

THE GILBANE REPORT

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METADATA, ICE & NEW HORIZONS

It would be difficult to overestimate the importance of metadata in designing useful and modern information management applications of any type (content management, portals, knowledge management, document management, *etc.*). In this issue, Tim shares some thoughts on the progress of metadata since we last wrote about it in depth (*Gilbane Report, Vol. 5, Num. 5*).

We are delighted to have our colleague, Bill Trippe, join us this month with an update on one of the most well known XML metadata applications, ICE (Information & Content Exchange) protocol. This is one of the (*many*) areas Bill knows a lot about. How important is ICE to you? The answer depends partly on what the final scope of the protocol is, and that is still an open question. In any case, the issues it addresses will be relevant to any web application that involves sharing content with business partners. You should be aware of it.

We are sorry to say that this will be Tim's last article as editor. Tim is embarking on a couple of exciting new activities that will command the lion's share of his time. We'll be keeping in touch and you will likely hear about one of Tim's new activities in these pages at the appropriate time. Tim's insight, clarity, and no-nonsense honesty will be sorely missed, and we wish him all the best with his new endeavors.

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METADATA UPDATE

THE 50,000 FOOT VIEW

Not too long ago, the *Gilbane Report* devoted a whole feature to the subject of metadata. There's been enough progress and action on this that it's worth raising the metadata flag one more time.

To review: almost all historical information management (libraries, document control, archiving) was based on the use of metadata, in the form of card catalogues, retention listings, and subject indices. Commercial MIS applications are very metadata-heavy; the fields of most relational databases are full of metadata describing real-world business objects of one kind or another.

The World Wide Web, operating on the Internet scale, has had essentially no metadata. Thus the heroics of the search engine vendors, whose crawlers retrieve the full text of every page and try to reverse-engineer the meaning out; their poor performance is one of the reasons they're trying to recast themselves as portals.

Most site-builder applications, whether they claim to manage documents, content, knowledge, media assets, or relationships, perform that management via a layer of metadata tables that hover over the actual web content.

WHAT TWO SMART PEOPLE SAID

At a recent industry conference, I chaired a two-man panel consisting of Tim Berners-Lee and Laird Popkin. Tim is the prime inventor of the Web, and currently Director of the World Wide Web Consortium. Laird runs the Internet facilities of News Corporation, and handles things like *TV Guide*, Fox News, and Fox Sports — which entails managing hundreds of thousands of pieces of content in parallel. These two are at the very center of the Internet hurricane, and ought to have as much insight into technology realities and futures as anyone.

The question I asked was: It's too hard to find stuff on the Web. What can we do about that? I was expecting a bunch of visionary talk about knowledge representation, schema management, and next-generation protocols. Instead, I got the same answer from both of them, and it was: Start capturing metadata about each content item upstream, at the point of creation, and bind it very tightly to the item itself, as long as the item remains alive.

This is very deep insight. The Web is simply too big to allow turning the metadata problem over to a staff of librarians. Those who create content are going to have to start assuming responsibility for providing the meta-

content too, if they want their material ever to be found and used (and almost every content creator does, passionately).

On the technology front, we need two capabilities: the first is infrastructure for capturing metadata at authoring time (a problem that the productivity-tools vendors are going to have to start solving). Second, we need a general way to interchange that metadata, so that it travels with the content around the Web without getting tied to any particular operating system or application platform.

RESOURCE DESCRIPTION FRAMEWORK, AGAIN

That second problem is the domain of the W3C's latest Recommendation, released on February 24th after almost two years' work: Resource Description Framework. RDF, which we've touched on before in these pages, is a general framework for encoding information about information; while it is encoded in XML for transmission, it is highly constrained in its structure, specialized for efficiently describing the properties of network resources.

While it doesn't take any particularly deep insight to see that exchanging metadata is a good and useful thing, getting a grip on RDF is quite difficult. There are two reasons for this: first, a metadata facility that is independent of any particular set of metadata is quite an abstract thing, and abstractions are hard. Second, the RDF specification itself is written in an opaque and theory-intensive style that is a struggle for ordinary people who think in more concrete terms. Fortunately, we can expect a swarm of books and magazine articles to interpret RDF to the rest of us.

"While it doesn't take any particularly deep insight to see that exchanging metadata is a good and useful thing, getting a grip on RDF is quite difficult."

SPIDER THERAPY

Let's consider just one example of the power of RDF. Right now, the bots and spiders that build the Web search engines trek laboriously from Web page to Web page, retrieving the content of each and computing how to index it. But there's a better way. Imagine a spider, a year from now, fetching a Web page, its header contains a link to an RDF file that provides a bunch of basic metadata facts: author, title, organization, size, subject keywords, datestamp. But that RDF file, when fetched, contains those facts not for that one Web page that led to it, but for all 15,000 pages on that Web site.

