



# 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.

## Directors and Officers

### Chairman

Robert J. Cassiliano  
Business Information Services  
212 232-0315

### President

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Strategic Facilities Inc.  
973 875-7701

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516 242-1255

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Western Union  
201 986-5653

### Executive Director

Joseph Paladino  
7x24 Exchange Inc.  
914 835-5740

### Programs

Spring 2002  
John Oyhararay

### Fall 2002

John Oyhararay

### Chapters

#### National Board Chairperson

David Sjogren

#### Arizona

John D. Blevins  
602 236-5464

#### Atlanta

David Hulse  
770 750-7580

#### Bay Area (San Francisco)

Eric Adrian  
415 436-1975

#### Delaware Valley

Russ Mytykyn  
215 826-1168

#### Metro - New York

David Sjogren

#### Mid-Atlantic (Washington, DC)

Engineering Design Group  
202 862-9600

#### Midwest (Kansas City, MO)

Joseph R. Alvarez  
816 843-7870

#### Northwest (Seattle)

Douglas Bors  
206 667-0555

#### Ohio

Stephanie Strack  
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#### Rocky Mountain

Gilbert Roper  
303 239-0909

#### Southern California (Los Angeles)

John Sears  
949 457-3720

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## 2001 Conferences, End-to-End Reliability: Vulnerabilities, and The Future, Set New High-Water Marks

June 3 - 6, 2001 The Grand Floridian, Orlando FL; and November 11 - 14, The Phoenician, Scottsdale AZ

*"As usual with 7x24, the whole is greater than the sum of its parts."*

*"Exceeded all expectations for my first conference."*

*"Probably the best conference I've attended."*

There is an old saying about dog food and dogs' eating choices. These and similar audience comments, as well as overall conference ratings of 5.96 (Spring) and 5.92 (Fall) on a scale of: 1-poor to 7-excellent by the 600 attendees, shows 7x24 Exchange is a culinary expert among uptime pooches.

A broad range of highly-rated topics included:

- *Lightning Physics, Protection and Warnings.*
- *Reliability: A Case Study—Technology Center of the Americas.*
- *Two outstanding Pass-the-Mike/Professional Panels.*
- *Four new Sunday Tutorials — Electricity, Power, Networking and Thermal Dynamics Basics.*
- *Cyber-Crime and Litigation.*
- *An outstanding motivational speech by Eric Weihenmayer, the renowned blind mountaineer.*
- *Emerging Power Technologies.*
- *Eliminating Fire Vulnerabilities.*
- *How to Predict and Control Data Center Cooling Airflow.*
- *A New Approach to Power Quality: Tougher Loads.*
- *High Availability: Methods/Myths/Mistakes.*

While content, education and open dialogues are 7x24 Exchange's primary value-added, the organization and, especially, the vendor members, recognize the value of providing wholesome social

events that promote openness, sharing and camaraderie. As the 6.64 audience rating and these comments indicate, the stunning Epcot event at the Spring conference set the bar very high: "Awesome." "Excellent." "Fantastic." "One of the best experiences of my adult life." "What can I say, it was wonderful. Going to be very tough to beat."

But then, just a week after the Arizona Diamondbacks won the World Series, the group met at BOB Stadium for an unforgettable *Field of Dreams* event, eclipsing the Spring event with a near-perfect score of 6.68.

These costly events in a time of economic strain, the second one just 63 days after the notorious 9/11, are signs of vendor sponsors' commitment to 7x24 Exchange and its members. And, as stated in the workbook, a measure of quality is performance under stress: thus we thank these sponsors for their unbending support:

- Active Power
- American Power Conversion
- ASCO
- Black & Veatch
- Ellerbe Becket
- GE Digital
- Johnson Controls
- L-3 Communications
- Liebert
- Mazzetti & Associates
- Powerware
- Reliable Power Meters
- Russelectric
- Trigen Energy
- Sure Power

*Those in red were sponsors for both events.*

Bob Cassiliano, 7x24 Exchange, chairman observed, *Not only are we thankful to our vendor sponsors for their support, we also are gratified for the high ratings and relatively stable attendance numbers, given these hard time. This*

*gives us a degree of confidence as we plan for our '02 conference program.*

Continuing the thought, Dave Sjogren, 7x24 Exchange president, points out, *Our aim is to continue to improve by paying close attention to our audience's view of our strengths and shortcomings, so we can supplement our strengths and correct our weaknesses.* Following is a sample of audience comments on strongest and weakest parts:

*Diversity of topics—Depth of tech content; Discussion on distributed power, all subjects were good, but some presenters did not have enough time; Great subject matter; Keynote speaker—Tech presentations; I liked 7x24 moving to multiple keynote speakers; Good content. A lot of interesting presentations—Too many sales people; Sometime sessions were too hurried to really get the info out to the audience—little interaction; Too long on some presentations; Great balance of program content—IT/FAC/Futures.*

In sum, the '01 conferences were great successes and work is underway to serve up some more great content at the '02 Spring, June 2 - 5, Orlando, FL and Fall, November 17 - 20, Scottsdale, AZ conferences.

