



RMIC XPress

Rocky Mountain Chapter

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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2010 FALL SOCIAL

This year we returned to an evening dinner event and for the first time a live jazz band. Our Social was held at the Renaissance Denver Hotel and they did a marvelous job in accommodating all of our needs and laid out a wonderful feast for everyone.



Michael Ryan

Our keynote speaker was Michael Ryan with the Colorado Homeland Security's Rubicon Critical Infrastructure Protection team.

Michael pointed out some of the vulnerabilities we are all faced with on a daily basis and how to better protect ourselves. Some activity that goes on right in our city was surprising as well as shocking and chilling.

We have already made reservations to return to the Renaissance Denver Hotel next November 3rd in 2011 and will continue to have our social as a dinner event. If you didn't get a chance to attend this year you might want to pencil the 2011 date in your calendar.



Gary Bristow Bob Maas

Our great evening wouldn't be possible if it wasn't for our membership and sponsors, and I'd like to give a special thanks to the companies that donated some great door prizes. This was a grand way to end the evening and the year.

2010 FALL SEMINARS

Modular Data Centers



Eric Friall

Eric Friall, Regional Manager of TAS, a Houston based manufacturer of packaged technical solutions for the mission critical market provided 7x24 Exchange members

with information on the relatively new concept of modular data centers. He shared some insight into the advantages of modular data centers versus traditional construction. The presentation highlighted the modular data center benefits of cost savings, scalability, energy efficiency and shorter construction time.

Distributed Energy

Max Billington, Exec. Director of our Rocky Mountain Chapter of the 7x24 Exchange and Chief Electrical Engineer for the RMH Group gave an insightful presentation on distributed energy.



Max Billington

Max covered a brief history of the electrical utility industry, including distributed energy and its impact on the national grid. Max also shared information on the coming smart grid, and renewable energy sources as they apply to critical facilities.

The audience was captivated by both presentations and provided enthusiastic feedback!

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COLORADO SPRINGS SATELLITE PROGRAM

Our fourth educational program for the 7x24 Exchange Pikes Peak Satellite was held on October 26, 2010 at the US Olympic Training Center in Colorado Springs. The program was entitled "Contiguous Power Quality" which addressed power quality from the utility through engineering and then to the end user.

The presenters were Steve Schaarschmidt, Susan Lovejoy, and Mike Allison of Colorado Springs Utilities; Dale Pickering of FedEx; and Dan Heggem of Swanson Rink.



Dale Pickering



Susan Lovejoy



Mike Allison



Dan Heggem

Approximately 50 were in attendance for this program. The newly formed Pikes Peak Satellite Board of Directors was also introduced to the attendees.

Fall National Program

The 7x24 Exchange's 2010 Fall Conference had many valuable sessions.

Joe Theismann, a former quarterback in the National Football League kicked off the session with a



humorous and motivating presentation urging us to set goals and correct problems each step of the way. Thus, you can build an

atmosphere of success. He posed for photographs afterward enthusiastically waving his Super Bowl ring.

There were presentations by HP and IBM covering the latest in servers and cloud computing. There was a session by the Uptime Institute on the quantitative reliability analysis of their four-tier data center topologies. They discussed data center performance metrics and the question and answer session had some lively discussions about the high cost of Tier-4 facilities without a commensurate increase in reliability. A later session evaluated that Tier-3 and Tier-4 facilities might have lower reliability due to the increased exposure to failure during planned outages and maintenance; the increased failures were due to human error servicing such.

There was a great presentation on High Performance Computing (HPC) and supercomputers discussing load densities of 700 to 1600 W/sf. They presented the looming specter of 2500 W/sf in the next generation of Cray supercomputers.

The highlight of the conference involved two shipping containers in the parking lot. One contained a fully functional chiller plant, the other a completely contained server room with self-cooled server racks. An associated session discussed the pros

and cons of containers for data center applications.

These conferences provide valuable and timely information and the most important opportunity to meet other data center professionals. Please consider attending a future conference.

GREEN CORNER

By: Max Billington

Recent convergent happenings around the country will result in higher energy costs and lower power reliability; data centers will no doubt be affected by these coming changes. Here are some snapshots of what is happening. This week Fox News reported on how the Obama administration will use government agencies and the Clean Air Act to push through its global warming agenda. This comes after Congress failed to pass legislation requiring the reduction of carbon emissions. The administration has asked the EPA to have preliminary rules in place by this summer. Large scale governmental mandates reducing carbon emissions will result in higher energy costs; thus putting even more pressure on data centers to be more energy conserving.

The District of Columbia recently passed a law requiring all public and private buildings to publically report their energy use. This trend will expand to other cities around the country requiring reporting of energy use as a means of pushing energy efficiency and reduction in energy consumption. Once a building reports poor energy

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performance there will be pressure to reduce energy consumption. For private buildings, the value of the building will be directly affected by this amount of transparency, making building owners more sensitive to energy use. Data centers energy use will no doubt be under higher scrutiny in the years to come.

