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## XML ON THE FRONT END: CONNECTING PEOPLE & PROCESSES IN B2B E-COMMERCE ENVIRONMENTS

This month we welcome back Mary Laplante as a contributor. Mary's article dovetails nicely with our analysis of e-commerce evolution in *Volume 7, Number 10*. In that issue we emphasized the similarities between B2B (business-to-business) and B2C (business-to-consumer) technology developments. Mary reminds us that there are also important differences. For example, where B2C solutions initially targeted human interaction with web pages and largely ignored integration with back-end systems, B2B solution have done just the opposite — they have focused on the interaction between back-end systems and mostly neglected how humans interact with these systems.

As B2B systems become more integrated the growing number of many-to-many interactions become increasingly unwieldy. Humans need direct and easy access to these systems and processes to manage them. Because all the major B2B vendors are using XML to facilitate application and information integration, it seems obvious that we should expose this XML to humans via a browser to accomplish the required access. Mary builds a convincing case for connecting people and processes in B2B environments sooner rather than later.

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# XML ON THE FRONT END: CONNECTING PEOPLE & PROCESSES IN B2B E-COMMERCE ENVIRONMENTS

Interaction is the very nature of commerce. The buying and selling of goods and services, especially on a large scale, is the end result of interaction between those who have the goods, and those who want to purchase them. Commerce is carried out in marketplaces where buyers and sellers come to interact. Until recently, marketplaces were typically physical structures – guildhalls in the Middle Ages, farmers markets, retail superstores, the New York Stock Exchange. In the 1970s, the introduction of computer technology and standard practices for Electronic Data Interchange (EDI) enabled Fortune 500 companies to transition certain buyer-seller interactions to the virtual world. That shift continued as computing technology became more affordable, and business organizations began to insert that technology deeper and deeper into their internal and external business processes. Then came the Internet and the Web. The availability of open and low-cost networks has dramatically, profoundly affected the rate at which we are transitioning buyer-seller interaction from physical to virtual marketplaces.

We cut our new-economy teeth on building and hosting marketplaces that connected buyers and sellers of commodity-style consumer goods, like books and CDs. Meanwhile, we set about implementing Internet-based technologies within our companies, replacing proprietary network architectures and client/server applications with standard protocols like TCP/IP and HTTP and standard technologies like Web browsers. Then we broadened our intranets to extranets that enabled online interaction with customers, suppliers, partners and distributors. We are now in the midst of another inexorable shift, this time from one-to-one commerce models – where one party interacts directly with one other party – to many-to-many "butterfly" models where buyers and sellers participate in business webs.

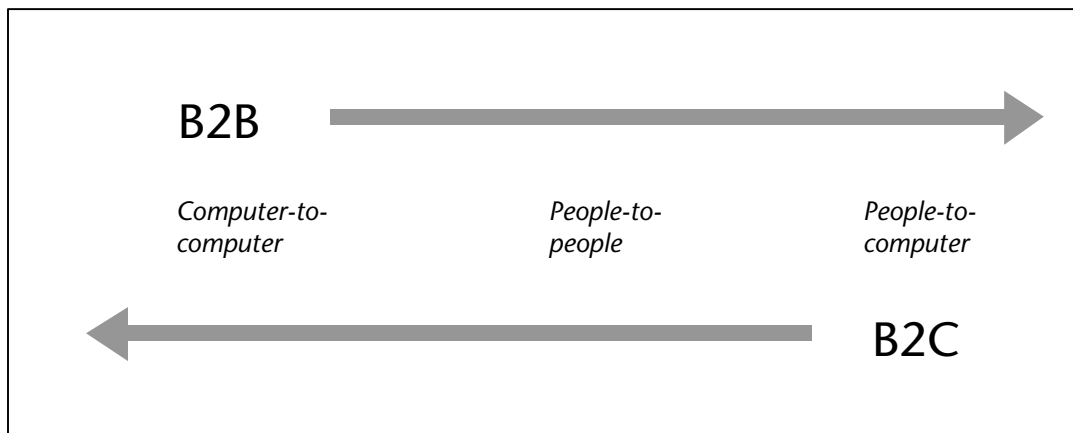
## MARKETPLACE INTERACTIONS: PEOPLE AND COMPUTERS

Regardless of whether the marketplace is virtual or physical, it's still the place where buyers and sellers interact. No matter what the flavor of business-to-business commerce in which you're engaged – buy-side, sell-side, exchange /distribution, or content aggregation – a marketplace, in fact, exists *only* when it connects a buyer with a seller. Because computing technology is now firmly embedded in our commerce infrastructures and processes, computers are also an integral part of marketplace interaction. Within e-commerce environments, then, there are three dimensions along which people and computers interact:

- ▲ Computer-to-computer: interaction between legacy systems, databases, applications, servers, browsers, and so on.

- ▲ People-to-people: interaction between humans who buy, sell, administer marketplaces, and provide customer service and support.
- ▲ People-to-computer: interaction between humans and the systems that execute commerce processes.

To date, most of the effort associated with building e-businesses has been focused on the first class of interaction. The key functions here are automation of processes and integration of the systems that do the processing, either within a single organization or between multiple organizations. The success of companies like Commerce One and Ariba illustrates the emphasis that we've put on facilitating computer-to-computer interactions. Their enterprise e-procurement systems are specifically designed to automate an organization's purchasing processes and integrate them with those of its suppliers. General-purpose solutions for integrating Web and enterprise systems range from those used to connect systems within a single organization (offered by companies like Neon and Tibco) to those that enable cross-organizational integration (from companies such as webMethods and Extricity). Although approaches differ, there is today no dearth of solutions that readily address the automation and integration aspects of computer-to-computer interaction, especially with the addition of XML capabilities for exchanging content and transactional data.



**Figure 1.**  
B2B & B2C solutions are following different evolutionary paths.

Notice that B2B and B2C technology have evolved in different ways. While vendors in the B2B space attacked the computer-to-computer problems first, B2C suppliers initially focused on building enticing people-to-computer shopping environments, and neglected integrating with back-end systems. There is a pleasing symmetry here as vendors move to fill out their solutions.

We are beginning to see the development and deployment of technologies that enable the second class of interaction – that between humans who are engaged in buying and selling activities on the Web. Companies like eGain and Kana support people-to-people interaction by connecting Web sites to call centers, managing e-mail response, or enabling real-time chat while completing an order form. Most of the adoption is in business-to-consumer environments at the moment, but it won't be long until more sophisticated versions of these technologies make their way into business-to-business e-commerce.

What we don't have in the B2B market today are tools and technologies that enable the third type of interaction, between people and computers – more speci-

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cally, between people and computerized business processes. For simple consumer-oriented transactions like buying books and CDs, the current state of technology allows e-businesses to build adequate user interfaces. But as transactions increase in complexity, making connections between people and processes requires more than HTML, Web forms, and standard Web browsers. We are just beginning to see the emergence of software solutions for building more efficient, effective interfaces between people and complex processes such as RFQs, lease line applications, logistics orders, and product configuration. These solutions will be of interest to companies who interact with their customers online through complex transaction processes.

Why are interaction management solutions becoming increasingly important? How does XML play a critical role here, as it does in other layers of architectures for e-business? Who are the likely providers of interaction management tools?

## DEALING WITH INCREASED COMPLEXITY

By its very nature, business-to-business commerce is complex in both the online and offline worlds. The products tend to be complex, as are the processes involved in designing, specifying, manufacturing, and selling them. Coordinating those processes across organizational boundaries creates additional complexity – no two companies conduct business in exactly the same fashion. There's complexity in managing supply chains and distribution channels and the relationships that enable them. Trends in e-commerce development will only increase this complexity:

- ▲ Suppliers will interact with buyers through multiple channels, including their own commerce-enabled Web sites and extranets, infomediaries that address market inefficiencies by bridging information gaps, and vertical and horizontal marketplaces. Operating within each of these channels means dealing with multiple different sets of interactions and interfaces.
- ▲ Marketplace-to-marketplace commerce will become increasingly common, as vertical marketplaces that serve specific industries intersect with horizontal marketplaces that offer MRO (maintenance, repair and operation) goods and business services like shipping. Buyers will need tools to help them to manage transactions with these interconnected marketplaces.
- ▲ Online marketplaces and exchanges will be characterized by mixed pricing models, allowing buyers and sellers to transact business using both fixed and dynamic pricing. The marketplace will have to be able to provide multiple user interfaces that support the different models, such as catalog, auction, and RFQ.
- ▲ The use of ASPs and outsourcing will separate some services from a business's internal infrastructure and locate them externally. The connection between people and processes must be seamless across multiple organizations, allowing the user to interact with them as if they are one enterprise.
- ▲ All constituents – buyers, sellers, marketplace administrators – will want to customize their interactions and interfaces by segment and/or personalize according to individual.

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Today, companies address the challenges associated with connecting people with complex business processes in one of two ways: by providing a one-size-fits-all set of rules for driving interactions, or by hand-coding custom interfaces. The first option can compromise the efficiency of e-commerce transactions by imposing a "lowest-common-denominator" limitation on functionality. The second option drives up the cost of developing and maintaining marketplaces and offers no scalability, which is necessary in order to achieve the time-to-critical-mass that separates marketplace winners from the losers. A new kind of software is required in order to make it fast and easy to build sophisticated, customized user interfaces for complex interactions – interaction management software that lets people carry out intelligent, dynamic interactions with e-commerce systems via a standard Web browser.