## New 7x24 Exchange Address

Effective March 1, 2002 7x24 Exchange's new mailing address will be:

7x24 Exchange  
322 Eighth Avenue, Suite 1400  
New York, NY 10001

Please update your records and inform your accounting department.

## Chairman's Letter

As we reflect on the events of 9/11, there are many lessons to learn. Not the least of which is: *Stop taking things for granted.* Let us treasure the precious moments of our lives.

*From a business perspective, learning from 9/11 will be the theme of our upcoming Spring Conference in Orlando, Florida, June 2 - 5, 2002.*

### On a special note:

After 10 years of service to 7x24 Exchange, Joe Paladino is refocusing his efforts on other management consulting business at Axiom Group Inc. Joe joined 7x24 Exchange when it was the *Uninterruptible Uptime Users Group*. At that time we were an organization with a Good Idea, a Great Following, and Future Growth Potential. Joe was instrumental in tapping the organization's potential. His contributions include: development

of a strategic plan, transition of the corporate identity to 7x24 Exchange, production of major conferences and sponsored events, the continuous improvement of the conference program and day-to-day membership support.

On behalf of the 7x24 Exchange Board of Directors and membership, I extend a sincere thanks to Joe for his extraordinary support in taking the organization from its start up years through its early/mid-development stages. He has given us *End-to-End Uninterruptible* support.

*Joe, Best Wishes from all of us in all your future endeavors!*

Beginning March 1, Dolci Management Services, Inc., an association management company based in New York City and focused on non-profit organiza-

tions, will support 7x24 Exchange. Dolci Management conducts a number of major events, including the *I Love New York Program* and the *Parade of Stars for Larry King*.

Dolci Management Services, Inc.  
322 Eighth Avenue, Suite 1400  
New York, NY 10001  
646 486-3818 phone  
212 645-1147 fax  
jdolci@msn.com

Please join me in welcoming the Dolci Management Team to 7x24 Exchange.

Robert J. Cassiliano

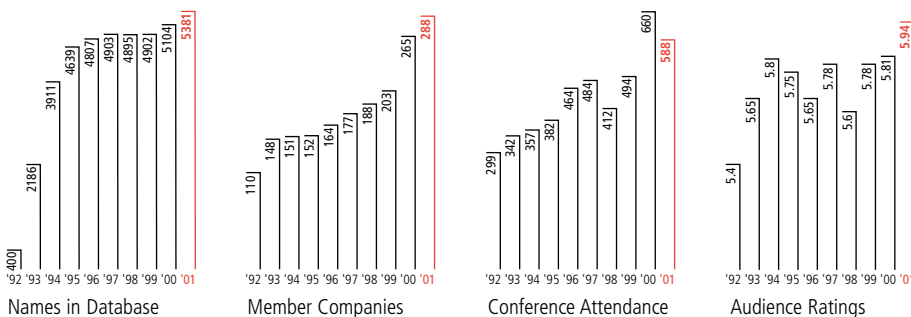
# "...parting is such sweet sorrow."

## Executive Director's Final Report

This letter officially signals the February 28 conclusion of a decade of service to members, chapter officers and 14 national officers and directors of 7x24 Exchange. My first contact with UUIUG (7x24 Exchange's predecessor), was in Spring '92, when I helped write and edit the Spring Newsletter and organize the Conference.

From that point forward, I have been part of a growing and evolving organization that has moved inexorably towards its mission, "the leading knowledge exchange among those who design, build, use and maintain mission critical information infrastructures."

Gauging progress toward this goal requires a look at hard and soft measures. On the hard side (see [www.7x24exchange.org/downloads/MissionVision.pdf](http://www.7x24exchange.org/downloads/MissionVision.pdf) for stated goals), there has been a steady increase in member companies, database contacts, conference attendance and audience evaluations, and active chapters, as shown:



Attendee ratings have increased rather steadily over the past 20 conferences, from 5.4 to 5.94 (scale 1-poor to 7-excellent) are especially satisfying in light of the *escalating expectations* phenomenon, where the last high score becomes the expectation or benchmark for the next conference.

