



NewsLink

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

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Rolando Geniza, *Southern California Gas*
213 265-5107

7x24 Exchange

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New York, NY 10163
Phone 212 575-2275
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Formerly the
Uninterruptible Uptime Users Group

Spring Conference Announced

End-to-End Reliability: Lessons Learned

May 23 - 26 JW Marriott Hotel, Washington, DC

Those who cannot remember the past are condemned to repeat it.

George Santayana

As the leading knowledge exchange for those who design, build, use and maintain mission-critical enterprise information infrastructures, 7x24 Exchange's goal is to improve end-to-end reliability by promoting dialogue among these groups. Our job is to help members, young and old share and learn from one another.

This conference will explore various vital old and new topics that will allow attendees to look into the future and learn from the past. Opening with a keynote address by Brian Cashin, senior vice president, Fidelity Investments, who will discuss Fidelity's application Geographically Dispersed Parallel Sysplex, a new multi-site management facility that automatically mirrors critical data and balances workloads between sites 30+ miles

apart. There will be important Y2K related presentations, including a report on utility and telecommunications systems readiness in more than 50 countries and another on contingency planning. There will be presentations and tours of several mission-critical facilities, including Bell Atlantic and AT&T.

David Isenberg, a leading industry expert on telecommunications/networks, will keynote day two with a review of the coming telecommunications/networking revolution—*stupid networks and free bandwidth*—and their mission-critical infrastructure implications.

Learn to see in another's calamity the ills which you should avoid.

Publius Syrus 42 BC

Back by popular demand, George Kamburoff will lead a discussion of common sense approaches to grounding; Caterpillar's Brian Weller will discuss Engine Generator sets, including a review of

emission standards; and, there will be a panel review and discussion of the results and implications of initial results from our Critical Electrical System Service Survey (see related article, page 2), a number of networking activities,

Learning is ever in the freshness of its youth, even for the old.

Agamemnon

including a vendor-sponsored, dinner boat ride on the Potomac and much more.

Conference details and registration forms will be included in the Conference Brochure that will be distributed shortly. Conference fees will be \$900 for member company employees and \$1,200 for non-members. Fees include all conference materials, Sunday evening's reception/dinner; breakfasts, lunches and breaks on Monday, Tuesday and Wednesday; and tour transportation. For additional information, contact 7x24 Exchange.

President's Letter

We are in our tenth year of operation. Thanks to all of you who have actively supported our efforts over the last decade. I am honored to address you for the first time as 7x24 Exchange president. Looking back, I feel humbled by what we have done and awed by what remains to be done.

From its initial meeting, November 15, 1989 in Shearson Lehman's conference room in lower Manhattan, UUUUG has grown in numbers and stature. The initial meeting was attended by 38 people representing 18 companies. We closed 1998 with 5000 names in our database, more than 180 member companies, six recognized chapters and conference attendance well over 400. Until 1993, all conferences were held in the New York Metropolitan area. Since then, the conferences have been held at 10 different locations around the country. Our goals are to continue increasing members served, locations visited and services provided.

We are developing a comprehensive marketing/service package that can be tailored for use by national to: expand national membership, attract speakers and establish relations with peer organizations and the media. Likewise, chapters can use the package to attract local and national members, as well as Board and Advisory committee members.



7x24 Exchange Nee UUUUG founders (l to r) Howard Levison, Paul Fox, Dennis Cronin, Frank Gialanella, Alan Freedman, Kenneth Brill, John Jackson

While we can always improve, and while conferences will always be an important part of 7x24 Exchange, we are meeting most of our goals in this area and we will therefore shift our focus to:

- Expand our data collection and publishing efforts.
- Expand and provide additional support for our chapter network.
- Increase our visibility with the trade press/media.