## ONE APPROACH: PUT THE SMARTS IN THE BROWSER

Suppose that you are a purchasing agent for a company that operates commercial ships for cargo transport. Your company participates in an online exchange for repair parts and services in the professional marine industry. You use the exchange's RFQ process to acquire the parts and services that you'll need to repair and maintain the ship when it docks at its next port destination. You complete a standard RFQ form and submit it to the exchange. Software running on the server reads the form, identifies the set of suppliers to whom it should be sent, and notifies those suppliers that there's an RFQ for their review. The supplier responds by completing the appropriate bid form and sending it to the exchange. When the responses have been collected from the various suppliers, you receive a message indicating that you have a bunch of bids to review. You negotiate with one or two suppliers, and finally accept a bid. The server automatically converts the bid document to a purchase order, spawning yet another workflow that processes the purchase order.

What happens under the hood in this scenario? Today's technology makes use of business objects, typically represented in XML, and business process automation tools to execute these transactions and complete the RFQ, bid, and purchase processes. XML business objects have become the de facto mechanism for conducting transactions once processes have been automated and systems have been integrated. Developers create business objects by modeling data that's required for a certain process and by specifying logic that defines their behavior. The business objects are, practically and conceptually, XML documents that drive workflows for processing RFQs and purchase orders, for example. These XML business objects are moved around, filled with data to create a particular instance of that object, and presented to buyers and sellers according to business rules. Companies like webMethods and Bluestone offer products that move XML business objects between companies according to pre-defined business rules. Suppliers like Vitria provide capabilities to manage XML business objects within a marketplace or trading community.

*"Today, companies address the challenges associated with connecting people with complex business processes in one of two ways: by providing a one-size-fits-all set of rules for driving interactions, or by hand-coding custom interfaces."*

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A business process automation tool like Vitria's BusinessWare uses business objects in several ways:

- ▲ To enable data connections to enterprise systems. Typically, the tool supports object transformations, and provides connectors to move objects in and out of databases and to receive objects from application servers.
- ▲ To automate internal business processes, driven by the business objects moved through the system. The tool looks at properties of these objects and then kicks off various processes. When processing an incoming purchase order, for example, the tool can create a new PO record in the accounting system, store the PO verbatim in a transaction document log, and start a manufacturing or delivery process.
- ▲ To support workflow – scan that PO, compare the approval limit and the submitter's profile, and create a new task for the submitter's manager to approve the PO if it's over the approval limit.

***"Most of the automation tools enable the conversion of business objects into XML documents so that users can interact with them. But none of the tools currently provides that interaction capability."***

Business objects are common to each scenario. They are moved in and out of other enterprise systems (and in some cases are actually stored in pieces in multiple systems), are the subject of routing through process automation and workflow, and are examined to make process and workflow decisions.

How would business objects and business process automation tools play in our purchasing example? The RFQ process begins when you as the purchasing agent create a new RFQ. The RFQ itself is represented as an XML document containing all the various fields of the RFQ with optional attachments for drawings and so on. The standard method for letting a user create such an RFQ is to code up an HTML form with all the RFQ fields. Once it gets to the server, the XML RFQ document is loaded into an RFQ business object in a process automation environment built with a tool like Vitria's.

The system looks at the RFQ object, extracts the set of suppliers to deliver it to, and sends the appropriate notification to those suppliers. When a supplier gets the RFQ, he needs to create a matching bid. Using another custom forms-based HTML user interface, the supplier fills out a form (or set of forms) that becomes an XML representation of the bid. This will then result in a "Bid" business object. Once the appropriate number of bids has been returned, the system will put a "ReviewBids" task in your inbox. When you see this task, you'll need yet another user interface to review the bids, make comments on them, possibly submit queries back to the supplier or respond to queries from the supplier, and so on. And when a bid is accepted, the system will create a new PO object and route it appropriately. This PO also becomes a business object that can be externalized as an XML PO document. The system looks at the total on the PO and compares to the approval limit stored in the your profile. If the total exceeds your approval limit, then the system creates a new approval task for your manager. The manager will need an approval user interface.

The process automation tools have nice interfaces for defining the logic of processing/workflow/routing, and the tools with roots in enterprise application integration have good capabilities to move the business objects in and out of enterprise systems. What they don't do, however, is give people or foreign systems access to the business objects. Most of the automation tools enable the conversion of business objects into XML documents so that users can interact

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with them. But none of the tools currently provides that interaction capability. The business logic isn't pulled forward and made accessible to users.

An interaction management tool could extend the utility of business objects and enable such accessibility. Using such a tool and given the schema for a business object, a developer could create a Web user interface that lets users interact with a business object. This would provide a direct connection of people and processes *in the browser*, closer to the user. The general concept is to encapsulate the front-end to internal business processes as a set of XML documents exchanged among business partners. By creating business objects in the browser, at the point where users and processes connect, it becomes easier to bring interactions with partners online across the spectrum of Web commerce (e.g., marketplaces, supply chains, distribution chains and so on).

In the purchasing example above, we identify a need for no less than four custom-coded interfaces – to create the RFQ, to respond with a bid, to review the bid, and to approve the PO. The time and effort required to build these interfaces is not insignificant. The value of interaction management software becomes even clearer when we take customization into account. Say that a buying organization wants to mimic its current paper forms. Today, that would mean a whole new custom development job to rebuild the HTML user interfaces. With a software tool for building user interfaces that connected people and processes by pulling business objects into the browser, this would be much easier. The only changes would be in presentation and possibly interaction logic, making it fast and easy to create multiple custom user interfaces.

## MAKING CONNECTIONS TODAY

The first generation of interaction management solutions is already on the market. These are product configuration systems from companies like OnLink, Selectica, and Calico. They allow developers to create interfaces that walk the user through the process of configuring a complex product. The canonical example that we've seen in booths at trade shows uses car buying as the demo scenario. In this context, the interdependencies of the various options make it difficult and time-consuming to configure a car that you could actually buy. These tools are meant to ease and speed that process by presenting only those options that are available, by performing validation and automated forms-filling, and so on. Most of these vendors claim to be supporting business-to-business commerce, but they target just one specific application area – product configuration – within the larger range of interactions between people and processes.

ActionPoint Inc. (formerly Input Software Inc.) is taking this a step further by offering a software solution for building more robust user interfaces for transactions that go beyond the product configuration tools available today. ActionPoint refers to the places where people interact with complex e-commerce systems as, well, "action points." Its software suite includes a drag-and-drop designer for creating dynamic user interfaces along with a "dialog server" that functions as a run-time engine, and an enterprise server that connects ActionPoint front-ends with back-end applications and databases. A key advantage of this approach is that the business logic operates in the browser, eliminating all or most of the round-trips to the server. This kind of functionality has the potential to offer significant performance enhancements and to deliver a more efficient and satisfying user experience.

***"The value of interaction management software becomes even clearer when we take customization into account."***

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The established players (Tibco, Extricity, webMethods, Vitria, *etc.*) in business-to-business integration solutions may also be candidates for interaction management offers as they attempt to leverage their expertise in creating and managing XML business objects and to extend their product reach beyond infrastructure. Look for partnerships with companies like ActionPoint.

## OVERCOMING ONE MORE BARRIER

Research firm IDC (International Data Corporation) estimates that only 1.1% of all B2B e-commerce is Internet enabled today. Its analysts say that a key inhibitor is the interface between people and processes – it's just plain difficult for humans to interact with e-commerce systems. Interaction management software addresses this problem, and so removes one more barrier from the wider adoption of global business-to-business commerce. What's more, the use of XML business objects in the browser will have the affect of accelerating that adoption because XML-based front-ends can be snapped into place fairly easily with XML-based process automation systems, integration servers, and back-end enterprise applications.

With the introduction of interaction management solutions, technology for connecting people and processes can catch up with technology that's available today for integrating systems and processes. These solutions will be critical to getting beyond these early stages of Web-enabled e-commerce. After all, people make markets, not computers.

–Mary Laplante<sup>1</sup>  
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<sup>1</sup> Mary and her colleagues at Fastwater consult with B2B web businesses and net "market makers".  
*Disclosure:* Mary has also consulted with ActionPoint, one of the companies she mentions in the article.



