

May 7 - 10, 2000  
The Fairmont Hotel  
San Francisco, CA



# End-to-End Reliability *The Business Case*

The leading knowledge exchange among those who design, build, use and maintain mission-critical enterprise infrastructures, 7x24 Exchange's goal is to improve end-to-end reliability by promoting dialogue among these groups.

#### Who Should Attend and Why

This conference is designed for anyone involved with 7x24 infrastructures — IS, data center, disaster recovery and network/telecommunication managers; computer technologists; facility or building managers, supervisors and engineers. Vendors, consultants, or anyone concerned with uninterrupted access to critical information also will find the conference of value.

Attendees and their organizations benefit from the conference because proactive plans and cooperation from diverse functions are needed to improve reliability. By promoting a dialogue and clarifying the synergies among functions, past conferences have enabled teams of attendees from a given organization to better communicate the critical importance of a proactive approach to continuous uptime. Team members also were able to cover breakout sessions and network with other professionals in similar companies/industries with like problems.

Conference attendees benefit in three ways: professional development and advancement; increased recognition of their function's importance; and exposure to new ideas, contacts and resources.

First-time attendees often discover that many companies face similar, if not identical, technical and organizational problems in their quest for higher availability levels. Those unaware of this often view their situations as unique. However, they learn there are many common downtime risks and failure modes with solutions clustering around universal ideas and attitudes. 7x24 Exchange conferences provide insights into what is being planned and done by others to mitigate or eliminate downtime risks. Recommended changes can then be justified, both on their practical merits and in the context of business arguments that have been successful elsewhere.

The reasons for and issues, tools and techniques involved in 7x24 Information Infrastructures, and end-to-end reliability, are many and varied. Presentations by some of the world's leading companies and experts will look at some of the critical variables and conceptual and environmental issues involved, examine some available tools and processes, as well as nuts and bolts case studies.

The conference will open with a keynote address by Michel Langlois, director internet architecture, CISCO Systems, outlining Networking's New World: A 7x24 Society and Ubiquitous Internet. There will be a *masterminds* panel moderated by Fred Moore, a world-recognized storage expert, who is back from his outstanding presentation at 7x24 Exchange's '99 Fall Conference and a panel of *masterminds* from leading user and vendor companies. Mark Mills, president of Mills-McCarthy & Associates, will outline a sea change underway in the electrical power business. This new insight, dubbed *The Powercosm*, has significant, as yet unclear, implications for 7x24 operations. Erin Oberly will discuss Business Risk Assessment: New Require-

ments and Tools. INTRIA-HP, the new ultra-high availability service provider, a joint venture between Hewlett-Packard and CIBC, one of Canada's largest banks, will discuss 7x24's Technology Stewardship.

Sessions dealing with tools and techniques will include Base Isolation & Exotic Building Structural Systems plus Probability Reliability Analysis in Action.

Case studies and nuts and bolts sessions will include Heat Removal 101; Lessons Learned from an Extended Generator Run; UPS Selection, and Lurking Vulnerabilities.

There will be tours of four local facilities:

- 200 Paul Ave Telecommunications Hotel
- Bank of America
- Exodus
- Several civic center municipal buildings using exotic Seismic Isolation technologies

To promote open dialogue, the conference will again include a professional panel/pass-the-mike session and, as with all 7x24 Exchange conferences, there will be several formal and informal networking opportunities, including a vendor-sponsored dinner cruise on San Francisco Bay.

# Agenda

All program elements aim to increase the reliability and availability of an enterprise's information infrastructure by presenting case studies, new ideas, techniques and tools. Open dialogue between attendees and presenters is encouraged throughout. Further, by involving the many functional specialists from user and supplier/service organizations in formal and informal sessions, we hope to make the experience expanding, rewarding and enjoyable for all.

## Sunday, May 7

2:00 p.m.

### Chapter Dialogues/ Updates

There will be an open meeting discussion by 7x24 Exchange Board members, chapter officers and current and prospective chapter members, to review/discuss chapter activities and needs.

5:00 p.m.

### Registration

Please pick up registration materials and badges to help reduce Monday morning congestion.

