NAXML Pilot Project – Getting Started

The following guidelines are offered to help pilot participants get started on a NAXML Pilot Project using XML for the electronic exchange of business documents. NACS has committed to assist pilot participants with the content and structure of the business documents. The development of the choreography methodology (how documents will be transferred between trading partners) and the programming routines to accept, process and/or view the data is the responsibility of the trading partners and solution provider.

1. Download from the following web site all documents listed. http://208.144.173.70/NAXML/dtds/

2. Review the NAXML Manual document. This document provides guidelines for conducting electronic business-to-business using XML for data interchange and other background material on the objectives of NAXML and the development framework.

3. Review the NAXML dtds listed below and the xml sample documents:
   4. NAXML-BusDoc.dtd
   5. NAXML-LotDoc.dtd
   6. NAXML-FuelsDoc.dtd
   7. NAXML-Common.dtd
   8. NAXML-DataDictionary.dtd

   The purpose of the review is to determine which document(s) would make a good candidate for the Pilot program. There are two types of documents: (1) those that are received by the retailer from a supplier whose data should be input to the retailers home office/back office system and (2) those that originate from the retailer's home office/back office system to be sent to a supplier. It is recommended that those documents in the first category would make the best candidates to begin work on a pilot.

9. After determining which document to consider for the pilot, review the dtd for that document with specific attention to the mandatory and optional elements and attributes to determine if all of the data required is accommodated in the dtd. If you have a requirement that a specific element be mandatory and it is only optional in the dtd, or if data that your system requires is not included in the dtd, you should send a note to jhervey@gerke.com advising of the facts and your recommended solution including placement of the new data within the structure of the dtd.

10. If you determine that all of the information is included in the dtd and the mandatory/optional flags are acceptable, take one of the sample documents and map to your system. If your system requires the information in a flat file such as an ASCII comma delimited format or a fixed length record, consider the use of an

XSLT (stylesheet transformation) as a tool to build a template to convert the xml document into your file format.

11. Trading partners and solution provider need to jointly agree on a timetable regarding their readiness to participate in a pilot. If any trading partner has any particular problems with regard to the xml document, such as missing data elements or incorrect mandatory/optional designation this should be made known to all concerned along with what actions have been taken or need to be taken to correct these problems. Determine what communication method will be used to send the document between trading partners. Determine encryption method, if any. Setup a timetable for receipt of a test document. Solution providers should begin programming for acceptance, receipt verification, and updating of systems.

12. Consider the use of XMLConnect as an interim step in setting up communications between trading partners. Information can be found at www.xmlconnect.net. (note this is net not com.)

13. Establish a timetable for regular and periodic conference calls among all participants, including the retailer, supplier, and solution provider. Determine who will initiate the calls, the agenda for each call and the length of the call.

14. Notify jhervey@gerke.com of your timetable and involved parties. Also notify if anyone in your organization should be added to the NAXML listserv distribution list for updates to the documents and pilot news.

15. Monitor the NAXML listserv messages for changes and updates to the dtds and sample documents. Participate in the listserv discussions regarding questions or problems others might be having.

16. Review the NACS XML/EDI Pilot Project Evaluation Form for evaluation criteria. After Pilot testing is complete, please fill out the evaluation form.

17. NACS will be publicizing Pilot Project efforts. Please communicate significant project activity/achievements to jhervey@gerke.com.

NACS encourages Pilot Project participants to sign the Pilot Project Agreement. Pilot Project participants who have signed the agreement may request on-site project assistance from NACS consultants. On-site assistance will be subject to approval by NACS and availability of appropriate NACS consultant(s). Signed Pilot Project Agreements should be sent to Alan Thiemann, Attorney, via fax to 703-836-9410 or by mail to:

Thiemann Aitken & Vohra, L.L.C.
908 King Street, Suite 300
Alexandria, VA 22314

Tools
Extracting Data from corporate databases and converting to XML

There are a number of tools available to transfer data between corporate databases and XML documents. Some of these are free or shareware and some are commercial products. Some of these tools are listed below. No warranty is made regarding any of these tools. The purpose is to provide an initial listing for your investigation. It should be noted that even the most expensive of these tools is significantly less expensive that traditional EDI translation and mapping software packages.

