

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 not-for-profit organization seeking to improve end-to-end reliability by promoting dialogue among these groups.

Founded on the assumption that often 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 also would 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 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.

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 specialists from user and supplier/service organizations with formal and informal sessions, the experience is rewarding and enjoyable for all.

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 still 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.

8:00 A.M. – 5:00 P.M.

Pre-Conference Workshop – Real Availability

Did you ever want to learn about reliability and availability, but were put off by the mathematics of probability density functions, Venn diagrams and Boolean algebra? Few senior managers want to learn how to perform reliability and availability calculations themselves, but many want to know how to understand, critique, and use the results.

Steve Fairfax of MTechnology and Mike Golay of MIT have developed a new version of their popular *Real Availability* short course specifically for members of the 7x24 Exchange. Offered for the first time at the Spring, 2004 conference, *Real Availability* was a great success and will be updated and revised for the Fall 2004 conference. *Real Availability* distills the key lessons and principles of quantitative risk management into just 8 hours.

Participants will learn to learn how to think about risk, how to estimate it, how to read and understand quantitative risk analyses, and how to spot errors and omissions in studies and sales literature. They will come away from this course with a new way of looking at risk, one that will enable better control of the risks of downtime to their organization. The course is based MTechnology's detailed Probabilistic Risk Assessment (PRA) of a hypothetical data center's electrical and cooling systems. The results of the study will be presented with details on how to interpret the numbers and develop plans of action based on the results.

Stephen A. Fairfax

President
MTechnology, Inc.

Michael Golay, Ph.D.

Professor of Nuclear Engineering
Massachusetts Institute of Technology

There is an additional fee for this full-day, pre-conference workshop. Please register for this session and the conference using the Conference Registration Form on page 10. If you are interested in providing a pre-conference workshop for 7x24Exchange please e-mail a proposal to tara@dolcimmanagement.com.

10:30 A.M. – 10:00 P.M. Registration

11:00 A.M. – 1:00 P.M.

Tutorial Session A: Datacom Cooling Planning 101

Today's Datacom Facility requires a holistic approach balancing the tradeoffs between datacom equipment and facility cooling infrastructure. It is important for both corporate facilities and IT groups to have a general understanding of areas NOT directly their responsibility but impact their budgets, operation, or performance. This same general understanding is important for equipment manufacturers, architects/engineers, contractors, and service technicians. This course emphasizes ASHRAE Technical Committee TC 9.9 material. For datacom equipment, it includes lead trends, environmental specifications/measurements, and

nameplate data versus ASHRAE's thermal report. For the facility cooling infrastructure it includes load and capacity planning.

Donald L. Beaty

President
DLB Associates Consulting Engineers and
ASHRAE Technical Committee - TC 9.9 Chair

Roger R. Schmidt

Distinguished Engineer
IBM Corporation

2:00 P.M. – 4:30 P.M.

**Tutorial Session B: Fluid Mechanics 101:
Fundamentals of Data Center Airflow**

This tutorial session will introduce basic concepts of air velocity, flow rate, pressure, flow resistance, and momentum balance as applied to raised-floor data centers. You will be shown why the flow distribution through the perforated tiles is usually not uniform. It is governed by the air velocity and pressure variation *under* the raised floor. By calculating this variation, you can predict the airflow coming out of each perforated tile. Such a calculation allows you to study the effect of variables such as: positions of the CRAC units and the perforated tiles, the percent open area for the perfs, the height of the raised floor, and any partitions/blockages placed under the raised floor. You can see how the flow will redistribute if cable openings were sealed. You can also evaluate failure scenarios, in which the modified flow distribution as a result of the failure of one or more CRAC units can be calculated. The tutorial will show how to create a computational model of a data center layout and calculate the corresponding airflow distribution.

Suhas V. Patankar, Ph.D.

Professor of Mechanical Engineering
University of Minnesota and
President, Innovative Research, Inc.

3:15 P.M. – 3:30 P.M. Refreshment Break

5:00 P.M. – 10:00 P.M.

Registration (continued)

Pick up conference materials and name badges to help reduce Monday morning congestion.

6:00 P.M. – 10:00 P.M.

Welcome Reception

Join us for a buffet reception with open bar accompanied by soft music. This is an excellent opportunity to dialogue with conference presenters, meet new people, network, welcome first time attendees, renew old acquaintances, and meet the board members.