6:00 p.m.

### Reception/Ice-Breaker

Join us for a buffet supper and open bar. This is an excellent opportunity to dialogue with conference presenters, network, meet new people and renew old acquaintances.

7x24 Exchange Board members Dave Sjogren and Bob Cassiliano will moderate an ice-breaker session designed to welcome first-timers and open dialogue on 7x24 Exchange and uptime issues and experiences.

## Monday, May 8

Starting at 6:30 a.m.

### Registration/Continental Breakfast

(Coffee, Danish, fruit)

Pick up conference materials and badges.

8:30 a.m.

### Welcome and Opening Remarks

*Robert (Bob) Cassiliano, president, Business Information Services, Inc. and 7x24 Exchange chairman*

Mr. Cassiliano will open the formal agenda, provide a conference overview and review meeting logistics.

9:00 a.m.

### Networking's New World: A 7x24 Society and Ubiquitous Internet

*Michel Langlois, director internet architecture, Office of the CTO, CISCO Systems*

The Internet is changing the way we work, live and play. Beyond just *moving packets* between systems, network infrastructure plays an ever-larger role in our way of life, as we evolve towards an *information society*. Radical technology/business changes are underway in the Telecom/Datacom industry, PC and Network appliances and media/publishing industry vs. the Internet. This presentation outlines fundamental aspects of these new business models, how they affect and what they expect/demand from the network architecture. It also will discuss some of the technology catalysts that support this evolving *new world Internet economy*, including evolution of the Internet, INtelligent Network Services and Optical Transport.

10:00 a.m.

### High-Availability Storage

#### Masterminds Panel

*Moderator: Fred G. Moore, editor-in-chief, Storage, founder, Horison Information Strategies and founding partner, IN\_fusion.*  
*Panelists; Randall L. (Randy) Chalfant, director of corporate storage strategy, StorageTek; William F. (Bill) Finfield, VP of IS, The Navy Exchange; Russell T. (Russ) Schneider, president, Marketex; Thomas (Tom) Trainer, enterprise storage networks program manager, EMC Corporation*  
Data has emerged as the DNA of the Information Age. Successfully protecting, managing and communicating data

is only possible if it can be accessed. The Internet's global reach is making true 7x24 availability a near-universal requirement. The impact of an unscheduled IT outage can exceed \$10 million per hour. Achieving ultra-high-availability for today's computing systems is based on many factors; typically, moving up the high-availability chain becomes increasingly more complex and expensive. This panel of data storage *masterminds* will explore vital technologies and development activities that move us all closer to the 100 percent availability goal.

11:00 a.m.

### Break

Coffee, Danish, juices and soft drinks will be available.

11:30 a.m.

### High-Availability Storage

#### Masterminds Panel (continued)

12:15 p.m.

### Lunch

1:45 p.m.

### Concurrent Sessions

#### A. Business Risk Assessment: New Requirements and Tools

*Erin A. Oberly, CPCU, CIA, ARM, risk management and insurance consultant*  
Regulators in many countries are recommending and, in some instances, requiring organizations under direction of the Board of Director's audit committee, to regularly assess and report on all risks and on the control processes employed to manage those risks. In response, business advisory organizations in many countries, including the U.S., are developing new risk assessment methodologies and tools. These methodologies consider risk from the standpoint of the organization's various stakeholders: How a disaster affects the company, its customers, the community at large and anyone else impacted. It considers reputational risks, loss of key contracts, as well as lost revenue, and the hard dollar costs of recovery. This session describes this risk assessment process, including best practices, pitfalls, and where to look for resources within your own organization.

**B. Running on Empty – Lessons Learned from Extended Emergency Generator Runs**

*John E. Diamond, director of engineering, Cushman & Wakefield*

John will outline operational experiences encountered when emergency generators become the primary power source for mission critical facilities.

Areas examined will include:

Consumables – fuel, filters and lube oil; Environmentals – storm and flood exposure, exhaust, noise and neighbors; and, Managing Mayhem – responding to crisis under fire.

2:30 p.m.

**Break: Make your own Sundae**

Coffee, juices, soft drinks, ice cream, toppings and sweets

3:15 p.m.

