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XSL-FO: READY FOR PRIME TIME?

It's hard to believe it has been close to 20 years since the first attempts started to build a standard that would support the application of formatting characteristics and rules to descriptive markup. The ISO standard, DSSSL (Document Style Semantics and Specification Language) was a mammoth 10-year effort, and even the dramatically less ambitious US DoD Output Specification (known more widely but inaccurately as the FOSI – for Formatting Output Specification Instance) was a multi-year endeavor by a large number of developers and subject matter experts. Back then it was difficult to convince either IT or programmers that this was a difficult or even interesting problem. It is still difficult, but happily there is now plenty of interest fueled by the years of exponential growth of XML content we can confidently predict.

We haven't been directly involved in these efforts for quite some time, but the industry is fortunate that many experts who were involved have continued to play an active role and have been joined by a diverse, talented, and generous group to work on this problem as part of the W3C's XSL-FO (Formatting Objects) committee and elsewhere. It is time for us all to pay more attention to how far we've come and what we still have left to do.

This month we are happy to welcome publishing technology industry veteran Thad McIlroy as a contributor. Thad has spent a lot of time looking at XSL-FO to see how he should advise both his publishing and software vendor customers, and takes a frank, refreshing, and illuminating look at XSL-FO from the perspective of the user.

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XSL-FO: READY FOR PRIME TIME?

I don't know why it is that every time I try to write about anything to do with the Web I find myself thinking of that old chestnut about the six learned blind men trying to describe an elephant. Each feels only a part of the elephant and describes it variously as a wall, a spear, a snake, a fan, a tree and a rope, none seeing the totality.

XSL-FO is just such an elephant. It is many different things, depending on which blind man you speak to. There is of course some truth in each of the disparate perspectives on XSL-FO, but I don't think that the true nature of this beast has been defined.

This article seeks to describe XSL-FO, its genesis and current status. More importantly, it tries to answer the questions: How important is XSL-FO and what should I be doing about it now, or in the future. What are my alternatives?

Without giving away the punch line, I'll offer two early observations to guide you while reading further. XSL-FO is a complex and multi-faceted specification, and promises publishers a great many benefits. But I think we're still in the very early days.

WHAT IS XSL-FO?

XSL-FO is an attempt to add formatting capabilities to a data tagging structure (XML) that was not necessarily intended to concern itself directly with format, an attempt to add print formatting capabilities to data that was more likely intended primarily for electronic distribution, Web or otherwise. Whether the authors of the FO specification acknowledge it or not, it's also a stab at a universal page layout language, one that moves the publishing world far beyond the proprietary days of PageMaker versus QuarkXPress versus Adobe InDesign. It's the beginning of a standard database and variable data publishing tool. It could form the basis for the ultimate cross-media publishing tool. It's...it's...an elephant.

Just getting a clear definition of XSL-FO can be tricky. There's no ultimate controversy here, but there are significant differences of perspective and of language when XSL-FO is discussed.

What Does the W3C say?

First off there really is not a separate standard called "XSL-FO." It's really just XSL, or the "eXtensible Stylesheet Language." "FO" stands "Formatting Objects," and formatting is really what XSL is mostly about. But adding confusion to the conceptualization of this beast is that XSL is really three different recommendations. As the W3C Web site declares:

"The Extensible Stylesheet Language Family (XSL) XSL is a family of recommendations for defining XML document transformation and presentation. It consists of three parts:

- XSL Transformations (XSLT), a language for transforming XML

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- The XML Path Language (XPath), an expression language used by XSLT to access or refer to parts of an XML document. (XPath is also used by the XML Linking specification)
 - XSL Formatting Objects (XSL-FO), an XML vocabulary for specifying formatting semantics”

For this article I’ll use “XSL” to refer to the full specification, and “XSL-FO” (or just “FO”) to reference the specific subsection of the specification that deals with formatting objects.

OK, so far?

Schizophrenic Standards: What is XML Really For?

Imagine how tough it would be if your father was SGML, and your mother was the anarchy of the Internet! What a difficult time you could have trying to find your real purpose in life.

Someone asked me the other day: “Does anyone really think about XML in the context of SGML anymore?” Well they should, because that’s clearly where it came from. XML is a pared-down version of SGML. According to the official 1.0 XML specification, “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.”

As a clear descendent of SGML, XML might logically be thought to be primarily involved with documents and their expression. XSL was one of the original three XML standards. Where did things go wrong? With all of the energy of the Internet and the Web, and all of the mad greed of the late 1990s, before we knew it XML suddenly became primarily an enabler of commercial data transactions. It hardly seemed worth the trouble of expressing this data visually.

Eventually the limitations of HTML began to nag, and Cascading Style Sheets were dropped into the pot to improve graphic expression (on the Web) including that of XML-tagged data.

But still nothing to do with print. I remember clearly at Seybold Seminars in the late ‘90s I would ask Web CMS and system vendors if they had any print options. The quizzical look I got back said it clearly: “Why would you want to do that?”

Where Does XSL-FO Come From?

Fortunately some concerned participants in the W3C thought that it might be a good idea to make it possible to create professional-level print from XML-tagged data.

Perhaps the best source of information for the thinking behind XSL-FO comes from a fine article written by Stephen Deach for *The Seybold Reports* (“What is XSL-FO and When Should I Use It,” Vol. 2, No. 17, December 9, 2002). He points to three problems that the XSL Working Group faced:

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1. There was no language to describe the pagination of complex documents on the Web.
 2. There was no way to deal with long documents and complex layouts.
 3. The typography in CSS had been designed for browsers, not for print.

Deach then outlines five goals that motivated the group during XSL development, including maintaining a pure XML syntax; that the language be declarative, rather than procedural; a need to build on CSS2; to support cross-media publishing; and to “match or exceed the typographic and layout features of existing page formatters.”

The 1.0 XSL specification reveals more of XSL’s ancestry: “XSL builds on the prior work on Cascading Style Sheets (CSS2) and the Document Style Semantics and Specification Language (DSSSL). While many of XSL’s formatting objects and properties correspond to the common set of properties, this would not be sufficient by itself to accomplish all the goals of XSL. In particular, XSL introduces a model for pagination and layout that extends what is currently available and that can in turn be extended, in a straightforward way, to page structures beyond the simple page models described in this specification.”

Some of you will have forgotten DSSSL (pronounced “Dissle”). It’s an international standard: ISO/IEC 10179:1996(E). This is the SGML antecedent of XSL-FO, and it’s very much about print. But the authors of DSSSL foresaw the electronic future and wrote that the specification is “intended for use in a wide variety of SGML application environments, including both electronic publishing and conventional printing.”

The authors of DSSSL also introduced the distinction between transformation and formatting that essential to XSL. As they wrote: “The DSSSL conceptual model has two distinct processes: (1) a transformation process and (2) a formatting process. The two processes may be used in conjunction with each other, or each may be used alone.”

Data Conversion Laboratory, in its Website glossary, writes: “XSL... is a stylesheet language that gives us the ability to specify how data coded with XML will format *on screen* (emphasis added). This language was developed based on the ISO companion standard for SGML known as DSSSL...”

On screen? What could they possibly mean “on screen”? That’s not what XSL is about. Or is it? As Deach describes in the cross-media objectives: “XSL should cover the basic presentation requirements for...a wide range of display devices, including reflow or repagination for palmtop devices, and for the accessibility requirements that are now mandated by many governments.”

Therein lays another example of this schizophrenia involving all things XML. Is the prime purpose print, or is it electronic presentation? OK, it’s both. So can one standardized approach really address the cross-media challenge? Or will it meet the same fate as every other product or system that claims to handle cross-media? Failure. Adobe itself in the latest version of InDesign essentially admits that the cross-media dream had not worked out as previously expected. The cross-media feature of InDesign CS is to bundle up all the print text and graphics and ship them over to GoLive, a Web publishing application.

THE COMPLEXITY PROBLEM

XSL-FO is nothing if not complex. As Ken Holman puts it charitably in his very good tutorial "What is XSL-FO?" (available on XML.com), "The Recommendation itself is a rigorous, lengthy and involved technical specification...the document remains out of reach for many people who just want to write stylesheets and print their information." The more enthusiastic Rodolfo Raya, in an article "Using XSL-FO to Create Printable Documents," (on IBM's DeveloperWorks XML zone) suggests that "If you plan to master FO, you should learn on your own how to use the 56 different objects that comprise XSL-FO." Thanks for the suggestion, Rodolfo, but I'm a little too busy right now to study 56 new objects!

I've now read four or five XSL-FO tutorials, and my head is filled with "fo namespaces," "block area," "reference areas," and "tree structures," and I still don't know a thing.

