

UniNews

UniForum. The International Association of Open Systems Professionals

March 13, 1996
The Newsletter For UniForum Members Volume X, Number 4

UniForum Announces New Corporate Sponsors *Additions increase association's diversity*

The UniForum Association is pleased to announce the addition of three names to the ranks of our corporate sponsors: the Motorola Computer Group (MCG) of Motorola, Inc.; Enlighten Software, a division of Software Professionals, Inc.; and Lucent Technologies, a newly formed division of AT&T.

MCG (<http://www.motorola.com>) is a part of the General Systems Sector of Motorola, which is one of the world's leading providers of wireless communications, semiconductors and other electronic systems and services. Located in Tempe, AZ, MCG is focused on developing, manufacturing, selling and supporting a range of board-level products, Unix-based multiuser systems, distributed computing server platforms, realtime systems and client/server computing solutions.

Enlighten Software in San Mateo, CA (<http://www.equinox.sftw.com>), provides auto-

mated system administration software for distributed, heterogeneous environments. Applications support many Unix platforms including Sun Solaris, IBM AIX, HP-UX and SCO Open Server. The division also supplies systems management software products and services.

Lucent Technologies, located in Murray Hill, NJ (<http://www.att.com/ssg>), is the new systems and technology company formed from AT&T's recent restructuring. Backed by research and development at Bell Labs, Lucent Technologies will design, build and deliver public and private networks, communications systems and software, consumer and business telephone systems, and microelectronic components.

UniForum looks forward to working with these new sponsors to help advance the technology, marketing and understanding of open systems. ♦

UniForum Celebrates Milestone Anniversary *Looking back on 15 years of change and growth*

UniForum celebrates its fifteenth anniversary this year! There can be no other industry in history that has changed and grown as much as ours over this period of time, and it is worth taking a moment to look back to see how far we have come.

UniForum's success has always been linked to the people who dedicated the time and effort required to make the idea of a Unix and open systems organization work. In this issue of *UniNews* and in subsequent ones, we will talk to some of those leaders who are most responsible for UniForum's past and its positioning for the future, asking them about their thoughts on the association and the changes they have seen in the industry.

Jim Bell, director of corporate alliances for Hewlett-Packard in Cupertino, CA, has been an important figure at UniForum for over nine

years, serving both as president and board member. This year, he also received the coveted UniForum Achievement Award at the UniForum Conference in San Francisco.

When asked about the changes in information technology that have affected UniForum, Bell cited the evolution of the open systems community from a "small, if energetic" movement centered on Unix and portability to a mainstream industry that emphasizes more inclusive benefits like interoperability. In adapting to these changes, he said, UniForum has filled "a unique niche in the ecology of open systems."

Kenneth Linhares, attorney from the law firm of Fenwick & West, also stressed the unique role of UniForum. Linhares was present at the first meeting of "/usr/group"—the ini-

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Association Memberships for Open Group End Users

Offering based on new alliance between UniForum and The Open Group

The Open Group and the UniForum Association have announced that all corporations belonging to The Open Group will receive blocks of memberships in UniForum. These memberships will be made available to individuals at the corporations.

The Open Group was recently formed by consolidating two leading consortia for open systems development: Open Software Foundation (OSF) at Cambridge, MA, and X/Open Co., Ltd. with offices in Reading, U.K.

Major UniForum membership benefits received by individuals at current and new end-user companies of The Open Group include:

- Voting privileges for UniForum Board of Directors elections
- Qualification to serve on UniForum committees such as the Technical Steering Committee and the Editorial Advisory Board
- Subscriptions to all UniForum publications, such as *UniForum's IT Solutions*, *UniNews* and the *Open Systems Products Directory*
- Access to the online *Open Systems Products Directory*
- Discounts on all UniForum conferences.