1. XML-DBMS The description given is from the product literature for the product. "XML-DBMS, along with its source code, is freely available for use in both commercial and non-commercial settings. It is not copyrighted and has **absolutely no warranty**." It can be found at the following link: http://www.informatik.tu-darmstadt.de/DVS1/staff/bourret/xmldbms/readme.html#LangClass

    "XML-DBMS is a set of Java packages for transferring data between XML documents and relational databases. Programmers use these packages to build systems that transfer data; a sample application can be run from the command line to transfer data between a database and an XML file.

    XML-DBMS preserves the hierarchical structure of an XML document, as well as the data (character data and attribute values) in that document. If requested, it also preserves the order in which the children at a given level in the hierarchy appear. (For many data-centric applications, such order is not important and the code runs faster without it.)

    Because XML-DBMS seeks to transfer data, not documents, it does not preserve document type declarations, nor does it preserve physical structure such as entity use, CDATA sections, or document encodings. In particular, it does not attempt to implement a document management system on top of a relational database."

2. ODBC2XML The description given is from the product literature for the product. This product has a cost of $49.95. It can be found at the following link: http://members.xoom.com/gvaughan/odbc2xml.htm

    "ODBC2XML merges data from any ODBC data source into XML documents. It accepts well-formed XML "template" files that can contain XML text, SQL queries, and instructions about where the query results merge with the XML. It generates well-formed XML files that contain the ODBC data merged into the original XML text."

3. XML Junction The description given is from the product literature for the product. This product has a cost of $895.95 beginning August 1, 2000. It can be found at the following link: http://www.xmljunction.net.

"XML Junction is a software tool for e-Commerce and application integration specialists. It automates the creation of DTDs, XML Schemas and XML Documents from virtually any application or data format including EDI, SQL formats, Legacy formats, HL7, SAP and more."

4. XMLConvert The description given is from the product literature for the product. This product has a cost of $1,000.00 per cpu. An evaluation copy can be downloaded from the following link: http://www.unidex.com/xflat.htm

"XMLConvert is a java application that performs the following functions:
- Flat file to XML document
- XML document to flat file
- Flat file to flat file"

5. XAWARE The description given is from the product literature for the product. This product is in beta and can be downloaded at no cost from the following link: http://www.xaware.com/XAdownload.htm

"BizTools - Because XA-BizTools can retrieve and store data from virtually any data source, it is an ideal solution for data translation, import, and export. A single BizDoc can be constructed that contains two BizComps - one to retrieve data from one system into XML format, and another to store data from XML into the native format of the other. XML is used as a common intermediate format. In order to provide optimal performance, the XML is actually maintained in an internal structure that is much more efficient than the text-oriented XML."

6. XML Instance - This product is not exclusively for conversion of database data to xml, however, it does have the ability to connect to ODBC compliant databases and build an XML document based on the tables and columns in the legacy database. http://www.extensibility.com

XML Resource Guide[1]

Third-party companies are rapidly releasing new tools and new versions of existing tools that are compatible with XML and take advantage of its latest enhancements. We offer a listing of products, descriptions, and pricing by company.

While FTP's intent is to provide the most accurate and comprehensive information possible, the manufacturers are ultimately responsible for the accuracy of data and product claims. We encourage you to contact them for further information.

Please send any additions or corrections to this list to Listings Editor, Fawcette Technical Publications, 209 Hamilton Avenue, Palo Alto, CA 94301-2500; fax them to 650-853-0230; or send them by e-mail to mtominaga@fawcette.com.