A. LEED: A Case Study for an Environmentally Friendly Data Center

Mission critical facilities, with their inherent redundancies and heavy infrastructure are not typically associated with environmentally friendly construction. This presentation will discuss the process and challenges of becoming the first LEED (Leadership in Energy and Environmental Design) certified data center in the country as measured by the United States Green Building Council. We will discuss the LEED program as a whole as well as the unique challenges the project team faced as we designed and constructed an environmentally responsible data center without sacrificing the project program. We will also discuss the benefits of the LEED program and how more teams can successfully incorporate LEED into their projects.

Doug Clough

Project Manager

Holder Construction Company, LLC

Kenneth M. Stipcak

Vice President

Mark G. Anderson Consultants

Joseph Lauro, RA

Associate

Gensler

Geoff Cope, PE

Principal

EYP Mission Critical Facilities

B. Managing Business Continuity in a 7x24 Environment

Many companies have taken steps in recent years to address the need for Disaster Recovery. However, while they may have a Disaster Recovery Plan, typically it is not an integrated recovery plan that addresses Business Continuity and Disaster Recovery. The areas are typically managed by different groups with differing priorities. Additionally the Disaster Recovery group usually struggles to justify the needed investment. In this presentation, we will discuss a business-driven approach to developing Business Continuity and Disaster Recovery plans that focus on business outages from major disasters to a machine failure. The presentation will also outline the key elements that you should address in the SLAs with your outsourced IT services and facilities providers to ensure a timely and cohesive approach to recovery operations.

Binod Taterway

Partner

Blue Canyon Group, LLC

Mark Witlin

Vice President

Blue Canyon Group, LLC

3:45 P.M.

Building a Perfect Up-Time Record: How Inflow Delivers 100% for Mission Critical Hosted Customer Applications

Supporting 850 customers via a nationwide network of 13 data centers, Inflow is a leading provider of application hosting and business continuity services. Central to Inflow's commitment to deliver the ultimate customer experience is its promise to provide every customer with 100 percent Internet and power uptime. That's a big promise to make and keep in a world where electric utility companies make no such promise. The presentation will provide a case study on how Inflow is delivering on this commitment. This case study will provide a true peer-to-peer perspective on how Inflow is meeting the current and developing power management challenges faced by today's data centers.

Joel Daly

Chief Operations Officer

INFLOW

Mark Ascolese

President

Eaton's Powerware

Angelo Mandarinò

Vice President

Large Systems Sales Group

Eaton's Powerware

4:30 P.M.

Virtual Tour – American Express

The American Express Information Processing Center (IPC) and Technology Resource Center-West (TRC-W) virtual tour will provide a unique opportunity to see and discuss a true World-class 24x365 2N+ data center. This tour covers the IPC's 150,000 SF of production raised floor equipment space and 150,000 SF of electrical and mechanical infrastructure support space. Additionally, the tour will include TRC-W's 41,000 SF raised floor designed for software and hardware development labs. The IPC, completed in 1989, is a 300,000 SF dedicated data center facility which supports the full range of American Express' worldwide processing. IPC has a comprehensive 2N+ electrical and mechanical infrastructure. This includes 15 MW of prime standby power, 12 MW of UPS with 97 raised floor Static Transfer Switches, and 6400 tons of chilled water-cooling. TRC-W, completed in 2001, is a 226,000 SF technology office building with a 41,000 SF of 24x365 development lab area. The IPC provides all electrical and mechanical infrastructure and operational support services for the TRC-W facility.

7:00 P.M. – 11:00 P.M.

Hospitality Suites



7:00 A.M.

Breakfast

8:30 A.M.

Opening Remarks Day 2

Bob Cassiliano will review day one highlights, provide an overview of upcoming events, present an update of current 7x24 Exchange activities and plans and address housekeeping items of interest.

9:15 A.M.

The Central Park Jogger: Recovering to Wholeness

Trisha Meili is the author of the best-selling memoir, *I AM THE CENTRAL PARK JOGGER: A Story of Hope and Possibility*. Her story is not a story of an attack, but rather, facing a crisis, recovering and moving forward.

After Wellesley College and Yale University, Trisha joined the highly competitive world of investment banking at Salomon Brothers in 1986. But, on the evening of April 19, 1989, during a run in Central Park, she was viciously beaten, raped and left for dead. The recovery of her physical and mental abilities taught her valuable lessons for anyone facing seemingly insurmountable crises. Her story has encouraged people worldwide to overcome life's obstacles – regardless of what they might be – and get back on the road to life.