To give you a little more meat than the above, let me add a couple of quotations from the 1.1 specification that provide context:

"XSL is a language for expressing stylesheets. Given a class of arbitrarily structured XML documents or data files, designers use an XSL stylesheet to express their intentions about how that structured content should be presented; that is, how the source content should be styled, laid out, and paginated onto some presentation medium, such as a window in a Web browser or a hand-held device, or a set of physical pages in a catalog, report, pamphlet, or book.

"An XSL stylesheet processor accepts a document or data in XML and an XSL stylesheet and produces the presentation of that XML source content that was intended by the designer of that stylesheet. There are two aspects of this presentation process: first, constructing a result tree from the XML source tree and second, interpreting the result tree to produce formatted results suitable for presentation on a display, on paper, in speech, or onto other media. The first aspect is called tree transformation and the second is called formatting. The process of formatting is performed by the formatter. This formatter may simply be a rendering engine inside a browser...

"XSL was developed to give designers control over the features needed when documents are paginated as well as to provide an equivalent 'frame' based structure for browsing on the Web. To achieve this control, XSL has extended the set of formatting objects and formatting properties. In addition, the selection of XML source components that can be styled (elements, attributes, text nodes, comments, and processing instructions) is based on XSLT and XPath, thus providing the user with an extremely powerful selection mechanism.

"The design of the formatting objects and properties extensions was first inspired by DSSSL. The actual extensions, however, do not always look like the DSSSL constructs on which they were based. To either conform more closely with the CSS2 specification or to handle cases more simply than in DSSSL, some extensions have diverged from DSSSL."

Both the accepted 1.0 specification (416 pages) and the 1.1 recommendation are available on the W3C site. Read 'em and weep.

THE PAGINATION PROBLEM

Noted above as one of the objectives of the FO Working Group was to “match or exceed the typographic and layout features of existing page formatters.”

Existing page formatters are a large and diverse group. First there are the interactive applications, ranging from consumer-oriented software like Microsoft Publisher, through higher-end layout applications like QuarkXPress and Adobe InDesign. A second class of interactive applications have specialized market foci, for example toward technical documentation, like Adobe FrameMaker, or perhaps towards packaging applications, like the Artwork Systems software.

A more relevant third class of software is batch pagination systems. There are numerous players in this field, but most significant are the public domain TeX system, and the high-end proprietary systems XyEnterprise XPP, and Advent 3B2. Combined they have perhaps 50 years in the market, and hundreds of man-years of development. Their typographic and batch layout features are considered state-of-the art. When taken in tandem with the widely-lauded page layout and typographic sophistication of Adobe InDesign, it would be difficult to imagine that XSL-FO “matches or exceed the typographic and layout features of existing page formatters.” But a Web search finds no tests that confirm or deny. It’s a subject ripe for study. What features represent *the state of the art*? And what features are required for each pagination marketplace? Is there any objective data available?

Beyond today’s state of the art, efforts continue to improve both the quality of typography and of pagination in software. For example Hermann Zapf’s “About micro-typography and the hz-program” (*Electronic Publishing*, Vol. 6 (3), 283–288, September 1993) suggests a new algorithm to improve typographic quality. There have been enormous efforts over the years to optimize typographic appearing by adjusting letterspacing and kerning. For the first time, Zapf seeks to combine type *scaling* – minor adjustments to the width of letter forms – with kerning to create optimal spacing typographic output. As Zapf writes, “...the hz-program works...partly based on a typographically acceptable expansion or condensing of letters, called scaling. Connected with this is a kerning program which calculates kerning values at 100 pairs per second. The kerning is not limited only to negative changes of space between two critical characters, but also allows in some cases positive kerning, which means the addition of space.” As far as I know the hz-program has never been implemented in a commercial system, but if it were, the results could be dramatic.

At the same time a 2003 paper, “On the Pagination of Complex Documents” by Anne Bruggemann-Klein, Rolf Klein and Stefan Wohlfeil (R. Klein et al., Eds.: *Computer Science in Perspective*, LNCS 2598, pp. 49–68, Springer-Verlag, 2003) argues that “The pagination problem of complex documents is in placing text and floating objects on pages in such a way that each object appears close to, but not before, its text reference. Current electronic formatting systems do not offer the pagination quality provided by human experts in traditional book printing. One reason is that a good placement of text and floating objects cannot be achieved in a single pass over the input. We show that this approach works only in a very restricted document model; but in a realistic setting no online algorithm can approximate optimal pagination quality... We propose to use the total number of page turns necessary for reading the document and for looking up all ref-

erenced objects. This objective function can be optimized by dynamic programming, in time proportional to the number of text blocks times the number of floating objects.”

These are but two examples of ongoing attempts to improve both the typography and pagination of print documents. There is still much work to be done. It remains to be seen whether we can ever develop a fully-automated pagination system that will achieve optimal results without operator intervention for the vast majority of complex documents. And so one of the questions that surround XSL-FO is whether there will be value in an optional WYSIWYG formatter that would permit interactive tweaking as a final pagination phase.

THE CROSS-MEDIA CHALLENGE

I’ve read a couple of enthusiastic reports about XSL (such as those quoted above), and find myself ultimately thinking “so what?” There’s no significant technological breakthrough in XSL, except perhaps the degree of innate multi-language support. The breakthrough is more commercial than technological: creating what was previously available only in proprietary systems in a system based on open (royalty-free) standards. I’m all for that, but forgive me if I don’t offer a standing ovation. I need more.

The “killer app” for XSL is the opportunity to create the underpinnings for the broad cross-media delivery of content. But XSL just isn’t there yet.

As Jacco van Ossensbruggen, Joost Geurts, Lynda Hardman and Lloyd Rutledge point out in their article, “Towards a Multimedia Formatting Vocabulary” (ACM 1581136803/

03/0005), “Multimedia content providers need to publish their content for a wide variety of Web devices and to facilitate the creation of on-line presentations from content stored in structured XML documents or multimedia databases. To do this effectively, the well-known advantages of document engineering techniques need to be made applicable to multimedia content.”

While they recognize the value of the W3C standard SMIL 2.0 for multimedia output, they argue that “it is difficult, however, to fully integrate (standards such as SMIL) in a complete document transformation processing chain. In order to achieve the desired processing of data-driven, time-based, media-centric presentations, the text-flow based formatting vocabularies used by style languages such as XSL, CSS and DSSSL need to be extended.”

Beyond print and the Web, the concept of cross-media is growing as new applications come into focus. On February 3, 2004 the W3C announced “the advancement of the Voice Extensible Markup Language (VoiceXML) Version 2.0 to Proposed Recommendation... VoiceXML uses XML to bring speech, touch-tone input, digitized audio, recording, telephony, and computer-human conversations to the Web.” At the same time, structures proposed outside of the W3C, XUL (XML User Interface Language, pronounced “Zool”) and Microsoft’s XAML (eXtensible Application Markup Language, pronounced “Zammel”) use XML encodings to simplify interface design.

The possibilities for extensive cross-media integration with XSL are huge; the realization is as yet extremely limited.

LIMITATIONS

By all accounts XSL-FO can be considered a robust system, at least for technical documents. There's very little information out there yet on what works best, and what doesn't really work.

Probably the most detailed paper around is Eliot Kimber of ISOGEN International's presentation "Using XSL Formatting Objects for Production-Quality Document Printing" offered at XML 2002 in Baltimore. As Kimber points out: "XSL Formatting Objects has unavoidable limitations from two principal causes: missing layout features and the limitations inherent in the two-step XMLxt-pages processing model." He says also that FO is "not a full solution for index generation."

Kimber, while generally very much on XSL's side, points also to a range of specific limitations, including an inability to deal with:

- Text that flows around arbitrary curved areas (but text flowing around rectangular areas is possible using side floats). There are no extensions that satisfy this requirement.
- Page-location sensitive inclusion or exclusion of content. For example, there is no direct way to condition the text of a cross reference based on whether or not the target of the reference occurs on the same page as the reference itself. There are no extensions that satisfy this requirement.
- Any other presentation tuning semantics that require feedback.

Ken Holman echoes Kimber's theme when he writes, "Unfortunately there are many 'common' requirements that just couldn't be met with XSL-FO 1.0 that will be addressed in future versions. I understand that had the committee tried to add everything in the first version, it would never have been released due to feature creep. The first version was necessary to understand how it was going to be used." (The recommendations for version 1.1 were published in mid-December, but appear to be more of a "bug fix" for 1.0, than a new version.)