PRODUCTS:

BizTalk BizTalk is an industry initiative started by Microsoft and supported by a wide range of organizations, from technology vendors like SAP and CommerceOne, to technology users like Boeing and BP/Amoco. BizTalk is not a standards body, but a community of standards users, with the goal of driving the rapid, consistent adoption of XML to enable electronic commerce and application integration. Through their Web site (www.biztalk.org/BizTalk/default.asp) you can locate, manage, learn about, share information about, and publish XML, XSL and information models and business processes supported by applications that support the BizTalk Framework. There's a library of XML schemas for you to review and download for use in your own applications. Free. Microsoft Corporation. Phone: 800-621-7930. Web: www.microsoft.com

Bluestone XML Suite Bluestone XML Suite enables you to develop and deploy e-commerce, electronic data interchange, application integration, and supply chain management applications. The Suite includes Bluestone XML-Server, a dynamic XML Server; Bluestone Visual-XML, a developer's toolkit to help companies integrate applications using XML throughout the enterprise; XwingML, a development platform for merging XML and Java code so that users can create (in common English) XML documents that generate Java Swing classes to create graphical user interfaces; XML-Contac, for the Palm Computing Platform. Contact for pricing. Bluestone Software. Phone: 888-BLUESTONE; 609-727-4600. Web: www.bluestone.com

Breeze Commerce Studio Breeze Commerce Studio (Breeze) is a visual XML toolkit that provides a development environment for building e-business applications that enable broad e-commerce automation for corporations of all sizes by establishing a framework for communicating XML via the Web, e-mail, and fax. Breeze Commerce Studio includes a visual XML editor, XML forms designer, and a developer's toolkit. You can automatically generate dynamic XML objects in Java, COM, and C++ with wizards, and design forms that can be used to send XML documents via e-mail as HTML attachments or to a VSI-FAX server for faxing. Contact for pricing. VSI. Phone: 800-556-4874; 949-489-8778. Web: www.vsi.com

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[1] This listing developed by *Fawcette Technical Publications* has been modified to delete products, services or publications not applicable to NAXML Pilot Projects.

ClarientXML Server ClarientXML Server provide real-time XML publishing capabilities for Lotus Notes and Domino 5.0. It allows Lotus Notes and Domino 5.0 servers to communicate using XML, interpret XML documents, and perform Lotus Notes database-related functions. Contact for pricing. Object Resources, Inc. (ORI). Phone: 913-438-7140. Web: www.objres.com

CUEXml ActiveX 2.0 CUEXml ActiveX 2.0 is an XML parser that fires events for the various components of an XML document. The XML document object model (DOM) component parses and represents XML documents in a tree-like structure. This structure can be manipulated through object interfaces and then be saved back to an XML document. This product includes a single OCX file with 2 primary interfaces: ICSXmlParserX, which implements an XML parser, and ICSXmlObjModelX, which implements the W3C DOM specification. Features include support for eXtensible Query Language (XQL) for advanced queries, and you can read XML documents from a local file system, via HTTP, or via FTP. $79. CUESoft. Phone: 303-466-4825. Web: www.cuesoft.com

Delphi 5.0 Delphi 5 is a RAD tool for Windows designed to simplify the integration of Windows and browser clients, Web servers, middleware and back-end database systems. Features include support for HTML 4 and XML for developing systems that are flexible and extensible to support e-commerce. It includes MIDAS PageProducer, and WebBroker for building distributed HTML applications. Build, debug, and deploy applications using the Visual Component Library with more than 200 reusable components with source, and use InterBase Express to create turnkey database systems. Inprise Corp. Phone: 831-431-1000. Web: www.inprise.com

eXcelon eXcelon is a scalable data server that caches and serves all information to enterprise applications and Web servers as XML. It works with all data sources, application servers, and client software. It fully complies with XML and all related standards as defined by the W3C. eXcelon can be used as an application cache for existing data sources, or as a complete data management system for new XML-based applications. eXcelon is comprised of two components, the eXcelon Server and eXcelon Toolset, an integrated set of tools for server administration, XML data management, and XML schema definition. eXcelon automatically stores, caches, and delivers XML data across the middle tier of multi-tier applications. $995. Object Design, Inc. Phone: 800-962-9620;781-674-5000 Web: www.objectdesign.com