**Seismic Isolation & Innovative Building Structural Systems**

*David A. Friedman, SE, president, Forell/Elsesser Engineers Inc.*

The state-of-the-science of structural and earthquake resistant engineering has undergone great advancement in the last decade. These technological advancements are derived from sophisticated analytical modeling, extensive laboratory testing and the real-life performance of building materials and systems subjected to strong earthquakes around the world. Performance-based design allows designers to better understand the real *inelastic* behavior and deformations that occur in a building and to include elements needed to dissipate an earthquake's energy. The extent to which this energy is dissipated and deformations are controlled translates into the buildings' *damageability* and *repairability*. Including energy dissipating devices in structural systems allows structural engineers to reliably design essential service buildings to maintain mission-critical functions with infrastructures intact.

Energy dissipating devices are no more exotic than shock absorbers or rubber bearings used under bridge girders, though innovative in their seismic

resistance application. This presentation will explain the analytical basis for the design of these devices with specific project applications of progressive resistance systems, passive damping and base isolation. The presentation will a number of project examples from the San Francisco area including: PG&E's seismic retrofit of its Market Street office complex (Progressive Resistance Systems); the State Office Building (Steel Moment Frames with Passive Dampers); City Hall Seismic Retrofit, The Asian Art Museum's Retrofit of the Old Main Library and the new 911 Emergency Dispatch Center (Base Isolation).

4:45 p.m.

**Concurrent Tours**

*Buses will leave at 4:45 p.m. and return to the hotel by 7:30 p.m. Several vendor organizations will host hospitality suites from 5:00 p.m. – 11:00 p.m. Details will be posted at the conference.*

**T1. 200 Paul Ave.,**

**Telecommunications Hotel**

*(1 hour tour, limit 30, 15 minutes from the Fairmont Hotel).*

*Tour Guides: Steve Kundich, engineer, and Scott Adkins, chief building engineer, Cambay Group Inc. (building's owner) with help from Mazzetti & Associates*

This 330,000 ft<sup>2</sup>, five floor, telecomm hotel is designed to co-tenant communications companies. The facility features an advanced utility infrastructure and routing management with eight utilities, fiber optic entry from three carriers, a meeting room where tenants and service are joined, three distribution shafts, sophisticated roof-top mechanicals, a 150 kv, on-site sub station and generator yard. Reflecting the success of this new concept, the building is 50 percent built-out/100 percent occupied, construction will begin on a second, 90,000 ft<sup>2</sup> building in August and there are plans to construct an additional million ft<sup>2</sup> over the next several years.

**T2. Bank of America, 1455 Market St.**

*(limit 50; 1 hour tour, 15 minute bus ride from Fairmont Hotel).*

*Eric Adrian, svp; Brian Jarnutowski, vp; and Larry Larson, svp, Bank of America*

This 1.4 million ft<sup>2</sup> office tower/data center has 280,000 ft<sup>2</sup> raised-floor serving the bank's N. California, retail banking

and worldwide wholesale banking operations. The facility features a 2N mechanical system with thermal storage, 14 megawatts of emergency power and a command center for three data centers.

**T3 Exodus Facility**

*(Limit 30 attendees, 90 minute bus ride, 1 hour presentation/tour is restricted to users).*

This state-of-the-art Internet data center located in Santa Clara illustrates Exodus' leadership role in designing, building and operating the world's most advanced internet hosting facilities.

**T4. San Francisco Municipal Buildings**

*(Two, one-hour tours: 15 minutes from the Fairmont Hotel).*

Tours of several buildings in the Civic Center area, including City Hall, the 911 facility, that use innovative seismic isolation techniques discussed in David Friedman's 3:15 p.m. presentation are under development.

**Tuesday, May 9**

7:45 a.m.

**Continental Breakfast**

(Coffee, Danish, fruit)

Pick up conference material and badges.

8:45 a.m.

**Opening Remarks Day 2**

Bob Cassiliano will review day one highlights, provide an overview of upcoming events, last-minute changes.

9:00 a.m.