Beyond the numbers are the many positive audience and speaker comments and thanks received for pushing the envelope, exposing you, our members, to new ideas and views, including: *The Internet*, Jock Gill '92; *The Future of Data Storage*, Fred Moore '99; *The Emerging Power Tsunami*, Mark Mills; and, *Biometrics*, Bill Rogers '00; *Lightening, Physics*, Martin Umar; *Emerging Power Technologies (superconductors)*, Paul Grant; and, *Cyber-Crime*, Tom Talleur '01; *Wireless Technology...* Doug Field, '94; *Sonnet*, *Zinc Wiskers* and many more. Likewise, expanding networking opportunities at first-class receptions and those unforgettable vendor sponsored events were *flat out fun*. In short, I think we did a lot, shared a lot and learned a lot about the business and one another.

Helping create, guide and develop such a vital organization has been most satisfying. Articulating a mission, vision and strategic plan/direction was a chal-

lenge and creating a new name, logo and web presence have been very gratifying.

And, as demonstrated by ever-increasing-coverage in the trade and popular press, 7x24 Exchange and you, its members, are increasingly recognized as vital professionals responsible for the ever-more-complex mission critical information infrastructure.

Clearly, more work is needed. The new management group, your current and future boards of directors and the entire membership has my best wishes for continuing 7x24 Exchange's progress. Parting is truly a sweet sorrow and I will miss being part of the dialogue. However, it is imperative that I return to a strategic focus, consulting with our firm's other clients.

Looking forward, the issues and opportunities facing the business are many. However, the underlying trends bode well for the 7x24 business and those in it who can adjust. Most prominent is the fact that technology is a major aspect of business life and, I believe businesses'

major change agent. Essentially all new business technology aims to convert physical elements, processes, and actions into digits and electronics to facilitate increased speed, flexibility and global actions.

For example, I believe nearly all of the world's most prominent business successes have derived as much from being early, extensive users of *their* new technology, as from the new customers, products and services these technologies created. The massive early success and profitability of the Bell System, Xerox, IBM, Federal Express, Microsoft and Cisco had as much to do with the speed, efficiencies and improved services these organizations derived from early, effective use of phones, copiers, computers, logistics, software and the internet as they did with the sale of phone service, copiers, computers, etc.

As our economy and business becomes increasingly knowledge-based, the importance of information and information processing will accelerate. The resulting increased need for information and increased importance of time will demand more robust, flexible and reliable information infrastructures. Responding to these demands will challenge the professionals who

"...design, build, use and maintain..." these infrastructures, 7x24 Exchange members, i.e., *business technology risk managers*.

If we are correct, the firm's success will increasingly rely on information technology and its information infrastructure. As new technologies emerge to further speed, automate and globalize business processes, the demands for more flexible, reliable and robust information infrastructures will require these business technology risk managers to be aware of, rapidly evaluate and, when appropriate, implement these technologies.

The question is what elements/issues/technologies are critical to assuring 7x24 information infrastructures that are truly robust and reliable, end-to-end?

Clearly, the importance of networks and *network logistics* (speed, bandwidth, flexibility, reliability, latency, etc.) will continue to grow. Security, including physical, cyber and software, and the related issues of single-sign-on and biometrics, also are likely to increase in importance. Mobile/wireless computing and communications will become increasing vital. Each of these trends/issues will increase demand for processing power, bandwidth and reliability, and ultimately, the electrical and mechanical infrastructures upon which they are built.

In the short-term, cost, availability and reliability of powering and cooling these facilities has been and will continue to be vital 7x24 Exchange conference issues.

Likewise, as blade servers, edge computing, distributed storage, open-source software, mobile/wireless computing/communications and network logistics move to the forefront, the infrastructure will become less *conventional* and the solutions to powering, cooling, staffing, will also.

In the longer-term, mems, nanotubes, superconductors and light computing hold great promise to dramatically impact the structure of computing and the information infrastructure beyond recognition. In short, the opportunities and challenges facing you, the information infrastructure professionals and 7x24 Exchange, are many. Having worked with so many of you and knowing the organization, I am confident that, together, you will meet these challenges.

Above all, I thank each of you for your support, commitment, camaraderie and caring. You have made this one of the most satisfying assignments I have ever undertaken and I feel privileged to have served you and served with you.