ExeterXML E-Commerce Engine ExeterXML E-Commerce Engine is an Internet application for integrating XML and EDI e-commerce systems. Designed to allow small companies to exchange data with larger companies without EDI systems, ExeterXML E-Commerce Engine features the Lotus XSL Processor running with IBM's WebSphere Application Server. It also also employs Object Design's eXcelon XML data server. All business logic is written in Java and all transformation instructions are written in extensible style language (XSL). Exeter includes an interchange engine, a data transformation engine, mapping tools, and application connector architecture. Contact for pricing. XMLSolutions Corporation. Phone: 877-XML.XMLS (965-9657); 703-506-1111. Web: www.xmls.com

EXml Editor EXml Editor is an XML editor with a structure view, a source view, and built-in XSL namespace support. It checks for well-formedness. In the structure view you can add element nodes to the tree through a dialog. Features include a dialog for inserting XSL commands that lets you select properties, and you can enter the values after insertion. You can also add text, CDATA sections, comments, attributes (in a

separate pane), and processing instructions. You can also modify the source view. Free. CUESoft. Phone: 303-466-4825. Web: www.cuesoft.com

Microsoft XML Notepad Microsoft XML Notepad is a simple prototyping application for HTML authors and developers that enables the rapid building and editing of small sets of XML-based data. With XML Notepad, you can create XML prototypes in an iterative fashion, using familiar metaphors. XML Notepad offers a GUI that represents the tree structure of XML data. Working with the standard building blocks of XML supported in Microsoft Internet Explorer 4.0, you can create reproducible data structures that you fill. Free for non-commercial use. Microsoft Corporation. Phone: 800-621-7930. Web: www.microsoft.com

OmniMark 5 C/VM OmniMark 5 C/VM is an integrated OmniMark compiler and virtual machine. It can be used to compile and execute OmniMark source code programs in a single step or execute separately compiled OmniMark byte code applications. OmniMark C/VM is a normal command-line-based execution environment for all applications, from simple CGI scripts to major server-based systems. OmniMark is a programming language with a built-in parser and advanced text processing, suited for XML application development. Free. OmniMark Technologies, Inc. Phone: 212-792-4119. Web: www.omnimark.com

OmniMark Developer IDE 1.0 OmniMark Developer IDE 1.0 is a Windows-based graphical editor and debugger. The IDE lets you fully exploit the power of the OmniMark network programming language, a programming language with its built-in parser and advanced text processing, that eases XML application development. Its features let you prototype, implement, and maintain advanced server and streaming data applications in an efficient manner. $695. OmniMark Technologies, Inc. Phone: 212-792-4119. Web: www.omnimark.com

Oracle8i Oracle8i is a database solution that integrates Java programs, Web sites and Internet content. Oracle8i also provides support for Enterprise Java Beans, CORBA and IIOP interfaces. Features include Oracle iFS (Internet File System), which combines the security of a database with the ease-of-use of traditional file systems. Oracle8i features core XML support directly in the database, so you can build applications that store XML in the database as either documents or data, and that publish XML documents from existing data and queries. Oracle Corp. Phone: 800-ORACLE1; 650-506-7000. Web: www.oracle.com

Progress Apptivity 3.1 Progress Apptivity 3.1 is a Java application server and integrated development environment that features support for XML to facilitate the deployment of broadly available business-to-business and e-commerce applications. In addition, enhanced SQL functionality strengthens e-commerce applications by allowing custom, vendor-specific queries on enterprise databases. It supports the latest Web standards, including Java Development Kit 2.0 and Microsoft Internet Explorer 5, and new cut-and-paste functionality allows faster communication between Apptivity Java clients and other applications on the desktop. $10,000/server. Progress Software Corp. Phone: 800-477-6473; 781-280-4000. Web: www.progress.com