We solicit your input and advice on each of these items and encourage each of you to provide us with ideas on issues, topics, people or places for presentations or articles that will advance the state of the art in end-to-end reliability. We will work with you to prepare the material for articles/presentations; we will work with you to develop and administer data collection instruments, collect and

consolidate data and prepare and publish/disseminate results. However, the critical piece is getting involvement and guidance from you, our members—the people on the front line.

There is so much to be done and we all have so little time to do it, that I feel a little like the Queen of Hearts from Alice in Wonderland, because it seems like we have to run twice as fast just to stay in the same place. For the good of the group, please help us and share your ideas, experiences and suggestions.

I am honored to be your president and I look forward to picking up where my able predecessors have left off. But, it will not work unless each of you becomes actively involved.

I solicit your help!

David A. Sjogren
David A. Sjogren

'98 Fall Conference Summary – "On Target"

More than 215 attended "End-to-End Reliability: A Technological Perspective," 7x24 Exchange's Fall Conference, November 8-11, 1998 in Scottsdale, AZ and gave it an overall rating of 5.77, on a scale of 1-poor to 7-excellent. "This is one of our highest rated conferences ever and that is very gratifying since escalating expectations make it more and more difficult to achieve these ratings," said president Dave Sjogren. Among the top-rated sessions were: the vendor sponsored *Evening at the Heard Museum* (6.40), the first jointly-sponsored event at a 7x24 Exchange conference; *Electrical System Grounding and Data Centers* (6.24); *Transient Voltage Surge Suppression* (5.85); *Fire Suppression Systems* (5.55); *Critical Building Automation Systems, Underground Storage Tank Environmental Issues and Networks—Total, Complete 100 Percent Uptime*, all of which rated (5.5). 7x24 Exchange chairman Bob Cassiliano observed, *we are*

always pleased when we satisfy our 5.5 session rating goal. The fact that our first attempt at a jointly sponsored event was so well received is very satisfying, indeed, and encourages us to continue to try new ways to promote dialogue.

Following are a few sample audience comments:

Keynote: Crisis Management — *Good idea driver. Inspires me to check out our readiness; Very interesting and thought provoking...; Excellent, right on target for 7x24.*

Ultra High Availability Computer Power — *Excellent – innovative – well prepared; Fascinating breakthrough approach; A very worthwhile subject for me, worth the whole trip alone...*

Office of the Future — *Great presentation; They knew their stuff...*

Y2K Panel — *Comprehensive and informative; Very good coverage of hot topic.*

Tours:

First Data — *Tour was excellent.*

Tours are the main reason I attend.

Salt River Project — *Very good trip with knowledgeable presentation and guides.*

Wells Fargo — *Good tour, interesting site.*

Critical Building Automation Systems — *Excellent; Excellent; Excellent comprehensive survey of control vendors role in facilities operations; Great update; generated a lot of audience participation.*

Networks – Total, Complete, 100 percent Uptime — *Very good, stretched my mind to think a little more globally; Knowledgeable, comprehensive look at the IS role in 7x24 operations; Excellent presentation.*

Electrical System Grounding and Data Centers — *Entertaining and informative; Very dynamic and interesting; A dull subject made interesting/entertaining; Dynamic.*

John Oyhagaray, program chairperson, observed: *While we, and more importantly, the conference attendees, are very pleased with the overall conference, there are some troublesome areas that need attention. For instance, we know we need to do something to rejuvenate the Pass-the-Mike session. The idea of open dialogue is critical to our conferences and our mission, but we obviously need to do something to rejuvenate this session. Look for something new this Spring.*



Attendees continue conference dialogue at vendor sponsored Evening at the Heard Museum.

Newsletter Ideas/Articles

In keeping with its mission 7x24 Exchange endeavors to provide the communications vehicles, editorial and communications support needed to promote and improve dialogue among 7x24 Exchange members and practitioners. Anyone with a manuscript, study results or an idea for an article they believe would be appropriate to 7x24 Exchange NewsLink should contact Joe Paladino, 212 575-2275.