Warmest personal regards,

## Chapters Update

### Arizona

Arizona became an *official chapter* in November 2000 and has since grown to 134 individual members. The group holds quarterly meetings at 11:30 am – 1:30 pm at SRP's Tempe facilities (Phoenix metropolitan area) with lunches sponsored by local businesses, making participation free for chapter members.

UPS: Rotary or Static was the discussion/debate topic at the Chapter's 12/5/01 meeting. Experts from Liebert/PowerWare on the static side and Piller/Reliable Power Systems on the rotary side, gave short presentations highlighting the respective technologies, followed by a lively discussion.

The Chapter's next meeting, scheduled for February 27, will feature a presentation by the Electric Power Research Center's Marek Samotyj. Marek will present an overview of the Consortium for Electric Infrastructure to Support a Digital Society's (CEIDS) paper, *Powering the Digital Revolution* (see <http://www.7x24exchange.org/downloads/EPRI-CEIDS%20cost%20of%20power%20report.pdf>). This consortium will be focused on advancing the quality and reliability of power delivered to high-tech businesses.

### Officers and Directors

#### President

John Blevins, SRP

#### Vice President

Steve Mathis, Charles Schwab

#### Treasurer

Bruce Penman, FRC

#### Secretary

Mike Pearson, Carlson Solutions

#### Membership Chair

John Swetish, APS

#### Program Chair

Jim Rea, SRP

### Atlanta

'01 was an active year for the Atlanta Chapter. It initiated a web page ([www.7x24exchange.org/atlanta/](http://www.7x24exchange.org/atlanta/)) on the national site. The group had a very successful meeting at McKesson-HBOC early in '01 with outstanding participation. The group then met to review operations and decided to recruit new board members and implement a new meeting format—three annual meetings, one at a user site and two 4 – 5 hour gatherings at meeting facilities. As Mike Kenig puts it, "we reorganized and reinvigorated the chapter." The new leadership includes:

#### Executive Committee

David Hulse, AT&T

Kevin Fannin, Chick-fil-A Inc

Jack Ruane, Marconi

#### Steering Committee

Tom Addington, Diversified Cmpt R Svcs.

Robert Cameron, MCSi - Control Rm Grp.

David Hagedwood, Cummins South

Alan Kaufmann, Hoffman Media Sys.

Michael E. Kenig, Holder Construction

Patrick Sweeney, Barco ControlRms.

Tony TeVault, Holder Construction

Sky Williams, T.S. Williams & Assoc.

Bill Angle, CS Technology

The group held its first '02 meeting January 25, at AT&T's Alpharetta data center. More than 100 attended the meeting, including a dozen new members. Two other meetings are scheduled for 2002: March 15 and September (day open). Anyone interested in presenting at the meetings should contact Lori Graddy ([lori.graddy@chick-fil-a.com](mailto:lori.graddy@chick-fil-a.com)).

## Spring 2002 Conference Set End-to-End Reliability: Learning From 9/11

June 2 – 5, 2002  
Disney's Grand Floridian,  
Orlando, FL.

Work is underway to finalize the program and will be posted to the web and detailed in a Conference Brochure that will be available in April.

## The Cost of Downtime

The following downtime cost by industry figures from a recent article in Storage Inc. may be of value in budget/cost justification activities:

Business	Hourly Downtime Cost
Brokerage	\$6,450,000
Pay-per-view	\$150,000
Catalog sales	\$90,000
Tele-ticket	\$69,000
ATM fees	\$14,500
Credit Card	\$2,600,000
Home shopping	\$113,000
Airline reservations	\$90,000
Package shipping	\$28,000

## Bay Area (San Francisco)

More than 70 attended San Francisco Chapter's December 5, meeting at Bank of America's San Francisco data center. The meeting included: a joint case study presentation by David Clary of ETI and Jim Szel of Syska and Hennessy on switchgear failure resulting from improper/lack of maintenance; a presentation on powerdown maintenance events and shared data collection regarding critical facility infrastructure maintenance; an overview of presentations from 7x24 Exchange's Fall Conference; and a discussion of chapter goals, initiative and directions.

Work is underway for a Spring Conference in March that will include an update on the potential impact of future designs by computer hardware manufacturers.

### Officers and Directors

#### President

Mike Jump, *Digital Island*

#### Vice President

Eric Adrian, *Jones Lang LaSalle*

#### Treasurer

Sue Alimagno, *Bank of America*

#### Secretary

Bill Mazzetti, *Mazzetti & Assoc.*

## Delaware Valley

'01 was also an active year for the Delaware Valley Chapter. More than 750 people attended its 6 meetings at end-user sites like QVC, MBNA, Computer Science Corp, PJM Interconnection and Meridian Telesis. Presentations ranged from Utility Deregulation and the Impact on the Delaware Valley 7x24 Community, to Mission Critical System Design in an Outsourced Data Center Environment. Sessions included presentations, panels and tours. Although plans for FY2002 called for 9 meetings, the impact of September 11th is clearly impacting the Chapter's ability to get into mission critical customer sites.