SAX 1.0 SAX is a standard interface for event-based XML parsing, developed collaboratively, and is is free for both commercial and non-commercial use. An event-based API provides a simpler, lower-level access to XML compared to tree-based APIs, which are useful for a range of applications but often put strain on system resources, especially if the document is large. SAX implementations are

currently available in Java and Python. Free. Megginson Technologies Ltd. Phone: 613-722-8770. Web: www.megginson.com/index.html

Sequoia XML Portal Server Sequoia XML Portal is an application framework that provides bi-directional extraction and conversion of legacy data to and from XML. The product line includes iAcquire, iManage, and iPresent. iAcquire is a set of data acquisition, capture, and transformation tools that streamline access to corporate data previously locked in proprietary systems. Once information has been captured, iManage provides the core repository, intelligent indexing, security, workflow, and data distribution tools to manage the data. iPresent then provides the corporate user with an intelligent set of Web-based publishing tools for accessing and querying iManage seamlessly. The Sequoia XML Portal Server runs on Windows NT Server and is Microsoft Back Office Certified. $10,000/server and $500/user. Sequoia Software Corporation. Phone: 888-820-7917; 410-715-0206. Web: www.sequoiasw.com

Vignette Syndication Server (VSS) Vignette Syndication Server (VSS) allows you to manage collaboration with affiliate sites, create business rules and constraints on the use of your digital assets, and automate the reception and deployment of digital assets. VSS is built on the XML-based Information & Content Exchange (ICE) protocol, so you can build and manage distribution across an online business network. Contact for pricing. Vignette Corporation. Phone: 512-306-4300 Web: www.vignette.com/

Visual XML Transformation Tool (V-XMLT) Visual XML Transformation Tool (V-XMLT) allows you to compose a new XML document from existing XML documents. The tool runs on Windows NT. It will take 1 and n number of DTDs that describe the source XML documents, and visually construct the DTD that describes the new XML document. V-XMLT also generates the XSLT script that will transform the input-source XML documents to the output XML document and unit-test the XSLT script. Free. IBM Alphaworks. Phone: 408-777-5910. Web: www.alphaworks.ibm.com

Xdex Xdex is an XML indexing engine that offers context-sensitive searching functionality for XML data and documents. Xdex's real-time adaptation technology allows you to add new XML document structures to the index automatically. If you want to ensure your XML documents meet the structure of your corporate DTD's, turn DTD validation on within Xdex. You can also perform an XQL compliant query language for searching, and map XML elements and attributes that are semantically the same. $495 prereserved; $1,995/server. Sequoia Software Corporation. Phone: 888-820-7917; 410-715-0206. Web: www.sequoiasw.com

XED XED is a text editor for XML document instances. It is designed to support hand-authoring of small-to –medium-size XML documents, and is optimized for keyboard input. Although it does not validate, it does read DTDs, keeps track of your document structure, and provides context-based accelerators to ease element and attribute entry. XED keeps track of all the changes you make in your document, so that you can undo as many changes as you need to if you make a mistake. This makes it easy to learn: if you're not sure whether a particular command will do what you want, just try it! If the results are not what you wanted, you can Undo them. Free. Language Technology Group. England. Phone: 44-131-650-4445. Web: www.ltg.ed.ac.uk

Xeena Xeena is a generic Java application from the IBM Haifa Research Laboratory for editing valid XML documents derived from any valid DTD. Key features include syntax-directed editing ability, and awareness of DTD grammar. It can make only

authorized elements icon-sensitive, automatically ensuring that all documents generated are valid according to the given DTD. Free. IBM Alphaworks. Phone: 408-777-5910. Web: www.alphaworks.ibm.com

