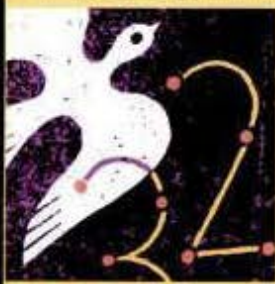


# INFO WORLD

The Voice of Enterprise Computing

## ENTERPRISE COMPUTING: 32-BIT DREAMS

**It's inevitable.** During the next two years a huge number of corporate sites will shift from Windows 3.1 to a 32-bit operating system. Some companies have already completed the process; others are in the middle of migrating. **We offer**



**advice from those familiar with the problem** on the planning, project management, and diplomacy skills you'll need **to keep your 32-bit dream from becoming a nightmare.** See page 81.

## XML à la Microsoft

Company eyes new markup format

*By Lynda Radoosevich*  
IN AN EFFORT to boost the Extensible Markup Language's role in transforming browsers into sophisticated front-end clients, Microsoft plans soon to propose an Extensible Markup Language (XML) style sheet language to the World Wide Web Consortium (W3C), according to sources close to the development. The move, if successful, would enable developers to create the kinds of browser-based database forms that many are considering building

"It's a big win for the users because neutral data is where people want to be in the long run," said Mark Walter, editor of the *Seybold Report on Internet Publishing*, in Media, Pa. XML is attractive to Microsoft—which wants to increase the appeal of its Internet Explorer 4.0 browser and slow down the adoption of Java—and to developers who believe Java is not yet mature enough for building the client side of business applications. "You could still use a Java ap-



### BlackWidow beta shines: Seagate Software beefs up Crystal Info's data mining capabilities. 99

### Winning WinFrame: Citrix opens up Windows applications to remote-access users. 99

**WinFrame beta pros and cons**

- WinFrame supports load balancing, Web browsers, and Unix and Macintosh clients.
- Enterprise shops using WinFrame will need to invest in server hardware.

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## HP revitalizes server lineup

### Web-based tools on tap Unix system prices cut

*By Cara Cunningham*

HEWLETT-PACKARD is developing a line of pocket-size Web servers that, with a little help from Java, aim to reduce some of the frustrations encountered with remote systems management.

By January 1998, the company plans to release the first product in this family, called Secure Web Console. This modem-size device,

> CONSOLE page 24

*By Cara Cunningham*

AIMING TO PROVE that its Unix-based RISC servers can take on Windows NT-based Intel servers and Sun Solaris servers without blowing IT budgets, Hewlett-Packard next week will release a new PA-RISC 9000 workgroup server.

Following new server releases last month from Compaq and Sun, HP hopes to be a

> SERVERS page 24

*Distributed computing*

## Novell kicks Java plans into high gear

*By Matthew Woollacott*

NOVELL IS PREPARING to launch two major Java-based initiatives as part of an overall effort to redefine the company.

In the near term, Novell on Sept. 17 will outline its plans to extend its Border and Collaboration Services using Java technology. Scheduled to take place in New York, this initiative will show how Java can be used in conjunction with the next major upgrade of NetWare, code-named Moab; Novell Replication Services; Novell Directory Services; ManageWise; and a GroupWise 6.0 upgrade, code-named Jolt, to create an extended enterprise network.

For the long term, Novell is working on a new distributed computing architecture that leverages Java to bring location-independence to data stored on the network.

The new architecture, called the Java Network Framework (JNF), is

**SPECIAL NEWS REPORT** Immature standards are hampering the emergence of directory-enabled applications

## Directory chaos

*By Emily Fitzloff*  
**J**UST ABOUT everybody agrees that the next generation of intelligent network applications will have to be based on directories. After all, in a networked world, both administrators and end-users need a map to get around. The promise of directories is that they will provide a single tool

**MICROSOFT Exhibit 1017**





## Opinions in this issue

**Mark Tebbe** SAP won't say R/3 is difficult to install, but it's trying to make it easier. **108**

**Bob Metcalfe** Centra's Symposium demonstrates how effective online classrooms could be. **107**

**Nicholas Petreley** I want Navio's Enhanced TV and so will you once you see it. **108**

**Ed Foster** Good documentation and practices are hard to find. **68**

*Hummingbird hooks up PCs to Unix with new Java and Web capabilities, page 47*



## NEWS

**3** Sun plans to complement its Java strategy with a series of WebTop servers next year.

**6** Microsoft will ship Hydra for NT 4.0 in the fourth quarter.

**6** Lagging technologies cloud the release of Microsoft's NT 4.0 Enterprise Edition this month.

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**8** Two recent moves have strained dealings between Netscape and Lotus.