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# INDUSTRY NEWS

Current news and commentary is available at [www.gilbane.com/](http://www.gilbane.com/)

## IBM ANNOUNCES AVAILABILITY OF SOFTWARE FOR DELIVERING WEB CONTENT TO WIRELESS DEVICES

3/31/00

IBM announced the worldwide availability of IBM WebSphere Transcoding Publisher, software that dynamically translates Web information – including text and images – to a format readable on a variety of Internet appliances. WebSphere Transcoding Publisher extends the reach of Web data and applications to information appliances, including smart phones, car browsers and PDAs. Because Transcoding Publisher customizes the content to match the capabilities of the receiving device, applications do not have to be rewritten. Built on a Java-based architecture, WebSphere Transcoding Publisher converts data and applications written in HTML and XML to other formats such as Wireless Markup Language (WML). It can also convert graphics to a format that can be viewed on a wireless device. The software is available for AIX, Linux, Solaris and Microsoft Windows NT and Windows 2000 operating systems. WebSphere Transcoding Publisher is available in ten languages (English, French, Spanish, Italian, German, Japanese, Traditional Chinese, Simplified Chinese, Korean, Brazilian Portuguese). [www.ibm.com/software/websphere/transcoding](http://www.ibm.com/software/websphere/transcoding)

## HP UNVEILS UNIVERSAL INFORMATION EXCHANGE

3/31/00

Hewlett-Packard Company unveiled its roadmap for unifying information exchange in the new Internet economy. HP's support of Object Management Group's (OMG) Common Warehouse Metamodel Interchange (CWMI) specification will help customers share information with customers and partners, creating customer intimacy and streamlining the supply chain. The CWMI standard follows XML Metadata Interchange (XMI) by the OMG. Marking the next step in the establishment of a metadata interchange among all data warehousing, business intelligence, knowledge management and portal technologies, the proposed CWMI provides a powerful object model with a set of APIs, interchange formats and services that span the spectrum of metadata relating to the extraction, transformation, transportation, loading, inte-

gration and analysis phases within data warehousing. CWMI resolves potential integration issues by enabling users to extend the model to meet their specific needs. HP support of CWMI will help customers with: Simplified Extract, Transform, and Load (ETL) processing, automated change data management, more useful Online Analytical Processing, real-time data collection from the Internet, and streamlined administration. Additional information from OMG regarding the CWMI specification is available at [www.omg.org/news/pr2000/3\\_20.htm](http://www.omg.org/news/pr2000/3_20.htm). [www.hp.com](http://www.hp.com)

## DOCUMENTUM, POET, & SAQQARA JOIN FORCES WITH COMMERCE ONE

3/29/00

Commerce One, Inc. announced the execution of memoranda of understanding with Documentum, POET Software, and SAQQARA Systems to deliver integrated e-catalog solutions that will enable suppliers to rapidly participate in business-to-business e-marketplaces powered by the Commerce One MarketSite Portal Solution. Documentum 4i eBusiness Edition, POET eCatalog Suite and SAQQARA Commerce Suite now support the XML Common Business Library (xCBL) that enables the exchange of e-catalogs. Under the terms of the definitive agreements which the parties expect to sign shortly, Documentum, POET, and SAQQARA are the newest three companies to endorse xCBL, created by Commerce One, that allows any company to trade with any other through end-to-end system integration and open XML document exchange. The new partnerships enable suppliers and manufacturers to automate the selling process and make product catalogs available to Commerce One MarketSite Portal Solution based business-to-business trading communities. Suppliers can choose a solution that best suits their unique requirements, providing them with seamless access to a global e-marketplace. [www.documentum.com](http://www.documentum.com), [www.poet.com](http://www.poet.com), [www.saqqara.com](http://www.saqqara.com), [www.commercone.com](http://www.commercone.com)

*Electronic catalogs and the integration associated with them remain the largest barrier to minimal-friction B2B e-commerce. These are three of the more robust solutions, although each has a very different approach.*

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## **ONDISPLAY ANNOUNCES AVAILABILITY OF FREE B2B XML SERVER**

3/29/00

OnDisplay, Inc. announced the general availability of XML Connect. XML Connect is a free, business-to-business, XML-based server for organizations that need to establish secure, guaranteed exchange of critical business transactions with trading partners. This new product enables the exchange of XML business documents – such as purchase orders, invoices, and order confirmations – seamlessly and securely with any other XML Connect user, as well as with users of OnDisplay's CenterStage eBizXchange product. The new product can be downloaded from the XML Connect Web site and supports all of the XML schemas on the market and allows B2B e-commerce participants to set up secure connections with trading partners without the need to purchase and install proprietary software on both ends of the trading partner connection. In conjunction with the availability of this product, OnDisplay is also launching XMLConnect.net, a B2B community portal found at [www.xmlconnect.net](http://www.xmlconnect.net). This portal was specifically created to become a destination site for the convergence of the B2B and XML Connect community. The community portal will offer a place to interact with trading partners, exchange ideas and access resources for learning more about the power of Internet ubiquity and the mass adoption of XML and XML Connect. OnDisplay offers free online support for XML Connect; for an additional charge a company can upgrade to a traditional phone support model. [www.ondisplay.com](http://www.ondisplay.com)

## **OPEN TEXT & KPNQWEST TO PROVIDE ASP SERVICES**

3/29/00

Open Text Corporation and KPNQwest announced a joint services agreement to offer Application Service Provider (ASP) services for European businesses. The signed joint services agreement (JSA) provides Open Text's Livelink collaborative software through KPNQwest's pan-European macro-capacity fibre-optic network and European CyberCentres. KPNQwest has twelve European CyberCentres and is in the process of constructing mega-CyberCentres of over 10,000 square metres close to key business centres in Europe. These CyberCentres are built on KPNQwest's high-capacity fibre-optic EuroRings network, which delivers the high-speed broadband bandwidth required to run sophisticated business-to-business applications.

KPNQwest and Open Text will jointly market and brand the hosted Livelink solution to KPNQwest's installed customer base of more than 100,000 businesses. This service will also be offered to the Open Text installed customer base in Europe. KPNQwest customers will also have access to use myLivelink, the customizable interface to Livelink which provides a collaborative information portal that can unite its hosted application services. This will give KPNQwest customers a view into multiple information sources including Livelink, and will allow them to personalize the interface to meet their individual requirements. [www.kpnqwest.com](http://www.kpnqwest.com), [www.opentext.com](http://www.opentext.com)

*In the few short weeks since we wrote about the ASP model (last month's issue) there has been a startling amount of activity in the content management space. Clearly most of this was already in the works – as it should have been!*

## **ARBORTEXT INTRODUCES "EXTEND" - ASP SUPPORT**

3/28/00

Arbortext, Inc. announced the release of Extend, a set of software and services that support Application Service Provider (ASP) deployment of its XML-based e-Content management system. Arbortext has identified FutureLink to help implement the rollout of Extend. Server-based computing services offer customers reduced cost of ownership and deployment time, faster scale-up, increased flexibility, more widespread access and tighter security. Additionally, companies who have people located throughout the organization or in multiple locations now have the ability to collaborate as if they were working in the same office. Extend enables companies to utilize Arbortext software who might otherwise be unable to do so because of out-dated equipment, lack of technical support, or cost of ownership. Arbortext's software can either be hosted on its customer's servers or on a third-party Web hosting service, and is accessible using a standard browser or a thin client. The software runs on a variety of desktops, including Windows, Macintosh, DOS, UNIX, Java and OS/2 Warp. [www.arbortext.com](http://www.arbortext.com), [www.futurelink.net](http://www.futurelink.net)

*Ditto.*

## **MERCATOR ANNOUNCES SUPPORT FOR WML**

3/28/00

Mercator Software announced it has joined the Wireless Application Protocol (WAP) Forum, and is

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supporting integration with WAP applications and devices through the Wireless Markup Language (WML) standard. Support for WML within Mercator E-Business Integration Broker products gives end user customers the ability to integrate information from existing business systems with WML formats, accelerating the integration of wireless applications into their e-business infrastructure. In addition, Mercator's WML transformation support allows third party solution providers to deploy wireless applications that can be integrated with the diverse applications of their enterprise customers. In supporting wireless applications, for example, Mercator E-Business Integration Broker software can enable a telecommunications company service representative to receive information regarding a service outage through a WML transaction sent from a computer system in the home office directly to the rep's mobile device. In the same exchange, the service rep can use the mobile device to check the history of service problems in the area where the problem occurred. All data required to complete this exchange, including information from the home office applications and databases, can be transformed into and out of WML using Mercator E-Business Integration Broker technology. [www.mercator.com](http://www.mercator.com)

## ORACLE ANNOUNCES DEVELOPMENT TOOL WITH END-TO- END XML SUPPORT

3/28/00

Oracle Corp. announced the latest release of Oracle JDeveloper with Business Components for Java. This latest version offers end-to-end support for XML. With JDeveloper Version 3.1, Oracle delivers an integrated, full-featured application development tool for building and deploying applications in Java and XML. Developers will be able to use JDeveloper to build, debug and deploy Internet applications that create and process XML data and documents. Oracle JDeveloper 3.1 simplifies the task of working with Java application code and XML data and documents at the same time. It features color-coded syntax highlighting for XML and built-in syntax checking for XML and Extensible Style Sheet Language (XSL). With the included XML Structured Query Language (XSQL) Pages support, developers will be able to edit and debug Oracle XSQL Pages, Java programs that can query the database and return formatted XML, or insert XML into the database without writing code. The integrated servlet engine will allow developers to view the XML output generated by their Java code in the same environment as their program source, making it easy to do rapid, iterative development and testing. JDeveloper's integration with Oracle8i

and Oracle Application Server will also help improve productivity by allowing developers to remotely debug Java/XML programs running on either server. JDeveloper will also allow Java developers to produce, develop and debug multi-tier Java 2 Enterprise Edition (J2EE) applications and remotely debug Java components in any web server or application server through its support of the J2EE Platform Debugging Interface (JDI). The tool also includes Oracle's XML Parser for Java Extensible Style Sheet Language Transformation (XSLT) Processor, and related JavaBeans components that make it easy to do drag-and-drop XML development. Oracle Business Components for Java, which ships with Oracle JDeveloper, is a server-side framework for creating scalable, high-performance Internet applications. The framework helps developers build reusable components for all types of Web-based business applications. The same server-side business component can be deployed without modification as either a JavaServer Pages/Servlet application or Enterprise JavaBeans component. This deployment flexibility enables developers to reuse the same business logic and data models to deliver applications to a variety of clients, browsers, and wireless Internet devices without having to rewrite code. In JDeveloper 3.1, programmers will be able to customize the functionality of existing Business Components by using the new visual wizards to modify their XML metadata descriptions. Business rules can be changed on site without needing access to the underlying component source code. JDeveloper 3.1 is scheduled to ship and be made available online starting in April. Developers can download JDeveloper from the Oracle technology Network at <http://technet.oracle.com>.