ADVANTAGES

It has always been a challenge to produce high quality print output from SGML (and then so too from XML). Hence the gargantuan effort with DSSSL. Specialized typesetting tools like Advent 3B2, Datalogics Composer, Arbortext Publisher and XyVision XPP provide (or provided) expensive SGML solutions, purely for the specialist. (Adobe FrameMaker+SGML was a much less expensive interactive offering.) By creating the XSL-FO standard, can we get away from the degree of expense and complexity demanded by SGML publishing solutions? I'm not certain. At the same time, where is the encouragement to move to lesser-cost software if the underlying system complexity only makes the user long for a professional vendor, willing to help makes things work, cost be damned?

Eliot Kimber of ISOGEN is a supporter, and says that "...ISOGEN's experience... is that creating an XSLT- and FO-based style sheet requires about one half the effort of creating the equivalent style sheet in a proprietary system. In addition, the incremental cost of adding new document types or new layouts to an existing family of document types or layouts goes down over time as you refine your XSLT code to be more modular, making it easier to add new functionality or new input or output choices. No other SGML- or XML-based composition system has this characteristic."

Adobe's Steven Deach suggests that XSL-FO could be best for documents such as financial-planning guides, owner and maintenance manuals and legal agreements and contracts. It's difficult to see why anyone would embrace the complexity of FO for these technically straightforward applications, much less abandon a current system (of which there are many) in favor of FO.

Kimber, on the other hand points out that "one important and distinguishing aspect of the FO design is its support for internationalized documents. FO is designed explicitly to not be biased in favor of any particular writing order, writing direction, page orientation or other culture-specific aspect of text presentation. Thus FO has been designed from the start to support, for example, right-to-left writing systems like Hebrew and Arabic and top-to-bottom writing directions like Traditional Chinese, as well as Western writing systems. It has also been designed to accommodate complex glyph layout requirements, such as those of Thai." Is this enough to justify the effort?

VENDORS SUPPORTING XSL

There are primarily three classes of vendors actively supporting XSL-FO. The first is small or relatively small vendors developing tools to aid in stylesheet development or FO rendering. The second is the two largest commercial structured batch software systems, XyEnterprise XPP and Advent 3B2. Both are proposing solutions for encompassing XSL-FO data within their current products, and implicitly thereby both endorsing and deriding the standard. Each seeks to communicate to the market full-compliance, but in the meantime highlight FO's current shortcomings, as well as their relative strengths against these shortcomings.

A third class of vendors includes Adobe and Microsoft. Each has limited support for FO at this time. (Oddly Adobe FrameMaker, previously a leader in SGML support, does not support FO.) I expect we'll be hearing much more about FO from vendors in the next year or so.

We have tracked 22 different vendors with meaningful FO implementations (and would love to hear from any more). Listed in alphabetical order, they are:

Vendor	Product/ Price	Short Description
3B2 www.3b2.com	3B2-FO \$100	"3B2-FO is a high speed, reliable, feature rich XSL-FO rendering tool developed by Advent 3B2."

Vendor	Product/ Price	Short Description
Adobe Systems www.adobe.com	Adobe Document Server	"Adobe Document Server is our first product to combine XSL-FO with Adobe formatting technologies."
Antenna House www.antennahouse.com	XSL Formatter \$5,000 for server license	"V2 is a professional formatting solution that conforms to XSL-FO V1.0 W3C Recommendation and supports over 50 languages."
Apache project http://xml.apache.org	FOP Open Source	"FOP (Formatting Objects Processor) is the world's first print formatter driven by XSL formatting objects (XSL-FO) and the world's first output independent formatter."
Arbortext www.arbortext.com	Epic Editor \$695	"Arbortext intends to continue to offer innovative, high-quality support for XSL-FO to satisfy its customers' most demanding requirements."
Chive Products www.chive.com	Apoc XSL-FO \$1,339	"Apoc XSL-FO is a tool for rendering PDF documents from a formatting tree. Apoc XSL-FO is compliant with a subset of the XSL-FO 1.0 specification and can be easily integrated into any .NET application."
Digital Dreams Software Solutions www.dig-dreams.de	jFO 30 €	"jFO is a java tool for generating formatting objects (XSL-FO). It offers a XSL-FO java API, an RTF (Rich Text Format) to XSL-FO converter and a report engine based on RTF importer."
Hewlett-Packard www-uk.hpl.hp.com/people/fabgia/foa/foa.html	FOA Open Source	"FOA is the world's first XSL-FO Authoring tool. It is a Java application that gives users a graphical interface to author XSL-FO stylesheets."
IBM http://www.alphaworks.ibm.com/tech/xfc	XSL Formatting Objects Composer	"XSL Formatting Objects Composer (XFC) is a typesetting and display engine that implements a substantial portion of XSL Formatting Objects (FO) ... XFC produces either an interactive onscreen display using Java2D or an output file using PDF. A single formatting engine drives both Java2D and PDF output through a common interface, Other outputs are possible,

Vendor	Product/ Price	Short Description
		and some are being developed."
InDelv Software www.indelv.com	InDelv XF Trial beta version	"InDelv XF is an XML formatting and generation tool. It combines three different applications."
Infonyte GmbH www.infonyte.com	XML Workbench	"a graphical XML authoring environment for large documents and document collections."
Inventive Designers www.inventivedesigners.com	Scriptura Engine Enterprise Edition € 2.995,00 per processor	"Scriptura is a graphical XSL-FO designer, supporting static objects and dynamic data (from XML and JDBC), for generating XSLT, XSL-FO, XHTML, PDF and PCL."
jCatalog Software AG www.xslfast.com	XSL-Fast 890 €	"XSLfast is the world's first graphical editor for XSLFO documents."
Microsoft www.microsoft.com	Microsoft Office and FrontPage Various	Support for XML in office; FrontPage will render the XML using XSLT.
Novosoft www.novosoft-us.com	RTF to XML \$20	"RTF TO XML converts RTF files to XML according to the W3C Formatting Object specification and generates a pair of an XSL template and an XML textual data file."
Pixware www.xmlmind.com	XMLmind FO Converter \$550	"XMLmind FO Converter is a Java component which converts XSL Formatting Objects (FO) to RTF."
RenderX www.xep.xattic.com	XEP Rendering Engine \$299.95 for client edition	"The XEP Rendering Engine converts XML documents into a printable form (PDF or PostScript) by applying XSL Formatting Objects styling."
ReportLab www.reportlab.com	Enterprise Publishing and Reporting Server \$25,000 per server	"ReportLab PDF - A Practical Alternative to XSL-FO"

Vendor	Product/ Price	Short Description
Sebastian Rahtz www.tei-c.org	PassiveTeX Free	"PassiveTeX provides a rapid development environment for experimenting with XSL FO, using a reliable pre-existing formatter."
Visual Programming Limited www.xmlpdf.com	Ibex XSL-FO Formatter \$675	"Ibex is a XSL-FO Formatting Engine which takes XML in the XSL-FO format defined by the W3C XSL Recommendation and produces PDF files."
Web Systems www.webxsystems.com	UltraXML	"High-end WYSIWYG XML publishing system with real time ActiveXSL and Visual DTD editing integrated into one of the most high end, yet easy to use publishing system, UltraXML™. Now you can see how your XML document will look as you create it, not after you
XyEnterprise www.xyenterprise.com	XPP	Support for XSL-FO is being integrated into XPP.

Table 1. Vendors Supporting XSL-FO

WHAT IS XSL-FO BEING USED FOR TODAY?

As far as I can determine, the use of XSL-FO today is limited in the extreme. The sense I get from the several FO mail lists (including XSL-List@lists.mulberrytech.com, <http://groups.yahoo.com/group/XSL-FO/>, <http://forum.java.sun.com/forum.jsp?forum=34> and www-xsl-fo@w3.org) is that there are few users, and that those few users are either in early testing mode, or undertaking compositionally simple documents, such as forms. I know of a few publishers experimenting with FO pagination. I've seen little mention of cross-media applications.

There's little general knowledge to be gained from these mail lists, and not much sense that delaying an FO implementation will leave you very far behind the crowd.

Arguably the biggest potential for FO today is just creating better print output from Web browsers. As G. Ken Holman points out in his XSL-FO tutorial, "We often take the printed form of information for granted, yet how many of us are satisfied with the print-screen functionality from a web browser? How many times have you printed a lengthy web document and found the paginated result to be as easily navigated as the electronic original?... When we want to produce a paginated presentation of our XML information, we necessarily must offer a different set of navigation tools to the consumers of our documents. These navigational aids have been honed since bound books have been used: headers, footers, page numbers and page number citations are some of the characteristics

of printed pages we use to find our way around a collection of fixed-sized folios of information.”