XJParser XJParser is an XML parser for delivering server-based enterprise applications utilizing open Web-standards. Features include XML 1.0 Standards Compliance with a complete set of W3C interfaces for interoperability with applications and Web-based technologies, a simple API for XML 1.0, and an integrated eXtensible Stylesheet Language (XSL) processor. XJParser supports and extends full XML functionality in Microsoft Internet Explorer 5.0. Contact for pricing. DataChannel Inc. Phone: 425-462-1999. Web: www.datachannel.com

XMetaL 1.0 XMetaL is a customizable XML authoring tool that is modeled on common word-processing applications. Features include a COM-based architecture and support for any Windows scripting language, and support of SGML. XMetaL's customization features enable the authoring environment to be optimized for any DTD. $495. SoftQuad Inc. Phone: 800-387-2777; 416-544-9000. Web: www.softquad.com

XML Class Generator XML Class Generator generates a set of Java source files based on an input DTD. The generated Java source files can then be used to construct, optionally validate, and print an XML document that is compliant to the DTD specified. The Class Generator supports validation mode to assist debugging. Contact for pricing. Oracle Corp. Phone: 800-ORACLE1; 650-506-7000. Web: www.oracle.com

XML Generator IBM's XML Generator is a Java program designed to automate this process by generating "random" instances of valid XML from a single input DTD. The XML Generator engine can create an XML file or can be accessed using the Document Object Model (DOM) API. The XML generator operates within a few user-definable constraints, which lets you limit the size and customize the appearance of the output XML. You can limit the depth of the generated tree, limit the number of IDs an IDREFs attribute can contain, and choose whether or not implied attributes should appear. Free. IBM Alphaworks. Phone: 408-777-5910. Web: www.alphaworks.ibm.com

XML Parser for Java 2 XML Parser for Java is an XML parser that incorporates support for XSL Transformations (XSLT). Features include validation and non-validation modes support, Intergrated Document Object Model (DOM) Level 1.0 API, and built-in error recovery until fatal error. XML Parser supports the XML W3C 1.0 Recommendation and W3C Proposed Recommendation for XML Namespaces. Contact for pricing. Oracle Corp. Phone: 800-ORACLE1; 650-506-7000. Web: www.oracle.com

XML Pro 2.0 XML Pro is an eXtensible Markup Language (XML) editor that features the IBM XML4J parser, offering support for the W3C Document Object Model and the SAX interface. New features include drag-and-drop, undo, cutting and pasting of elements, the ability to change document encoding, DTD view, and Java 2 (JDK 1.2.1) support. $174.95; $149.95 ESD. Vervet Logic. Phone: 812-856-5270. Web: www.vervet.com

XML Spy 3.0 XML Spy is a validating XML editor for Windows developers, IT professionals, and Web designers that lets you edit all XML, XHTML, XSL, RDF, 3DML, and DTD files. It provides three advanced views on your documents: an Enhanced

Grid View, for structured editing; a Source View, with syntax-coloring for low-level work; and an integrated Browser View, that supports CSS and XSL style sheets. Contact for pricing. Icon Information-Systems. Austria. Phone: +43 (1) 545 51 55 - 0. Web: www.icon.at

XML Validation Service XML Validation Service allows you to validate an XML document by either pasting in the actual text in the text field, or the URL for the local file field. It follows the XML 1.0 standard closely and provides a variety of warnings about problems, both potential and actual. Free. Scholarly Technology Group (STG). Phone: 401-863-7312. Web: www.stg.brown.edu

XMLZip XMLZip allows dynamic compression and uncompression of XML files based on the node. XMLZip reduces the size of XML files without adding undo-processing time to access portions of the files, and users can determine the level at which they want to compress XML files, for continued utilization of the DOM API without performance degradation. Available for both WindowsNT and Linux. Free. XMLSolutions Corporation. Phone: 877-XML.XMLS (965-9657); 703-506-1111. Web: www.xmls.com

XML Authority 1.2 Available from Extensibility. www.extensibility.com Has companion product XML Instance. These are professional level products with an excellent reputation.