*Hmmm... we seem to recall wondering what Microsoft meant when they talked about "end-to-end" XML support back in the Fall. In any case, users will be the winners if both Oracle and Microsoft vie for having the most complete end-to-end XML support, no matter what it means.*

## EXCELON SHIPS XSL EDITOR UPDATE FOR EBUSINESS

3/27/00

eXcelon Corporation, announced that Stylus 2.0, an eXtensible Stylesheet Language (XSL) editing tool is now shipping. Stylus 2.0 makes it easy for developers to create XSL stylesheets, giving them the freedom to transform XML into HTML for presentation on the Web, and into other XML formats for exchange with business partners. Stylus 2.0 includes a number of new features, including What You See Is What You Get (WYSIWYG) drag and

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drop editing. This allows developers to quickly and easily create stylesheets without any knowledge of XSL or HTML tags. The product is compliant with the final XSLT recommendation and has built-in support for international character sets, which makes the product viable for use in Japan and other foreign language countries. Stylus also includes one-click debugging that makes maintaining sophisticated stylesheets possible for the first time. Stylus 2.0 is available now on the eXcelon Corp. Web site. The product costs \$199. Stylus 2.0 is available both as a stand-alone tool, and as part of the tool set for eXcelon 2.0 Dynamic Application Platform (DAP), the powerful platform for building and deploying XML-based eBusiness applications. [www.exceloncorp.com](http://www.exceloncorp.com)

## **ENTRUST LAYS XML SECURITY FOUNDATION FOR B2B**

3/27/00

Entrust Technologies, Inc. announced its comprehensive set of solutions for XML security that enable organizations to accelerate the growth of B2B transactions. High value B2B transactions require comprehensive, integrated security that integrates with XML. Entrust's new set of solutions for XML security extend the XML framework to offer an integrated solution for B2B transactions and communications. Along with PureEdge Solutions Inc., and other vendors, Entrust is a contributing author to the XML digital signature standard spearheaded by W3C. Entrust has the tools available to enable support for this new standard once ratified. Entrust B2B solutions integrate XML security for Web, e-mail, VPN, FTP and third-party applications, building on Entrust's family of toolkits. Specifically, Entrust's solutions for security enable organizations to: Secure XML documents sent over the Internet, intranets and extranets via SSL, e-mail, VPN, and FTP; and digitally sign XML documents such as InternetForms. Entrust Technologies solutions for XML will be available April 1, 2000, direct from Entrust or by visiting [www.entrust.com/xml](http://www.entrust.com/xml). Pricing varies depending on the solution being implemented. Organizations wishing to implement a custom application may download the toolkit at no cost. [www.entrust.com](http://www.entrust.com)

## **OPEN TEXT & RESEARCH IN MOTION TO CONNECT BLACKBERRYS WITH LIVELINK**

3/22/00

Open Text Corporation and Research In Motion Limited announced a strategic relationship that in-

cludes a plan to integrate Livelink and BlackBerry features so that mobile Livelink users may collaborate dynamically within their organizations and throughout their supply chain communities. The BlackBerry wireless email solution includes a wireless handheld with integrated email/organizer software, PC docking cradle, PC synchronization software, single mailbox integration and affordable nationwide airtime. It features an end-to-end security system whereby all corporate email remains encrypted at all points between the desktop PC and the BlackBerry Handheld, meeting standard corporate security guidelines. The "push model" of email delivery that BlackBerry provides does not require the user to dial-in or initiate the connection, so users receive notification as a new email arrives and can respond immediately. Using Livelink's e-mail integration module and the interactive two-way communication capabilities of BlackBerry, users will have secure, collaborative access to Livelink systems in mobile environments. Livelink users will be able to set a notification for any event that occurs within Livelink, such as a change in status of a document or a completed step in a workflow, and receive timely updates on their BlackBerry Handheld. [www.opentext.com](http://www.opentext.com), [www.rim.net](http://www.rim.net)

*This is cool, but we won't be happy until we can get attachments on our mobile units. Of course, then we'll complain about the attachments.*

## **BREAKAWAY TEAMS WITH VIGNETTE TO DELIVER PERSONALIZATION & CONTENT MANAGEMENT**

3/22/00

Breakaway Solutions, Inc. and Vignette announced a strategic agreement. Under the agreement, Breakaway Solutions will be delivering Vignette's personalization and content management software platform to Breakaway Solutions' customers. In addition, the companies have signed a letter of intent, which will allow Breakaway Solutions' application service provider group to provide a hosted offering of Vignette's e-business platform. The relationship will allow Vignette and Breakaway Solutions to build a complete, integrated e-business solution for customers more quickly. As part of the agreement, the companies will participate in joint training and marketing programs to promote the offering. [www.breakaway.com](http://www.breakaway.com), [www.vignette.com](http://www.vignette.com)

*More content management and ASP activity.*

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## POET TO ADD BIZTALK SUPPORT TO ECATALOG SUITE

3/21/00

POET Software announced it will incorporate support for the Microsoft BizTalk Framework into its eCatalog Suite (eCS). By making eCS compatible with the BizTalk specification, POET becomes one of the first data management providers to utilize an XML message-passing approach to tie eProcurement systems together. Further, supporting BizTalk in POET's eCatalog Suite will simplify the management of electronic catalog data for suppliers to eProcurement systems, guaranteeing secure exchange of data between online trading partners, and enhancing the ROI of integrating such systems. POET eCS simplifies supply-side management of electronic catalogs by automating many of the resource intensive steps required to assemble, manage, cleanse, customize, transform and transmit eCatalogs to buyers and Net Market Makers. Unlike B2C eCommerce, B2B requires significant customization of the data for each buyer and Net Market Maker. POET eCS enables the supplier to automatically customize the eCatalog content for each buyer through a rule-based solution. POET eCS provides suppliers with a self-service solution for all their eCatalog needs, including transformation into any XML dialect or legacy data format allowing access to any form of XML regardless of origin. [www.poet.com](http://www.poet.com)

## FILEMAKER LAUNCHES FILEMAKER XML CENTRAL

3/20/00

FileMaker, Inc. announced the immediate availability of FileMaker XML Central. A comprehensive resource for IT professionals and web developers, FileMaker XML Central provides essential documentation that details XML support in FileMaker Pro. It also includes instructional examples and useful links for learning more about XML and XML formatting technologies. The XML documentation and examples will also be included in the forthcoming FileMaker Developer 5, planned for shipment in April. They equip IT professionals and Web developers to deploy an XML solution using dynamic data from their FileMaker Pro 5 database. With XML, The addition of XML technology also enables dynamic data exchange between FileMaker Pro 5 databases and other systems, like Oracle and SAP. In addition to the XML documentation, examples and a full working version of FileMaker Pro 5 for Mac OS and Windows, FileMaker Developer 5 will also offer a wide array of tools for FileMaker database customization; royalty-free run-

time distribution; the ability to rename FileMaker solution files and share FileMaker data using XML, JDBC and ODBC. FileMaker Developer 5 will have a suggested retail price of \$499 (US).

[www.filemaker.com](http://www.filemaker.com)

*For some reason this sounded strange. But we are happy to see this surprising survivor continue to keep up.*

## GOLDFARB LAUNCHES XML WEB SITE

3/20/00

Charles F. Goldfarb, author of The XML Handbook, announced the launch of [www.xmltimes.com](http://www.xmltimes.com), an Internet site for news and educational resources on XML, the language of e-business. The site features up-to-the-minute XML news-feeds from the Web's leading news agencies, with background and tutorial articles contributed by the authors of Prentice-Hall's XML Series from Charles F. Goldfarb. The XMLTimes.com Web site serves technical and non-technical readers with XML news, interpretive assistance, and a discussion community.

[www.xmltimes.com](http://www.xmltimes.com)

*Congratulations Charles!*

## SEQUOIA INTEGRATES 3 "POPULIST" APPS WITH XML PORTAL SERVER

3/20/00

Sequoia Software Corporation announced agreements with OfficeMax.com, biztravel.com, and 401Kafe for integrating their Web-based services with Sequoia's XML Portal Server (XPS). Collectively, OfficeMax.com's office products and services, biztravel.com's full-service online travel capabilities, and 401Kafe's online benefits planning information fall into the category of "populist applications" because they are useful to the broadest range of corporate users. By integrating these online applications within XPS, Sequoia is ensuring its customers' employees will be more enthusiastic about adopting the portal as their primary point of interaction with corporate content. This in turn will drive overall use of the portal, increasing the return on the corporate investment. Sequoia has signed a letter of intent with biztravel.com to integrate the biztravel.com service with XPS. The relationship is intended to give XPS end users immediate access to tools for planning, booking and managing travel arrangements. Based on an agreement with mPower, the parent company of 401Kafe.com, Sequoia will offer its customers integrated access to the 401Kafe site as a content component of XPS.