Critical Electrical System Service Survey Distributed

Designing and building a totally reliable, bulletproof site is a good start but it will all mean nothing if the critical electrical system is not properly serviced and maintained. Past 7x24 Exchange conferences and newsletter articles have dealt with the overall design of such systems as well as the purchase/installation and maintenance of many of the critical components. To determine the strengths and weaknesses of such services, gauge what related services are needed/desired and involve major vendor suppliers of these services in evaluating/responding to these user/operator requirements, 7x24 Exchange has implemented the following program:

1. A *Critical Electrical System Service Survey* to 7x24 Exchange member user/operator company designees was distributed the first week of May.
2. Survey results will be compiled, analyzed and evaluated in early April.
3. A representative panel of concerned suppliers will be assembled to review/discuss survey results/findings.
4. The panel will present the survey results/findings and possible actions at 7x24 Exchange's '99 Spring Conference in Washington DC, May 23-26. It is expected this will be a two-part session, with survey results presented and then one or more workshops to review possible alternative actions/solutions for identified problem areas.
5. Depending on the results of steps 1 – 4, the survey will be revised/expanded to gather additional input on the same and/or related areas.

Anyone with questions, interested in being involved in this effort or any 7x24 Exchange user/operator member who has not received a questionnaire should contact Joe Paladino 212 575-2275, Fax 212 575-2808, e-mail, Axiomny@aol.com.



A true showman, George Kamburoff, discusses electrical system grounding, nearly did 'break a leg.'

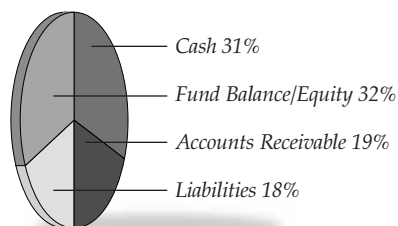
7x24 Exchange Financial Update

In keeping with its not-for-profit charter, its mission and strategic plan 7x24 Exchange, operates as close to break-even as is financially prudent. Combining these constraints with a commitment to maintain independence and objectivity meant that the organization's founders had to contribute a great deal of time and in-kind support to make up for the lack of money. Likewise, growing the organization has meant membership dues have remained constant since 1992 and while conference pricing remained at the low-end of comparable events resulting in deferral of a number of important actions and programs. *It has taken us a while, but our financials are now stable enough to allow us to pursue some of the challenging goals laid out in our strategic plan including: creation and management of a comprehensive professional Web site; implementing a concerted marketing program and providing additional support for chapters,* said executive director Joe Paladino.

At the end of February, Assets were \$92,000—cash (\$57,000) and net receivables (\$35,000), and Liabilities were \$32,500. Operating cost control

and a low level of bad debt has enabled maintaining the current dues and conference registration fees for Fiscal 1999. Thus, funds available for projects stood at \$59,500.

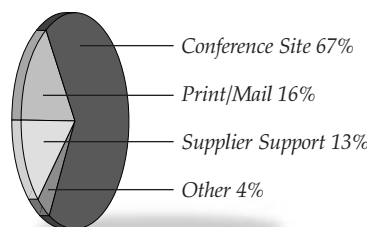
Balance sheet as of February 28, 1999



The Fall '98 conference costs exclusive of the vendor sponsored event totaled \$140,655. The cost mix was consistent with prior conferences: conference site 67%, Print/Mailing 17%, Vendor support 13% and other cost 4%. Costs for *The Heard Museum* event exceeded financial support by \$16,179. As a first-time event with unknown results, the level of financial support was greater than expected. The overwhelming success has generated vendor interest in supporting future events.

