiled SGML format and can deliver either XML or HTML data dynamically, according to requests from a client." See, for example, the **docs.sun.com** XML documents for display with Mozilla source: TocView.xml and disability.xml. [See also the database entry for the *docs.sun* AnswerBook Documentation.]

- [January 19, 1998] W3C NOTE "Name Spaces in XML": NOTE-xml-names in XML format from W3C; [local archive copy]

- [March 06, 1998] Sample chapters 'in XML format' from Richard Light's book, *Presenting XML*. Presented on the companion Web site.

- [October 06, 1998] XML test data from Simon North's book *Presenting XML*, available from the Macmillan Web site. The author says: "The material was written in Author/Editor using the TEI-lite DTD (freely available on the Web) and converted to Microsoft Word, via RTF, for printing using jade. The XML and HTML code was created from the SGML sources. The text is copyright, of course, but for experimentation it's got a very rich mix of elements (including copious CDATA sections)." [XML-L 6 Oct 1998]

- [December 07, 1998] XML release of the TEI Lite DTD" (personal work, from Patrice Bonhomme, "not an official release of the TEI Lite.") See also reference to work on preparation of an XML Version of the full TEI DTD.

- [December 11, 1997] Joseph Conrad's Heart of Darkness, provided by David Megginson. XML 1.0 DTD and markup. See also the announcement in the posting, or the XML source files, .ZIP, local archive copy.

- [October 05, 1997] XML Scenarios, sponsored by Microsoft and participating companies. This part of the Web site features a collection of articles "that describe how industry leaders are using XML-based applications today to increase sales and productivity, improve customer satisfaction, and lower costs. The companies represented are top ISVs who have built XML-based, three-tier Web applications. Each brief scenario demonstrates the solution to a real business problem. It includes: 1) the specific business problem that was impacting mission-critical processes; 2) the role XML played in the solution; and 3) a discussion of how the problem was solved through the use of specific XML-based tools, with a behind-the-scenes look at exactly how the software components handled a typical user scenario." As of October 5, 1998, nine articles were available.

- [January 27, 1998] XML Auction Demo from Microsoft.

- [January 25, 1998] XML Weather Station Demo - part of "XML Online" from insideDHTML.

- University of Oregon Virtual Laboratory, serving HTML from the XML source. Behind what you see, "there is a Java servlet based on Lark that pumps out HTML." The applets at this site have been programmed by Sean Russell.

- [December 30, 1997] Frontier 5 and XML: Scripting News in XML; or: references to samples

- JStud's XML Example and DTD Catalog (Don Park)

- The XML specification in XML format (WD-xml-970807.xml) [?]; [archive copy]

- Some XML examples from Elliotte Rusty Harold's book: http://sunsite.unc.edu/xml/books/xml/examples.

Non-Examples

- [December 13, 1997] James Clark's test suite of files for XML processors. The collection of XML test cases in the ZIP archive "contains 141 [now 164] small files that (in my view) fail to be well-formed XML documents, and should therefore cause any conforming XML processor to report a fatal error." See: ftp://ftp.jclark.com/pub/test/xmltest.zip. **Updated** December 13, 1997 to bring the test suite into alignment with the Proposed Recommendation of 1997-12-08.

- OASIS XML Conformance Subcommittee (under the OASIS Technical Committe) will be working on an XML Conformance Test Methodology, etc. Contact G. Ken Holman for additional information, and see the dedicated

entry.

- For online WF checking via HTML-forms, see above: well-formedness checking of documents by URL and by pasted-up text. Provided by Tim Bray (Lark, XML.com) and James Clark (XP, WebTechs).
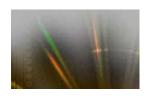

XML Conferences, Seminars, Workshops

[CR: 19990419] [Table of Contents]

Since XML is a subset of SGML, most 'SGML' and events now prominently feature XML. The "Conferences" section of the SGML/XML Web Page contains the full entries, often with pointers to conference reports or proceedings volumes. Summary information for special XML events is provided below.

- XML '99. December 6 - 9, 1999. Pennsylvania Convention Center, Philadelphia, PA.

- XML One - The International Users Conference. "Increasing Your Productivity with XML." May 24 - 27, 1999. Austin Marriott at the Capital, Austin, Texas.

- XML Europe '99. April 26 - 30, 1999. Granada, Spain.

- XML/SGML '99 Sweden. March 16-17, 1999 in Stockholm, Sweden.

- XTech '99. XML Application Developers Conference & XIO Expo March 7 - 11, 1999. San Jose Convention Center, California.

- Markup Technologies Conference. November 19 - 20, 1998. Chicago, Illinois, USA. ". . .technical issues relating to the design, development, and deployment of a variety of markup technologies including but not limited to SGML, XML, HyTime, and DSSSL."

- XML '98. November 15 - 18, 1998. Chicago, Illinois.

- <TAG> '98. November 4 - 6, 1998. Washington, D.C.

- SGML/XML BeLux '98 Conference. Fifth Annual Conference on the Practical Use of *ML. October 21, 1998 - Antwerp, Belgium.

- SGML, XML, and Databases. Tuesday, October 20, 1998. The Brunei Gallery Lecture Theatre, School of Oriental and African Studies (SOAS), Russell Square, London.