The implications, if you think about it a little, are astounding—the speed of crawling has just been increased by what a scientist would call four orders of magnitude; an engineer would just say a whole bunch. Furthermore, instead of the software having to guess at meaning from page contents, it can store the values of the metadata fields in an orderly way in a high-performance relational database.

STILL ON THE HORIZON, BUT BECOMING VISIBLE

" the only good way to generate that metadata is to get the millions of authors around the Web to do it."

RDF is not part of most people's everyday reality just yet. But there are a few places it's starting to become visible. One is at its logical home, the World Wide Web Consortium (<http://www.w3.org/RDF>), where there is a nice collection of tools and resources. Another is at its strongest partisan, Netscape, where RDF drives the "What's Related" function. Still in the Netscape camp is the Netscape Open Directory, most visible at <http://directory.netscape.com> but which really lives at <http://directory.mozilla.org>. This is a Yahoo-like directory of the Web, built neither by a spider nor a handful of professional surfers, but by thousands of volunteers who sign up to catalogue an area of the Web about which they care. This is an entirely untried concept, and the results, so far are spotty; but from the metadata viewpoint, the interesting thing is that you can get a dump of the whole directory (about 400,000 sites as I write this) in RDF.

BACK TO AUTHORING

Metadata interchange in general, and RDF in particular, are central to the future of Web navigation. But they are useless unless there is some metadata to interchange. And given the size of the problem, the only good way to generate that metadata is to get the millions of authors around the Web to do it.

Most of them would be willing. But it isn't going to happen until the authoring systems (word processors, web site managers, desktop publishers, HTML crafters) start making it easy to provide comprehensive metadata, and difficult not to. A few years from now, we will look back at the days when we routinely wrote important documents and unleashed them on the world with no accompanying metadata, and shudder in horror.

Tim Bray

WHITHER ICE?

The Information and Content Exchange (ICE) protocol was first conceived a year ago, so it's a good time to visit the initiative and see whether it still has the impressive momentum it seemed to develop right from the start.

THE PROBLEM, OR WHERE IS THAT HUNK OF HTML?

The ICE initiative was originally spearheaded by Vignette Corporation and Firefly on the vendor side, and a number of web content providers on the user side, including CNET, News Internet Services, and Preview Travel.

The goal was to solve an obvious but compelling problem: How do web sites more automatically share both content and the business terms that control that content? If you manage a web site and want to receive, for example, regular news updates from several different sources, you may have just assigned yourself a big headache. At the low end of the Internet food chain, people are ftp'ing ZIP files of hunks of HTML, unzipping them at their destination, retagging the HTML to adhere to local templates, and copying the files to their destination. Even in more automated environments, newly acquired content needs to be converted and loaded into the local databases, staged for delivery, and likely tweaked before being presented live.

ICE began by asking the simple question: Isn't there a better way? Or as a programmer colleague used to say, "Sounds like a job for a computer to me."

As the authoring group delved into the question, they found out the cliché, "the devil is in the details," applies to publishing perhaps more so than to any other industry. On one side of the business are the issues of content sharing: Your HTML isn't my HTML, Your Metadata isn't my Metadata, and so on. And on the other side are the business terms: Customer A may have purchased all articles for 60 days, Customer B all articles for 90 days, and Customer C all stories about baseball in perpetuity. ICE attempts to address these problems by defining a protocol for how content objects can be passed from server to server, using XML-based metadata to communicate the object's business rules: expiration dates, attributes, update information, and the like.

" Your HTML isn't my HTML, your Metadata isn't my Metadata "

BACKGROUND

The authoring group was formed in February of 1998, and included Vignette, Firefly (later as part of Microsoft), Adobe Systems Inc., Channelware, Net Perceptions, and Sun on the vendor side. Perhaps more impressively, major content vendors such as Tribune Media Services and CNET also were actively involved. (In the interest of full disclosure, I should note that I

briefly represented Ziff Davis on the authoring group, but left ZD when the effort was just getting underway.)

According to Brad Husick, Vice President of Syndication Networks at Vignette, the authoring group was committed to developing something in a reasonable amount of time. So between weekly conference calls and monthly face-to-face meetings, the group quickly produced a requirements document for comment in April. A broader group of companies was then invited to form an Advisory Council (some 80 have since joined), and were able to comment on the requirements document.

The authoring group pushed on and released ICE 1.0 this past October. To give a broader opportunity for comment, the group submitted it to the World Wide Web Consortium (W3C) as a note, and it can be viewed at <http://www.w3.org/TR/NOTE-ice>. At an ICE Summit in October, Vignette and News Internet Services previewed ICE-based products, and several other content management and web technology companies indicated future products would support the standard.