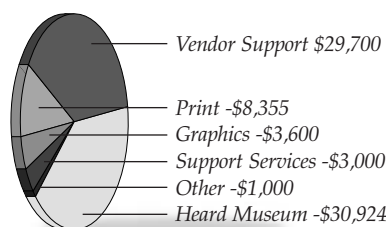
1998 Fall Conference excluding Vendor Sponsored Event

Costs: \$140,655

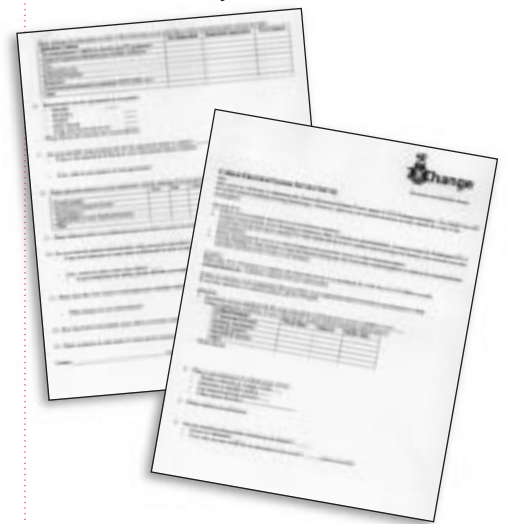


1998 Fall Conference Vendor Sponsored Event

Vendor Support: \$29,700
Costs: \$46,879



Thanks to Amdahl, Best Power, Carlson, Exide, Liebert, MGE, Russelectric, Sure Power and Swanson Rink for their sponsorship. And, special thanks to Automated Logic and IBM who provided financial support over the base assessment.



Help on Y2K Bug Fixes

There are a number of sites providing advice, guidance and resources on Y2K topics. One such site offering a number of helpful documents from alerting to management the importance of Y2K to self-help tools for small manufacturers, is <http://search.nist.gov/>. Once there search for Y2K and select the appropriate document.

Chapters Update

Atlanta Chapter

Receiving official recognition as a formal chapter positions the group for a productive year. A meeting was held March 12th in Southwest Atlanta at Chick-fil-A's Headquarters. Attendees were treated to an updated version of *Critical Building Automation Systems: A Technological Update* presented at the Fall '98 National Conference by John Ciccone, Automated Logic Corporation. The presentation reviewed the history, current market demands and trends related to critical building automation systems and included a look at trends and what can be expected in this important element of end-to-end reliability.

The group is considering a panel to discuss local, practical Y2K solutions. Upcoming local meetings are planned for July and September. Anyone interested in attending, hosting, or presenting at a meeting is encouraged to contact us.

Chapter correspondence is via e-mail. To get added to the e-mail list for future chapter activities or updates contact: Kevin Fannin or Mike Kenig.

Executive Committee:

Bill Angle, CS Technology,

bangle@cstechnology.com

Kevin Fannin, Chick-fil-A,

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Mel Foster, United Parcel Service,

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Chris Johnston, RL Daniell,

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Gloria Groves Smith, BellSouth,

gloria_smith@bscc.bls.com

Mid-Atlantic

Washington, DC

America OnLine hosted the December 2, '98 Fall meeting at its new Dulles Virginia Technology Center and Headquarters. President Allen Wood opened the meeting with a *President's Message* and welcomed the 35 attendees. Joel Gardner, MCI WorldCom discussed *Computer Based Training (CBT)*—a standard network-based user interface and delivery screen that supports dynamic content and a variety of video and audio file formats. Joel demonstrated MCI WorldCom's use of CBT for facilities personnel on UPS battery maintenance/sizing, Genset, SAP financial systems training, and Project Management—all training subjects near and dear to power and building managers and engineers.

Mid-Atlantic hopes to reach the 100-member mark in 1999. Strong interest and participation are a good indicator of the success of the Mid-Atlantic Chapter as we finish out '99 and head toward the new millennium.

As *Host Chapter* for the upcoming May 23-26 National Conference, the chapter hopes the additional exposure will help them reach their goal of 100 member companies before 2000.

Kevin Duffy pointed out "*Rich McWilliams is working closely with National on a number of logistic issues and tours and we are will be happy to advise*

attendees on Things to see and Places to go while visiting Washington, DC.