XSL-FO and PDF

Nearly all of the XSL-FO renders offer print output via PDF. It seems odd at first – why PDF? But what alternative? QuarkXPress native format? OEB (Open e-Book)? PostScript? No, PDF is the logical format. It’s well-structured (much moreso than PostScript), and well-documented (the 1172 page *PDF Reference* for PDF 1.5 can be downloaded without charge from Adobe’s Web site). Though controlled by Adobe, no one is prevented from using it (nor required to pay a royalty for doing so.) It’s the ultimate page-oriented print format, and a completely natural output file format for XSL-FO documents.

Adobe has embraced this FO-PDF workflow, and broadly endorses it for third-parties. I don’t know whether to read this as a win for PDF or as Custer’s Last Stand. In my view Adobe continues to struggle to find a clear role for PDF in an XML world. Encompassing XML within PDF seems natural until you question the bottom-line benefits. Is the XML document provider more fortunate to have PDF to represent document appearance, or is the PDF user more fortunate to have the granular markup provided through XML?

There has been a multi-year movement within both the XML and PDF communities to support the proposition of PDF *and* XML, rather than PDF *or* XML. I remain unconvinced.

CONCLUSIONS

After living with pagination systems for 20 years the main criteria I use for judging a new technology or software are that ease-of-use must underlie any successful system, while increased functional sophistication will be demanded over time. XSL-FO currently satisfies neither of these requirements. It’s a bear to use, and the functionality does not break new ground against existing batch pagination systems.

So in the here and now, it’s hard to present a compelling case for the switch to XSL-FO.

But there’s much more to the equation than this.

“Instead of manually creating ads, newspaper inserts, direct-mail pieces and brochures, companies will increasingly hook up template-driven layout engines to larger systems that streamline the document-creation process. The systems will take customer and order information, use that to select appropriate content and feed the results to the layout engine, which will in turn route the resulting digital file to the next step of the process.”

– Mark Walter, *The Seybold Report*, Volume 3, Number 19

Within this stream of thought Walter proposes XSL-FO is clearly a winner. FO’s approach is clearly consistent with this changing dynamic in document production.

However I think that the question of the importance of XSL is perhaps more related to the question of the ultimate importance of XML.

The key value of XSL is that it's contained within the family of XML specifications, and adheres to the XML syntax. As such, it is potentially able to offer two advantages that were never available to SGML. The first is the innate ability to tie the appearance aspects of the publishing process with the workflow and commercial aspects of the processes, in a single data stream. Standards like JDF, AdML and NewsML arose during the XML era, not the SGML era, and promise enormous workflow and business benefits.

Another great advantage is that elusive Holy Grail, a process to automate cross-media publishing. There is certainly a lot of work to be done, but I have no doubt that it's well within the capacity of XML semantics and XML engineering to build a basis for that workflow. The cross-media promise of XSL is real, if nowhere near realization.

But most significantly, XSL-FO will catch on because the adoption of XML (and more importantly, XSLT) has become so widely entrenched across all industries, and has the unequivocal support of all the largest and most important vendors across the business process landscape. Working with XSLT moves a developer a big step closer to being able to implement FO, and that's a significant undercurrent of experience and energy propelling the standard forward.

The publishing industry has demonstrated repeatedly that it will favor standards over proprietary approaches, provided the software functionality related to the standard meets its business needs. As the XSL specification continues to mature, and as the software supporting it becomes more robust and user-friendly, I think we'll have a winner on our hands.

Thad McIlroy, thad@arcadiahouse.com

INDUSTRY NEWS

Current news, old news (to January 1999), and commentary is available at www.gilbane.com. Free RSS 2.0 news feeds are available at www.gilbane.com/syndication.html.

RENDERX ANNOUNCES STRATEGIC ALLIANCE WITH X-HIVE FOR XML DOCUMENT MANAGEMENT & PUBLISHING

12/22/2003

RenderX, Inc. and X-Hive Corporation announced they have established a strategic initiative focused on technology to deliver a comprehensive solution for the management of XML content and high quality print output of that content. The joint solution enables organizations to shift from SGML content to XML structures. X-Hive will embed RenderX XEP software into their Docato software. X-Hive/Docato is an XML-based content management system designed specifically for technical documentation for the management of technical content in a distributed work environment. RenderX XEP was designed to allow developers and end users to dynamically apply sophisticated styles to XML documents and to publish those documents to different platforms. By aligning these solutions together, X-Hive and RenderX provide an e-business solution for creating PDF, PostScript, and other dynamic document packages from XML content stored in X-Hive databases without the need for users to understand the complexities of XML and XSL FO. www.x-hive.com, www.renderx.com

YOZONS RELEASES SIGNED & SECURED 3.3

12/19/2003

Yozons Inc. has released its 3.3 version of its Signed & Secured web-based business private network software and service. New features in Signed & Secured include more advanced administration capabilities, a performance dashboard, templated messages for repeatedly sending out similar types of contracts or document packages, enhanced customer branding, as well as upgraded its Experian credit-based authentication module which is now offered on a pay-as-you-use model on the hosted web service. Version 3.3 is available immediately. It can be deployed behind a customer's firewall, as a managed service or as a hosted web service. The licensed technology is available in an Office Edition for smaller volume customers, as a hardware appliance for those who need more customization without volume restrictions, and as an enterprise license for high volume and tightly integrated deployments. www.yozons.com

IBM ACQUIRES GREEN PASTURE SOFTWARE

12/17/2003

IBM announced it has acquired Green Pasture Software, Inc., a privately held provider of document management software based in Corvallis, Oregon. Financial details were not disclosed. Green Pasture's operations will be integrated into IBM's Enterprise Content Management business and Green Pasture products will be available immediately from IBM. This is IBM's third acquisition in its Enterprise Content Management business since 2002. IBM purchased Tarian's records management software in November 2002 and Apatrix's Web content management software in July 2003. Green Pasture Software enables businesses to take advantage of real-time, high-performance document management capabilities to electronically collaborate, edit and manage multiple documents simultaneously. The software helps organizations more easily develop and manage documents that incorporate interrelated parts, such as spreadsheets, multimedia files and computer aided design (CAD) references. www.software.ibm.com/data

ISITE SERVICES INTRODUCES CONTENT MANAGEMENT SYSTEM

12/17/2003

Isite Services, Inc. announced the immediate availability of Control!, a web content management system designed specifically for web designers. Isite's Control! allows content changes without losing control of the layout. This inexpensive product enables content editors to change text, add pictures or add new pages without knowing anything about HTML or page layout. Web designers retain control over the site layout, and can authorize users for a few pages or allow them to restructure major portions of the site. Templates and global parameters ensure design consistency throughout the site. Isite's Control! does not require software installation; it is controlled entirely through the browser. The interface allows authors to focus on content rather than on complicated procedures. Control! starts as low as \$5.95 per month.

www.isite.net

MICROSOFT UNVEILS PRICING & PACKAGING FOR BIZTALK SERVER 2004

12/17/2003

Microsoft Corp. unveiled pricing and packaging details for its forthcoming release of BizTalk Server 2004. BizTalk Server 2004 will deliver enhanced business process orchestration functionality, new business activity monitoring (BAM) and human-based workflow capabilities, and a new scalable rules engine. In addition, the new BizTalk Server 2004 license will include copies of Microsoft Visual Studio .NET 2003 and Microsoft Office InfoPath 2003. BizTalk Server 2004 will enable Standard Edition and Partner Edition customers to connect to more applications and trading partners than in previous versions of the product and will be localized in nine languages, five more than in BizTalk Server 2002. Current BizTalk Server customers with Software Assurance will receive a license for BizTalk Server 2004. BizTalk Server 2004 will be offered in four editions: Enterprise, Standard, Partner and Developer. The pricing for these editions is on par with the 2002 version, with ERP Open B pricing starting at \$25,000 CPU for the Enterprise Edition, \$7,000 CPU for the Standard Edition, \$1,000 CPU for the Partner Edition and \$750 per user for the Developer Edition, which can be used for development and testing purposes only. The availability of BizTalk Server 2004 has not yet been announced. www.microsoft.com

PERCUSSION & CONVERA PARTNER

12/16/2003

Percussion Software announced that it has formed a partnership with Convera. The partnership is initially focused on utilizing Convera's RetrievalWare search technology for the content delivery environments based on Percussion's Rhythmyx 5 Enterprise Content Management (ECM) system and the newly announced Rhythmyx Express Portal. The Convera RetrievalWare search engine will search content delivered by Rhythmyx 5 to any delivery repository, including Percussion's Rhythmyx Express Portal or any other portal. Working in these content delivery environments, RetrievalWare will provide advanced search capabilities in the simplest to the most complex aggregation of delivery channels, scaling as required to meet an organization's needs.