GOALS FOR 1999

In the standards world, momentum is everything, and ICE had it through the summer and fall of 1998. As 1999 begins, ICE needs to maintain and build on that momentum.

With the initial document out there, the authoring group has a two-pronged approach for 1999. On the theoretical side, advance the thinking about the protocol itself, and on the practical side, seek broad vendor and user adoption of the standard.

In terms of the protocol, the authoring group will be publishing both a clarification and a version 2.0 within this calendar year. Husick mentioned that one of the goals for 2.0 will be to develop a more fully realized notion of data constraints, such as additional rules for where content should and should not be used.

But adoption is the key. ICE has come under some scrutiny for being too much of a Vignette effort, as some competitors chafed at not being allowed more input to the authoring process. Vignette's Husick indicated that the authoring group is aware of these concerns, and expects to announce soon that sponsorship of the authoring process will be turned over to a well known non-profit organization. This handover will include more formal processes for membership, including a plan to ensure that the user organizations will never be a minority on the authoring group.

WILL OTHERS WEIGH IN?

ICE has an impressive list of supporters, including some core involvement from the likes of Microsoft, Adobe, and Sun, all of whom serve on the authoring group. The broader Advisory Council includes many of the names

you would hope to see there Inso, Allaire, and DataChannel among others though one should keep in mind that some companies joined as their only way to get an early look at the developing document.

The key indicator will be announced products. Vignette Syndication Server (VSS) is currently being Beta tested by the likes of Ziff Davis, National Semiconductor, and TheStreet.com. News Internet Services also announced a product at the ICE Summit, and several companies are demonstrating ICE-based solutions or technology previews. One interesting implementation is ShiftKey's SiClone Technology Preview, which can be seen at <http://www.shiftkey.com/icepreview.htm>. ShiftKey is looking to adopt a Syndicator-Subscriber model that would enable a broad spectrum of applications, from traditional publishing to more business-oriented sites.

Many other companies have announced support, ranging from Documentum to FutureTense to Inso, but have not yet announced products.

"But how much of the broader information exchange problem will ICE solve?"

BIGGER THAN A BREADBASKET?

The technical challenge of ICE going forward may be for the authoring group to decide how broad of a problem they are trying to solve. A protocol for server-to-server content exchange that uses metadata to communicate the object's business rules has the potential to address a wider problem, and perhaps a wider market, than publishing per se. National Semiconductor, with an eye toward improving the distribution of parts information, has been involved from the beginning.

But how much of the broader information exchange problem will ICE solve? Jon Bachman, Director of Marketing for Inso, points to the demanding, specific, and sometimes quirky requirements that even the publishing market itself brings. One Inso customer, Electric Boat, needs to regularly update massive publications, but can only bring a submarine to the surface for a few minutes not enough time to download an entirely new set of manuals. The key requirement then becomes the ability to isolate the specific updates that need to be made.

Laird Popkin, Chief Technology Officer at News Internet Services and chair of the ICE authoring group, points out that ICE 1.0 provides the means for transporting the content and not a standard structure for all the content. In addition, there are hooks in ICE 1.0 to identify what has changed at a discrete level. Popkin added that while initial implementations of ICE will likely deal with the more free-form assets typical of a web site HTML, GIF files and the like later implementations will begin to see more powerful and useful applications of more structured content.

And this is the point of agreement between the people on the inside and the outside of the ICE authoring group: the most useful applications will be in the sharing of structured information. Did someone say XML? While ICE utilizes XML at the transport layer, nothing precludes the user from shipping

fully realized XML or even SGML. And as web developers get increasingly comfortable with XML, look for them to start clamoring for even more.

MOVING FORWARD

Perhaps most interestingly, how will ICE address the question of how broad of a problem they think they are tackling? Will ICE be best suited for a relatively narrow definition of content syndication, closest to the needs of some of the authoring group's member companies such as CNET and Ziff Davis? Or will it tackle all the content distribution a National Semiconductor or perhaps even an Electric Boat faces, from the ongoing creation and dissemination of content to the interoperability with complex databases that support product data management?

In the meantime, there is no doubt that broad adoption of ICE would fuel a syndication model of publishing, and perhaps dramatically increase the availability of low cost means for web site developers to add sophisticated content management and distribution.

We'll look forward to the upcoming announcement that the ICE authoring process will be handed over to a third party. This will enable the ICE insiders to address the key concern—the need for a more open and inclusive authoring and review process. Remaining technical concerns can then be hashed out at the authoring table.