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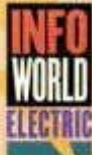
**40** An IBM data-mining tool helps expose health-care fraud.

## NETWORKING

**1** IS is using metadirectories and LDAP to simplify management of multiple directories.

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# THIS WEEK



For all the highlights of this week's *InfoWorld Electric*, go to <http://www.infoworld.com>.

## FORUMS

Office 97: Should Microsoft open up its file formats to the public domain?

Design flaws: Bad software design got your goat? Tell it to BugNet.

Navio Enhanced TV: Would you buy one? Nicholas Petreley wants to know.

Total cost of ownership: What's the best way to get an accurate TCO?

## OPINIONS

Plugged in: Life would be easier if Microsoft published the Office 97 file formats.

Inside the Firewall: Home pages on the company intranet are not as strange as you might think.

## PRODUCT REVIEWS

The Intel Device View for Web and Intel Express Management Module solution allows administrators to graphically manage hubs from a standard Web browser.

IBM's ViaVoice and Dragon Software's NaturallySpeaking are both effective speech-recognition solutions.

## BOOK REVIEWS

Adams Electronic Job Search Almanac 1997, from Adams Media.

## THE INFOWORLD SCOOP

For a brief summary of the latest news, reviews, interviews, features, and forums, subscribe to our weekly newsletter, *The InfoWorld Scoop*, at <http://www.infoworld.com/launch/register.htm>.



TIC CEO Stephen Walker takes the hot seat on

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*Summer's end means that Cringely will deal with more interesting events than reading, page 107*

*Intel empowers workstations with 440LX chip set, page 32*





## PIPELINE

### SHIPPING

FreeGate this week will roll out its Multi-Service Internet Gateway family-

ly, which will enable small businesses to support mission-critical applications through a reliable, permanent connection to the Internet. The gateway integrates an IP router, Web server, dynamic packet-filtering firewall, e-mail, FTP, Domain Name System, Dynamic Host Configuration Protocol servers and a remote management system. Shipping now, the Multi-Service Internet Gateway product family will start at a price of \$5,395, based on configuration. FreeGate Corp.: (408) 617-7000; <http://www.freegate.com>.

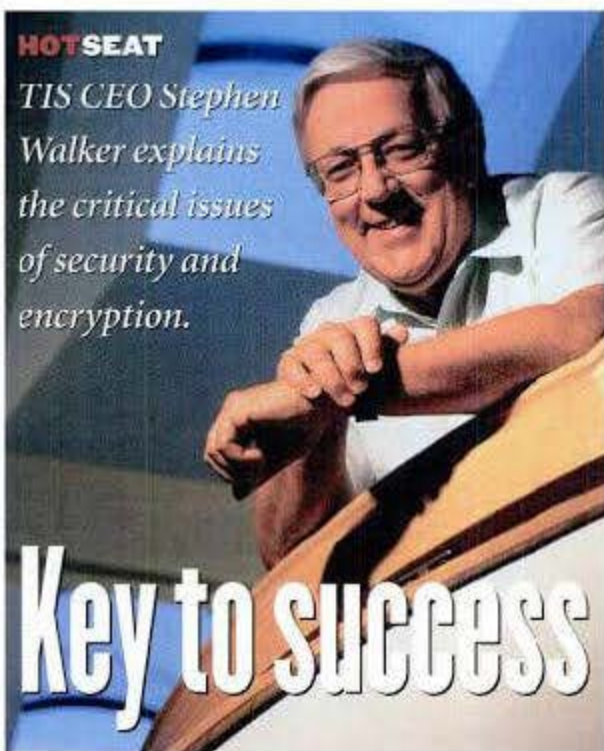
NET-IT SOFTWARE announced its Net-It Now desktop-to-Web document builder, which will be bundled with Netscape Communicator Deluxe Edition. Net-It Now leverages Net-It Software's JDoc technology which creates compact, cross-platform replicas of desktop documents that can be viewed with a Web browser and no additional plug-ins. Net-It Now is expected to ship this week with Communicator Deluxe Edition, which will be priced at \$79. Net-It Software Corp.: (415) 551-0600; <http://www.net-it.com>.

### ANNOUNCED

HUMMINGBIRD COMMUNICATIONS last week released Common Ground Web Publisher 4.0, a suite of Windows NT applications that provide automated intranet publishing and universal document viewing with a Java-enabled Web browser. Documents are converted automatically to Web-ready DigitalPaper, a format that maintains the graphic design of the original document. The product is set to ship this month priced at \$4,995 per server, which includes licenses for as many as five users to publish an unlimited number of documents. Hummingbird Communica-

### HOTSEAT

TIS CEO Stephen Walker explains the critical issues of security and encryption.



