

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS INC.

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Feb 23/2009

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TOPIC:

CONTROLS Technology Shifts and ASHRAE Standards

JOSEPH KLOTS, CEM
Project Sales Manager, Canada
Johnson Controls

Meeting - Mon Feb 23/2009

RESEARCH NIGHT

London Chapter Members = \$30.00
Students = \$10.00 Others = \$40.00

THE LAMPLIGHTER INN, 591 Wellington Rd., London
CASH BAR ALL YOU CAN EAT BUFFET
5:15-Social 6:00-Dinner 7:15-Program





President's Message

Challenging economic times are certainly being felt or at least noticed by all parts of the world – particularly to the south of us in the USA.

We in Canada sometimes think that we are insulated, and to some degree protected from the kinds of problems being experienced by other countries, but I don't think that we are going to be that fortunate. We may not suffer to the degree that the USA does, but we will definitely see and feel the belt tightening processes north of the border over the next year or two.

London has always been to some degree blessed with a good mix of industry and professional employment; we may not experience the huge "booms or busts" that areas like Windsor or Toronto do, but we have a much more stable economy here – due in large part to the institutional, and hospital presence and established economies.

Energy usage and consumption is always a concern and a target for producing savings – particularly when times get tough, we attempt to wring more dollars in savings from the day to day cost of operations that we incur.

Our speaker this month will speak to the subject of "Controls Technology Shifts and ASHRAE Standards" – a subject that is sure to bring some questions to mind when considering how we might go about doing a better job of controlling our surroundings to achieve better efficiency and therefore lower operational costs.

Our March speaker is to be from our own Region II – Joel Primeau is the ASHRAE Region II Student Activities RVC – from Ottawa. Joel will present "Selling Green 101; The HVAC Engineer as a Salesman" and the benefits of integrated building design to owners and operators. We will be planning to have the meeting at or near the UWO, with dinner also at a location close to the UWO in order to accommodate easier access to the meeting for our student membership.

In April, we are arranging a Technical Tour the CASCO – London Facility – they have an interesting plant operation that includes a Co-Gen plant in house with 3 gas turbines that produce 13 MW of electricity as well as steam that is used in the production of corn syrup and other products.

We look forward to seeing everyone at the meeting this month – February 23rd at the Lamplighter Inn on Wellington Road South.

Eric Shaw
ASHRAE London Canada Chapter President

Upcoming Meetings & Events

Mon Mar 30/2009 Student Night
Selling Green 101; The HVAC Engineer as a Salesman
Joel Primeau - ASHRAE Region II Student Activities RVC

Wed Apr 22/2009 IAQ Satellite Broadcast/Webcast
Clean, Lean and Green, IAQ for Sustainable Buildings

Mon Apr 27/2009 Membership Night
Tour



Pete Edmiston
Branch Manager



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Feb 23/2009 Meeting Topic

ASHRAE is adding wireless communications capabilities to the BACnet standards using ZigBee™ technology with BACnet messaging. ZigBee provides inherently reliable, ad hoc forming, self-healing wireless radio communication capabilities. This session will review and explain the concepts, illustrate the perceived and real radio interference issues, and show how it can provide for lower installation and lower life cycle costs for buildings owners.

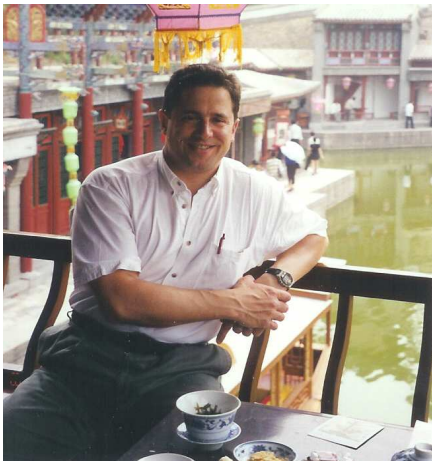
Presentation Outline

- Introduction
- Wireless Technologies and BAS
- What is ZigBee, and how it works
- Wireless Interference and IT concerns
- Standards advantages
- Wireless advantages

Speakers Bio

JOSEPH H. KLOTZ, CEM

Johnson Controls Product Sales Manager, Canada.