**The Emerging Power Tsunami**

*Mark P. Mills, president, Mills-McCarthy & Associates, Inc.*

Power is at the heart of all 7x24 information infrastructures. This session will discuss a number of trends that are driving a sea change in the power business. These changes will dramatically affect the structure of the power business and, thus, all 7x24 operations.

Technologies of the *New Economy*, especially the Internet, consume significant, increasing amounts of electric power. As a result, the broad array of companies that comprise the electric power industry are at the center of four major shifts: Least noted, but by far the

most important shift, relates to a dramatic increase in the demand for power — especially highly reliable power-derived from the exponential growth of processing power and bandwidth (George Gilder's *Microcosm* and *Telecosm*).

Second, also largely ignored, is a dramatic change on the supply-side, the radically innovative, rapidly-emerging silicon technologies of the new *Powercosm*. The remaining two imperatives relate to rapid loosening of economic and tightening of environmental regulations. Together, these forces promise deep, disruptive changes in the century-old industry of electrons. While the implications of such fundamental shifts for 7x24 operations are not yet clear, the impacts are likely to be of tidal wave proportions for 7x24 Exchange members.

10:00 a.m.

**Break**

Coffee, Danish, juices and soft drinks

10:30 a.m.

**7x24's Technology Stewardship**

*Keith Francis, account executive, INTRIA-HP*

Keith will focus on the business justification for providing ultra high availability to clients or companies. He will discuss the need for technology stewards to provide clients with value and appropriate solutions. Reviewing the business drivers and an approach to developing client-partnership-based value and mutual understanding, Keith will discuss the relationships between business drivers and some of the critical information infrastructure elements and issues facing 7x24 operations, including staffing, operational processes and infrastructure principles. INTRIA-HP (I-HP), an ultra high availability technology service provider, based in Toronto, Canada, is a joint venture between one of Canada's largest banks: CIBC, and Hewlett-Packard. I-HP is service provider to a number of major firms, including General Motors (Delphi, Transmission and Locomotive), Verisign and Haliburton Oil.

11:15 a.m.

**PRA (Probability Reliability Analysis) in Action**

*Douglas A. Bors, vp technology consulting and research, Sparling, Inc*

Today's typical Internet-commerce data center is reliability-challenged. Rapid growth, frequent software upgrades and the assembly of many boxes to accomplish one task, adversely affect reliability. Several UPS vendors have developed modular redundant systems and several IT equipment manufacturers produce dual power cord equipment. These are two approaches to power distribution redundancy. Both are attempts to improve reliability.

The instant an investment is made in redundant components, the question arises, "What value did I just purchase?" This presentation will demonstrate two ways to use the IEEE Gold Book probability reliability analysis (PRA) to add value to the data center design process. It will explore two significantly different power system topologies that cost about the same, but show radically different reliability values. It will then offer an example of a reliability-cost ladder—pay more, buy more.

12:15 p.m.

**Lunch**

1:45 p.m.

**Heat Removal Basics**

*George Kamburoff, independent consultant*  
Removing heat from computer operations is a critical, necessary and often misunderstood and under-appreciated data center operation. Most analysts and programmers as well as many technicians, data center managers and even some engineers, are unfamiliar with this critical part of their information infrastructure. This session will discuss the basics of thermal management and outline some simple actions non-experts can take to check the integrity and efficacy of their cooling systems.

2:30 p.m.

**Break**

Coffee, juices, soft drinks and fruit.

3:00 p.m.

**Concurrent Sessions**

**A. The Economics of Monitoring the Electrical Infrastructure**

*Robert E. Moore, president, Reliable Power Meters*

This presentation will outline the five classes of power monitoring currently used in industry. Bob will discuss the objectives and costs associated with implementing each class/level of monitoring, the types of problems each can uncover, along with suggested remedies. The presentation will discuss what the power monitoring industry is likely to achieve over the next few years using predictive maintenance technology and web integration and how managers can use these tools to virtually eliminate downtime from electrical failures.