- SGML/XML Asia-Pacific '98. October 12 - 15, 1998. Sydney, Australia and Tokyo, Japan.

- SGML/XML Japan '98. September 30 - October 3, 1998. Nippon Convention Center, Makuhari Messe, Chiba, Japan.

- XML World Conference and Exposition. September 14 - 17, 1998. Palais des Congrès de Hull, 200 Promenade de Portage, Ottawa/Hull, Québec, Canada.

- XML-seminar 98 Göteborg. September 8 - 9, 1998. At the Novotel in Gothenburg, Sweden. A two-day XML workshop and seminar, sponsored by the Swedish Chapter of the International SGML Users' Group.

- Seybold San Francisco/Publishing '98. August 30 - September 4, 1998. Moscone Convention Center, San Francisco, CA. With XML Day.

- XML Developers' Conference. August 20 - 21, 1998. Le Sheraton Hotel, Montréal, Québec, Canada.

- Metastructures 1998 Conference. August 17 - 19, 1998. Le Sheraton Hotel, Montréal, Québec, Canada. Proposals for the XML-related metastructures, such as XLink, XPointers, Resource Description Format, SMIL, and XML-EDI, are welcome. . ."

- SGML/XML Europe '98. "From Theory to New Practices." May 17 - 21, 1998. Hotel Sofitel - Forum Rive Gauche, Paris, France.

- W3C Workshop - "Shaping the Future of HTML." May 4 - 5, 1998. San Francisco Airport Hyatt Regency, California. Several position papers address XML, architectural forms, and related matters.

- Electronic Publishing '98. The Seventh International Conference on Electronic Publishing, Document Manipulation and Typography. April 1 - 4, 1998. Palais des Congrès, Saint Malo, France. Tutorials on SGML, XML, DSSSL, XSL, TEI-SGML. Conference presentations on SGML.

- SGML UK. March 31, 1998. "Putting on the Style! - DSSSL, CSS, XSL, ..." Wiltshire Hotel, Swindon. Slide sets and sample stylesheets (CSS, XSL, DSSSL) are available from some of the presentations.

- XML Developers Day within XML: The Conference (1998). "Enabling Intelligent Content on the Web." March 23 - 27, 1998. Seattle, Washington. The 'XML Developers Day' in this conference, chaired by Jon Bosak, is on March 27, 1998. Proposals for XML DevDay should be sent to Jon Bosak, W3C XML WG Chair. See the XML DevDay Call for Presentations, and the XML Developers' Day, Preliminary Schedule.

- Seybold Seminars New York / Publishing '98. Event and Exposition, March 16 - 20, 1998. Jacob K. Javits Convention Center, New York NY. Includes XML Xposed and XML Tutorials.

- Documation '98 West. Exposition & The Document Software Conference. March 10 - 12, 1998. Santa Clara Convention Center. Santa Clara, California. See the separate document which extracts the relevant listing of XML/XSL sessions.

- SGML/XML '97. December 7 - 12, 1997. The Washington Sheraton, Washington, D.C. See especially the XML highlights at SGML/XML '97; [local archive copy]

- INRIA XML Workshop. "The Potential of XML for Web-based Applications." October 23 - 24, 1997. INRIA Sophia Antipolis, (Nice), France.

- SGML UK October Meeting: "The eXtensible Markup Language (XML)." October 23, 1997. Wiltshire Hotel, Swindon, UK. Published agenda. Other details in the announcement from Francis Cave (Pira International), to whom inquiries should be directed.

- Seybold San Francisco '97. September 29 - October 3, 1997. Mosconi Center, San Francisco, CA. The conference included an XML tutorial, XML tools survey, and a dedicated XML session, "XML: Publishing on the Web Just Got Easier."

- SGML/XML Asia Pacific '97. September 22 - 24, 1997. Sydney, Australia.

- SGML Open for Business. September 17, 1997. Clarion Hotel, Millbrae, California. ["management and implementation information on SGML and XML..."]

- XML Developers Day. August 21, 1997. Montreal, Canada. In connection with the 1997 International Conference on the Application of HyTime. Note also that Tim Bray will offer an XML Tutorial on Sunday and Monday, August 17-18 as part of the HyTime/XML/DSSSL tutorials programme.

- European Conference on XML. "XML Ready for Prime Time?" London, UK. April 22, 1997.

- WWW '97: Sixth International World Wide Web Conference. April 7 - 12, 1997. Santa Clara Convention Centre, Santa Clara, California, USA.

- GCA XML Conference: XML SGML INTRANET. "The New Publishing Business Case: XML, SGML, and the Intranet." March 10 - 12, 1997. The Mission Valley Marriott, San Diego, California.

XML: Demos and Miscellaneous Uncategorized

[CR: 19990114][Table of Contents]

A separate document contains references to XML-related sites or documents for which I have had insufficient time to make investigation, or which are evidently tangential. Readers are invited to send email re: appropriate disposition. Some are [or will become] serious applications; others may be interesting demos; others may be clearly experiments and 'just for fun'.

XML: Of (Possible) Historical Interest

[CR: 19981111][Table of Contents]

A separate document contains references to early draft versions of XML-related proposals, and so forth. 'Early' means about 1996-1997. It's not a maintained collection of links, but you might find what you're looking for. . .

Document URL: http://xml.coverpages.org/xml.html   —   Legal stuff