Officers and Contacts

President, Allen Wood,

Bell Atlantic, 301 236-8366

Vice President, Doug Steinberg,

America Online, 703 265-4222

Treasurer, Shariar Zaimi,

Engineering Design Group,

202 862-9600

Secretary, Jim Embley,

Lee Technologies, 703 968-0300

Board Members

Baron Brown, AT&T, 703 691-6721

Chris Jenkins, Electronic Data Systems,

703 742-2427

Troy Hvizda, National Association of

Securities Dealers, 301 590-6806

Membership

(information **Yvette Brooks** at

202 862-9600)

Bill Banks, Fannie Mae, 202 752-7017

John Nine, Computer Power Technology,

301 948-3280

Jerry Pepiora, Wilson Associates,

410 665-1850

Programs

Bill Angle, CS Technology,

301 369-0180

Richard McWilliams,

Engineering Design Group,

202 862-9600

Newsletter

Kevin Duffy, Piller, Inc.,

703-764-8879, Fax-764-1971,

e-mail: kduffy@erols.com

Midwest Chapter

Kansas City, MO.

The Chapter has officially adopted the name "7x24 Exchange Midwest Chapter" to better align with the National Organization. Information on Chapter events, updates, and more is now available online at www.mindconnection.com/7x24.

The Chapter's '99 Spring Conference *Uptime in the Millennium* will be held April 16th at AT&T's Data Center in Kansas City, MO. Registration begins at 7 am. The one-day program includes:

Bill Mazzetti, principal of California-based Mazzetti & Associates, answering the question, *Does your testing program pass or fail?* with a presentation on *Integrated Testing*.

Dennis Hughes, senior property manager, First National Bank of Omaha, and Tom Ditoro P.E., electrical project engineer, HDR, Inc., will explain how a facility can support all electrical and mechanical equipment with a fuel cell system in *Fuel Cell or Utility Hell*.

Jerry Borland P.E., editor, EC&M Magazine, will present *Rx for Utility Deregulation*.

John Scheer, assistant chief engineer and Ron Best, chief electrician, AT&T Data Center, will host a tour of this modern site.

Best practices/solutions will be shared at the roundtable: *What Are You Doing for Y2K?*

The conference fee of \$60 covers all sessions, program materials, buffet breakfast and lunch and afternoon refreshments. Discounted lodging is available at Harrah's Hotel through April 1. An optional pre-conference

dinner will be held 7 p.m. April 15th at Harrah's. For further information, contact Lanny Bennefeld, 816 737-4073, or any Board member.

Officers and Contacts

Director, Lanny Bennefeld,

DST Systems, 816 737-4073

Assistant Director, Donald Riley,

AlliedSignal, 816 997-2917

Treasurer, Edward Rafter,

Power Engineering, 913 236-5010

Editor, Peggy Rafter,

Power Engineering, 913 696-1210

Membership, Tom Brink,

State Street Bank, 816 891-8751

Programs, Mark Lamendola,

Intertec Publishing, 913 967-1808

and Jose Alvarez, DST Systems,

816 435-1293

Northwest Chapter

Seattle, WA.

Information on Chapter events, updates, technical articles, and more is now available online at www.7x24nw.org. From the site, membership renewals can be processed, technical articles like John Cavallaro's *Do you know your Emergency Power System?* can be accessed and directions to the next Data Center Roundtable can be found.

The Winter Session was held February 16, 1999 at the Starbucks Center. Aladdin Knowledge System, Inc.'s Internet Security Unit head Yael Sachs presented *Internet Security – Fact or Fiction*. Ms. Sachs discussed the nature of Internet security threats, Internet sociology and user protection. Attendees also received a tour of Starbucks' new *lights out* remote data center. This site was conceived in 1996 and came online in March 1998. Starbucks' Ray Schutte, and Chuck Folker, along with Callison Architecture's Leonard Ruff, gave the history of the project and presented the successful outcome.