**B. HarvardNet's UPS selection process**

*Bob Zakarian, infrastructure manager, HarvardNet, Inc.*

This presentation will review HarvardNet's process for selecting 24MW's of UPS that support its regional data centers. Bob will discuss the technologies considered and the criteria/factors and rationale used in the selection process. HarvardNet is a super-regional data CLEC offering business-class DSL (digital subscriber line), broadband VPN (virtual private network) and advanced Web hosting services, serving businesses in the Northeast and Mid-Atlantic regions with its East Coast, IP-based backbone network connecting markets from Maine to Virginia.

3:45 p.m.

**Professional Panel/Pass-The-Mike**

This panel, drawn from conference speakers, will respond to questions submitted beforehand or surfaced during conference and will elaborate on 7x24 operations issues of interest.

4:45± p.m.

**Closing Remarks**

Bob Cassiliano will close day two and update last-minute changes.

6:30 p.m.

**Vendor Sponsored Dinner/Harbor Cruise**  
(Buses will leave at 6:45 p.m. and return to the Fairmont by 12 midnight).

This vendor sponsored, four-hour cruise of magnificent San Francisco Bay will include dinner, drinks and games of chance. This excellent networking opportunity with a scenic Bay view of San Francisco is sure to be a memorable event.

## Wednesday, May 10

7:30 a.m.

**Continental Breakfast**

8:15 a.m.

**Opening Remarks and 7x24 Exchange Update**

Bob Cassiliano will review highlights from days one and two and provide an update on chapter activities, a brief State of the 7x24 Exchange message, current 7x24 Exchange activities and plans.

8:45 a.m.

**HVAC Rack Mounts and Air Flow**

*Fred Bauman, research specialist, under-floor air distribution project leader, Center for the Built Environment, University of California at Berkley and John Pappas, PE, principal, Mazzetti and Associates.*

Great strides have been made in the development of fault-tolerant, highly robust mechanical and electrical infrastructures. Electrical design can identify and solve most issues related to mission-critical buildings. HVAC distribution in critical environments has not kept pace.

This presentation will review recent research and projects that demonstrate that many *standard* assumptions about air movement in a raised floor are incorrect. Viewing HVAC distribution as a system, from fan to device and back, recent research by Lawrence Berkeley Labs examines how air flow in computing equipment and rack systems relates to the overall data center HVAC cooling system. This situation is particularly acute in Internet data centers, and which contain a great deal of rack-mounted equipment.

9:45 a.m.

**Break**

Coffee, juices, soft drinks and fruit.

10:15 a.m.

**Best In Class – Lurking Vulnerabilities**

*W. Pitt Turner IV, PE, principal, Computersite Engineering*

This is a visual tour of things to avoid when designing or operating a data center. Case study photographs are selected from more than 75 different site reviews. They represent problems that have been found repeatedly in mechanical, electrical, and human factor site infrastructure subsystems. Conference participants are likely to see several *Lurks and Quirks* which are all too real because they represent real vulnerabilities back home.

11:00 a.m.

**Adjournment**

(Box Lunches)

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**Registration includes two steps:**

**1. Conference Registration**

Submit a completed *Conference Registration Form* for each participant:

- on-line at our Web site

7x24Exchange.org

or

- manually (see other side) and FAX or mail to:

**7x24 Exchange**

83 Calvert St.

Harrison, NY 10528

Phone: 914 835-5740

Fax: 914 835-5762

To assure space availability, registrations must be received by April 22, 2000. Attendance will be limited to 275.

**2. Hotel Reservations**

If you wish to stay at The Fairmont Hotel and take advantage of 7x24 Exchange's special rates, complete the *Hotel Registration Form* (see other side) and FAX or mail a copy to:

**The Fairmont Hotel**

Atop Nob Hill

San Francisco, CA 94108

Phone 415 772-5000

Fax 415 772-5086

The Fairmont must receive a completed *7x24 Exchange Hotel Registration Form* by April 21, 2000. After April 21, rooms are subject to space availability.

**What is 7x24 Exchange?**

The leading knowledge exchange for those who design, build, use and maintain mission-critical enterprise information infrastructures, *7x24 Exchange* is a non-profit organization seeking to improve end-to-end reliability by promoting dialogue among these groups.