"We are extremely enthusiastic about this announcement that will offer the customer members of The Open Group the significant added benefit of membership in the UniForum Association," said Peter Shaw, vice president of marketing and sales at OSF. Shaw stated that the new alliance with UniForum further strengthens the ties among end users and the various industry consortia supporting open systems development. ♦

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UniForum Celebrates Milestone Anniversary

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tial incarnation of UniForum—and helped incorporate the fledgling organization. Linhares stressed that unlike most trade associations, UniForum is “a hybrid for both corporations and users. They’ve done a good job of maintaining this balance in their organization over the years.”

Former UniForum president Bruce Weiner stressed the phenomenal growth of the industry when asked about what has impressed him the most over the years as a UniForum member. Weiner is president of Mindcraft, a software testing laboratory in Palo Alto, CA, as well

as president of Mediacraft, which develops Web site technology. He is also one of UniForum’s founders and the organizer of the first two UniForum trade shows.

Illustrating his point about industry growth, Weiner recalled that in the early 1980s, a market forecaster predicted that the Unix industry would become a \$9 billion market within ten years. “Everyone thought she was crazy,” he said with a chuckle, “and actually, it turned out that she was wrong—but on the low side! This industry has become much bigger.”

Tony Wasserman, a long-time UniForum friend and member and now editor-in-chief of the newly formed UniForum Press, pointed out

how membership has changed over the years. “People who worked with Unix back then were highly technical and largely from the research community.” He added that UniForum’s membership base is much more diverse now and that the association has provided a “valuable forum” for different people to share issues and discuss technology.

Echoing remarks made by other members, Wasserman also mentioned that UniForum can’t rest on its laurels. “We have to keep moving forward,” he said. “The association and the industry can’t ever take Unix and open systems for granted.” ♦

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Tom West: The Soul of a Development Manager

Data General veteran expanding NUMA, open systems technology

By Richard Cole

The book *The Soul of a New Machine* by Tracy Kidder was published in 1981 and became an improbable—but instant—best-seller. Describing the development of a new 32-bit minicomputer at Data General, Kidder was able to create a lively and suspense-filled narrative out of a highly technical subject by clearly explaining not only complex technology but also the equally complex people who developed it. At the center of this story was Tom West, head of the engineering team that developed that new machine.

Even now, 15 years later, Tom can still find himself recognized as “that manager in the Kidder book,” and he has to admit that “the book has changed my life, in some ways, forever.” He feels that Kidder did a thorough and accurate job of reporting, although he does admit that it was “a bit disarming” to find Kidder interviewing his children at the breakfast table.

It was also strange for Tom to see himself as a character in someone’s book. On the one hand, he was portrayed as an inspiring leader. As Kidder put it, “West . . . had a way of making ordinary things seem special; in this case a 32-bit Eclipse was being transformed into the occasion for an adventure.” On the other hand, his character remained an enigma—sometimes intriguing, sometimes even vaguely threatening—to even his closest coworkers. One engineer is quoted as saying, “When I first went to work, [West] was my boss, and it was amazing. Half the time I couldn’t figure out what he was saying. He expected you to be on his secret wavelength, and if you weren’t, he’d be disappointed in you.”

Describing his initial reaction to the book, Tom recalls, “Tracy didn’t show anyone what he was writing for about two years. And then one night I get 200 pages in galley proofs. Well, reading that was like getting 200 pages of psychoanalysis all at once.”

Although the book made West one of the first techno-celebrities, he admits that perhaps he would have been happier to have “remained anonymous,” and indeed, Kidder’s book describes only one segment in a long and varied career.

Digital Clocks

Tom’s early life had little to do with computers. As an undergraduate with middling grades

at Amherst College, he was officially declared an “underachiever” and expelled for a year, the better to improve his character. Tom spent the year happily playing folk guitar in coffeehouses around Boston, returning to finish a bachelor’s degree in physics.

Tom had spent summers working at the Smithsonian Institution in Washington DC, and he found a full-time position there straight out of college. Among other projects, he designed and built digital clocks that were used in NASA’s space program. The clocks were used with tele-



“Engineering is—and has to be—a creative profession.”

scopes to photograph and accurately calibrate satellite orbits, and each clock had to be synchronized and physically placed at different sites around the world. Tom spent several years traveling to remote areas and setting up the clocks. The job was fairly straightforward, though it did have its interesting moments. In Colombia, he was thrown in prison for a brief time because his clocks looked to the authorities like secret weapons.