Trisha Meili
Author

10:15 A.M.

Refreshment Break

10:45 A.M.

Case Study: Leading Financial Institution Implements Remote Monitoring for Mission Critical Facilities

When Bear Stearns, a leading global investment banking, securities trading and brokerage firm with 10,452 employees worldwide, began planning their move to a new world headquarters on Madison Avenue, it was certain that nothing less than cutting-edge technology was needed for this mission-critical location. Bear Stearns intended to operate the communication centers as “dark” data centers (unmanned). This case study outlines how the specific challenges of providing the required power and proper ventilation were addressed. AFCO Systems developed an enclosure with a combination of hardware and software to interface with Bear Stearns’ network management platform and remotely monitor for alarm conditions at the enclosure level. This presentation also will highlight how a remote monitoring systems and the latest enclosure technology was developed to ensure that the Bear Stearns data centers maintained “0-downtime”.

John Consoli
Managing Director
AFCO Systems

Dennis Murnane
Data Center Facilities Management
Bear Stearns

11:30 A.M.

**Achieving End To End Reliability:
An Electrical Design and Security Perspective**

This presentation will address critical issues related to Electrical-Infrastructure Power Distribution Design for Mission Critical Centers. The presentation will cover Primary Distribution, Emergency/Standby Power, Critical Power Systems, and Protective Electrical Devices as applied to Mission Critical Centers. In addition it will provide Data Center Managers with the broad guidelines and important design elements addressing the issues of electrical power for data centers.

Jerry Gallagher, P.E.
Principal
CSI Engineering

12:15 P.M.

Lunch

1:45 P.M.

Legislation Regulations and Their Impact on BCP

The myriad of compliance initiatives that organizations have to contend with today can leave one dazed and confused. Starting in the late 1960s with environmental, health and safety regulations having requirements for emergency preparedness, through today; the ever expanding requirements for greater preparedness seem without end. Today regulations, such as NYSE rule 446, require firms to develop, maintain, review and update business continuity and contingency plans that establish procedures to be followed in the event of an emergency or significant business disruption.

Geary W. Sikich

Principal

Logical Management Systems, Corp.

2:30 P.M.

Refreshment Break

3:00 P.M.

Concurrent Sessions

A. "No Data Center Down" for Electrical Retro-Fit

"No Cold Down" alternative implementation design for data center electrical retro-fit, through the use of paralleling jumper cables and tie breakers between data center PDU (power distribution unit) panels. How a one megawatt, 20K sq. ft enterprise level data center added 3 STS's (Static Transfer Switches) up stream of the data center electrical Distribution Panels without powering down a single piece of computing equipment.

John Musilli

Data Center Operations Manager

Intel Corporation

B. People & Process and Uninterruptible Uptime

Getting and staying reliable requires effort in three dimensions: people, process, and technology. This session introduces the IT Infrastructure Library (ITIL), which provides internationally accepted standard best practice guidance on the people and process components of highly available end-to-end services.

Rick Leopoldi

Managing Consultant

Fox IT, LLC

3:45 P.M.

Pass the Mike Session

This session will address questions previously submitted on registration forms and those which surfaced during the conference. 7x24 Exchange encourages all attendees to step up to the microphone and state their case. Attendee participation and open dialogue has made this a valuable session over the years.

Dennis Cronin

President

Resilient Solutions, LLC

6:00 P.M.

Vendor Sponsored Event

Details regarding this event will be e-mailed to registered attendees prior to the conference. For more information on sponsorship opportunities please contact Brandon Dolci at (646) 486-3818 x108.



7:00 A.M.

Breakfast

8:30 A.M.

Opening Remarks Day 3

Bob Cassiliano will review highlights from days one and two.

8:45 A.M.

Keynote Address: Information Lifecycle Management

As more information is created in digital format, managing, sharing and protecting it has become of paramount importance. EMC will discuss how to harness growing information assets – from the time of creation to archival and eventual disposal – through information lifecycle management.

Don Ferguson

Director, Products & Technologies
Field Marketing Group
EMC Corporation

9:45 A.M.

Refreshment Break

10:15 A.M.