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401Kafe is a community resource for 401(k) participants, providing news, articles, FAQs and discussion forums designed to enhance an individual's ability to grow the value of their 401(k) investments. [www.biztravel.com](http://www.biztravel.com), [www.OfficeMax.com](http://www.OfficeMax.com), [www.sequoiasoftware.com](http://www.sequoiasoftware.com), [www.401kafe.com](http://www.401kafe.com)

*I think it was Forrester that made the "populist" application requirement popular, although others (like Mike Maziarka) suggested it as a characteristic of corporate portals some time ago. Either way it is a good idea. Adding too many to any single portal site however would not be a good idea.*

## SOFTWIRED ANNOUNCES OEM DEAL WITH XEROX

3/20/00

SoftWired's iBus messaging technology will power Xerox Corporation's wireless-based product, MobileDoc. Xerox's software application was designed specifically to allow people to fax and e-mail documents of various size, remotely, from any mobile device including cell-phones, personal digital assistants, and pagers. MobileDoc will initially support Motorola's PageWriter 2000X and TimePort P930 interactive devices, and the Nokia 9110 Communicator. By integrating iBus/MessageBus with technology developed at the Xerox Research Centre in Cambridge, U.K., MobileDoc allows people to browse through large document libraries via wireless devices. Documents can be sent to any fax or e-mail in the world. Professionals can easily send up-to-the minute contracts, pricing proposals or any other document to customers and clients within minutes. The iBus is deployable as part of every inter-networked Java device from wireless PDA's, pagers and mobile phones to personal computers, delivering information in real time and with reliable multicast. [www.xerox.com](http://www.xerox.com), [www.SoftWired-inc.com](http://www.SoftWired-inc.com)

## BIRDSTEP ANNOUNCES XML DATABASE FOR MOBILE DEVICES

3/20/00

Birdstep Technology AS, an international vendor and developer of Ultra Small Footprint database technology, announced a unique solution to an increasing problem faced by the growing mobile computing industry. The Birdstep solution is a database that supports XML to increase processing power and storage capacity on handheld devices. An example is an XML-database of a 42,000 word Norwegian-English dictionary implemented on a PDA running Windows CE. The Birdstep database requires only 12MB of space to handle the dictio-

ary, while traditional database systems supporting XML may need up to three times as much space. Birdstep's patented atomisation techniques store and manipulate the XML-structures within the actual database. This technology differs from most vendors that provide relational or flat file databases that are not able to provide multilevel XML support. Birdstep's technology allows for native XML representation within the physical database itself. As such, Birdstep's support for XML becomes an integrated part of the handheld's database system, versus approaches that only provide an XML-layer on top of the flat file or relational technology. In addition, Birdstep technology keeps the whole XML-structure - or tree - persistently across disk and memory, a detail of importance when manipulating large and complex XML-documents. [www.birdstep.com](http://www.birdstep.com)

*I think we've asked this before, but we are still interested in other companies building this kind of technology. Send us an email if you know of any.*

## NETSCAPE ANNOUNCES GECKO ADOPTEES, XUL, & NETSCAPE 6

3/20/00

Netscape Communications announced that Netscape Gecko will be used by IBM, Intel, Liberate, NetObjects, Nokia, Red Hat, and Sun Microsystems. These companies will use the cross-platform Netscape Gecko browser engine to extend the Web from the traditional desktop computer to a wide range of Internet devices such as set-top boxes and browsing appliances. Designed to power Internet devices across many platforms and devices, Gecko is a key component of the "AOL Anywhere" strategy. In another announcement, Netscape also said that Netscape 6, its new Gecko-driven Internet browser would be available to the public within the next 25 days. Netscape also announced the availability of XUL (pronounced "zool"), the XML based User interface Language, a new XML application that makes it easy to develop a cross-platform user interface. XUL, the XML-based User Interface Language, uses XML to describe the features, objects, and layout of a traditional desktop application user interface. XUL lays out the user interface elements across all platforms by using these common Web standards: HTML, XML, CSS, the W3C DOM, and JavaScript. <http://home.netscape.com/browsers/gecko/whitepaper.pdf>, <http://home.netscape.com>

*Cool. The model is appealing and we wish them luck, but we have to say we had almost forgotten about them.*

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## ICAP FORUM COMPLETES DRAFT WITH PLANS TO SUBMIT TO IETF

3/20/00

The ICAP Forum of Internet companies today announced the completion of the first draft of a protocol aimed at enabling Internet e-services. The new protocol, Internet Content Adaptation Protocol (ICAP), leverages the Internet's infrastructure and increases the intelligence and flexibility of networks. ICAP will be submitted to the Internet Engineering Task Force's (IETF) Web Replication and Caching (WREC) working group as an Internet draft at the next WREC meeting. The proposed standard allows enterprises, content providers and ISPs to seamlessly conduct e-services such as Web page reformatting, targeted Web advertising, virus scanning, content filtering, data compression and language translation from any Internet access device. The ICAP Forum is hosted by Akamai Technologies and Network Appliance, and is joined by content delivery service providers, application developers, and Internet infrastructure companies. Forum members participating in the development of ICAP include: AdForce, Advertising.com, Allaire Corporation, Anystream, Appliant, Inc., BroadVision, Capella, Cidera, Cobalt Networks, Compaq, Direct Hit, DoubleClick, eBuilt, Ecliptic, eColor, Engage, Entera, Finjan Software, Fresher Information, Frictionless Commerce, Gomez, Google, Idiom, Idini, iKnowledge, InfoLibria, Ingeniux, iWeb.com, Izar, Kanda Software, Lionbridge Technologies, Mirror Image Internet, Navisite, Network Associates, Novell, N2H2, Oki, Open Market, Optibase, Oracle Corp., Pandesic, Predictive Networks, PictureWorks, RuleSpace, Secure Computing, Sight-Path, StarBurst Software, Symantec Corp., Trend Micro, Inc., Vignette Corporation, Websense, and WWWhoosh. Instructions on how to participate in development of the protocol are available at [www.i-cap.org](http://www.i-cap.org). With the first version of ICAP now complete, the Internet community is invited to prototype e-services offerings using ICAP and provide feedback on the protocol at [comments@i-cap.org](mailto:comments@i-cap.org). Central to the ICAP concept is a simple, yet powerful, open protocol that enables communication between edge content devices (i.e. Web caches and Internet content delivery servers), and application servers that modify content and then deliver it to Internet access devices. For example, when a Web cache receives a request from a cell phone browser, the cache will deliver the requested content to an application server that adapts the content for display on the cell phone. The cache serves the page, and caches it for subsequent cell phone browsers. This allows a very high degree of flexibility on the types of services that can be offered at access points while maintain-

ing the high performance and integrity of the access servers. [www.i-cap.org](http://www.i-cap.org)

*We don't know anything about this so can't comment on it. However if all the consortium members actually are actively involved it should be checked-out.*

## BOWSTREET ANNOUNCES BUSINESS WEB EXCHANGE & WEB FACTORY 2.0

3/16/00

Bowstreet announced the Bowstreet Business Web Exchange, an open Internet community where companies can find, acquire and customize other companies' "web services" from the Exchange, as well as publish web services to it to build their businesses. Bowstreet is replacing the traditional model of building custom B2B applications - coding line by line with a simpler approach. Line-of-business managers will visit the Exchange to find, obtain, exchange and publish web services, which are complete business processes wrapped in XML. Without technical help, managers will snap these web services into their B2B web systems to automate the creation of dynamic and customized business webs, or B2B web marketplaces. Business managers can blend and customize the web services they acquire, then deploy them in unique combinations to customers, partners and suppliers. Each web service contains all of the publisher's terms of use, allowing companies to expand their market reach and commercial horsepower without in-depth negotiations. As a result, companies can scale their business relationships as quickly as they can conceive of new business models and mutually beneficial relationships. With XML-based web services, companies can now instantly connect their back-end systems with partners' systems, automating their business processes over the Internet without IT help. In addition to creating custom web pages, web services can send output such as stock prices, catalog data or custom flight information to pagers, wireless phones and computer systems. Each web service will contain all the instructions, code, documentation, templates and usage examples a web service consumer needs. Bowstreet also announced Business Web Factory 2.0. A special, free Marketplace Edition of the Bowstreet Business Web Factory will be available on the Bowstreet Business Web Exchange to get companies started publishing, obtaining and deploying web services at no cost. [www.bowstreet.com](http://www.bowstreet.com)

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## EBXML INITIATIVE RELEASES TECHNICAL SPECS FOR COMMENT

3/15/00

The first ebXML Initiative Technical Specifications have been released for public comment. The ebXML Requirements Specification is available for download from the ebXML web site at [www.ebxml.org](http://www.ebxml.org). This ebXML Requirements Specification represents the work of the ebXML Requirements Project Team. It defines ebXML and the ebXML effort, articulates overall business requirements for ebXML, and defines specific technical infrastructure requirements that will be addressed by the various ebXML Project Teams in preparing their deliverables. The document includes general guiding principles for the development of other ebXML Technical Specifications. Major requirements are identified in the specification. The specification is available for the full ebXML Work Group and all interested parties in the general public. Comments should be emailed as plain text in the body of the mail message or as an attachment to Mike Rawlins, ebXML Requirements Project Team Leader at [rawlins@metronet.com](mailto:rawlins@metronet.com) or Mark Crawford, ebXML Requirements Project Team Editor at [mcrawfor@mail.lmi.org](mailto:mcrawfor@mail.lmi.org). The review period closes 27 March 2000. The specification will undergo a second cycle of revision and review prior to the expected final approval. The ebXML vision is to create a single global XML framework solution. It is a joint effort of the United Nation/CEFACT organization and OASIS. Participants represent 14 countries, 83 companies, government agencies and several national and international standards organizations. More than 500 people around the world participate via Internet mailing lists. Following the public comment period, the final Requirements Specifications will be approved by the full ebXML Plenary during its meeting in Brussels 8-12 May 2000. Full details about the ebXML Initiative, its project teams and meetings is at [www.ebxml.org](http://www.ebxml.org), [www.uncefact.org](http://www.uncefact.org), [www.oasis-open.org](http://www.oasis-open.org)