Toward the end of the 1960s, funding for his projects began to dry up, so Tom decided to get another job. Intrigued by computers, he checked out what books he could find on the subject at the local library and started to read them on his back porch. Six weeks later, he landed a job at RCA where he essentially taught himself to be a computer engineer.

RCA gave him increasingly important projects, but he found the atmosphere confining, so he moved to Data General where he soon became a development team manager. For several years, he “pounded out 16-bit Eclipses.” Then, in 1977, he was picked to manage the team that developed the first 32-bit Eclipse. Code-named Eagle, the computer was designed to go head to head with the 32-bit VAX series from Digital Equipment Corp. As such, the 32-bit Eagle had to be not only as good but better than any 32-bit minicomputer on the market. West and his team worked seemingly impossible hours against seemingly impossible deadlines and finally completed the computer known as the Eclipse MV/8000. It outperformed the VAX machines and became the first in a series of successful minicomputers.

Laptops in Japan

In the fall of 1979, their work completed, the Eclipse development team was disbanded and Tom became manager of Japanese business development for Data General. “Japan was great,” he says, describing visits in the country in the early 1980s. There were relatively few American business people in Japan at that time, and even Tokyo wasn’t as Westernized as it is today. “Every time you turned a corner,” he says, “there was something fascinating that you didn’t understand.”

The period was an exciting one for Japanese technology. Hewlett-Packard had just released a bombshell report suggesting that Japanese computer manufacturers were surpassing the U.S. in terms of quality. U.S. manufacturers were going through a period of deep angst, examining Japanese management and manufacturing techniques to try to find the secret of their success.

Tom studied Japanese through Berlitz courses in Massachusetts and flew to Japan “eight or 10 times” a year. He worked at Nippon Mini-computer, a manufacturing company in which Data General owned a controlling interest. With Nippon’s engineers and managers, he oversaw the development of the DG/One, the world’s first laptop computer. Tom asserts that the DG/One was also the first computer developed through a complete, one-to-one collaboration between American and Japanese engineers. The Americans contributed PC technology. The Japanese added a CMOS micro-processor, flat-panel displays, the first 3.5-

inch floppy diskette drive and the first 3.5-inch hard diskdrive.

Unix and NUMA

Tom returned to Eclipse development in 1983, working on several generations of Eclipse machines. Since 1988, he has been influential in developing several products for Unix-based platforms. In 1988, he spearheaded the development of Aviiion, Data General's Unix-based product line of servers. In 1992, he oversaw the creation of the Clariion business unit responsible for the development, marketing and sales of open storage systems for the commercial Unix market. "Open systems are simply the thing of the future; there's no question about it," he says. "And the systems keep getting more and more open."

Currently, he is working on projects involving NUMA (Non-Uniform Memory Access), a clustering technology that allows many processors to work together. As Tom points out, since Intel chips and the motherboards supporting these chips have become so powerful, their combined performance now approaches main-frame levels. The trick is how to combine them in the best manner. Microsoft, Compaq, Data General and a host of other companies are trying, each in their own way, to link processors together. The advantage with NUMA, Tom says, is that applications from one processor can run almost unmodified on another one in the cluster. "You get all the Intel benefits like performance and low cost," Tom says, "while preserving the investment made in applications and training."

Tom adds that Data General is working with a number of other companies. "This is an issue where a whole lot of fragmented efforts are going to defeat the cause." When questioned about the number of processors that might be ultimately tied together, he only says, "Who knows? It's a crawl, walk, run sort of thing. We'll just have to see. This is a software issue. It's like symmetric multiprocessing [SMP] in Unix; it takes a long time to get the software to work."