Yes, You Can Have High Reliability & Energy Conservation

This presentation will be a case study of a new data center for a large insurance company in the northeast to illustrate how energy conservation measures can be incorporated into a data center, and have a positive impact on reliability. The referenced project is 90,000 Sq ft. with 28,000 sq.ft of raised floor. The design criteria called for 30 W/sq ft, tier III, and for the raised floor space to expandable to 40,000 sq ft. The initial development will have spot densities as high as 200 W/ sq ft. Key elements to the design include the use of High Delta T Cooling (HDTC) to increase the cooling capacity of the floor mounted cooling units thereby reducing the quantity of units and associated fan motors. The use of central humidity control with eliminated the reheat coils and humidifiers in the cooling units.

R. Stephen Spinazzola

Vice President
RTKL Associates, Inc.

11:00 A.M.

Case Study: Eliminating Single Points of Failure in UPS Applications

7x24 Mission critical facilities today demand the highest in UPS system reliability, availability, and maintainability. Parallel configurations can provide this reliability by adding redundancy to a UPS or group of UPS supporting critical loads. This paper compares the benefits of distributing the static bypass and control features of a parallel configuration versus the centralization of the static bypass and controls. This study will compare the reliability using MTBF, total installed costs, system footprint, scalability and maintainability. A customer case study of an N+1 configuration with three 300KVA UPS Units in parallel will be presented that analyzes an existing installation at MFS Investment Management.

Ronald W. Glaser

UPS Product Manager
General Electric Company

Robert Landrigan

Engineering Manager
MFS Investment Management

William Vassallo

Senior UPS Applications Engineer
General Electric Company

11:45 A.M.

Conference Wrap-Up & Raffles

12:00 NOON

Conference Adjourns



Conference Registration Form:

PLEASE PRINT OR TYPE CLEARLY

Name: _____

(Informal Name/nickname for badge) _____

Position/Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone () _____ Fax () _____

E-mail _____

CONFERENCE FEES:

	Early Bird Discount Through Sept 20th	After Sept 20th
Member:	\$1,200	\$1,500
Non-member:	\$1,500	\$1,800

PAYMENT METHOD

Check enclosed

Charge (check one):

American Express Visa MasterCard Discover

Card Number: _____ Exp. Date: _____

Name (as it appears on the card) _____

Signature _____

DO YOU PLAN TO ATTEND?

Sunday 8:00 a.m. – 5:00 p.m.

Pre-Conference Workshop – Real Availability Yes No

(There is an additional fee of \$975 to attend this session. The fee includes Sunday breakfast, lunch, refreshment breaks and course materials. Individuals registered for the pre-conference workshop must also register for the full conference)

Sunday 11:00 a.m. – 1:00 p.m.

Tutorial Session – Datacom Cooling Planning 101 Yes No

Sunday 2:00 p.m. – 4:30 p.m.

Tutorial Session – Fluid Mechanics 101 Yes No

Sunday Evening's Buffet Reception Yes No

If yes, do you plan to bring a guest? Yes No

Name of guest: _____

A guest is a spouse/significant other, friend or an adult child (18 and over) who is not in an industry related occupation. Co-workers or associates in the industry may not use the guest registration category and are required to submit a separate registration form. Guests are invited to attend the Welcome Reception, Hospitality Suites, Tuesday Morning Keynote Address and the Vendor Sponsored Event.

BREAKOUT SESSIONS (PLEASE CHOOSE ONLY ONE)

Monday 3:00 p.m.

A. LEED: A Case Study.....

B. Business Continuity.....

Monday Evening Tour

Virtual Tour of AMEX

Tuesday 3:00 p.m.

A. "No Data Center Down"....

B. People & Process....

Vendor Sponsored Evening Yes No

Do you plan to bring a guest? Yes No

Name of guest: _____

COMPANY PROBLEM/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 information? Yes No

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

Other comments, suggestions:

Do you wish to receive membership information? Yes No

Check here if this is your first time attending a 7x24 Exchange Conference

The conference registration fee covers conference sessions and activities, handout materials, Sunday's reception, lunches, breakfasts on Monday, Tuesday and Wednesday and tour transportation. The conference fee does not include the Sunday Pre-Conference Workshop. The pre-conference workshop registration fee covers breakfast, lunch and refreshment breaks on Sunday as well as course materials. Attendees who register for the pre-conference workshop must also register to attend the full conference.

Participants are responsible for all other expenses, including guest meals, transportation and hotel accommodations. The dress code is business casual. Cancellations received by October 8th will be refunded, less a \$75 handling fee. There will be no refunds after October 8th. However, substitutions of company participants may be made at any time.