Founded on the assumption that most professionals involved with data center uptime issues work in isolation when dealing with technical, budget, political, and career issues. As a result of expensive, time-consuming, and, sometimes, painful trial and error processes, innovative practitioners evolved unique and creative ways of solving problems and building the organizational support needed for their implementation. However, many have been stymied because they did not have access or know how to communicate potential risks to senior management to avoid a downtime disaster occurrence.

*7x24 Exchange* members work together to advance the state-of-the-art in infrastructure reliability. By collecting and disseminating data on safeguarding information systems and alerting top management to the importance of proactive measures, members can protect their companies' information lifelines.

**The Goal of 7x24 Exchange Conferences**

The field of uninterrupted uptime has no textbooks. Before its founding in 1989 as the *Uninterruptible Uptime Users Group*, learning how to deal with uptime issues largely resulted from individual trial and error. Continuing this random rate of reliability improvement would increasingly restrict the potential productivity of the large, growing investment in computer and communication hardware and systems. It would also interfere with the increasingly critical dependence on information accessible through computers.

With 7x24 operations now common, how much higher will availability requirements be in five years? How can cost-effective, reliable responses be

*Continued on page 6*

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## Directors and Officers

### Chairman

Robert Cassiliano  
Business Information Services, Inc.  
732 446-7502

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David Sjogren  
Strategic Facilities Inc.  
973 875-7701

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Michael Weinstein  
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Spring 2000  
Dave Sjogren

Fall 2000  
Mark Dianora

Spring 2001  
Howard Levison

Fall 2001  
Joseph Paladino

### Newsletter

Joseph Paladino



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## Continued from page 5

assured? When is a centralized application site requiring ultra-high availability viable? Addressing and, hopefully, answering these and related strategic questions, 7x24 Exchange conferences provide stimulating discussion forums. Collectively, we know much about the future options and alternatives available. With 7x24 Exchange, that knowledge can be shared.

### Vendor/Consultant Participation

Vendors and consultants are encouraged to participate in 7x24 Exchange. However, the group is primarily driven by user interest. Tables are provided at the

conference for the distribution of product literature, educational material and other useful information. Overt selling at 7x24 Exchange meetings and the use of 7x24 Exchange membership lists for direct selling are prohibited.

### Special Interest Groups (SIGs) and Chapters

To better serve users and provide a means for ongoing technical interchange between semi-annual conferences, 7x24 Exchange encourages and supports the formation of local 7x24 Exchange Chapters and Special Interest Groups (SIGs). Monthly or bi-monthly chapter

meetings help assure continued dialogue between members in a given geographic area. SIG's provide an opportunity for members to explore specific 7x24 issues/problems in depth.

7x24 Exchange's Board of Directors will authorize Chapters and SIGs based on availability of a president/chairperson, a clear program plan and, if needed, a budget. Each chairperson is responsible for gathering a working group and achieving approved plan's objectives.

Any member interested in forming a Chapter or SIG should contact a board member.

# Conference Registration Form

Return this form to 7x24 Exchange. Fax: 914 835-5762

Please type or print clearly

Full name \_\_\_\_\_  
 (Informal name/nickname for badges) \_\_\_\_\_  
 Position/Title \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City ( ) State ( ) Zip \_\_\_\_\_  
 Phone \_\_\_\_\_ Fax \_\_\_\_\_  
 E-mail \_\_\_\_\_

Fees	Through April 21	After April 21
Member	\$ 900	\$1,100
Non-member	\$1,200	\$1,400

### Payment Method

Bill me  Check enclosed  
 Charge (check one):  
 American Express,  Discover,  MasterCard,  Visa

\_\_\_\_\_ Expiration Date \_\_\_\_\_  
 Card Number

The registration fee covers all sessions and activities, handout materials, Sunday's reception, breakfasts and lunches, on Monday, Tuesday and Wednesday and field trip transportation.

Participants are responsible for all other expenses, including transportation and hotel accommodations.

The dress code is business casual.

Cancellations received by April 29, 2000 will be refunded, less a \$75 handling fee. There will be no refunds after April 29. However, substitutions of company participants may be made at any time.