www.convera.com, www.percussion.com

NETWORK APPLIANCE & DOCUMENTUM EXTEND PARTNERSHIP

12/15/2003

Network Appliance, Inc. and Documentum announced that they are extending their existing partnership. Specifically, the two companies will perform joint lab testing at Documentum to certify and support the Documentum ECM platform on NetApp platforms, and Documentum will join the NetApp Developer's Program. The companies will also develop expanded go-to-

market strategies, including collaborating to deliver total solutions to mutual customers. The combined solution provides fast access to both current and archived content, simplifies infrastructure management, and scales to a billion data objects while still supporting thousands of concurrent users. www.documentum.com, www.netapp.com

NORTH PLAINS ANNOUNCES WEB SERVICES SUPPORT & TECHNOLOGY PARTNERSHIP PROGRAM

12/15/2003

North Plains Systems Corp. announced that it has released the Integration Broker which provides the next generation of integration and web services for TeleScope Enterprise. TeleScope has an existing suite of integration tools which allow customers to share their data with other business systems, such as the XML Gateway. The Integration Broker, utilizing SOAP, is an extension to these integration capabilities. Concurrent with the release of the Integration Broker, North Plains Systems has initiated a technology partnership program enabling third-party technology suppliers to connect to the TeleScope framework or embed TeleScope's DAM services within their application. North Plains Systems will offer its technology partnership to software vendors in such industries as e-Learning, Marketing Automation, CRM (Customer Relationship Management), Content Management, and others. www.northplains.com

GROXIS RELEASES GROKKER 2

12/15/2003

Groxis, Inc. announced general availability of Grokker 2, the latest generation of its visual search product. The new software can organize and visually map thousands of search results in a few seconds from multiple search engines and content sources simultaneously. This creates the opportunity to build Grokker plug-ins to any content source, database, or search engine on the net. The company expects to announce several new plug-ins in the coming months. Grokker 2 goes on sale today at a special price of \$49, along with a 30-day free "Try and Buy" offer. Available on PCs today, Grokker 2 will be available for the Apple Mac OS X platform in Q1 2004. www.groxis.com

PLUMTREE & BACKWEB FORM ALLIANCE

12/15/2003

Plumtree Software and BackWeb Technologies announced that Plumtree will resell BackWeb's Offline Access Server, giving mobile Enterprise Web users access to applications and content when those users are disconnected from the network. Plumtree will resell a Standard Edition of the BackWeb Offline Access Server with support for the entire Plumtree Enterprise Web Suite; this functionality extends offline access to the Plumtree Corporate Portal, Plumtree Content Server and Plumtree Collaboration Server, Microsoft Office integration portlets and portlets created using Plumtree Studio Server. Plumtree will also resell an Enterprise Edition of BackWeb's Offline Access Server which includes the added capability to offline enable Plumtree's Integration Products, custom portlets, and 3rd party portlets. Users of the offline features can subscribe to specific portlets, content or applications for offline access ensuring that only the selected content will be downloaded when the user logs off the network. BackWeb's Offline Access Server is built to support the Plumtree Corporate Portal 4.5, 4.5WS and 5.0, Collaboration Server 3.0, Content Server 5.0, and Studio Server 2.0. www.backweb.com, www.plumtree.com

MILLER SYSTEMS & PERCUSSION PARTNER

12/15/2003

Miller Systems and Percussion Software announced a partnership to offer customers expanded content management solutions. Miller Systems will offer implementation services for Percussion's Rhythmyx Enterprise Content Management (ECM) System to its clients with comprehensive content management requirements. Miller Systems' partnership with Percussion will enable it to design, develop and deliver sophisticated content management solutions more easily for clients' Web sites, intranets, extranets, and enterprise portals. www.percussion.com, www.millersystems.com

HUMMINGBIRD & RICOH FORM TECHNOLOGY ALLIANCE

12/15/2003

Hummingbird Ltd. announced a technology alliance with Ricoh Corporation. Hummingbird's relationship with Ricoh extends Hummingbird Enterprise solutions to provide the ability to capture, manage and share scanned documents and photographic images across the enterprise, from multiple sources to a single repository. The Hummingbird and Ricoh technology alliance introduces two distinct applications: Ricoh GlobalScan document scanning software linked to the Hummingbird DM system; and a new geo-imaging solution integrating Hummingbird Enterprise for ESRI with the Ricoh GPS-enabled digital camera. Ricoh GlobalScan software, combined with Ricoh Aficio multi-function products (MFPs), can link to the Hummingbird DM system allowing users to scan and index documents into Hummingbird document management repositories directly from the touch-screen panel of the Ricoh Aficio MFPs. With Ricoh's GlobalScan software architecture all information such as indexes, database information and file types are displayed and accessed easily through the Aficio MFPs front panel. www.ricoh-usa.com, www.hummingbird.com

EMC TO ACQUIRE VMWARE

12/15/2003

EMC Corporation announced that it has signed a definitive agreement to acquire VMware, Inc. in a cash transaction valued at approximately \$635 million. The acquisition is subject to customary closing conditions and regulatory approvals, and is expected to be completed early in the first quarter of 2004. The acquisition of VMware will help customers deploy virtualization technologies across their heterogeneous IT infrastructure to create a single pool of available storage and computing resources. This "Virtual Information Infrastructure" will enable organizations to dynamically configure and reconfigure their compute and storage environments. EMC expects to take a charge of approximately \$15 to \$20 million in the first quarter of 2004 for the value of VMware's in-process research and development costs and other integration expenses. EMC plans to operate VMware as a software subsidiary of EMC, headquartered in Palo Alto and led by Diane Greene, VMware's current President and CEO. VMware will remain focused on developing, selling and servicing VMware's products and solutions. www.vmware.com, www.EMC.com

GLOBALSCAPE ANNOUNCES CUTEHTML PRO FOR WEBMASTERS

12/11/2003

GlobalSCAPE released CuteHTML Pro, a professional version of its Web site development tool, CuteHTML. CuteHTML Pro gives Webmasters granular control over coding, a set of power tools to complete tasks quickly and correctly and doesn't add a lot of unnecessary code. A free 30-day trial of CuteHTML Pro is available immediately for Windows 98/ME/NT/2000/XP.

CuteHTML Pro has a standard list price of \$49.99 per single-user license. Volume discounts are offered for quantities of five or more. www.globalscape.com

CAPE CLEAR ANNOUNCES CAPE CLEAR DATA INTERCHANGE

12/11/2003

Cape Clear Software announced Cape Clear Data Interchange, a Web Services-based approach to solving the problem of integrating data with enterprise applications. Cape Clear Data Interchange provides a visual environment for transforming diverse data sources, such as text files, spreadsheets, and ZIP files into XML Schema, as well as a runtime capability which securely routes that data to the appropriate back-end application. Once these mappings are created, subsequent files are automatically transformed and routed to the appropriate applications as they arrive. Cape Clear provides wizards that analyze new data and suggest appropriate XML Schema-based representations and mappings. Cape Clear Data Interchange includes pre-built support for a wide variety of data formats including CSV, CICS, CISCO IOS, CORBA, Excel, GSM, EDI, EDIFACT, HL7, Java/J2EE, JDBC, .NET, ODBC, Oracle, Parlay X, SWIFT, SMS/MMS, Sybase, Text, WSDL/SOAP, XML, and ZIP files. Cape Clear Data Interchange includes support for Business Process Execution Language (BPEL). Cape Clear Data Interchange requires the Cape Clear Business Integration Suite. It is available immediately on IBM AIX, Linux, Microsoft Windows, and Sun Solaris. Pricing starts at \$75,000. www.capeclear.com

BLUEBILL ADVISORS & GILBANE REPORT NAMED TO ECONTENT 100 LIST OF 'COMPANIES THAT MATTER MOST'

12/10/2003

Bluebill Advisors, Inc. and its publication, The Gilbane Report, announced they were named one of the top 100 companies in the digital content industry by EContent magazine, an IT business monthly that focuses on development and implementation of digital content strategies and resources. Bluebill Advisors and The Gilbane Report are acknowledged as leaders in the Consulting Services category on the 'EContent 100,' a list of companies that matter most in the digital content industry as determined by a panel of editors from the magazine and other Information Today, Inc. publications, in the December 2003 issue of the magazine.