Work is underway on creation of a standards program to provide an active forum to exchange information on the collective practices, features, processes and reference sources of its members.

The group now has more than 85 company and 300 individual members.

### Chapter officers:

#### Executive director

Russ Mykytyn, *DVL, Inc.*

#### President

Phil Davis, *MBNA*

#### Executive Vice President

William Leedecke, *The Vanguard Grp.*

#### Secretary/Treasurer

Jack Clift, *DVL Automation*

#### VP – Standard Committee

Phil Michel, *St. John's Consulting Grp.*

#### Vice Presidents

John Ash, *SAP America, Inc.*

Al Clark, *Penn Power Systems, Inc.*

Ed Lynch, PE, *Bala Consulting Eng.*

Rich Mauer, *Bristol-Myers Squibb*

Tom Reed, PE, *TKLP- Kling Lindquist*

## Metro – New York

The Metro—NY chapter served as the pilot chapter for hosting chapter web pages on the National Web site. The chapter held two meetings in '01: January and August 6 at ASCO's NJ facility, with total attendance approaching 100. Chapter use of an online registration form/process was successfully piloted with registrations for the

chapter's August meeting and will be made available to all chapters in 2002. In consideration of 9/11, the chapter cancelled its Fall meeting and has announced a meeting on Physical Security for March 6, 2002 at The Newark Regional Partnership, Newark, NJ.

### Chapter Executive Committee

#### Chairperson

David Sjogren, *Strategic Facilities*

#### Vice Chair – Membership

Brian Schafer, *Carlson*

#### Vice Chair – Programs

Doug Sandberg, *ASCO Services*

#### Vice Chair – Communications

Lou Weiss, *Kleinknecht Electric*

#### Membership

Stan Pearson

## Mid-Atlantic

No activity to report.

## Midwest

2001 was another active year for the Midwest Chapter, which included a full and a half-day program. The April 6, Spring program held at Harrah's Casino Hotel, from 7:00 am to 12 noon included presentations by Mike Karl, Emergency Management Director, City of Kansas City, MO on KC's Contingency Planning; Technologies Presentation on *High Availability* by Steve Fairfax; and David Jackson of TRANE Co., speaking on Variable Flow Chillers, as well as a number of networking opportunities. The Fall program 10/19/01, also at Harrah's, ran from 8:15 am to 3:15 pm, with four outstanding presentations:

- Russ Hailey, Secure Network Group. *Business Fundamentals of IT Security*
- John Voeller, Black & Veatch, *The Use of Adaptive Autonomous Entities for Multi-faceted Reliability*
- Dave Konye, Power Measurement, LTD, *Deregulation Update: The California Energy Crisis*
- Don Avise, Seiler Instruments, *"As built by Laser"*

The tentative '02 Spring program set for April 12 will include: Fuel Technologies – *Generator Fuel Considerations*; Black & Veatch – *Trans-American Power Grid*; Liebert Global Services – *Cooling your STUFFED Server Cabinets*; and Mindconnection – *Time Management*.

The Fall program is set for 10/18/02 at Harrah's with the following tentative line-up: Fluke Corp: *What you can do with a hand-held scope (or power analyzer—still being discussed)*; Cutler-Hammer: *What they never told you about breakers (possible)*.

### Officers and Directors

#### Director

Joseph Alvarez, *DST Systems*

#### Assistant Director

Mark Lamendola, C.M., *EC&M Interactive Publishers*

#### Treasurer, Database Manager

Ted N. Carlton, *DST Systems*

#### Awards Officer

Edward Rafter, P.E., *Power Eng.*

#### Conf. Mgr., Venue Neg. Officer

Joseph Alvarez

#### Conference Printing Officer

Donald Riley, *Honeywell*

#### Members-At-Large

Bruce Bleser, *Black & Veatch*

Tom Brink, *State Street*

Scot Emert, *Craftsmen Industries*

Mike McCurley, *Trammel Crow*

Bob Ross, *Electro-Test*

### Past Director

Lanny Bennefeld, Jr., *DST Systems*

### Webmaster

Mark Lamendola

## Northwest

Hats off to Leonard Ruff for his continued outstanding efforts making the Northwest Chapter 7x24 Exchange's longest running active chapter.