STEPHEN WALKER is president, CEO, and founder of Trusted Information Systems (TIS), the Glenwood, Md., developer of the Gauntlet Internet firewall. Walker, who was a computer security expert for the U.S. Department of Defense before founding TIS in 1983, testified before Congress in July on the controversial key escrow debate. His stance on government control over encryption technology export is somewhat unique in the software industry: There is an acceptable middle ground between government's need for recovery keys to decrypt criminal communications and the need to protect the privacy of communications. In a conversation with *InfoWorld* Senior Editor Lynda Radosevich, Walker explained his position on encryption export and other hot Internet security issues.

**What level of encryption does Gauntlet 4.3 provide for international use?**  
We offer 56-bit DES without key recovery. We also offer DES encryption with key recovery because there are companies that want key recovery in order to recover their

tion because it has to protect its stuff from everybody else but cannot afford to have an employee encrypt something and have no way to get it back.

We also have approval to offer on Gauntlet triple-DES or 128-bit encryption with key recovery. In addition, we have built a crypto-service provider that is compatible with the Microsoft cryptographic API [thereby enabling companies to add encryption capabilities to Windows applications and establish internal key recovery systems].

In March, we got approval from the Commerce Department to ship 128-bit encryption or triple-DES encryption with key recovery in our crypto service provider. We are testing it with a European commission pilot project in five countries right now.

**What level of encryption do you believe is needed to provide rock-solid security?**  
If you're building a system that's going to be around for a long time — between four and 15 years — you'd better use triple-DES or 128-bit encryption today. But if you're just protecting e-mail that isn't going to matter two weeks or a year from

*We have now installed more than a dozen key recovery centers in seven or eight countries.*

## Marimba, friends support data replication protocol

■ Proposed standard sent to W3C

By Lynda Radosevich

NEW YORK — Marimba and a cadre of partners, excluding Microsoft and IBM, last week announced the submission to the World Wide Web Consortium (W3C) of a new protocol for data replication over the Internet.

Backing the submission during the announcement here at the Java Internet Business Expo were Netscape Communications, Novell, Sun Microsystems, and @Home Network.

Based on the incremental update capabilities in Marimba's Castanet products, the Distribution and Replication Protocol (DRP) is an enhancement to the HTTP protocol.

DRP aims to reduce Internet congestion resulting from software distribution and pushed content updates, said Arthur van Hoff, chief technical officer and founder of Marimba.

Internet congestion is reduced by using a differential update process that only sends the portion of a Web page or program that requires updating, van Hoff said.

Other companies endorsing the proposed protocol include Fujitsu, PeopleSoft, Sybase, Symantec, and Toshiba.

Notably absent from the endorsee lineup were Microsoft and IBM/Lotus, but officials at the announcement downplayed the giants' no-show.

"I don't think you should look at the list of those who are missing," said Tim Berners-Lee, the W3C director who was on hand to endorse the proposal.

Berners-Lee explained that the W3C was the starting point for discussions on the proposed protocol.

DRP may overlap with other W3C proposed protocols, including one called Distributed Authoring and Versioning (DAV).

However, DAV targets content creators, and the W3C working groups will look to find synergies and come up with the most comprehensive recommended protocol, van Hoff said.

Van Hoff declined to predict when DRP might move to the W3C recommendation stage.

Once DPR becomes a W3C recommendation, Netscape, which already distributes the Castanet Tuner client with Communicator, will work to incorporate the new protocol quickly into its products, said Danny Shader, vice president of developer relations at Netscape, in Mountain View, Calif.

Although it is just in the proposal stage, DRP has a modicum of maturity: Marimba has already tested in its laboratories prototype products that use DRP with products from Netscape and other vendors, van Hoff said.

Marimba Inc., in Palo Alto, Calif., can be reached at <http://www.marimba.com/>.

## THE WEB HOTLIST

Web sites worth checking out

- Internet2** <http://www.internet2.edu>  
Learn about Internet2, a collaborative effort of more than 100 universities to develop next-generation network applications and a high-speed communications infrastructure. The Library contains an overview of the project's architecture.
- Control Data** <http://www.cdc.com>  
Systems integrator Control Data Systems uses the fictional city of Rialto to promote its products and services. Visit the Customer Showcase for case studies or Industry Hotlinks for links to a variety of Internet-commerce Web sites.
- BEA Systems** <http://www.beasys.com>  
Middleware vendor BEA Systems offers a well-designed site devoted to its software and services. Among the topics covered in white papers are Internet com-