When asked about other projects, West laughs and says he can't talk about specifics. However, he does say that "if you buy the notion that the world is going to be made up of Intel motherboards connected together in various ways over high-speed networks, then the way you think about input/output, mass

ABOUT TOM WEST

Age: 56

Current Position: Senior vice president of advanced development, Data General Corp.

Years at Data General: 24

Place of Birth: Westchester County, New York

Last Book Read: *Primary Colors*

Car He Drives: 1994 Saab 9000

Favorite Nonwork Activity: Playing the guitar, sailing around the Boston and New England area.

On Microsoft: "I'm not as anti-Microsoft as some others. I think they play an important role when you need identical systems in order to attract applications."

Open Systems Pet Peeve: "I wish [the open systems community] could expand its vocabulary a little bit. It's created so much jargon that the language has lost any content. I can read a whole article and realize *nothing happened*. People assume that a lot of these *noms de jour* like 'openness' and 'interoperability' have some sort of magical meaning. It's important that systems are open, but it's also important that we get on with the next concept."

storage and other concepts will change, too. So it's not just about the computer engine, which is what NUMA is all about; it's about scaling other parts of the system as well."

Next-Generation Engineers

Tom has been around long enough to see a new generation of engineers assume important roles in today's computer industry. He mentions that "twenty-something" engineers seem far more career-oriented than engineers from the 1970s; they have a clearer sense of what they want to do, how to get there and how much money it is going to cost. "In the 1960s, there were few computer science curriculums and computer tools around," he says. "You'd get people with pure science degrees, math degrees, history degrees. We had a lot of disciplines. Now the people we're hiring have

more trade-related degrees like electrical engineering or computer science."

Do today's highly focused engineers have the same level of creativity as engineers from the wild and woolly early days of the industry? "That's a potential problem," concedes Tom. "In the past, people joined the computer industry because they didn't want to sign up for the whole nine yards of Commercial America. Now, the kids today have signed up for that before they enter college."

At the same time, Tom objects to the notion that today's engineers—and engineers in general—are one-dimensional and too concerned with highly controlled environments. "The whole business of control is not limited to engineers," he points out. "People in finance, say, or manufacturing have the same problem. It's important to think one-dimensionally in working through a difficult problem. But the stereotype goes too far in describing the whole person."

West has seen more than a few changes over the years. "When I first started and you were at a cocktail party and you told people you were in computers, they shrunk away to the other side of the room. Now people want to tell you about their kid's Macintosh and their hard drive." At this point in his own career, he says, "There aren't many mountains left to climb." However, he looks forward to new challenges and to introducing new engineers to the field. "I'd like to spend more time getting some of these kids onto projects that they're going to be proud of when they get to my point in life." ♦

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UniForum Offers the Best at Chicago, Toronto Comdex Shows

Conferences, showcases and tutorials scheduled

UniForum will definitely be a major presence at this year's Comdex shows in Chicago and Toronto as it offers "The Best of UniForum Conference and Tutorial Programs"—one of the most comprehensive sets of conference and educational programs the association has ever assembled.

In Chicago, at Comdex Spring, the conference and showcase are scheduled for June 3-5 and the tutorial program for June 6-7. In Toronto, at Comdex Canada, the tutorial is scheduled for July 8-9 and the conference and showcase for July 10-12.

As a special bonus, all attendees of the UniForum Conference and Tutorial Program will automatically become general members in the UniForum Association for one year. Member benefits include a subscription to *UniForum's IT Solutions*, *UniNews*, the *1996 Open Systems Products Directory*, discounts at UniForum seminars and conferences and much more!

A complete description of the conference and tutorial programs is found below. Conference tracks and sessions are the same at the Chicago and Toronto shows, with the exception of Toronto-only sessions marked with a (T). The tutorial sessions are the same at both locations. ♦

For more information, contact:

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CONFERENCES

Conference programs will address the concerns of today's IT professionals: executives, managers, technical staff and developers who need to choose, implement and maintain the best technologies to support today's fast-moving businesses.

TRACK ONE: "Using the Internet and the Web for your Competitive Edge"

How far have Internet and World Wide Web technologies come, and how can they give you a competitive edge in business?