Return this form to: 7x24 Exchange • 322 Eighth Avenue, New York, NY 10001
Phone 646-486-3818 • Fax: 212-645-1147 • www.7x24exchange.org

2004 Fall Conference • www.7x24exch

"Exceptional!"

"Fascinating new information from high level speakers"

"Great job maintaining the current high standard"

"Good topics & presentations, great balance!"

"Conference delivered practical applications and real experiences of value"

"Conference was well run. Everything was great!"

"First time I attended – great conference – I'll be back!"

Vendor/Consultant Policies & Procedures

Information Tables and Pop-Up Displays

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 at no cost. Overt selling at 7x24 Exchange meetings and the use of 7x24 Exchange membership lists for direct selling are prohibited.

Conference sponsors at the Key level or higher will be permitted to occupy one full six foot table for literature and/or a pop up display at no cost. Non sponsoring companies can set up pop up displays at a cost of \$500 per table for members and \$750 per table for non-members. Any additional costs such as electric, shipping etc. are the responsibility of the vendor.

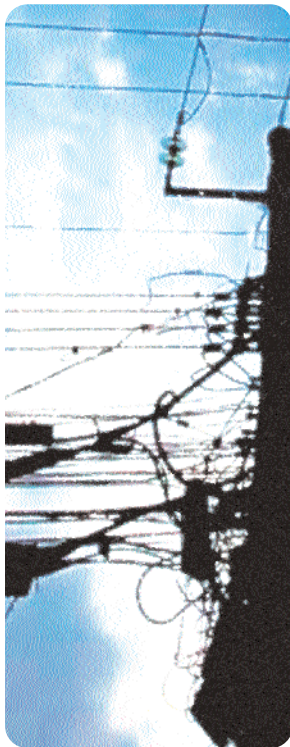
7x24 Exchange and the Hyatt Regency Scottsdale at Gainey Ranch are not responsible for the theft, loss or any damage incurred to any vendor materials. If you wish to coordinate a display please contact Tina DiMichele at 646-486-3818 x100. All displays MUST be registered with 7x24 Exchange by September 23rd and accompanied by one full conference registration by a representative of the company.

Hospitality Suites

Hospitality suites/demo rooms are permitted on Monday, October 18th, 2004 between the hours of 7:00 P.M. and 11:00 P.M. All hospitality suite hosts must be at least a Key member of the 7x24 Exchange Corporate Leadership Program (CLP). In order to be recognized by 7x24 Exchange vendors must complete a suite registration form.

As always, hosting a hospitality suite gives vendors direct access to the conference attendees and provides the opportunity to promote products and services in an enjoyable relaxed environment.

If you are interested in hosting a suite on Monday, October 18th, please contact Brandon Dolci at 646-486-3818 x 108 before September 23rd.



2004 FALL CONFERENCE CORPORATE LEADERSHIP PROGRAM MEMBERS (at press time)

Silver Members



SIEMENS

Key Members



JOHNSON CONTROLS

EMERSON Network Power

ASCO Power Technologies

Liebert Energy Solutions to Business



Contributors



DIRECTORS AND OFFICERS

CHAIRMAN OF THE BOARD

Robert J. Cassiliano
Business Information Services, Inc.

PRESIDENT

David Sjogren
Strategic Facilities, Inc.

VICE PRESIDENT - PROGRAMS

John Oyahagary
First Data Corp/Western Union

DIRECTOR

Roy L. Chapman
American Express

DIRECTOR

Ravi R. Mehrotra
Federal Reserve Bank of NY

CHAPTER REPRESENTATIVE

William Leedecke
Vanguard Group

ADMINISTRATIVE DIRECTOR

Kathleen A. Dolci
(646) 486-3818 x103

MEMBERSHIP & EDUCATION

Tara Oehlmann, Ed.M.
(646) 486-3818 x104

CONFERENCES

Brandon A. Dolci
(646) 486-3818 x108

REGISTER ONLINE TODAY @ WWW.7X24EXCHANGE.ORG

QUESTIONS? CALL 646-486-3818 X100 OR E-MAIL INFO@7X24EXCHANGE.ORG



322 Eighth Avenue, Suite 1400
New York, NY 10001
www.7x24exchange.org

PRE SORTED
FIRST CLASS
U.S. POSTAGE

PAID

WILKES-BARRE, PA
PERMIT NO. 188