The Spring Session will be held Tuesday, May 11, 1999, from 4:00 – 7:00 pm. Tentative topics include an overview of new communications protocols and technologies for Internet 2 and a tour of the Alaska Airlines data center. Check website soon for more information.

Officers and Contacts

President, Kim Holyoak, U S West,

425 451-7108

Vice President, Christopher Haubeil,

Coffman Engineers, 206 624-0717

Secretary and Newsletter,

Leonard Ruff, Callison Architecture,

206 623-4646

Treasurer, Rob Costa, Boeing ISS,

425 865-2187

Membership, Chuck Meyer,

Aubeta Technology,

206 766-8800

Program, Jon Ridgeway,

206 643-0212

Ohio Chapter

The group has met three times since November to review '98 accomplishments and set plans for '99 and beyond. As part of its work on a long-term plan the group has decided to aim toward two annual membership meetings, with focus of eliminating single points of failure. Each meeting

would concentrate on one the five major components—architectural; electrical; mechanical; operations; fire and security. The group is aiming for meetings in June and October, plans to publish a Newsletter in April and is investigating creation of a Web site.

President Stephanie Strack commented, "*We are very pleased with the strides we made last year, we have lots of good ideas and we see so many opportunities, it's just getting the time to do them all. As with any organization, the key is good people so if you are interested in getting involved, especially if you have experience planning programs we would love to hear from you.*"

Officers and Contacts

President, Stephanie Strack,

Lexis-Nexis, 937 865-6940

Vice President, Harold Perdue,

Proctor & Gamble, 513 983-8295

Treasurer, Martha Rollins-Soder,

Nalco Chemical, 800 527-2068, ext. 6863

Membership, Mark Neiheisel,

Uptime Solutions, 513 937-3400

Newsletter, Brad Deaton,

Engineering Dynamics, 513 459-8333

Southern California Chapter

After moving to a new assignment, Rolando Geniza is helping to revitalize the Southern California Chapter. Working with John Sears of Liebert, a core group 25 people held an organizational meeting at Liebert's Irvine facility on March 18, 1999 to prepare a draft plan and goal and select a pro forma slate of officers. If you would like to be involved call Rolando Geniza, 619 547-3330 or John Sears 949 457-3720.

Boston Candidate Chapter

More than 30 met at State Street Bank on November 19 to hear a presentation on the bank's new Kansas City Data Center. Bob Krislis of State Street Realty, along with Steve Wencis, Anthony Caracino and Wayne Dooks of Carlson Associates, presented details of the new 100,000 ft² facility. Bill True of Fidelity will host the next meeting at Fidelity's Merrimack Campus. Details of the meeting, which will include a tour of the Merrimack data center, are under development. For details, contact Gary Murphy gmurphy@carlson-dc.com or 508 370-0100.

According to Gary Murphy, "*We are aiming to achieve chapter recognition later this year.*"

The Bay Area Chapter and the Sacramento Candidate Chapter have not reported any recent action. To learn more contact:

Bay Area

Eric Adrian, Bank of America,

415 436-1975

Bill Mazzetti, Mazzetti and Associates,

415 362-3266

Sacramento

Judy Haar, Carlson,

415 677-0141,

jhaar@carlson-dc.com

Building Operating Management and 7x24 Exchange Sponsor Second Joint Report on 7x24 Facilities.

The January 1999 issue of *Building Operating Management* Magazine, contained a five page article outlining some of the business trends that are increasing the demand for 7x24 facilities and what this means to the facilities group. The article touches on some of the potential pitfalls involved in designing, building and maintaining such facilities as well as some of the special processes and issues that must be dealt with. A complimentary copy of the magazine was sent to the designee of each 7x24 Exchange member company and limited quantities were sent to each 7x24 Exchange chapter. Limited quantities of the issue are available from 7x24 Exchange national or the article can be downloaded from www.facilitiesnet.com.