Sessions

Firewalls and the Future of Internet Security

Chair: Rik Farrow, Unix security consultant and author

This session includes an in-depth discussion of firewalls, including firewall options and the level of security provided by each.

Using the Internet for In-House Communications (Including Groupware)

Chair: Stephen Tolchin, president, WebFlow Corp.

How can internal corporate intranets be designed to arm employees with tools to access the Internet's vast array of resources and also to create powerful media for business communication?

Electronic Cash and its Alternatives

Chair: Corinne Morre, associate executive director, CommerceNet

With the majority of companies turning to the Internet today to broaden their marketability, what are the pros and cons of electronic cash and what alternatives are available?

Java: How Hot Is It?!

Chair: Geoffrey Baehr, chief network officer, Sun Microsystems

What is it about this interactive language that turns Web pages into dynamic documents?

Advanced Internet Technologies (T)

An in-depth look at security concerns and tools, efficient information searching methods and the newest developments for networking, like ISDN, frame-relay, ATM and

the more conventional T-1/T-3 leased line.

Introduction to HTML & HTTP (T)

An overview of the technologies that make the World Wide Web happen: the Hypertext Markup Language (HTML) and the Hypertext Transmission Protocol (HTTP).

TRACK TWO: "Business-Critical Architecture"

If you're serious about data warehousing, enterprise-wide distributed computing and other business-critical architectures, be sure to attend this track of sessions and tutorials devoted to new concepts and practical applications that can improve your business processes.

Sessions

Integrating Window Desktops with Unix-based Servers (T)

This session will explore options for enabling desktops to access the robust services of Unix-based systems, without sacrificing users' familiar environments.

Choosing and Integrating the Right Server: Unix and Windows NT (T)

This panel will examine the pros and cons of Unix and NT, presenting perspectives on each platform's capabilities today and in the future. Users of both systems will present their Unix and NT deployment, the logic behind their configurations and the integration within their two environments.

DCE: Productive or Just Promised?

Chair: Jean Bozman, research manager, Unix & Server Operating Systems, IDC

The Distributed Computing Environment (DCE) standard is used to develop and maintain applications that run over multiple operating systems and network protocols. Is it delivering on its promises to simplify complex network management?

Strategies for Developing Multi-Tier Applications

Chair: Jim Lenahan, director of consulting, Enabling Technologies Group

Issues to be addressed include what architecture model and tool sets should be used, which applications should be deployed and who is going to integrate the solution.

Message-Oriented Middleware and Supporting Distributed Applications

Chair: Max Dolgicer, director, International Systems Group, Inc.

How can message-oriented middleware be used to keep control of thousands of user accounts and system configurations, all of which are in a constant state of change?

Options for Integrated Systems Management

Chair: Frank Henderson, director, Network Strategies & Design Practice Group

Effective strategies will be examined for managing Unix and Windows NT/Windows in heterogeneous environments.

Software Quality: Debugging, Deploying and Driving Distributed Applications

Chair: Chuck Boudreau, director, Technology Infrastructure

This session details what you need to do to ensure that your software performs as required, while allowing your information system to evolve with new generations of technology.

OLE Integration with Unix Object Systems—Fact or Fantasy?

Chair: Joe Quagliani, sr. product manager OLE, Microsoft Corp.

Object-oriented technologies, Microsoft's OLE and Unix vendors appear to be following different courses. This session will examine the similarities and differences in the various approaches and present options for integrating these environments.

Successfully Implementing DCE (T)

This session will present actual users of DCE who will discuss their implementations and describe lessons learned.

Windows and Unix (T)

How will Windows, Windows NT and Unix coexist in the world of networking, communications and heterogeneous environments?

TUTORIALS

The UniForum Tutorial Program offers you the most comprehensive technical and managerial educational experiences that the open systems industry has to offer. With a two-day format, instructors can cover more information in greater detail. The tutorials are intensive, informative, practical and filled with information relevant to your continuing professional development.