## UPDATE COMPANION ENABLES CONTENT CONTRIBUTION TO WEB SITES

3/15/00

Companion B.V. released an update of their main product Companion 2.0. The main new feature in this update is the add-on Companion Publisher which can be installed separately on the machines of content contributors. Companion 2.0 and Companion Publisher provide a comprehensive environment for database publications without the

need for a specific and expensive application server. Companion makes it possible to create pre-generated database-driven web sites. Companion provides three Database Query Wizards and several specialized Companion tags to include database content in static pages, e.g. one specific field, a list of fields, all records, or a selection based on an SQL query. Companion facilitates content publication from ODBC and Access databases. For publication Companion retrieves the specified content from the database(s) and inserts it into the files that are uploaded to the web server. Companion Publisher enables content contributors to publish new database content, for instance new press releases or new product information, without the help of the web developer. Web developers control which templates are shown in Companion Publisher. A simple user interface allows the content contributor to start and stop the publication of templates. By choosing a Project Profile the author can choose to publish to a test location before the final release. Companion 2.0 is geared at professional, technically skilled users and early adopters. Companion 2.0 departs from the current paradigm in web development of editing source files directly – Companion introduces a separate layer, enabling a component-based approach of script management. The following prices are applicable: Single user license: \$199 (introductory price, normal price \$349); Five user license: \$945 (normal price \$1675); Ten user license: \$1875 (normal price \$2975). [www.companion.nl](http://www.companion.nl)

*Sounds interesting. There will be an increasing amount of software coming out of Europe. There were a record number of French startups exhibiting at Documation France a couple of weeks ago, and there is a lot of German activity as well.*

## IBM ANNOUNCES CONTENT MANAGER

3/14/00

IBM unveiled the IBM Content Manager, an offering that helps companies manage the exploding amount of digital information now facing organizations in the e-business world. Content Manager offers a complete, integrated portfolio for database management, content management and business intelligence. IBM Content Manager helps companies make the most of their information, no matter the form. IBM Content Manager leverages IBM's experience in rich media and document management technologies. It enables corporations to electronically manage, protect and share critical business information, in any format, including XML and HTML. Images, audio and video, computer generated output and business documents can



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now be securely shared electronically - a crucial step in the e-business transformation. Additionally, it can search across a variety of content and data repositories such as production imaging, computer-generated output, document management and multimedia repositories, delivering a unified search result. The IBM Content Manager, when combined with the recently announced IBM Enterprise Information Portal, provides a single point of access and integration for IBM and non-IBM data and content stores helping customers truly leverage the vast amounts of information across their business. IBM Content Manager is currently available shipping with support for IBM AIX and Microsoft Windows NT platforms. Pricing starts at \$15,000 per workstation server and \$2,000 per concurrent user. [www.ibm.com/software/data/cm](http://www.ibm.com/software/data/cm)

## **XEROX BRAZIL PARTNERS WITH INTERTECH**

3/14/00

Xerox Brazil has partnered with InterTech Information Management Inc. to bundle InterTech's DocuPACT software with their current scanner technology. InterTech is a software and application service provider for electronic document management and workflow solutions that enable document-centric commerce over the web. In addition to having their own document management software, DocuShare, Xerox Brazil has also chosen to integrate DocuPACT with their Document Centre-230 hardware—a scanner/copier/printer rolled into one. Xerox is also selling this solution to the banking market and plans to develop human resources and accounts payable applications to be bundled with DocuPACT/DC-230. [www.intertech.com](http://www.intertech.com), [www.xerox.com.br](http://www.xerox.com.br)

## **FOURTHCHANNEL EXPANDS XML SUPPORT; INTEGRATES WITH ONDISPLAY'S XMLCONNECT**

3/13/00

ASP fourthchannel announced its support of XML business documents as a means of exchanging data with other applications and technologies. fourthchannel customers can now leverage XML to integrate their Internet commerce solution with their back-office applications, and those of their partners; XML connectivity also increases the product's attractiveness for licensing to OEM distribution partners. fourthchannel also announced its integration with XML Connect, a new product from OnDisplay Inc. that enables the secure and

reliable exchange of XML business documents. [www.fourthchannel.com](http://www.fourthchannel.com), [www.ondisplay.com](http://www.ondisplay.com)

## **ARBORTEXT ANNOUNCES SUPPORT FOR XHTML 1.0**

3/13/00

Arbortext, Inc. announced their product support of the W3C's Recommendation for XHTML 1.0. Available in Arbortext software products, this support provides customers a way to reformulate HTML 4 as XML. XHTML 1.0, a W3C Recommendation, allows authors to create Web documents that can be processed by XML-enabled software while still working with current HTML browsers. With XHTML 1.0, XML's promise of being able to mix and match known HTML 4 elements with elements from other XML languages is extended to more application domains including wireless devices and eBooks. Available immediately, XHTML support can be downloaded from [www.arbortext.com](http://www.arbortext.com). All Arbortext customers are eligible to receive this at no charge as an update from the Arbortext Support Web site. Adept version 8.0 and above and all versions of Epic support this update. [www.arbortext.com](http://www.arbortext.com)

## **ADOBE ANNOUNCES NEW VERSIONS OF FRAMEMAKER & FRAMEMAKER + SGML**

3/13/00

Adobe Systems Incorporated announced new versions of Adobe FrameMaker and FrameMaker + SGML software. New features offered in the FrameMaker 6.0 applications include enhanced web support and improved book management capabilities. Sophisticated XML output functionality and integration with Adobe Acrobat and Adobe GoLive provides a complete print-to-web, multichannel publishing solution. Multichannel publishing allows FrameMaker users to publish content to a variety of mediums—web, CD-ROM, print-utilizing leading technologies such as XML, HTML and PDF. FrameMaker 6.0 + SGML offers the same functionality as FrameMaker 6.0 with additional support for SGML, a required format for documentation in some industries. Along with FrameMaker 6.0, Adobe offers FrameViewer 6.0 software, an online viewer for electronic FrameMaker documents. In FrameViewer, the cross-references, indexes, and tables of contents that were created in FrameMaker automatically become hypertext links making document navigation easier. Users of FrameViewer can also add annotations to documents, which can be marked "public" or

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"private." Using Adobe GoLive software, and most other HTML editors, documentation specialists can generate cascading style sheets to create a consistent look and feel across all media, including paper or the web. With integration into Adobe Acrobat 4.0.5, FrameMaker 6.0 provides support for export to Adobe PDF. Adobe FrameMaker 6.0 software for Windows 98 and WindowsNT 4.0, Macintosh 8.5, 8.6 or 9.x, and Unix are expected to be available in Spring 2000 in the U.S. and Canada. French, German and Japanese versions are expected to be available shortly after the U.S. and International English versions. The U.S. version of FrameMaker 6.0 is expected to sell at an estimated street price of U.S. \$799 for Mac and Windows platforms, and \$1,329 for the UNIX personal version. The U.S. version of FrameMaker 6.0 + SGML is expected to sell at an estimated street price of U.S. \$1,449 for Mac and Windows and UNIX personal version. The U.S. version of FrameViewer is expected to sell at an estimated street price of U.S. \$49. FrameMaker will be available through adobe.com and Adobe's standard distribution channels.  
[www.adobe.com/products/framemaker](http://www.adobe.com/products/framemaker)

## JACADA SUPPORTS WAP & PALM WIRELESS DEVICES

3/13/00

Jacada Ltd. announced Jacada Wireless, a suite of solutions enabling wireless devices to quickly and easily integrate with existing applications. Jacada provides a complete software infrastructure to rapidly transform business critical systems into e-business solutions and to empower enterprise developers to build Internet applications. Jacada Wireless supports any WAP enabled device such as mobile phones, as well as PDAs such as the Palm VII. The newest addition to the Jacada product family bridges the gap between a company's mobile employees, partners and customers with its core enterprise applications. Using Jacada Wireless, any mainframe or AS/400 application can be delivered to WAP-enabled or Palm devices providing mobile users controlled access to valuable business applications and data. Jacada Wireless allows organizations to leverage existing business logic and data without requiring modifications to, or any special knowledge of, existing application code or data structures. Jacada Wireless automatically produces wireless markup language (WML) and HTML code that is interpreted by the wireless device. Jacada Wireless is based on the same e-business infrastructure software that supports Jacada's current offerings including Jacada for Java, Jacada for HTML and Jacada Connects. [www.jacada.com](http://www.jacada.com)