Bill Trippe

INDUSTRY NEWS

Additional news is available at www.capv.com/dss/newsand.htm

W3C ISSUES RECOMMENDATION FOR RDF

2/24/99

The World Wide Web Consortium (W3C) today releases the Resource Description Framework (RDF) Model and Syntax specification as a W3C Recommendation, representing cross-industry and expert community agreement on a wide range of features for using and providing metadata on the Web. RDF uses XML to define a foundation for processing metadata and complements XML. Whereas XML can be used as a general way to transport data on the Web given prior agreement between the parties on the specific form of the data to be transported, RDF layers on top of XML a general form for a broad category of data. When the XML data is declared to be of the RDF format, applications will be able to understand much of the interpretation of the data without prior arrangement. www.w3c.org

This is important. See Tim's article on page 2.

OPEN MARKET ANNOUNCES AGREEMENT WITH VIGNETTE

2/24/99

Open Market, Inc. announced a joint marketing and technology agreement with Vignette Corporation. This collaboration combines Open Market's Internet commerce solution, Transact, with Vignette's StoryServer 4. Under the terms of the agreement, Open Market and Vignette will jointly develop and market an extension toolkit which will primarily serve to expedite deployment and accelerate time to market of the complete Internet Relationship Management and order management solution. This combined solution will help online businesses customize their offerings to each customer's preferences and then provide order management, transaction processing, and customer service capabilities. www.openmarket.com, www.vignette.com

OPEN TEXT INTRODUCES LIVELINK ACTIVATOR FOR BASIS

2/23/99

Open Text Corporation announced the release of Livelink Activator for BASIS. Livelink Activator for BASIS extends Livelink to the BASIS community. BASIS databases, records, documents and pre-defined queries are integrated with Livelink knowledge management features such as folders, project workflows, discussions, task lists, enterprise-wide file distribution, and workspaces. BASIS is used to manage large collections of catalogued information in special libraries and corporate information centers. BASIS was originally developed by Information Dimensions, which was acquired by Open Text Corporation in June 1998 and is now an integrated division of Open Text. Activator for BASIS is available immediately. It is priced at US\$25,000 per Livelink server. www.opentext.com

ROBERT P. LEE NAMED CEO AT INXIGHT SOFTWARE

2/23/99

Inxight Software announced the appointment of Robert P. Lee as president and chief executive officer. Inxight Software develops information visualization and knowledge extraction software components critical for online publishing, knowledge management, and business intelligence. Prior to Inxight, Lee was CEO of Formulab Neuronetics, a public Australian computer company, and chairman, CEO, and president of Insignia Solutions, a software company he took public in 1995. Previous management background includes executive vice president at Symantec, senior vice president at Shared Medical Systems, and eleven years with IBM. www.inxight.com

GE INFORMATION SERVICES INTRODUCES GE INTERLINX

2/23/99

GE Information Services has introduced GE InterLinX, a multipurpose message brokering system. GE InterLinX enables businesses to centralize, expand and manage their Enterprise Application Integration (EAI) initiatives, as well as address Electronic Commerce/Electronic Data Interchange (EDI) gateway requirements. This engine, which operates on the Windows NT platform, simplifies the complex integration of information between business applications. GE InterLinX's XML capability identifies XML objects, parses, and routes them to applications that support XML. www.geis.com

INTERLEAF AND OBJECT DESIGN TO CROSS LICENSE TECHNOLOGIES

2/23/99

Interleaf, Inc. and Object Design announced a strategic partnership intended to leverage both companies' core competencies in XML-based solutions and improve their ability to deliver solutions specifically tailored for their customers' business needs. Interleaf and Object Design will cross license their technologies for use in Interleaf's BladeRunner and in Object Design's eXcelon. Interleaf's XML-based e-content solution, BladeRunner, will employ Object Design's object-oriented database, ObjectStore, and Interleaf's Styler&Composer will be integrated into Object Design's eXcelon, an XML data server. www.interleaf.com, www.objectdesign.com

CiTEC ANNOUNCES SGML/XML/HTML BROWSER

2/23/99

CiTEC Information, a Finnish developer of advanced information systems and document-technologies, announced component technology based on Netscape's Mozilla Open Source. DocZilla displays XML and SGML directly, just like HTML, using Cascading Style Sheets (CSS) and can manipulate the entire document dynamically using the Document Object Model (DOM) and JavaScript. The "DocZilla" components address the demanding requirements of complex documentation and electronic publishing systems: technical illustration, precision searching, efficient

handling of extremely large documents, dynamically-generated navigators, powerful link capabilities, complex tables, and SGML. DocZilla is slated for release in the second quarter of 1999, but a "Preview" can be download from the DocZilla web site today at www.doczilla.com.

This is probably worth a look especially for those of you with a markup language mix.