Recent programs include:

**Winter '01:** Powering the Internet – A Discussion with Seattle City Light

**Spring '01:** The Nisqually Earthquake – An Overview of Lessons Learned

**Fall '01 Update Topics:** SAN-High

Availability Data Storage Energy

Efficient Servers; Wearable Computing

Work Group Updates

**Winter '02:** U.S. Trends in Reliability and Security for WAN's; Server Cooling

Work Group Update

More than 75 people attended these meetings.

And, kicking off 2002, more than

15 people attended the January 29 *Server Cooling Work Group* meeting at Intel's

Dupont Campus.

The group also is sponsoring a *Server Cooling Work Group*, whose goal is to understand thermal issues facing the modern data center, bring together the industry server thermal roadmap and data center cooling capacity, and chart a course for power and density growth over the next five years. Initiated in May of '01, the group met five times and the minutes of its meetings are posted to the chapter web site ([www.7x24nw.org/workgrps.htm](http://www.7x24nw.org/workgrps.htm)). All *Server Cooling Work Group* meetings can be attended in person or by conference call. To be notified of the conference call access number for the next meeting, contact David DeLorenzo at Intel: [david.s.de.lorenzo@intel.com](mailto:david.s.de.lorenzo@intel.com)

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the survey, indicates, "our goal is to assist our members in evaluating their own best practices and to benefit from the exchange of information provided by others in the region. We think it will be a great help to guide our programs and help our members.

### Officers and Directors

#### President

Gary Bristow, *Qwest*

#### Executive Vice President

Chuck Corcoran, *DoubleClick*

#### Secretary/Treasurer

Don Mastro, *Hoffman Media Sys.*

#### Executive Director

Gilbert Roper, *The RMH Group*

#### Vice President (Program Chair)

Roger Crosby, *The Crosby Group*

#### Vice Presidents

Montgomery Sykora, *Level 3 Comm.*

Jim Ward, *IBM*

## Southern California

No activity to report

## Candidate Chapters

### Boston

After several false starts, Bill Collins, Cummins Power Generation, has taken the reins and is in the process of regrouping to get the chapter off-the-ground. An organization meeting is being planned for April in Boston. Anyone interested should contact [william.j.collins@cummins.com](mailto:william.j.collins@cummins.com)

### Canada

James Kennedy, On Power Systems, is leading the effort to make Eastern Canada the first non-US chapter. The group has met several times and submitted a draft set of by laws. However, as Jim pointed out in a recent letter, " ...there were a few delays as some of our members had their companies sold and some moved on."

Anyone interested in getting involved should contact one of the following.

### Candidate Board Slate

John Boyd, [jboyd@ca.ibm.com](mailto:jboyd@ca.ibm.com)

Jim Blanchard, [jblanchard@hr-reit.com](mailto:jblanchard@hr-reit.com)

David Doyle, [david.doyle-eds@eds.com](mailto:david.doyle-eds@eds.com)

Bob Hughes, [bob.hughes@mbs.gov.on.ca](mailto:bob.hughes@mbs.gov.on.ca)

Elmar janssen, [ejanssen@hr-reit.com](mailto:ejanssen@hr-reit.com)

Jim Kennedy, [jkennedy@onpower.com](mailto:jkennedy@onpower.com)

Bill Powell, [ppowell@mcgregor-alsop.com](mailto:ppowell@mcgregor-alsop.com)

## The Carolinas

While still working towards chapter recognition, the group has held a number of organizational and informational meetings. For information on involvement, programs and sponsorship/membership, contact Randall Perkins, [rperkins@marketware.com](mailto:rperkins@marketware.com).

## New Chapter Formation

Anyone interested in forming a chapter can download a set of guidelines which describe the whys and wherefores of the eight step process <http://www.7x24exchange.org/chapters.html>.