## NCOMPASS LABS LAUNCHES RESOLUTION 3.0

3/13/00

NCompass Labs announced the launch of NCompass Resolution 3.0, the out-of-the-box, Microsoft-centric Web content management solution that integrates site design, content authoring, publishing and site management. Resolution 3.0 extends the capabilities of version 2.1 to speed deployment and simplify distributed content management for worldwide e-business applications. The new release's highly visual browser-based authoring empowers non-technical users to create, manage, publish, and archive rich content while the open, object-oriented API permits rapid customization and integration of Resolution's Web content management capabilities. Resolution 3.0 is designed to integrate with an organization's existing infrastructure and allow content owners to be fully engaged in Web and e-business initiatives. Its new Web Client eliminates the installation and maintenance of desktop authoring software while allowing non-technical authors to use their browser interface and common desktop applications, such as Microsoft Word, to create Web content. Support for all of the world's major languages and time zone synchronization permit authors around the world to easily contribute up-to-date content regardless of their geographic location. The Resolution 3.0 Publishing API permits ready customization of the authoring interface and supports personalized, on-the-fly delivery of audience-appropriate content. New page version archiving and audit trail features permit rapid review of all site changes. Resolution 3.0 will be generally available March 31.  
[www.ncompasslabs.com](http://www.ncompasslabs.com)

## X12 COZIES-UP TO XML

3/9/00

The Accredited Standards Committee (ASC) X12 is accelerating its processes, expanding its reach to include XML and object oriented electronic data interchange (OO-EDI) and collaborating with related standards development initiatives. ASC X12's collaborative efforts with e-commerce organizations will help support the requirements of a broad base of users by bringing together the EDI foundation with XML development. To accomplish these objectives, the committee focused at its recent ASC X12 meeting on refining the goals of the newly created XML Task Group, which is charged with providing X12 input into complementary XML initiatives. This group covers the breadth of XML technical work and facilitates a forum for industry experts to address similar initiatives. In a parallel move, the X12 Committee actively participates in

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and formally endorses the Electronic Business XML (ebXML) initiative, which is working to provide an open XML-based infrastructure enabling the global use of electronic business information in an interoperable, secure and consistent manner by all involved parties. ASC X12 will pursue its XML development efforts within the framework being defined by ebXML. Furthermore, the committee encourages XML education and the development of emerging business requirements. By offering its expertise on "Procurement Using a Purchasing Card as Payment Method," the committee completed work on the OO-EDI standards pilot project, demonstrating a next generation of EDI utilizing unified modeling language methodology. The committee will continue to research and develop core components for plug-and-play solutions that utilize OO-EDI, XML, and other emerging syntaxes. [www.x12.org](http://www.x12.org)

*As we have argued before, this direction is inevitable. However it is good to see it acknowledged by X12. Standards groups sometimes bury their heads in the sand.*

## **VENDORS JOIN PACIFIC EDGE TO DEFINE PROJECT MANAGEMENT XML SCHEMA**

3/9/00

Pacific Edge Software Inc. announced that eProject.com, Great Plains, Onyx Software, PlanView, Primavera Systems and Welcom have joined Pacific Edge Software to define the XML schema for project management. The flexible, business-to-business schema will enable intelligent project data exchange between an organization's information systems. The coalition of collaboration technology, e-business solutions, CRM, project management, workforce management and PKM companies will work together to forge an open industry standard by making modifications, extensions and enhancements to Pacific Edge Software's XML schema for project management. eProject.com, Great Plains, Onyx Software, PlanView, Primavera Systems and Welcom will work with Pacific Edge Software to update the Project Management XML schema on a regular basis. The schema and its source can be viewed at [www.biztalk.org](http://www.biztalk.org) and [www.pacificedge.com/xml](http://www.pacificedge.com/xml)

*If the Workflow Management Coalition is still active they should get involved in projects like this.*

## **PAGEFLEX SIGNS LICENSE WITH HP FOR MPOWER**

3/9/00

Pageflex, Inc., a subsidiary of Bitstream, announced that it has entered into a worldwide license agreement with Hewlett Packard Company. Under the agreement, HP will license Mpower, Pageflex's XML-based marketing on demand solution. Pageflex Mpower gives enterprise organizations the ability, from a Web browser, to design and produce customized marketing communications on demand. Mpower enables them to transcend the limitations of "one size fits all" communications by tailoring messages to an audience, whether that's a group or a single individual. Mpower incorporates Pageflex's NuDoc XML page layout engine to generate print output documents on-the-fly. [www.pageflexinc.com](http://www.pageflexinc.com)

## **INTERFACE SYSTEMS ADDS WIRELESS SUPPORT TO L2I**

3/9/00

Interface Systems announced that its L2i products will support WAP via WML (Wireless Markup Language) and HDML (Handheld Device Markup Language). The Company said its MyCopy software will be the first L2i application to take advantage of the emerging wireless technology, which will enable brokerage firms to deliver information contained in confirms, margin calls and other documents to their clients via wireless devices. Interface Systems, Inc.'s Legacy-to-Internet (L2i) technology allows any Internet application to access and make full use of information stored on legacy systems. The company specializes in Internet bill presentment and payment, as well as electronic delivery of statements and other legacy content to the Internet, fax, email, and other destinations. Interface helps its customers extend the life, the reach, and the value of their existing information systems. [www.interface.com](http://www.interface.com)

## **DATA JUNCTION TO DISTRIBUTE XML JUNCTION FREE**

3/8/00

Data Junction Corporation announced general availability of XML Junction. This major new release enables e-Commerce and Business Integration professionals to XML-enable virtually any application or data source for a full range of e-Commerce integration, application integration and B2B data exchange projects. The product features automated

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creation of DTDs and XML documents as well as myriad data-mapping and data-manipulation capabilities. XML Junction is available only as a download at [www.xmljunction.net](http://www.xmljunction.net), and is free to download until July 31, 2000. The product contains online documentation and tutorials. Once this promotion has ended, XML Junction will sell for \$895. XML Junction leverages Data Junction's drag-and-drop interface and integration engine to rapidly map and transform more than 100 application and data formats to XML. DTDs and XML documents are automatically created with point-and-click ease, allowing data stored in any format (EDI, XML, SQL, Cobol, HL7, SAP, etc.) to be published to the web or exchanged with any external application – even data stored in complex hierarchical structures. Furthermore, data stored in XML documents and traditional applications can be manipulated to ensure compliance with any standard, such as those utilized by BizTalk, Schema.net, Arriba's Commerce XML and Financial Products Markup Language (FpML), as well as non-XML business-to-business standards such as Open Buying on the Internet (OBI) and RosettaNet. [www.datajunction.com](http://www.datajunction.com)

## VOICEXML FORUM ISSUES VERSION 1.0

3/7/00

The VoiceXML Forum announced it has completed the VoiceXML 1.0 specification, which is expected to expand the reach of the Internet by providing voice access to content and services. The Forum membership, which now numbers 79 companies, is reviewing the specification before it is submitted to the appropriate body for formal standardization. VoiceXML specification provides a high-level programming interface to speech and telephony resources for application developers, service providers and equipment manufacturers. Standardization of VoiceXML will: simplify creation and delivery of Web-based, personalized interactive voice-response services; enable phone and voice access to integrated call center databases, information and services on Web sites, and company intranets; and help enable new voice-capable devices and appliances. On the basis of the 0.9 version of the specification, released last year, many companies have already begun implementing VoiceXML in their products and services, and a market for third-party VoiceXML application development has begun to emerge. The VoiceXML 1.0 specification is based on research and development at AT&T, IBM, Lucent Technologies and Motorola, as well as comments from Forum members. 18 companies have joined the VoiceXML Forum as supporters since the 0.9 specification was issued,

including Brooktrout Software; Cisco Systems; ConApps; Gold Systems; Indicast Corporation; Intrado Systems; IP Unity; ITT Industries; Net Technologies, Inc.; Nokia Corporation; Oki Electric Company, Ltd.; Onebox.com; PipeBeach AB; S-Link Corporation; Spyglass, Inc.; SS8 Networks, Inc.; Vail Systems, Inc.; and Voyant Technologies, Inc. The 1.0 version of the specification, currently being reviewed by Forum members, is now available to the public on the Forum's Web site at [www.voicexml.org](http://www.voicexml.org)

*This is not as far out as some of you may think. Think of customer service applications that simply want to integrate voice, email, and web interactions. There are much more sophisticated applications, but the right XML app (we don't know if it is this one or not) will allow easy automated collection of these different content types.*

## EPRISE & INFORMATION HIGHWAY TO PARTNER ON CONTENT MANAGEMENT

3/7/00

Eprise Corporation announced it has formed a partnership with Information Highway, a leading Internet systems integrator headquartered in Stockholm, Sweden. The agreement calls for Information Highway to market, sell, and support Eprise Participant Server technology and services to customers throughout Europe as a core solution for Web content management. The two companies will work on strategic accounts within the high technology and financial services sectors. [www.ih.com](http://www.ih.com), [www.eprise.com](http://www.eprise.com).