<http://www.econtentmag.com/EContent100/>, www.bluebilladvisors.com, www.gilbane.com

W3C TECHNICAL ARCHITECTURE GROUP PRODUCES "ARCHITECTURE OF THE WORLD WIDE WEB"

12/10/2003

The World Wide Web Consortium announced the publication of "Architecture of the World Wide Web". The authors of this document, W3C's Technical Architecture Group (TAG), invite review by the community of this description of principles that guide the evolution of the Web. The TAG invites comments on the First Edition by 5 March 2004. The Web architecture consists of three fundamental concepts: identification (URIs), interaction (protocols such as HTTP and SOAP), and representation (formats such as HTML, SVG, and PNG). These three branches are typified by the familiar user experience of using a browser to click on a link that identifies a Web site, leading to interaction with the Web site (referred to generically as a "Web resource"), and then to the display of information in the browser. Some of the topics covered by the Architecture Document include important considerations when managing a Web server, such as persistence; how to take advantage of "safe" Web interactions and allow bookmarking and caching; and pitfalls to avoid when using content negotiation. The document also explains how XML fits into the Web, and how to ensure that new formats "play well" on the Web. www.w3.org

SNAPBRIDGE RELEASES BETA VERSIONS OF XML DEVELOPERS TOOLS FOR INFORMATION INTEGRATION

12/9/2003

Snapbridge Software released Beta versions of Snapbridge FDX Information Server Developers Edition and Snapbridge XStudio, XML development tools for creating information integration and content publishing solutions. Snapbridge FDX Information Server Developers Edition is a fully integrated development environment, composed of XStudio and FDX Information Server. XStudio is a graphical design environment, offering drag-and-drop tools for XML and non-XML data for the creation of XSL. FDX Information Server allows developers to rapidly design, test, and debug real-time information integration and content management solutions, then deploy them into a production environment. Beta versions of both products are currently free to developers and are available for download. Snapbridge FDX federates multiple data sources such as data from relational databases, flat files, mainframe data, Web services, digital images from content repositories, streaming feeds, etc., to create composite objects that can be viewed, or updated as part of a transaction. Beta versions of Snapbridge FDX Information Server Developers Edition and XStudio are currently free, and are available for download from the Snapbridge Web site at www.snapbridge.com

PANSCOPIC ANNOUNCES INTEGRATION WITH TAMINO XML SERVER

12/9/2003

Panscopic announced that it has integrated the Panscopic Scope Server reporting solution with Software AG's Tamino XML Server. The combination provides self-serve access to XML content and allows users to combine XML data with non-XML data. The combined solution leverages existing J2EE and application server infrastructures, is faster than custom coding alternatives and is a cost-effective means to visualize XML content. With self-serve reporting access to enterprise content via native XML, presentation and reporting are enabled, with no delay between content storage and user accessibility. Authorized users have secure access to current business data when they need it. The new solution gives customers: the ability to report off of information stored inside Tamino XML Server without "shredding" the XML data, i.e., without destroying its descriptive structure; the power to combine, filter, and aggregate information from multiple documents stored in Tamino XML Server with XQuery; and support for interactive reporting on Tamino XML data using XQuery. www.softwareagusa.com, www.panscopic.com

MERANT GETS SAP NETWEAVER CERTIFICATION

12/9/2003

Merant announced that its content management solution, Merant Collage, achieved certification as part of the SAP NetWeaver Partner Initiative. Merant Collage's "Powered by SAP NetWeaver" status means that it can be deployed on the SAP Web Application Server and accessed through mySAP Enterprise Portal via pre-built iViews. The integration between Merant Collage and the SAP NetWeaver integration and application platform enables users to integrate sources of enterprise data and content from SAP and other vendors to control heterogeneous IT environments. Merant Collage is certified for SAP Web Application Server 6.20 and SAP Enterprise Portal 5.0. www.merant.com

IMARKUP ANNOUNCES LAUNCH OF IMARKUP/VIGNETTE SOLUTION

12/9/2003

iMarkup Solutions announced the availability of a joint iMarkup/Vignette V7 content management, document annotation and markup solution. The joint solution combines Vignette V7

content management products and iMarkup Server V4 to allow text markups, sticky notes, free-form drawings and other types of annotations to be applied to all types of Web formats, from HTML and ASP to JSP and PDF. www.imarkup.com

XYENTERPRISE RELEASES VERSION 1.1 OF XPP WEB SERVICES TOOLKIT; NEW XPP PERSONAL EDITION AVAILABLE

12/8/2003

XyEnterprise announced that it has released version 1.1 of its XML Professional Publisher (XPP) Web Services Toolkit. XyEnterprise also announced the availability of XPP Personal Edition, a new single-user version of its XML publishing software. Both offerings are available now. Version 1.1 of the XPP Web Services Toolkit adds functions for e-mail notification, support for SOAP attachments, improved file manipulation capability, and other enhancements. XPP users can proof, modify, and publish their documents in a browser from any location. XPP Personal Edition customers include individual users who have had prior experience with XPP at larger organizations, initial deployments in specialty publishing environments (such as STM journals or reference guides), or remote contributors working for larger organizations. XPP Personal Edition includes the XyView interactive interface with composition and editing functionality, the CITI module for generating Contents, Indices, Tables, and Illustrations, and a choice of two Hyphenation and Justification dictionaries. Other optional components (including MathML, XyDiff, EDGAR) are also available. www.xyenterprise.com

CLICK2LEARN & RECOMBO DELIVER LEARNING CONTENT TO THE ENTERPRISE

12/8/2003

Click2learn in conjunction with partner Recombo announced the availability of a new library of "Aspen-Ready" content developed to run through Click2learn's Aspen Enterprise Productivity Suite without customization or integration. Housed on Recombo's Aspen-specific Web site, the catalog of more than 3000 "Aspen-ready" courses and other learning resources is drawn from third-party content providers and spans a range of subject matter, including software training, business skills, regulation compliance and certification, as well as content relevant to specific vertical industries. To ensure that third-party content will be immediately interoperable with Aspen when it reaches Click2learn's customers, Recombo has installed Aspen in its content integration lab and has developed tools and processes for accelerating content integration. The resulting content catalogs are mapped to Aspen's descriptions of learner paths and competency requirements and tailored to the needs of specific industries. In addition to their ongoing content partnership, Click2Learn and Recombo share a common commitment to promoting the Shareable Content Object Reference Model (SCORM). www.recombo.com/click2learn, www.click2learn.com

INTERWOVEN ANNOUNCES AVAILABILITY OF WEB CHANGE MANAGEMENT SOLUTION

12/8/2003

Interwoven, Inc. announced the availability of the Interwoven Web Change Management Solution. The solution addresses the change requirements of Web applications faced by IT departments today by standardizing the way an organization's code and content changes are aggregated, synchronized, and deployed throughout development, testing, staging, and production environments. While the solution delivers full reporting and version control capabilities required for regulatory compliance, it also speeds application time-to-market and reduces IT costs by automating inefficient, manual change management processes. Components of the Interwoven Web Change Management Solution include Interwoven OpenDeploy Distribution

Server software, Interwoven Control Hub Server software, and Interwoven Trusted Advisory Practice. www.interwoven.com

ONTOPIA ANNOUNCES ONTOPIA KNOWLEDGE SUITE RELEASE 2.0

12/5/2003

Ontopia AS Announced the Release 2.0 of the Ontopia Knowledge Suite (OKS). This major release of the OKS brings: the full release of the Web Editor Framework for building custom topic map authoring environments, extension of the query language to cover tasks that had required, either API programming or use of the Navigator Framework tag libraries, new built-in predicates now allow querying all parts of a topic map, support for import and export of RDF data to topic maps, the free-download, Omnigator, now includes support for hierarchy visualization, and more. The OKS uses the Topic Maps model to enable the rapid development of complex systems. Using the OKS, integrators can create representations of diverse information and knowledge models, and then access and manipulate them with a common tool set and query language. The OKS, a Java toolkit for applying Topic Maps functionality, consists of a topic map engine with scalable API, J2EE-compliant toolkits for development of editing and browsing applications, full-text search, schema tools, and persistent and scalable storage of topic maps in an RDBMS. The suite will be available from 19 December 2003. www.ontopia.net

DOCUCORP LAUNCHES POLICY XPRESS FOR THE INSURANCE INDUSTRY

12/3/2003

Docucorp International announced the availability of Policy Xpress for the insurance industry. Policy Xpress provides insurers with a complete library of fully implemented ISO industry standard forms for the property and casualty (P&C) marketplace. Docucorp's Policy Xpress offering includes: a standard data dictionary, which includes field definitions for all known P&C data elements (used for tagging forms); standard XML schema; ISO forms; pre-defined data mappings for all forms; pre-defined forms triggering; and default systems configuration. Since most P&C insurers utilize industry standard forms, Docucorp used ISO forms as a standard for developing Policy Xpress. As this service offering grows, Docucorp plans to include other industry standard forms for both the P&C and Life insurance industries. www.docucorp.com

SNAPBRIDGE UNVEILS SNAPBRIDGE FDX FOR ENTERPRISE INFORMATION INTEGRATION (EII)