## 2001 Spring and Fall Conference Attendees

**@Lightspeed**  
Robert McClary  
Neil S. Miller

**Abbott Laboratories**  
Robert E. Hill

**Active Power**  
Mark A. Ascolese  
Jim A. Balhazar  
Dennis P. DeCoster  
William C. Kabele  
William Kainer  
Bradley S. Walter

*I keep coming back because it is a great forum.*

**Aetna Inc.**  
Ralph S. Catalano  
Paul Close

**AL-Critical Systems**  
Larry Bacher  
John Ciccone  
John Loving

**American Express**  
Douglas Dudinski  
John Stanley Jackson

**American Power Conversion**  
Domenic J. Alcaro  
Jorge L. Balcells  
John W. Collins  
Carlton J. Cottuli  
Ali M. Doost  
Tony K. Evans  
James R. Fink  
Ryan Hansen  
William Hunt  
Henry C. Lengefeld  
John P. Menoche  
Robert Perry  
Mario Recine  
Peter Rumsey  
Russell Senesac  
Kimberly Slinko  
Dwight Sperry  
Chris Thompson  
John P. Yagelovich  
Robert A. Zakarian

**American Power Technologies**  
Clifton LaPlatney  
Kostas Pervolarakis

**American PowerNet**  
R. S. Helm

**Anheuser Busch**  
Warren L. Lambert

**APW-Wright Line**  
Todd Schneider

**Archon Group / GENISUS**  
Prudence P. Lidbury

**Arup**  
Andrew P. Harrison

**ASCO Services**  
Amir Abouhashem  
Douglas H. Sandberg

**AT&T Solutions**  
Michael Weinstein

**Autocap Solutions, Inc.**  
Charles E. Burns

**Automated Logic Corp.**  
John T. Kaasa

**Ballard Generation Systems**  
Brent Graham  
Colleen Coyle Mathis

**Bank of America**  
Richard J. Alessandri  
Suzanne Alimagno  
Dave Clary  
John R. Furtado

**Bechtel Betts Laboratory**  
William Roper

**Beck**  
Harry B. Brittan

**Bell Canada**  
Ian Alexander

**Bermello Ajamil & Partners**  
Scott Bakos

**Bick Group**  
William Davies III  
William J. Bick  
Douglas N. Reid

**Black & Veatch**  
David A. Barr  
Tom Bates  
Bruce W. Bleser  
Paul J. Rieger  
John G. Voeller

**BlueCross BlueShield of FL**  
Brent Blanchette  
Marion Lane

**Business Information Svcs**  
Robert Cassiliano  
Robert J. Cassiliano Jr.

**C&D Technologies**  
Harold W. Smith  
Douglas B. Strassle

**California ISO**  
Tom Armstrong

**Callison Architecture**  
Leonard Ruff

**Capstone Turbine**  
Ali M. Doost  
Tony K. Evans  
James R. Fink  
Ryan Hansen  
William Hunt  
Henry C. Lengefeld  
John P. Menoche  
Robert Perry  
Mario Recine  
Peter Rumsey  
Russell Senesac  
Kimberly Slinko  
Dwight Sperry  
Chris Thompson  
John P. Yagelovich  
Robert A. Zakarian