## GE GLOBAL EXCHANGE SHIPS XML SUPPORT FOR APPFUSION

3/7/00

GE Global Exchange Services (GE) announced the commercial availability of native XML support within the AppFusion product suite of integration brokers, which includes GE InterLinX, Application Integrator, and the Enterprise System. This announcement follows months of beta testing with several clients. The addition of XML support allows the AppFusion product suite to recognize the data type it is dealing with; as a result, the integration brokers can perform business rules upon the business object. The integration broker can inspect certain fields and values, route the business object to multiple destinations based on the content of these fields and transform the fields to other values or to completely new business objects using data trans-

formation functions contained within the integration broker. The AppFusion product portfolio includes: Application Integrator, the transformation engine has a process for performing data transformation via a one-pass process. The one-pass process enables it to handle data transformation in a real time manner to facilitate speed. Application Integrator supports XML, EDI and user defined file formats including ODBC databases, and is fully internationalized to provide support for multi-byte character sets. GE InterLinx, a multipurpose integration broker that provides a platform upon which clients can centralize, expand, and manage their Enterprise Application Integration (EAI) and electronic commerce integration requirements. GE InterLinx allows clients to implement a flexible, standard method for integrating their new ERP systems with their legacy applications, extending those applications for e-commerce, integrating their web applications with ERP and legacy systems, and streamlining their entire supply-chain. [www.geis.com](http://www.geis.com)

## **EXTENSIBILITY INTRODUCES SCHEMASTREAM**

3/6/00

Extensibility, Inc. announces the upgrade of XMLschema.com an on-line service that streamlines the exchange of valid e-business grammars. The newly introduced SchemaStream allows any application utilizing XML schemas to take advantage of this Internet based service. This interface for automated processing supports the XML-Schema (Dec. 17 draft) and is being offered for a limited time free-of-charge for remote application access. XMLschema.com now offers: Conversion - automated across all major and emerging schema dialects, including DTD, XML-Schema (Dec. 17 draft), XDR, BizTalk and SOX v2; Validation - automated service that ensures schemas are accurate; Instance documents can be converted into schemas or an XML exemplar document can be generated from an existing schema; SchemaDOC - schema documentation allowing for output in browser viewable graphics or style sheets in any of the major or emerging dialects; and SchemaSource - a resource for posting and searching for schemas on the Internet. The first customer applying technology from XMLschema.com is Microsoft's BizTalk Framework. For a limited introductory period, SchemaStream is being offered free-of-charge. All other services are available to the public for free at [www.xmlschema.com](http://www.xmlschema.com), [www.extensibility.com](http://www.extensibility.com)

## **TEOCO ANNOUNCES WIRELESS SUPPORT IN PAGENGINE WEB**

3/6/00

TEOCO Corporation announced the availability of direct wireless support in Release 2.0 of its PageN-gine family of products. PageN-gine Web Site Publisher will now support concurrent delivery of HTML, XML and WML content. PageN-gine Portal Infrastructure will dynamically generate web content optimally formatted for a range of wireless devices including cell phones and PDAs and WebTV. Written in Java/EJB, PageN-gine's portable architecture allows it to be fielded on a variety of run-time platforms including Windows NT and 2000 and most UNIX operating systems, while operating against all major relational databases (Oracle, Sybase and SQL Server). PageN-gine is designed to support high-volume and mission-critical applications and its runtime, document and data processes are easily configurable to satisfy individual organizations' business needs. PageN-gine includes a migration feature that facilitates the representation of existing Web sites through the PageN-gine. PageN-gine Web Site Publisher uses template-based construction to allow both dynamic and static presentation of the corporate Web presence. The product centralizes control of the site's "look and feel" and appropriate technical standards while allowing for distributed content management and dynamically generated content such as navigation and section branding. PageN-gine reduces time consuming, expensive and error prone manual processes while significantly improving publishing time. PageN-gine Portal Infrastructure provides content delivery functionality packaged for the needs and revenue models of Web Portals and virtual businesses including private label branding of site content for multiple end displays and portal partners. Upcoming enhancements include user-profiling, which enables organizations to capture user and site usage information and automatically modify their presentation based on usage patterns and preferences. PageN-gine Release 2.0 will be available on March 31, 2000. [www.teoco.com](http://www.teoco.com)

## **FILENET & INTERWOVEN JOIN FORCES**

3/2/00

FileNET Corporation and Interwoven, Inc. announced a strategic partnership to develop an integrated solution aimed at the insurance, financial services, healthcare, government, manufacturing, utilities, and telecommunications sectors. As a result of this agreement, the companies have begun joint product development efforts. Both sales and

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marketing organizations will begin efforts to work together with customers and in the US, Europe, and Asia. The companies will address managing a rich variety of content from diverse sources whether destined for the Internet or Intranet. The partnership addresses this content lifecycle challenge with a solution to manage existing corporate documents along with information specifically developed for the Web. Although the information may derive from a variety of sources and providers, the joint solution will manage and deploy this content as appropriate. [www.filenet.com](http://www.filenet.com), [www.interwoven.com](http://www.interwoven.com)

*This is interesting. Imaging/workflow/document management combined with content management. If their sales forces buy into it there is a lot of potential for both companies.*

## **POET & LIAISON PARTNER TO ADDRESS ECATALOGS FOR NET MARKETPLACES & ASPs**

3/1/00

Liaison Technology and POET Software announced they have formed an alliance to serve the catalog content needs of B2B Net Market Makers and ASPs. Liaison's Dexter DE product with Adaptive Content Recognition (ACR) technology complements POET's eCatalog Suite, (eCS). Together these products create a complete eCatalog solution. They enable Net Market Makers and ASPs to build a critical mass of highly customized content from a diverse population of suppliers, in order to attract and retain buyers. POET's supplier-driven model and Liaison's dynamic-commerce model address unique needs of E-business. Together, they create a complete solution for the catalog needs of today's Net Marketplaces and ASPs. Liaison's Dexter enables Net Market Makers to quickly build content for their site by identifying and extracting catalog data such as product information, merchandising specifications, and pricing information from the Internet. Dexter also provides transformation and rationalization of the data to conform to numerous data formats, including XML requirements. This enables Net Market Makers to jumpstart their content aggregation efforts. The POET eCatalog Suite complements the Dexter approach with a model that enables the supplier to assemble, cleanse and manage eCatalog content, which is then highly customized for specific buyers and Net Market Makers. POET eCS provides suppliers with a self-service solution for all their eCatalog needs, including transformation into any XML dialect or legacy data format. Liaison's Dexter is deployed at the Net Market Maker's location to extract catalog data from suppliers' public Web sites, and rational-

ize it. This enables Net Market Makers to quickly build catalog content. POET eCS is deployed at the supplier's location and enables the supplier to provide custom catalogs to all Net Market Makers as well as eProcurement solutions from companies like Ariba, Commerce One and others. These solutions complement each other because Liaison's Dexter provides Net Market Makers with quick access to catalog content, while POET eCS provides suppliers with a mechanism for sending rich and highly customized data to multiple Net Market Makers. [www.liaison.com](http://www.liaison.com), [www.poet.com](http://www.poet.com)

## **ARBORTEXT ADDS PLATFORM SUPPORT FOR IBM AIX, HP UX & COMPAQ TRU64 UNIX**

3/1/00

Arbortext, Inc. announced the mid-March availability of an upgrade to Adept 9.0 that supports additional major operating systems so that customers have more options to deliver richer, more convenient and more personalized content to the Web. In addition to Adept 9.0.1, the products upgraded in this release include Epic version 3.0.1 and Adept Editor LE version 9.0.1. Also included in this upgrade are localized user interfaces for additional languages and product enhancements. Arbortext's Adept Editor and Adept Publisher are now available on Windows 95/98, Windows NT, Sun Solaris, IBM AIX, HP UX, and Compaq Tru64 Unix. Future support for Windows 2000 is planned. Turbo Styler. Turbo Styler, previously unavailable in Adept Editor LE, is a feature now available in every Arbortext product that helps users quickly and easily develop online stylesheets and prototypes for print stylesheets. Automatic DTD compile function. For customers who load an XML or SGML instance where Adept or Epic can't immediately locate the DTD, this enhancement allows the user to browse for the associated DTD on the local hard drive, on the network or on the Web, then automatically compile it, and launch Turbo Styler to create a stylesheet. Language support. Included with this product upgrade is a localized user interface in French, German and Spanish. Available mid-March, this product upgrade will be available as a patch. Arbortext customers on maintenance are eligible to receive this upgrade at no charge. Customers can download the patch directly or request a CD-ROM installation kit. [www.arbortext.com](http://www.arbortext.com)

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# BACK ISSUES

Issues less than a year old are usually available in both print and PDF for \$45. Sometime there are special offers at [www.fatbrain.com](http://www.fatbrain.com) (just search for "Gilbane"). Issues from 1993 thru 1998 are \$15 if in print. See [www.gilbane.com/back\\_issues.htm](http://www.gilbane.com/back_issues.htm) for more information.

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## CALENDAR

**XMLLeadership Conference**, April 3-5, Orange County Convention Center & Peabody Hotel, Orlando, FL. Chaired by Charles Goldfarb, this conference is designed for executives and covers business issues.

**AIIM 2000**, April 9-12, Jacob Javits Center, New York, NY. (301) 755-2603. The big annual AIIM event covering all aspects of document management from imaging to content management.

**Ground.zero3**, May 14-17, Park Plaza, Boston, (510) 647 3799. The Net Market Makers conference. The "in" place to be if you have anything to do with B2B.

**Dynamic Content 2000**, May 22-25, Sir Francis Drake Hotel, San Francisco, CA, (781) 871-9000. A new CAP Ventures' conference covering our favorite topic. This event replaces the U.S. Documentation conference.

**XML Europe**, June 12-16, at Le Palais des Congrès, Paris, France, 703 519 8190. The annual XML event in Europe produced by the GCA and chaired by Pam Gennusa.

**Extreme XML 2000**, August 13-18, Montreal, Canada, (703) 519 8190. "...A new, highly technical conference concentrating on the evolving abstractions that underlie modern information management solutions, how those abstractions enhance human productivity, and how they are being applied." Chaired by the editors of the MIT Journal on Markup Languages.

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