12/3/2003

Snapbridge Software unveiled Snapbridge FDX, a technology for integrating large amounts of different kinds of data in real-time. Snapbridge FDX fuses multiple data sources such as account detail from relational databases, flat file mainframe data, email correspondence, digital images from content repositories, feeds from third party resources, other information from the Internet, etc., to create composite objects that can be viewed, or updated as part of a transaction--regardless of where the data is stored, how it is formatted or when it was created. Snapbridge FDX capitalizes on XML for structuring and expressing information, allowing the system to operate on structured data and semi-structured content (documents and images) at the same time. Snapbridge FDX information integration software combines technologies for indexing, normalization, aggregation, correlation and "semantic" data delivery, resulting in a comprehensive information integration solution. www.snapbridge.com

VIRAGE RELEASES UPDATED VS NEWS MONITORING

12/3/2003

Virage, Inc. announced the latest release of VS News Monitoring, a real-time monitoring and content management solution to automatically track content for time sensitive, strategically significant events. VS News Monitoring helps organizations and government agencies to automatically digitize, categorize, centrally manage, alert and distribute vast collections of news content. With this solution, organizations can process large volumes of content and provide users or analysts up-to-the-minute access and information right at the desktop. In addition, the solution automates the processing and categorizing of the original footage. The solution now manages all forms of unstructured content from the point of ingestion through real-time content access. Powered by Autonomy's Intelligent Data Operating Layer (IDOL), video and rich media are now integrated at the center of other content types and compatible with existing systems. IDOL Server capabilities include automated retrieval, hyperlinking, categorization, alerting, profiling, clustering and personalization. www.virage.com, www.autonomy.com

VISUAL CENTURY RELEASES VIA2 2.0

12/3/2003

Visual Century, a technology company based in Barcelona, has released the new 2.0 version of its rich media asset management software ViA2 Platform. Among other new features, ViA2 Platform version 2.0 provides content-based searches of images and video keyframes using advanced shape, color and texture recognition tools as opposed to traditional textual metadata such as descriptors or keywords. Content-based image retrieval features allow the user to load images into the system and search the database for images or video keyframes similar in shape, color and texture. ViA2 Platform offers the possibility to complement content-based searches with traditional textual metadata tools (keywords, descriptions and descriptors) or filters (by date, status, type of document, etc). Equally advanced features of prior versions include asynchronous video analysis, much faster than video reproduction, which can analyze a 50 minute MPEG1 file in just 10 minutes. ViA2 Platform is distributed worldwide by Software AG and will be available from December 2003. www.visualcentury.com

ATOMIK XPORT PERSONAL EDITION AVAILABLE

12/3/2003

Easypress Technologies announced the availability of Atomik Xport Personal Edition, the entry-level XML export software for QuarkXPress. The new software brings 'one-touch XML' export to QuarkXPress, enabling anyone to automatically create XML from their QuarkXPress documents. Atomik Xport Personal Edition comes with a set of global preferences that enable users to customise the XML export to their requirements. A fully functional demonstration version is available for download from www.easypress.com. The demonstration version is available for both Mac and Windows versions of QuarkXPress 4.1 and 5.01. A QuarkXPress 6 version is planned for 2004. Atomik Xport Personal Edition is available direct from Easypress Technologies and its resellers and system integrators worldwide. The suggested retail pricing for a single-user licence is Pounds 695, \$995 or Euro 995 depending on the country of purchase. Further pricing for 5, 10, 50 and 100-user licence packs is available upon request. www.easypress.com

SYNTEXT UNVEILS XML WYSIWYG EDITOR

12/3/2003

Syntax, Inc. announced the general availability of Serna, a WYSIWYG XML editor. Serna incorporates on-the-fly XSL-driven rendering technology. Serna makes XML editing look and feel like conventional word processing and allows casual users and professional authors to create and maintain complex XML documents. Serna also provides full functionality on both Microsoft Windows and Linux OS. Its optimized, C++-based design makes it responsive on both platforms. Serna is capable of editing multilingual Unicode-based XML documents. The key features

of Syntext Serna include: out-of-box support of industrial XML standards DocBook, DITA and TEI; on-the-fly XSL rendering (using XSLT and XSL-FO), on-the-fly document validation (based on XML Schema), XSL-FO and CALS table support, multilingual spell checking and availability for Microsoft Windows (2000, XP) and Linux. www.syntext.com

FATWIRE RELEASES CONTENT SERVER 5.5 & DOCUMENT MANAGEMENT MODULE

12/3/2003

FatWire Software announced the general availability of Content Server (CS) 5.5. This release contains DocLink, a new Content Server product that provides a simple interface for managing documents and digital assets, as well as enhancements in the areas of workflow, template creation, and platform support. DocLink is an extension to Windows Explorer that displays the Content Server hierarchy as folders within the familiar Windows Explorer interface. Users can add and update documents by dragging and dropping them between their local desktop folders and Content Server folders. The new version of Content Server allows customers to create and edit templates with Macromedia Dreamweaver. Content Server's workflow capabilities have been enhanced to allow users to take actions on workflow groups, and users across multiple sites can participate in a workflow process. Content Server 5.5 has been enabled on two versions of Linux. For the BEA WebLogic Platform, Content Server supports Linux RedHat 7.2. For IBM WebSphere, Content Server supports Linux SuSE 8.2. Content Server 5.5 supports the IBM WebSphere, BEA WebLogic, and Sun Microsystems SunOne platforms. www.fatwire.com

NORTH PLAINS ANNOUNCES ENTERPRISE DAM TECHNOLOGY FOR ADOBE CREATIVE SUITE

12/2/2003

North Plains Systems Corp. announced that it will offer an integrated enterprise digital asset management solution for the Adobe Creative Suite. North Plains' integrated support of the Adobe Creative Suite includes three new components for TeleScope Enterprise 7.1: The I-Piece for Adobe XMP enables metadata to be captured at the asset creation stage and maintained within TeleScope throughout the asset's lifecycle; the I-Piece for Adobe InDesign gives non-creative users the ability to search, preview and dynamically interact with InDesign documents directly from a web browser and without the need for the InDesign application; and the Conversion I-Piece for Adobe Graphics Server allows all users to perform complex transformations, regardless of their knowledge of graphic manipulation. The TeleScope I-Pieces for Adobe Creative Suite will be available later this month. www.northplains.com

EKTRON ANNOUNCES CMS300 VERSION 4.0

12/2/2003

Ektron, Inc. announced version 4.0 of Ektron CMS300. In version 4.0, Ektron delivers several new features including the version 4.0 of Ektron eWebEditPro+XML. Beyond the latest version of Ektron's XML editor, Ektron CMS300 version 4.0 adds: improved audit trail capabilities, index searching to ensure more precisely matched search results by leveraging XML (through partnership with Ixiasoft), enhanced international language support to enable management of metadata and teasers with XML, content randomization functionality, internal search to improve capabilities for locating and accessing content being managed in the system, improved meta-tagging, and industry-specific sample sites to help organizations in hospitality, healthcare, education and other verticals. Ektron's component-based application is used in Microsoft ASP, ASP.Net, PHP or ColdFusion Web application server environments. Pricing is USD\$4,999 for a 10-user license and USD\$19,999 for enterprise licensing. www.ektron.com

FILENET TEAMS WITH NETWORK APPLIANCE TO OFFER INTEGRATED ENTERPRISE CONTENT MANAGEMENT SOLUTIONS

12/2/2003

FileNet Corporation announced a global strategic alliance agreement with Network Appliance, Inc. FileNet and NetApp will coordinate marketing and development activities to integrate and optimize FileNet ECM solutions with NetApp unified storage and information lifecycle management (ILM) solutions. Both companies are working to ensure tight product integration, validation, and support for NetApp fabric-attached storage (FAS) systems, NearStore storage systems, and SnapLock data permanence storage solution within the FileNet P8 product line, including FileNet Image Manager, FileNet Content Manager, and FileNet Records Manager suites. Customers can add the SnapLock functionality to existing NetApp NearStore and FAS systems and deploy it with FileNet's Image Services Connector for SnapLock (ISCS) available in late December 2003. FileNet and NetApp also will develop a plan to test NetApp SnapMirror disaster recovery and high availability software for FileNet P8. FileNet will participate in the NetApp Manage ONTAP partner program. www.filenet.com, www.netapp.com

CONTRACO TO RESELL FAST IN GERMANY, AUSTRIA & ITALY

12/2/2003

Fast Search & Transfer (FAST) and Contraco Consulting & Software Ltd. announced a value-added reseller (VAR) agreement, providing Contraco with FAST Reseller status with a primary focus in Germany, Austria, and Italy. With this agreement FAST Data Search, FAST's enterprise search platform, will be marketed and resold by Contraco to its wide variety of customers either as a stand-alone search solution, or as integrated with other technologies, such as the BRISBANETM technology developed by Contraco. www.intranetsuche.de, www.fastsearch.com