PUBLICATIONS:

Building XML Applications Building XML Applications explains XML and walks you through the creation of real applications. It shows developers how to create financial, document management, and e-commerce XML applications to address real programming needs. Includes CD-ROM. By Simon St. Laurent and Ethan Cerami. 550 pages. $49.99. ISBN: 0071341161. McGraw-Hill. Phone: 800-722-4726 Web: www.books.mcgraw-hill.com

Client/Server Data Access With Java and XML Client/Server Data Access With Java and XML examines how to implement a Web-based database using JDBC for programming relational databases in Java; the emerging SQLJ standard for creating "embedded" SQL within Java code; and the ODMG Java binding for manipulating object-oriented databases directly in Java. RMI, ORBs, JavaBeans, and Enterprise JavaBeans are also discussed. Includes CD-ROM. By Dan Chang and Dan Harkey. 600 pages. $49.99. ISBN: 0471245771 Wiley Computer Publishing. Phone: 800-225-5945. Web: www.wiley.com/compbooks

Professional XML Design and Implementation Professional XML Design and Implementation addresses how XML can help a group of small, specialist companies gain the market presence of large competitors. It explains ways to ensure that applications are accessible from browsers that are not XML-aware. It stresses the benefits of XML in informational systems, where it can be used to separate content from presentation, and in transactional systems, where it can act as a low-cost alternative to EDI protocols. By Paul Spencer. 400 pages. $39.99. ISBN: 0471245771. Wrox Press. Phone: 800-USE-WROX. Web: www.wrox.com

XML and Java: Developing Web Applications XML and Java: Developing Web Applications is a tutorial that teaches Web developers, programmers, and system engineers how to create robust XML business applications for the Internet using Java.

Its step-by-step approach illustrates real-world implications of XML and Java technologies as they apply to Web applications. Includes CD-ROM. By Hiroshi Maruyama, Kent Tamura & Naohiko Uramoto. 386 pages. $39.95. ISBN: 0201485435. Addison-Wesley. Phone: 800-358-4566; 617-944-3700. Web: www.aw.com/devpress

XML Bible XML Bible is a tutorial plus reference that covers everything from the fundamentals of the XML language to document construction and simple XML-based solutions for specialized markup problems. Includes CD-ROM. By Elliotte Rusty Harold. 1,015 pages. $49.99. ISBN: 0764532367 IDG Books Worldwide. Phone: 800-762-2974. Web: www.idgbooks.com

XML by Example XML by Example discusses what XML is and how it differs philosophically from HTML without competing with it. Conversational style leads the reader through such topics as publishing databases with XML or using Channel Definition Format to create a push-publishing channel. The book's editor, Charles Goldfarb, is the developer of SGML, the parent markup language upon which XML is based. Includes CD-ROM. By Sean McGrath. 450 pages. $39.95. ISBN: 0139601627. Prentice-Hall. Phone: 800-382-3419; 201-236-7156. Web: www.prenhall.com

XML in Action XML in Action is a general introduction to XML, with a focus on Internet Explorer 5.0's implementation. It illustrates how to script XML and how to use it to build data structures, and discusses XSL and the special linking capabilities of XML, focusing on XLink and XPointer. Includes CD-ROM. By William J. Pardi. 330 pages. $31.99. ISBN: 0735605629. Microsoft Press. Phone: 800-MSPRESS. Web: www.microsoft.com/mspress

Additional Materials

XSLT Programmer's Reference. WROX Press, www.wrox.com The definitive work on XSLT.

XML Programming with VB and ASP. Manning Press. www.vbxml.com

The XML Companion Addison-Wesley