MEDIASURFACE 2.0 LAUNCHED

2/22/99

Mediasurface announced the Mediasurface 2.0 Enterprise Content. New features include a Content Gateway that allows integration with delivery and web design features from software vendors. Among the new features of Mediasurface 2.0 are the Content Gateway, XML support and integration of email with workflow functions. Mediasurface 2.0's multi-server synchronization functionality now also enables full support for content sharing amongst sites and vendors' systems. By utilizing the Content Gateway Module, real time content can be shared between Mediasurface 2.0 and existing proprietary delivery engines and custom built flat file sites. This allows users to work with existing tools from vendors including BroadVision, Vignette, ATG, Engage and Point 4, thus preserving their existing site investment. Mediasurface implementations are licensed by servers with entry-level single-server sites at \$25,000. Typical enterprise implementations then scale to multi-server configurations of \$200,000 and above. www.mediasurface.com

OPEN TEXT TO INCORPORATE ADOBE PDF FORMS

2/19/99

Open Text and Adobe announced Open Text's Livelink Forms, using Adobe's Acrobat. The Livelink Forms/Adobe Module will support common business transactions that require structured data. Livelink's knowledge management services support the new forms integration, providing version histories of forms and audit trails, forms security, workflow routing and searchable form data. The Livelink Forms Adobe Module will be offered as an optional module to Livelink. The Module is shipping now and priced at \$25,000. www.opentext.com

INSO AND BASIS TECHNOLOGY ANNOUNCE PARTNERSHIP

2/18/99

Inso Corporation and Basis Technology Corporation announced a technology and service partnership at Inso's International User Group Conference in New York City. Under the agreement, Basis has developed Korean and Chinese (traditional and simplified) "pluggable" language system modules that drop into DynaText, Inso's Extensible Markup Language (XML)-based professional publishing system. In addition, Basis will provide support for the "language modules and will receive a royalty on future sales of DynaText that incorporate this new functionality. The pluggable language system modules developed by Basis Technology will allow DynaText to correctly process, index, and render text in Chinese (simplified and traditional) and Korean. www.inso.com, www.basistech.com

ENTRUST TECHNOLOGIES PARTNERS WITH DOCUMENTUM

2/16/99

Entrust Technologies Inc., supplier of managed public-key infrastructure (PKI) solutions, has partnered with Documentum, Inc., to authenticate web access and to deliver integration of digital signatures using X.509 certificates into Documentum's EDMS 98. This integration provides security to the pharmaceutical industry and other process manufacturing companies for the management of documents, policies and procedures. The two companies also plan to work together to integrate Entrust/PKI features with industry-specific applications built upon Documentum's EDMS '98. www.documentum.com, www.entrust.com

INSO ANNOUNCES PRODUCT DATA MANAGEMENT DIVISION

2/16/99

Inso Corporation today announced the formation of a new Product Data Management (PDM) Division. Headquartered in Milpitas, California, Inso's new PDM Division was created after the company's recent acquisition of Sherpa Systems Corporation, the developers of SherpaWorks. Paul R. Anderson, formerly vice president of corporate development at Inso, has

been named vice president and general manager of the new PDM Division. Stephen Baunach, Sherpa's former chief technology officer, assumes the role of vice president and chief technology officer for the PDM Division. Inso has also appointed Stephen Schreifer as the vice president of worldwide sales for PDM products. Prior to joining Inso, Mr. Schreifer held senior sales positions at SDRC. www.inso.com

ADOBE RELEASES ACROBAT 4.0

2/16/99

Adobe Systems Inc. announced the latest version of Acrobat. Acrobat 4.0 adds a new set of annotation and security tools for transforming and conveying documents written in different formats. The new Adobe PDFMaker utility also lets users convert Microsoft Word, Excel, and PowerPoint files from within those applications. Acrobat 4.0 captures Web pages or entire Web sites and turns them into fully formatted PDF files. The application also can secure files through a certificate system that validates users' identities. 4.0 will ship in the second half of the year, at \$249. Users can upgrade from earlier versions for \$99. www.adobe.com

PC DOCS/FULCRUM ANNOUNCES NEW VERTICAL BUSINESS UNITS

2/12/99

PC DOCS/Fulcrum announced it will re-focus its current organization into six different operating Business Units to address the Professional Services (including Legal), Financial Services, Manufacturing, Government, OEM, and ISO markets. www.pcdocs.com

INSYSTEMS TECHNOLOGIES ANNOUNCES CALLIGO TOOLKIT

2/11/99

InSystems Technologies, Inc., a provider of knowledge-based document processing solutions for financial services, announced the Calligo Toolkit, a software developer's kit for Calligo. Calligo Toolkit will provide customers and alliances the ability to integrate their current applications such as ratings, contact management, or policy administration software with Calligo, InSystems document assembly, management and workflow solution. www.insystems.com.