7x24 Exchange's annual corporate membership is \$300 for users and \$600 for vendor organizations. A corporate membership allows all employees from that business unit to attend 7x24 Exchange conferences at the reduced rate.

### Do you plan to attend?

#### Sunday 2:00 p.m. - Chapter Dialogues/Updates

Yes  No  Undecided  
 Are you currently active in a chapter/a chapter member?  
 Yes. If yes, which?  
 \_\_\_\_\_  
 No. If no, are you interested in forming a chapter? Where?  
 \_\_\_\_\_

Please include any questions/topics you wish covered.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Sunday Evening's Reception?

Yes  No  
 Do you plan to bring a guest?  Yes  No  
 If yes, name \_\_\_\_\_

### Monday Field Trips/Tours

Do you plan to attend a tour?  Yes  No

If yes, please indicate your preferences: 1 - preferred, 2 - second choice, 3 - third choice; or N for tours you are not interested in. Space is limited, requests will be handled on a first-come, first-served basis (See page 3) for tour descriptions, logistics and limits.

#### Preference Tour

\_\_\_\_\_ 200 Paul Ave., Telecommunications Hotel  
 \_\_\_\_\_ Bank of America, 1455 Market St.  
 \_\_\_\_\_ Exodus Facility (users only)  
 \_\_\_\_\_ Municipal Building(s)

### Tuesday Evening's Vendor Sponsored Dinner Cruise

Yes  No  
 Do you plan to bring a guest?  Yes  No  
 If yes, name \_\_\_\_\_

### Breakout sessions

Monday 1:45 pm  
 A. Business Risk Assessment: New Requirements and Tools  
 B. Running on Empty: Lessons Learned from ...  
 Tuesday 3:00 pm  
 A. The Economics of Monitoring the Electrical ...  
 B. HarvardNet's UPS selection process

### Company problem/issue/case study

An important part of 7x24 Exchange conferences is the discussion of real world uptime issues, problems and solutions. Each attending organization is requested to provide a short write-up of a recent experience, major question, problem or issue which might be of interest to conference attendees:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(include additional sheets if necessary)

May we identify your company as submitting this information?  
 Yes  No

These write-ups will be reviewed by the 7x24 Exchange Board of Directors and provided to appropriate presenters and moderators for possible inclusion in their sessions.

Other comments, suggestions:  
 \_\_\_\_\_  
 \_\_\_\_\_

Do you wish to receive membership information?  Yes  No

# Hotel Registration Form

Each attendee is responsible for his/her own hotel. To take advantage of 7x24 Exchange's special rates, The Fairmont Hotel must receive a completed 7x24 Exchange Hotel Registration Form by April 21, 2000. After April 21, rooms are subject to space availability.

To reserve a room, complete and fax or mail a copy of this Hotel registration form to:

**The Fairmont Hotel**  
Atop Nob Hill  
San Francisco, CA 94108  
Phone 415 772-5000  
Fax 415 772-5086

Please type or print clearly

 \_\_\_\_\_  
Full name

\_\_\_\_\_  
Company

\_\_\_\_\_  
Address

\_\_\_\_\_  
City (      )                      State (      )                      Zip

\_\_\_\_\_  
Phone                                      Fax

### Payment Method

Charge (check one):  Amex,  MasterCard,  Visa,  Diners,  Discover

\_\_\_\_\_  
Card Number                                      \_\_\_\_\_  
Expiration Date

X  
\_\_\_\_\_  
Signature

Arrival date: \_\_\_\_\_

Departure date: \_\_\_\_\_

Smoking     Non-Smoking

Number of adults: \_\_\_\_

Number of beds:  one     two

### 7x24 Exchange Room Rate

Single \$220/night  
Double \$240/night  
Additional person \$30.00 night  
plus 14 percent state and local tax.

**The above rates are available to 7x24 Exchange attendees from May 5 - 12, 2000.**

### Things to remember

- Check-in time is 3:00 pm
- Reservations are held until 6:00 pm unless guaranteed late arrival. A no-show will be charged as a one-night stay.
- Checkout time is 1:00 pm