SIRSI PARTNERS WITH NORTHERN LIGHT

12/2/2003

Sirsi Corporation and Northern Light Group LLC announced an agreement to use the Northern Light Enterprise Search Engine as part of Sirsi Rooms. The Northern Light Enterprise Search Engine will be used to search hand-selected Web resources and return context-specific results, assisting library professionals in finding, evaluating, and indexing the "best of the Web" for each "virtual room" included in the Sirsi Rooms solution. www.northernlight.com, www.sirsi.com

IDIOM ANNOUNCES WORLDSEVER 6

12/2/2003

Idiom Technologies, Inc. announced WorldServer 6, the latest release of its globalization technology. WorldServer 6 features new asset integration capabilities, server-based translation memory enhancements, and a series of workflow improvements that make it easier for global companies to translate and localize the content. WorldServer 6 includes new management and reporting features that help Idiom customers reduce the costs associated with outsourcing translation work to third parties. WorldServer 6 includes support for the latest products from Documentum, Interwoven, Rational/IBM, Oracle, as well as support for emerging XML repositories and standards. A newly enhanced translator workbench allows users to launch external applications, including Word or FrontPage, from within WorldServer. WorldServer 6 adds several new filters, including SGML, XML, XSL, and filters for native Microsoft .DOC, and .PPT formats. New Asset Segmentation capabilities enable customers to segment their translation memory database for specific translation projects. WorldServer 6.0 provides support for XLIFF, the

emerging XML standard for sharing translation assets, in addition to the TMX and MTW standards for exchanging different translation memory systems. www.idiominc.com

P.H. BRINK PARTNERS WITH VASONT

12/1/2003

P.H. Brink International, a provider of language solutions, was selected by Progressive Information Technologies to be included in their Vasont Important Partner (VIP) Program. This alliance will combine P.H. Brink's automated workflow system, Otto, with Vasont's content management features and functionality to provide an integrated solution for managing content translation and localization for multilingual publishing in global organizations. Vasont is a content management system for cross-media publishing that centralizes and manages content for multilingual technical documentation, user's guides, and other publications. Vasont's integration with P.H. Brink's Otto allows companies to automatically evaluate and reuse previously translated content. Vasont routes only the new content through P.H. Brink's ISO 9001:2000 certified process, where it is translated. The newly translated content is automatically returned to Vasont where it is managed and ultimately delivered to multiple publications in various formats (e.g., print, CD, Web). www.vasont.com, www.phbrink.com

AQUENT PARTNERS WITH INTERWOVEN

12/1/2003

Aquent and Interwoven have formed a strategic alliance to deliver joint clients integrated enterprise content management solutions for their branding initiatives. Aquent will integrate Interwoven's ECM solution into its brand management solutions. Aquent's consulting division includes its Marketing and Branding Technology (MBT) practice, the division that is partnering with Interwoven. www.aquent.com, www.interwoven.com

ADOBE UPDATES FRAME MAKER TO VERSION 7.1

12/1/2003

Adobe Systems Incorporated announced Adobe FrameMaker 7.1. FrameMaker 7.1 introduces conditional text support for XML to allow multiple variations of an XML document to be stored in a single file. FrameMaker 7.1 also extends its cross-referencing features to allow links between XML documents. New filters enable PageMaker and Quark XPress files to be migrated into FrameMaker. Corporate publishers can import Photoshop files directly into FrameMaker 7.1. Other additions include support for the JPEG 2000 graphics format and improved filters for handling artwork in Adobe PDF, including native files from Adobe Illustrator, and expanded support for Scalable Vector Graphics (SVG). Adobe FrameMaker 7.1 for Windows and Sun Solaris will be available in January 2004 in the United States, Europe and Canada at the Adobe store at www.adobe.com. FrameMaker 7.1, desktop version, for Microsoft Windows has an estimated street price of US\$799 for the full version and \$199 for the upgrade. On Sun Solaris, the full version has an estimated street price of \$1,329 and \$279 for the upgrade. www.adobe.com

PLUMTREE ADDS TO ENTERPRISE WEB DEVELOPMENT KIT

12/1/2003

Plumtree Software announced the release of a new add-on to its Enterprise Web Development Kit (EDK), for creating interactive portlets using Microsoft .NET Web Controls. Part of Microsoft's .NET Framework, .NET Web Controls are visual drag-and-drop elements that developers can use to create Web applications. .NET Web Controls created by Microsoft and the .NET de-

velopment community can now be used without any coding to create portlets within the Plumtree Enterprise Web Suite. The Plumtree EDK offers services, sample code and documentation for using Java and .NET development tools to build portlets and Web services. Plumtree supports JSR 168 and WSRP portlets, Apache's Java Struts, Sophia, Java Server Faces, C#, Visual Basic.NET and Java Server Pages. The newly released add-on to the EDK allows .NET Controls to function as-is within the Enterprise Web as portlets. Using Plumtree's Active Portlets technology for communications between portlets within an application, the Control-based portlet can refresh within the page without causing the rest of the page to refresh. www.plumtree.com

INSCI & IFIN SISTEMI ADD DAM TO DISTRIBUTOR AGREEMENT

12/1/2003

INSCI Corp. announced that document management systems integrator IFIN Sistemi will add INSCI's WebWare ActiveMedia digital asset management software to its product offerings throughout Europe. IFIN Sistemi is an Italy-based value-added reseller (VAR) for INSCI products. The agreement broadens and expands INSCI's European product distribution, and expands IFIN Sistemi's suite of document management solutions. IFIN Sistemi will market ActiveMedia, which integrates rich media into content management systems, marketing and communication portals, web publishing systems, and e-commerce portals to its client base. www.insci.com

DIALOG ANNOUNCES WEB SERVICE TO FACILITATE CONTENT INTEGRATION FOR WEB SITES, ENTERPRISE NETWORKS

12/1/2003

Dialog announced the launch of its Dialog API, a Web Service that enables Dialog's content collection and search engine to be integrated transparently into Web sites, enterprise portals, corporate intranets and extranets, software applications and other interactive services. Dialog API is designed for Web site developers, software programmers, enterprise information managers and others to integrate slices of the more than 14 terabytes of premium content -- a vast and continuously updated electronic warehouse of news, business intelligence, current and archived journal articles, patents and research across an array of industries and topics -- along with the Dialog search engine that allows users to pinpoint the specific documents they need within the content sets. Dialog and Cymfony announced that they are now bundling Dialog content -- including business, trade and consumer publications; content from the pharmaceutical, medical and healthcare industries, among others; comprehensive local market intelligence; and worldwide news coverage from 80 countries in 11 languages -- with Cymfony Brand Dashboard, a media measurement and analytics application. Dialog API is based on XML & SOAP. www.dialog.com, www.thomson.com, www.cymfony.com

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Documation 2004. Conference and Expo: March 16-17, Tutorials: March 15, 2004 CNIT, Paris La Défense, France. Our *10th annual* Documation conference and exhibition in Paris is focused on Content Management, Enterprise Portals, Enterprise Search, and Information Integration. This all-French event will include a large number of case studies, as well as over 125 exhibitors. www.technoforum.fr

The Gilbane Conference on Content Management: LA. Westin Bonaventure, Los Angeles CA March 25-27, Our Los Angeles event this year will look closely at technology and solutions for managing two types of rich content: *data rich content*, for example, information associated with complex products found in aerospace and defense, electronics, pharmaceutical and biotech, *etc.*, and *media rich content*, such as digital assets used in training, brand marketing, and media applications. The conference program is entirely focused on content management technologies, and includes 26 sessions and tutorials covering today's most critical issues for businesses planning or implementing a content management strategy. The conference faculty consists of 40+ speakers carefully chosen for their expertise and communication capability, and is comprised of a combination of (75%) analysts, consultants, and enterprise executives, and (25%) technology suppliers. The exhibit area has 30+ of the leading content management vendors. (*free iPods for early registrants for the Conference Plus package!*) www.gilbane.com/CM_conference_LA_04.html or www.lighthouseseminars.com

Gilbane Content Management 1-day Intensive Conference at Seybold. Amsterdam RAI Centre — Monday, 19 April, 2004. Join us for our second annual 1-day intensive conference on content management co-located with Seybold Seminars. The *Gilbane Report* is able to offer a special 10% discount off the current Platinum Passport rate. If you register before 26 March, your 10% off will be applied to the discounted early registration rate of €795 (€895 after 26 March) 19% VAT will be added at time of registration. To receive your 10% discount off the Platinum Passport, go to www.Seybold365.com/register. Use Promotion Code ARPDAB. www.gilbane.com/amsterdam04.html

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