Unix and Advanced Internet Security

Instructor: Rik Farrow, security consultant and author

Who Should Attend: System and network administrators and managers, IT auditors and managers, computer programmers, security administrators and individuals involved in providing Internet service and securing network gateways.

Level: Intermediate to advanced

Prerequisite: Attendees should be familiar with Unix and with TCP/IP networking.

Overview: While the Internet is becoming an essential part of your infrastructure, it also invites hackers to probe or attack your networks from anywhere in the world. This two-day program provides the basis for practical Unix system and Internet security.

Designing and Building Your Enterprise World Wide Web Server with Unix

Instructors: John Stewart, lead system administrator, Cisco Systems

David Kensiski, software development manager and network design engineer, MCI

Who Should Attend: This is a must-attend course for all computer professionals thinking of building a Web server.

Level: Introductory to intermediate

Prerequisite: Attendees should have a basic knowledge of Unix system administration to fully understand installation and configuration issues.

Overview: This course provides attendees with a comprehensive overview of the Web with a focus on building, configuring and maintaining a Web server. In addition, you will be provided with a complete overview of the authoring and publishing process, including design issues and advanced features such as forms, Java and Java script programming, CGI-bin script programming and image maps.

Bonus: All attendees of the Web Tutorial will

receive a free copy of the *Establishing a World Wide Web Server: A System Administrator's Guide* published by UniForum.

The Open Data Warehouse

Instructors: Dr. Brian Boyle, managing director, NOVON Research

Dr. Pamela Gray, president, The Winta Group

Who Should Attend: All serious information systems professionals responsible for planning and implementing data management systems where data reliability, integrity, security, maintainability, efficiency or responsiveness are needed.

Level: Introductory to intermediate

Overview: On day one, the tutorial introduces the concepts, tools and terminology underlying current commercial implementations, explores the potential benefits of applying selected aspects of these technologies and presents the associated limitations and risks. The 12-Point Open Data Warehouse Planners and Purchaser's Checklist will be discussed. On day two, the tutorial builds on prospects and problems of data warehouse applications uncovered in day one and sets forth a specific road map for successful implementation while maintaining open systems compliance and minimizing the complexity that leads to most failures.

Enterprise Distributed Computing Architecture for the 90s—the Middleware Solution

Instructor: Max Dolgicer, director, International Systems Group, Inc.

Who Should Attend: All computer professionals, managers, consultants and computer users/programmers interested in attaining a basic understanding of the Unix operating system and middleware.

Level: Intermediate

Prerequisite: A basic understanding of the distributed computing environment.

Overview: This tutorial defines, compares and contrasts the various types of middleware—RPCs, ORBs, OLE, messaging, database gateways and TP monitors, including their pros and cons, and makes recommendations on what middleware should be used and under which circumstances. Other topics include middleware evolution, major vendors strategies and the convergence of different middleware technologies such as DCE, ORB, OLE/COM and MQSeries.

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For 15 years, UniForum has provided its members with the best open systems information and services. Purchased separately these benefits cost more than twice the price of general membership. Don't be left out—if you're not already a general member, can you really afford NOT to be?

General Member benefits:

(Membership: \$125 per year U.S., Mexico and Canada. \$225 overseas.)

- UniForum's *IT Solutions* magazine
- The *UniNews* newsletter
- The annual *Open Systems Products Directory*
- UniForum technical publications including:

- *Setting Up a Home Page on the World Wide Web*

- *POSIX Explored: Shell & Utilities*
- *The Collected MOSES Whitepapers*
- *Establishing a World-Wide Web Server*

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Benefit in the Spotlight

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UniForum now offers Prime Time Freeware's *Tools & Toys for UnixWare* on CD-ROM at a discounted price to members. *Tools & Toys* is a collection of interesting freeware, ported to Novell's UnixWare operating system—some very useful, some just plain fun. Call UniForum for more information or to receive a Products and Services Order Form.

Price for general members: \$45
 Price for trial members: \$60

NEW!