**Carlson**  
William R. Johnson  
Kevin S. LeMans  
J. Michael Pearson  
James S. Robinson  
Brian Schafer

**Catalyst Power**  
Gary McConnell  
John E. Rodenhausen  
Kimberly Samaha

**CCG Facilities**  
Tim Rush-Ossenbeck  
Scott Preston

**Centex Technology Construction**  
Larry Casey  
Mike Little

**CGI Telecom/Group**  
Pascal F. Benedetto  
James R. Powell

**Charles Schwab**  
Mark J. Duplessie  
Stephen Mathis

**Cingular Wireless**  
Gloria Groves-Smith

**Clark Engineers, Inc.**  
James A. Burch

**Clark Facility Services**  
David A. Avedesian

**Clark Global Technologies**  
Neal Fleming  
Granger Stuck  
David D. Tacchetti

**Comdisco**  
Dan Navarra

**Communications Design**  
Frank W. Peri

**Compaq Computer Corp.**  
Kenneth R. Baker

**Compel**  
Brent D. Ciulei

**Consolidated Engineering**  
Dennis Mulgrew

**Convergys**  
Larry Blake

**CP&L**  
Warren L. Scrivani

**Critical Power Exchange**  
Casey Haley

**CS Technology**  
William R. Angle

**Cummins Power Generation**  
Joseph W. Herzog

**Cupertino Electric Inc.**  
Rudy G. Berghold  
Kirk Cowan

**Current Technology**  
David W. Carroll  
Dean W. Datre  
Joseph Roark  
Azam Zaidi

**Cushman & Wakefield**  
John E. Diamond  
Christian J. Magliano

**Cyberex**  
Michael B. Hays  
Andy Meikle  
David Skeans

**Danaher IPQ**  
Kurt Gallo  
Gary A. Masse

**Data Aire Inc**  
Jeff Trower

**Data Centers Now**  
Marc Bellet

**Data Support Associates**  
Frank Catapano

**Datasite Inc.**  
Robert Sayer

**Datasphere Inc.**  
Scott McClure

**Depository Trust and Clearing**  
Donald J. Donahue  
Alfred S. Lane

**Deutsche Bank**  
Sudhir Kalra

**DFW Consulting Group**  
Julian Y. Rachman, PE

**Dick Corporation**  
Richard Mehan

**DLB Assoc. Consulting Eng.**  
Donald L. Beaty  
David H. Rogers

**Donohoe Construction Co.**  
Stephen B. Altizer

**DoubleClick**  
Charles J. Corcoran  
Matthew F. Romano  
Dennis Yuscavitch

**Dranetz-BMI**  
Ross M. Ignall

**dRay Tech, Inc.**  
Derrick McLaughan  
James Savage

**DLV, Inc.**  
Russ Mykytyn

**E Source/Power Quality Series**  
Charlotte Otero-Goodwin

**E5 Group Inc**  
Darrell Henigman  
Rob Manton  
Roy Tabora  
Eli Yitzhaky

**EDS**  
Ted R. Martin

**EDS Systemhouse**  
Scott Finlayson

**EFT Architects**  
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**Electrotek Concepts, Inc.**  
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Dayle Wine

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**Encon Group Inc.**  
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**Energy User News**  
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**Engineered Data Products**  
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Thomas P. DeVries  
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Daniel Sullivan

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Tommy Nickolopoulos  
Scott Oehler

**Fleet**  
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**Fluor Daniel**  
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Howard J. Rapaport

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Lawrence S. Cook  
Scott Henderson

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**Gensler**  
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Peter Ouellette

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Thomas E. Reed, P.E.

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David Arnold  
Adam I. Kuehl

**M-W Zander**  
Herbert Blaschitz  
Norbert J. Loch  
Kevin D. Moss

**Mark G. Anderson Consulting**  
Kenneth Stipcak

**Mass Mutual Financial Group**  
David J. Brown

**MassMutual Life Insurance**  
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**Master Card International**  
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Michael D. Case

**Max D. Hopper Associates**  
Max D. Hopper

**Mazzetti & Associates**  
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William P. Mazzetti, Jr.  
Juan Orocco  
John M. Pappas  
Ronald Wilson

**McDermott, Will & Emery**  
Christopher Donovan

**MCSI**  
Daniel L. Knotts

**Merrich & Company**  
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**MTechnology, Inc**  
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**Nash Lipsey Burch, LLC**  
Bogue Waller

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**Navisite**  
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**NetBrowser Communications**  
Jonathan William Buckley

**New West Energy**  
Michele P. Negley

**Nexacor Realty Management**  
Todd MacLachlan

**NovaCenter**  
Robert Couture

**Office Depot**  
Michael K. Bell

**Ontario Government**  
Robert Hughes

**Orr Protection Systems, Inc.**  
Brian K. Fabel

**Paric Corporation**  
Mark A. Hubbs

**Parsons**  
Keith Rosdahl

**Partners National Real Estate**  
Kirk A. Killian

**Patterson & Dewar Engineers**  
Michael J. Kline

**PEI**  
John L. Daigle

**Piller, Inc.**  
Travis D. Gerould  
Robert Hall  
Gary Rackow

**Pinebreeze Technologies Inc.**  
Al Nichols

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Terry L. Sholin  
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**Power Measurement USA**  
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**Power Quality Magazine**  
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**Powerware**  
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Andrew Brusick  
John D. Mock  
Frank P. Spruill

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David A. Colvin

**Progress Energy -- CP&L**  
Sue Austin

**Provident Bank**  
Charles Tubbs

**Qualmag, Inc.**  
Lonnie Bradford  
Andrew B. Goldin

**Qwest**  
Charles Raudonis

**Rackware, Inc.**  
Michael J. Conley

**Reliable Power Meters**  
Brian Babcock  
John H. Carroll  
Scott Ceci

**Reliant Energy**  
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George H. Nolin

**Reliatech**  
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David Weinand

**Sabre, Inc.**  
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Bruce Garrett

**Safeco Insurance**  
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**Salomon Smith Barney**  
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Vincent Raniolo  
Thomas Weingarten

**SBC Communications**  
Phillip Wood

**Sebesta Blomberg & Assoc.**  
Lamont S. Fortune  
Jeffrey S. Rudin, PE

**SGC**  
Raymond G. Saleeby

**Shaw Communications**  
John Milino

**SIAC**  
Paul G. Hines

**Siemens/Energy & Automation**  
Michael Hellmann  
William Reid  
Ed Stogenson