W3C RELEASES DRAFT OF VECTOR GRAPHICS SPECIFICATION

2/10/99

The World Wide Web Consortium today released the first public working draft of the Scalable Vector Graphics (SVG) specification. The purpose of this publication is to encourage public comments and contributions. SVG is written in XML, which up to now has mainly been used for text. This draft is the first step in the development of a vendor-neutral, cross-platform and ubiquitous Web-specific format for XML vector graphics. Current members of the W3C SVG Working Group are key industry players who brought their graphical and Web expertise to the design of this specification. In alphabetical order: Adobe, Apple, Autodesk, Corel, HP, IBM, Inso, Macromedia, Microsoft, Netscape, Quark, RAL, Sun, and Visio. Following W3C's practice, the SVG Working Group provides a public mailing list (www-svg@w3.org) for comments in addition to the feedback channels defined by the W3C Process. www.w3c.org

This is a good thing and overdue, but we don't think it will take over the publishing world.

SEQUOIA, CEDITI SOFTWARE FORM

2/10/99

Belgium-Based CEDITI, and Sequoia Software, today announced formation of a strategic marketing and development agreement between the two firms. The relationship will enable CEDITI, a value-added-reseller (VAR) and integrator of information technology in Europe, to resell and create new product packages with Sequoia Interchange2000 (i2K) or to use it in integration projects. Under the licensing agreement with Sequoia, CEDITI will be a direct distribution channel for i2K for Belgium providing training, technical support, marketing and sales. www.sequoiasw.com, www.cediti.be

IMPACT INNOVATIONS, SEQUOIA SOFTWARE FORM PARTNERSHIP

2/9/99

Sequoia Software Corp. and Impact Innovations Corp. (IMPACT) today announced formation of a strategic marketing and development agreement. The relationship will enable Impact

Innovations, a VAR and integrator of information technology, to resell and create new product packages with Sequoia Interchange98 (i98) or to use it in integration projects. Under the licensing agreement with Sequoia, IMPACT will be a direct distribution channel for Interchange98 providing training, technical support, marketing and sales. The agreement takes effect immediately. i98 provides a distributed XML and document repository, data distribution and replication services, XML publishing, XML data entry, standardized security, and workflow with content-based routing. www.sequoiasw.com, www.iiginc.com

LEXIQUEST AND VERITY ANNOUNCE RESELLER AGREEMENT

2/9/99

LexiQuest, Inc., announced a strategic reseller agreement with Verity, Inc. Under the terms of the agreement Verity will resell LexiQuest technology and products through the Verity sales force. The agreement gives Verity customers access to LexiQuest's linguistic technology. The LexiQuest technology allows people to use everyday language to create search requests for Verity Knowledge Retrieval systems. These two technologies combine to give many types of users with different levels of skill and training tools to achieve results across a broad array of information resources. Because the LexiQuest technology includes a customizable linguistic knowledge base, it can be tuned to understand language that is specific to a given industry or discipline. The technology provides an intelligent linguistic interface that is easy for non-researchers to use. www.verity.com, www.lexiquest.com

QUICKSTREAM ANNOUNCES INTERFACES FOR ITS DOCUMENT MANAGEMENT SYSTEM

2/9/99

QuickStream Software, Inc. announced three new interfaces to its Java-based DocCentral document management system. The QuickStream Developers Kit (QDK), Open Document Management API (ODMA) and HTML Interface are available for beta testing with a scheduled commercial release in March. Providing a base for the other interfaces, the QDK allows the creation of custom functions on

top of the DocCentral application. The QDK is a set of simple Java functions that can be integrated into Java applications and Java applets. Developers can use the QDK to create customized features and incorporate them into DocCentral. Individually, the DocCentral server software is \$2,950.00, the Java-based Director client is \$495.00 and the HTML-based Associate client is \$49.95. The small work group twenty-five user bundle includes Java server software, four Director clients and twenty-one Associate clients for \$4,995.00. The large work group fifty user bundle is \$8,995.00 and includes Java server software, ten Director clients and forty Associate clients. QuickStream also offers a "Get Started" bundle that can be downloaded from its website at www.quickstream.com

MINT ANNOUNCES SUPPORT FOR XML

2/9/99

MINT Communication Systems Inc., a subsidiary of Oshap Technologies Ltd. and a provider of Enterprise Application Integration solutions to the financial services industry, announced support for XML. Financial institutions are adopting XML as a new standard because its flexible structure can simplify and speed the process of integrating and transmitting complex financial information between banks, securities firms, and clearing networks. The MINT/Rule Manager Module allows users to import and export XML metadata, and to integrate the data with other financial applications and industry standards like FIX and SWIFT, avoiding the time and cost for manually re-defining and transforming message formats.

