

Critical Facilities Round Table 6th High Density Data Center (HDDC) Committee Meeting

Hosted by John Richard, Johnson Controls, Inc.
04-22-2005

Magnus K. Herrlin, Ph.D.
Chair HDDC
Principal ANCIS Inc.
mherrlin@ancis.us

Bruce Myatt, P.E.
Co-Founder CFRT
Principal EYP MCF
bmyatt@eypmcf.com

Today's Program

- 8:30 Continental Breakfast
- 9:00 **Johnson Controls Welcome**
John Richard
- 9:05 **HDDC Committee Business**
Magnus K. Herrlin, Ph.D. Chair HDDC & Bruce Myatt, P.E. Co-Founder CFRT
- 9:30 **High Density Data Centers—The Big Picture**
Magnus K. Herrlin, Ph.D., ANCIS Incorporated
- 10:00 **Enabling the Wireless Utility**
Hugh Hudson, Johnson Controls, Inc.
- 10:45 **A New Metric for Data Centers?**
John Richard, Johnson Controls, Inc.
- 11:30 Discussion
- 12:00 Adjournment

CFRT Charter

Provide a Forum for End-User Members and their guests to...

- Share information about mission critical facilities
- Learn about new mission critical technologies
- Improve Members' technical expertise
- Develop solutions for facility operations.

HDDC Purpose and Membership

- Purpose

Addressing End-Users' thermal and energy challenges in High Density Data Centers.

- Membership

Anyone interested in sharing his/her expertise or in understanding HDDC is welcome to become a Member and participate in the activities.

Previous HDDC Meetings

1st HP Laboratories

Hosted by Dr. Chandra Patel,
Internet Systems & Storage Laboratory

2nd Oracle Corporation

Hosted by Dr. Mukesh Khattar,
Energy Director

3rd Intel Corporation

Hosted by Bill Hammond,
Intel Enterprise Server Group

Previous HDDC Meetings

4th AMD

Hosted by John Martin

Presentations by Jeff Underhill/Ed Gasiorowski

5th Liebert

Hosted by Lennart Stahl

Presentations by Lennart Stahl/David Toralez

- 1. The New Data Center Cooling Paradigm - The Tiered Approach**
- 2. Future Cooling Solutions – New Products**

Liebert Meeting

Meeting Minutes

Contact HDDC Secretary

James Alvers

alversj@squared.com

Last CFRT Meeting

Summary of last CFRT
meeting at Sun

Future Programs

Next HDDC Meeting, June 3, 2005

Air-Side Economizers: Pros and Cons

Host:

National Energy Research Scientific Computing Center (NERSC)

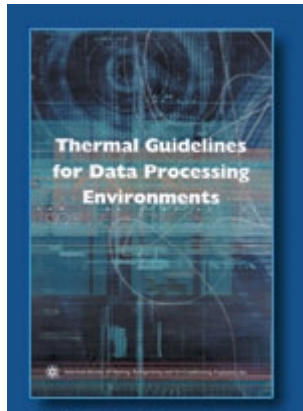
Tour of Facility in Afternoon

Unfortunately this event will be limited to 25 people

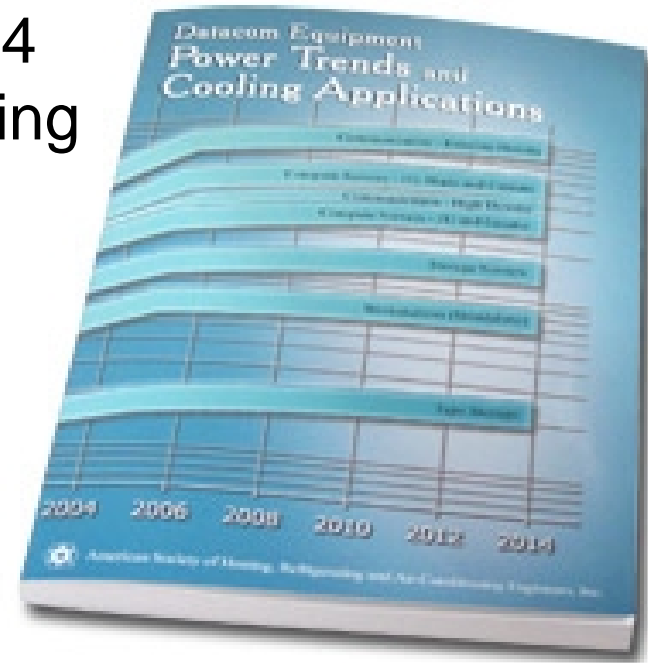
Summary of ASHRAE Efforts

Equipment Power Trends

- Power forecasting up to 2014
- Key aspects of facility planning
- Glossary of common terms



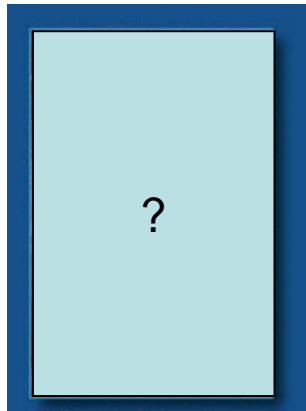
- Environmental Specifications
- Temp/hum Measurements
- Equipment Placement
- Airflow Patterns
- Equipment Reporting



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Design Considerations for Data and Communications Equipment Centers

- Design Criteria
- HVAC Systems and Components
- Air Distribution
- Contamination
- Redundancy
- Energy Efficiency



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