7x24 Exchange '98 Fall Conference Attendees

Active Power
William Ott

Aetna Inc.
Wade Godin

Air Canada
Eric Dandy
Thomas B. Martin, RPA

ALC Controls Inc
Klaren Alexander

Amdahl Corporation
Allen D. Buskirk

America Online
Shawn Kane
Richard Waddle

Bank of America
Eric Adrian
Brian F. Jarnutowski

Bank One
Robert J. Reinhard

Best Power
Chris Loeffler

Boeing
Charles Lynch
Phil VandeBrake

Business Information Services
Robert Cassiliano

C&D Technologies
Harold W. Smith
L. Douglas Zachau

Cyberex
Anthony J. Pinkey
Terry Sholin

Data Aire Inc
Jeff Trower

One of the best I have ever attended.

Deluxe Corporation
Jim McAlister

Depository Trust Co.
Donald J. Donahue
Meekue Jung

Dow Chemical
John C. Wolters

DPR Construction
Patrick Scott

Dranetz/BMI
Ross Ignall

E5 Group Inc
Darrell Henigman
John Sedo
Robert Manton

Ehrlich Rominger
Cassandra Chin-Alciati

EIDETICS
Gordon Fry
Christopher Shavor

Einhorn Yaffee Prescott
Clifford K. Albright
Peter Gross, P.E.
Joseph Mangan
Kevin J. McCarthy
Nicholas Yalich

Electro Test Inc.
David Clary

Ellerbe Becket
Timothy Dueck
Lamont Fortune, PE, CPE

Engineering Design Group
Shadi Makarechi
Richard N. McWilliams

Enviroguard
Doug Frazier

Perfect balance of presentations, networking, great job, keep raising the bar...

Exide Electronics
Stan Arlington
Mark Ascolese
Stephen Gillette
Ronald Dean Kunkel
Donald Luckman
John D. Mock
Joseph N. Prudente, Jr.
Lou Signorelli
Marty Stefanski
John G. Tracy
Michael D. Vogue

Facilities Eng Assoc
William Flaherty
Richard Rybski
Leo P. Soucy, Jr.

Facilities Mgmt Consultants
Howard W. Levison

Fannie Mae
William Banks
David King

Federal Reserve Bank of NY
Ravi R. Mehrotra

Great info/presentations with exceptional knowledge base of people. See you next year.

Fenwal Protection Systems
Marvin Charney

Fidelity
Jay Forester
Edward O'Brien
Victor J. Quijano
Robert L. Talbot

Fleet Bank
Ronald L. Giess

G.E. - Industrial Systems
Dennis W. Heath
David West

Galileo International
Thomas Dembeck
Mark E. Hample
Lester J. Mullens

General Public Utilities
David M. Herbein

Goldman, Sachs & Co.
Robert W. Baur

GTE Internetworking
Peter Ciaraldi
Thomas Sacco
John Trovage

HLW Services
Gerry Miovski

Holder Construction Corp.
Michael E. Kenig
Rick Morgan
Tony TeVault

IBM Corporation
Thomas Enger
Edmund H. Orchowski
Robert F. Sullivan

Ingllett & Stubbs Inc.
Richard Phillips
Anthony Sinyard

Innovative I/T Solutions Inc
Thomas R. Belesimo

Integrated Support Systems
Larry Pellerito

ISM/IBM Global Svcs
Charlotte Fremont

ISO
Douglas Coe

Ivey Mechanical Co
Frank Matthews

Jaros Baum & Bolles
Brendan P. Weiden

Johnson Controls Inc.
Jay A. Weinkauff

Kamburoff Associates
George Kamburoff

Kling Lindquist
Richard Dennis
Thomas E. Reed, P.E.