The North American Electric Reliability Corporation (NAERC) announced in its Reliability Impacts of Climate Change Initiatives (RICCI) Report that climate change initiatives will require substantial modifications to the bulk power system. They report that these initiatives may adversely affect power reliability. Last October, Symantec Corp. released the findings of its 2010 Critical Information Infrastructure Protection Survey, which highlights that 53% of critical infrastructure providers reported that their networks have experienced what they perceived as politically motivated cyber attacks. Cyber attacks on our nations utilities will be targeted toward large scale blackouts. Data centers will be subject to more power outages, placing high importance on the reliability of back-up power supplies.

SPRING PROGRAM

On March 15th NREL will be hosting the Spring Presentation for the 7x24 Exchange; an national organization of Data Center and Facility Managers. There will be a multi-part presentation to include High Performance Buildings, Building Ops, Green IT and How to Build a Better Data Center. The presentations will be followed by tours of the building and data center.

The presentation will be held at the Research Support Facility, NREL's new high performance building. This building is expected to be certified as the World's Most Energy Efficient Office Building, attain a LEED Platinum Rating, receive an Energy Star Rating for the Building, an Energy Star Rating for the Data Center and when fully operational be the World's Largest Net Zero Energy Building. The announcement will be coming shortly.

SUMMER PROGRAM

Critical Infrastructure Protection & Cyber Crime – Guest Speaker: Michael Ryan. June 7th @ 4001 Discovery.

Managing your risk and protecting your business and people is getting more complex. The enterprise, company-wide, approach to risk management is fast becoming the standard. The Colorado Office of Preparedness and Security can assist in your risk management process, offering programs, proven tactics and ideas you can implement right away. The Colorado Office of Preparedness and Security is proud to present a State Homeland Security Overview presentation on June 14, 2011. The presentation will cover:

- An Overview of Colorado Homeland Security
- A briefing on the Terrorist and “All-Hazards” threats that impact Colorado
 - Homegrown and international terrorism,
 - Improvised explosive devices,
 - Cyber crimes,
 - Increasing cases of identity theft,

- Greater interdependency requirements
- Homeland Security resources that can assist in the ongoing risk management process
- The information sharing and intelligence model
- Presenters will include representatives from the:
 - State Rubicon Critical Infrastructure Protection Team
 - Federal Bureau of Investigation's Joint Terrorism Task Force
 - Colorado Information Analysis Center (CIAC)

AFEC CONFERENCE

The Advanced Facilities Management and Engineering Conference is dedicated to increasing the skills and knowledge of Facility Managers and Engineers in the Rocky Mountain Region, preparing them to meet the demands of their occupation, today, tomorrow, and into the future.

As always 7x24 Exchange Rocky Mountain Chapter was represented at the show. We truly enjoyed making new contacts and finding new members.



Please mark your calendar for this year's show that will be held Oct. 5-6, 2011.

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AFEC SEMINAR:

What Every Facility Manager Should Know

7x24 Rocky Mountain Chapter officers participated in an educational seminar at the Fall AFEC conference. The seminar was moderated by Randy Jackson, 7x24 Exchange RMC Vice President. Panel members included Bob Maas, 7x24 Exchange RMC President, Rick Dassow, Vice President of CMI Mechanical, Woody Widmer, Vice President of CMI Mechanical, Dan Heggem, Vice President – Electrical at Swanson Rink, and Michael Donato, Commissioning Specialist at Emerson Process Management. Due to the brief time allotted, the seminar consisted of introduced topics such as disaster management, HVAC and electrical design considerations and strategies, and trends in data center design. Each topic was followed by a question and answer session. Attendee reviews of the seminar were very positive.

A NOTE FROM THE PRESIDENT

Working closely with your IT department and keeping yourself educated in the fast moving advancements in technology can help reduce energy usage dramatically in your data center. Data centers have a bad reputation for being real energy hogs, but with the technology today that doesn't need to be the case. Today in many data centers infrastructure sprawl is rampant. Virtualization has helped break the one-application-one server paradigm, but the I/O requirements of virtual servers have led to a proliferation of

network cards and storage connections. Cables tend to be strewn everywhere. The number of virtual machines capable of being hosted on individual servers is lower than originally expected because of these bottlenecks. The end result is a chaotic deployment that remains inefficient and expensive to run and is not energy efficient.

As components mature and manufacturing processes improve, IT equipment does tend to pack higher performance into smaller, less-expensive, and more-efficient packages. Based on cutting edge, multi-core processors, today's x86 Proliant server and blade systems are delivering mainframe like computing power. The latest advances in memory and network connectivity ensure that I/O does not impede performance. The bottom line to this is, if the equipment in your data center is 3-5 years old, the difference is not incremental; it's exponential. Yes it's easy to say new equipment is more efficient, but purchasing it can be the show stopper, but the money saved through energy and possible rebates can brighten the picture.

7X24 WEBSITE

To obtain information on current events, future programs, joining the RMC (obtaining a user-friendly membership application), or contacting us with any questions, please visit our website at: www.7x24exchangerm.org.