www.mintech.com

CAP VENTURES ANNOUNCES XML STUDY AT DOCUMATION

2/9/99

CAP Ventures Inc., announced the industry's first market study on early adopters of XML. The formal announcement and study scope was unveiled at Documation '99 West in Santa Clara, CA. The study is a project of CAP Ventures' Dynamic Content Software Strategies Consulting Service (DSS). The research phase of the project is currently in progress. The study will provide vital market information to software vendors and service providers. In addition, it will prove useful for end-user

companies who are evaluating the viability of XML projects. The research will uncover user motivations for employing XML, identify the corporate applications it will be used for most frequently by early adopters, and estimate spending on XML projects through 1999. It will also gauge the industry standards and vocabularies related to XML in which users are most interested. Data for the study will be collected through 250 telephone interviews with companies that have XML-based IT projects either planned or underway.

www.capv.com/dss

EPICENTRIC PREVIEWS PORTAL SOLUTION FOR CORPORATE APPS

2/9/99

Epicentric, Inc., publicly previewed its portal solution enabling companies to build custom enterprise portals for intranets, extranets and the. The company will provide its portal solution as either an enterprise server or hosted service and also license aggregation technology to vertical portal sites on the Web. Epicentric expects to ship its portal server in the second quarter of 1999. Epicentric's technology takes advantage of emerging XML-based standards such as the Document Object Model (DOM) and allows the server to easily communicate with any existing information source. Additionally, Epicentric is a member of the W3C and the Information & Content Exchange (ICE) Advisory Council, a standards body launched to facilitate content exchange. www.epicentric.com

EXTRICITY SOFTWARE ANNOUNCES SUPPORT FOR COMMERCE XML STANDARD

2/8/99

Extricity Software, announced support for Commerce XML (cXML), an open standard for business-to-business e-commerce that facilitates the exchange of catalog and transaction information between buyers and suppliers. Extricity has announced integration with its industry-leading Alliance application and cXML. Extricity and Ariba will begin pilot implementations using cXML over the Internet in Q2 1999. cXML was developed with input from more than 50 organizations, including e-commerce companies such as Ariba, Extricity Software, InterWorld Corporation, Ironside Technologies, Poet Software, Saqqara Systems

and Sterling Commerce. Contributing companies included INine Systems, Anderson Unicom Group, barnesandnoble.com, BT Office Products International, CAP (a division of the McGraw-Hill Construction Information Group), Chemdex Corporation, Collabria, Compucom, ComputerLiteracy.com, Cort Furniture Rental, Harbinger Corporation, Life Technologies, NCR Systemedia Group, Office Depot, RoweCom, Staples and US Technologies.www.extricity.com

There was a whole slew of companies announcing support for cXML this month. But how does this relate to other e-commerce XML applications like CBL and BizTalk? Good question, and one we'll come back to.

IRONSIDE TECHNOLOGIES ANNOUNCES SUPPORT OF cXML

2/8/99

Ironside Technologies Inc., a supplier of sell-side business-to-business electronic commerce solutions for the mid-tier manufacturing and distribution market, announced that it will support Commerce XML (cXML), an open standard for e-commerce that reduces on-line business costs by providing a lightweight protocol for exchange of supplier content and transaction information via an XML-based open architecture. www.ironside.com

ONESOFT ANNOUNCES THE AVAILABILITY OF ONECOMMERCE

2/8/99

OneSoft Corporation, announced the availability of version 2.0 of their Internet commerce system, OneCommerce. The new version is designed to provide businesses with the flexibility to implement multiple, new, and changing business models for Internet commerce. OneCommerce componentization is on a fundamental level separating data, function, presentation, and control. The plug-and-play nature of these components allows businesses to combine data, function and presentation in unique ways, differentiating them and allowing them to more effectively leverage their Internet sales channel. www.onesoft.com

POET TO SUPPORT XML

2/8/99

POET Software, announced support for Commerce XML or cXML, an open-standard subset of XML for electronic commerce designed to reduce online business costs by facilitating the exchange of content and transaction information between buyers and sellers. www.poet.com

SOFTQUAD SOFTWARE ANNOUNCES NEW ADD-ONS TO HOTMETAL

2/8/99

SoftQuad Software Inc., announced new value-added tools for HoTMetaL Application Server, its low-cost solution for deploying e-commerce, customer service and personalized content applications. These tools Quick Apps and Power Parts are pre-built mini-applications. Quick Apps and Power Parts are available at no charge via SoftQuad Software's new web site, www.hmfx.com. HoTMetaL users can access these tools via the HoTMetaL Resource Manager. Once loaded into the Resource Manager, users just drag and drop to add the mini-applications to their web sites. Absolutely no programming or testing is required. Power Parts are building blocks that enhance a Web site's productivity instantly. They are also developed using Miva scripts, and are accessed through the HoTMetaL Resource Manager. Power Parts include a Mail-to form, a banner ad rotator and statistical analysis tool, and a robust password protection system with the ability to add and delete users, create and change passwords, and more. www.softquad.com