LaSalle Partners
Richard A. Williams

Lexis-Nexis
Stephanie Strack
Jerry H. Zahora

Liebert
Bradford Brindley
Michael Lasky
Jeff Moore
John Sears
Richard Walden

Lockheed Martin
George J. Walton

Mazzetti & Associates
Jose Alvarez
John Pappas

MGE UPS Systems
Kameel Andrawos
Kevin P. Burke
Brett L. Korn
Michael O'Brien
Raymond J. Prince

Microsoft
Randy Ramusack

Morgan Guaranty Trust Co
John R. Anderson

Morgan Stanley
Dean Witter
Harry Nass

Mtechnology
Stephen A. Fairfax

N.K. Engineers
Naveen C. Kapur

NASDAQ
James J. Kaminski, PE

Nationwide Insurance
Ilkka Aro
Jacobus Kruger
Dennis O'Cull

Omniom Power Engineering Corp
Bradford Roberts

P K Electronics
Kevin Friel

Paine Webber
Dennis D. Cronin

PCS Health Systems Inc.
Paul Bretaign Nichols

PDJ
Richard A. Combs
Gregory J. Zawojski

Pfizer
Richard Clewell
Joyce Emery

Piller Inc.
Gary P. Rackow, P.E.
Keith Yeates

Power Paragon, Inc.
Saeed C. Mahramnia

PRK Associates
Michael Fluegeman
Steven Katarzoff

Proctor Electric
Steven J. Collins

Purdy-McGuire
Joe H. McFatter, Jr.

Reliable Power Meters
Paul Bradlyn

Russelectric Inc
Dennis Don
Henry C. Lengefeld
John A. Meuleman
Dean Miles
Kurt Richard
George J. Whittaker

Salomon Smith Barney
Vincent Raniolo
Thomas R. Weingarten

SIAC
Michael Whalen

Southwestern Bell Telephone
Michael J. Lammert

Sparling Engineers
Stuart Loberg

SRP
Michele Negley

State of California
Ron Hughes

Strategic Facilities Inc.
David M. DiQuinzio
David Sjogren

Sure Power Corp
William E. Cratty
Arthur J. Mannion

Swanson Rink
Robert J. Yester

Syska & Hennessy
Gerald Burkhardt
Brittany Dianat

The Phoenician
Bill Claypool

The Whiting Turner Contracting Co
Ronald Eisenberg

TrizecHahn Office Properties
James Blanchard
Elmar Janssen

United Parcel Service
James Bloom
Peter Dorizas
Melvyn Foster
Mark Haneman
Scott Killian
Guerry Schuman

United Power Company
J. Stuart Carter
Richard L. Melton

Utime Associates
John Stanley Jackson

VISA
Michael L. Siegele

Wavetech Associates
Jose R. Alvarez

Zenith Controls, Inc.
Thomas P. Duffy

Very well organized, planned and executed.

American Express
Timothy DeReu
Kent Herrick
Robert Semler
Ben Stevens
Joe Rossini

American Power Conversion
John Rodenhausen

American Power Technologies
Michael Butkiewicz

Angus Consulting Management Ltd
Michael Stone

Aperture Technologies, Inc
Loretta Flynn
Robert Longo

Callison Architecture
Leonard Ruff, AIA
Andrea Vanecko

Canyon Falls Group
Paul Raffaeli

Carlson
William Fraser PE
Judy Haar
William Johnson
Gary Murphy
James S. Robinson
Thomas Ryan
John L. Watts

Caterpillar
Nicholas Nott

I feel the conference has good content with very good networking between vendors and users.

AT&T
William H. Bennett, Jr.
Adam Early
Michael A. Weinstein

Automated Logic Corp
John M. Ciccone
John Miner

Automatic Switch Company
Douglas H. Sandberg
David A. Skaggs

Axiom Group Inc
Joseph Paladino
Francis Teracino

Ballard Generation Systems
Laila Bassim

Charles Schwab
Ellis Milano

Chris Robertson & Assoc.
Chris Robertson

CIGNA
Charles J. Corcoran

Convergys
Michael Svoboda

CS Technologies
Adam Krupp

Corning Inc.
Robert L. Tobey

Credit Suisse/First Boston
Debbie Jaslow Shatz

7x24 Exchange

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