STERLING COMMERCE TO SUPPORT cXML

2/8/99

Sterling Commerce, Inc., a provider of business-to-business electronic commerce software and services, announced, in conjunction with Ariba Technologies, its plans to support cXML. cXML is a proposed open industry standard for electronic commerce that reduces online business costs by facilitating the exchange of content and transaction information over the Internet between buyers and suppliers. cXML provides another method for companies, such as Sterling Commerce customers, to automate business processes, both internally and via

commerce communities.
www.sterlingcommerce.com

OMG MEMBERS SUPPORT XMI

2/5/99

Unisys, IBM, Oracle, Platinum, Fujitsu, Softeam, Rational, Sprint, Sybase, Xerox, MCI Systemhouse, Boeing, Ardent, ICONIX, Integrated Systems, Verilog, NCR, NTT and Daimler-Benz are some of the vendors who are collaborating on the Object Management Group's new XMI (XML Metadata Interchange) specification. XMI is a new open industry standard that combines the benefits of the web-based XML standard for defining, validating, and sharing document formats on the web with the benefits of the object-oriented Unified Modeling Language (UML). It provides application developers with a common language for specifying, visualizing, constructing, and documenting distributed objects and business models. The XMI specification quickly moved through the OMG's Technology Adoption process and is currently undergoing the formal technology adoption vote by the OMG membership. Market demand for XMI is encouraging vendors such as IBM, Unisys and Oracle to expedite implementations of the technology and products as early as mid-1999. www.omg.com

INTERLEAF ANNOUNCES INTERLEAF 7

2/3/99

Interleaf, Inc. announced the availability of Interleaf 7 (I7). This next-generation e-Content publishing solution enables workgroups in either Microsoft Windows or UNIX environments to author and publish complex documents to all current Web and e-Content formats - HTML, XML, SGML or PDF. I7 provides Interleaf's installed base of 2 million users with a new way to publish complex Web documents by eliminating the need to tie content creation to the publishing format. www.interleaf.com

BLUESTONE CONTRIBUTES

XML/JAVA FREWARE

2/2/99

Bluestone Software, Inc., the creator of Sapphire/Web, announced XwingML. XwingML is a public domain contribution from Bluestone labs that accelerates the learning curve for early adopters of XML/Java tools. Available today,

XwingML is provided free-of-charge by Bluestone and can be downloaded at www.bluestone.com. XwingML was developed by Bluestone labs as the framework for creating Bluestone's commercial dynamic XML products: Bluestone XML-Server, and Bluestone Visual-XML, a toolkit for building XML applications.

ARBORTEXT APPOINTS NEW

EXECUTIVES

2/1/99

ArborText also announced the appointments of new members to its executive management team. Joan Nevins has been named chief financial officer. Nevins joins ArborText from PictureTel Corporation, where she served in several roles including CFO, vice president of marketing and vice president of Strategic Alliances. Steve Chambers joins the Company as vice president of marketing, where he will be responsible for all strategic and tactical marketing activities. Chambers spent six years at PictureTel Corporation, where he was most recently the vice president of worldwide marketing. Denis LeBlanc, formerly VP and general manager of Rational Software, was named vice president of North American sales, Kevin Jackson joins ArborText as director of business development to lead strategic planning. PG Bartlett will assume the role of vice president of product marketing reporting to Steve Chambers.

EASTMAN'S DOCUMENT MANAGER FOR EXCHANGE VERSION 1.1 SHIPS

2/1/99

Eastman Software, Inc. announced that it is shipping Document Manager for Microsoft Exchange (DMX) version 1.1, adding document management capabilities to Exchange Server and Outlook environments. DMX is part of the EASTMAN SOFTWARE Work Management for Microsoft Exchange family of products. Version 1.1 includes version control, document locking and audit trails. Pricing is \$149 but is available as a free upgrade to version 1.0 customers. It has been localized for use in Dutch, French, German, Spanish, and Swedish. Japanese will be available in February 1999. www.eastmansoftware.com

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CALENDAR

AIIIM '99 Show and Conference, April 12-15, Georgia World Congress Center, Atlanta, GA 301.587.8202

AIIIM's annual show focusing on document management, imaging, workflow, and storage and retrieval is a mammoth event.

Internet World Spring, April 12-16, LA Convention Center. 203.226.6967

The Spring version of Internet World is one of the largest. If it has to do with the Internet it will be here.

XML Forum, April 11, Georgia World Congress Center, Atlanta, GA 301.587.8202

An AIIIM pre-conference forum on the use of XML hosted by CAP Ventures.

XML Europe '99, April 27-30, Palacio de Exposiciones y Congresos in Granada, Spain, 1703 519 8159

The successor to the SGML Europe Conference. A good place to find out the latest on XML and SGML activity in Europe.

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