Joe is responsible for all JCI product sales in Canada, including all BAS, HVAC and refrigeration controls, VFD's, fire, security and DVN systems sold through JCI Branches and independent third party channels. Joe has been in the HVAC / BAS industry since 1981 as a facilities manager, public works director, international business manager, and as CEO of a BAS manufacturer. Joe graduated from the University of Alaska Fairbanks with a BS in Natural Resources Management. He is an ASHRAE member, and an Association of Energy Engineers member.

Jan 19/2009 Meeting Summary

MR. LESLIE SALTEL - Project Manager and the Training Coordinator as well as MR. PHILIP BREARTON - Operations Manager for the Building Science Group from Pinchin Environmental, Mississauga, Ontario spoke about the building and fire code requirements for fire alarm and smoke control systems.



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**NEW: Advanced Energy Design Guide for Small Warehouses and Self-Storage Buildings**

www.ashrae.org/freeaedg

Advanced energy savings guidance is now available for self-storage buildings and non-refrigerated warehouses up to 50,000 square feet. Warehouses make up the second-largest segment of commercial new construction. Yet these building types are largely overlooked with respect to energy savings potential. Use of ASHRAE's new guide can help engineers, architects, operators and owners easily achieve substantial energy savings.

The Advanced Energy Design Guide series specifies use of off-the-shelf technology to deliver energy-efficient buildings. The series is co-developed by ASHRAE, the American Institute of Architects, the Illuminating Engineering Society of North America, the U.S. Green Building Council, and the U.S. Department of Energy. The Metal Buildings Manufacturers Association also contributed to this guide. The Advanced Energy Design Guide for Small Warehouses and Self-Storage Buildings covers:

- Building envelopes
- Lighting and daylighting
- HVAC and service water heating
- Recommendations for specific climate zones

In order to promote contributions by its members and others to achieve energy savings, ASHRAE, along with its partners, is making the Warehouse guide available for free download at www.ashrae.org/freeaedg. The book version of the guide may be purchased through the same link.

Learn more about the Advanced Energy Design Guide series at www.ashrae.org/freeaedg

ASHRAE's 2009 Satellite Broadcast Focuses on IAQ for Sustainable Buildings - April 22, 2009, 1pm – 4pm EDT

What's lean and green and clean all over? Your next sustainable building project and its indoor air quality, thanks to ASHRAE's upcoming satellite broadcast. The program, "Clean, Lean, and Green – IAQ for Sustainable Buildings," will take place April 22 from 1 to 4 p.m. EDT.

The free broadcast, sponsored by ASHRAE's Chapter Technology Transfer Committee with support from the U.S. Environmental Protection Agency, will challenge the building community to use good IAQ practices to create a more sustainable built environment. The program will highlight guidance from the publication IAQ Guide: Best Practices for Design, Construction, and Commissioning, developed collaboratively by ASHRAE, AIA, BOMA, EPA, SMACNA and USGBC.

"Saving energy in buildings is paramount, and everyone in the buildings industry must do all they can to ensure sustainability in their projects," says Dave Shugars, Chair of the Satellite Broadcast committee. "But sustainability must never come at the expense of good indoor air quality. Proper operation and maintenance of buildings must be combined with enhanced IAQ practices to ensure healthy, productive indoor environments."

Participants who complete the participant reaction form online at www.ashrae.org/iaqbroadcast the week following the broadcast may be awarded three PDH credits.

The broadcast presenters and their topics are:

Martha Hewett, Director of Research, Center for Energy & Environment, Minneapolis, MN
Practical, Proven Strategies to Deliver Better IAQ

Hoy Bohanon, P.E., Owner and Manager of Bohanon Engineering, PLLC, Winston-Salem, NC
Improving Your IAQ and Reducing Your Energy Costs through HVAC Design

H.E. Barney Burroughs, Owner and CEO of Building Wellness Consultancy, Inc, Atlanta, GA
Keeping Buildings Clean: Avoiding and Building Control of Contaminants to Attain and Maintain IAQ Acceptability

George DuBose, Certified General Contractor, Liberty Building Forensics Group, Orlando, FL
Avoiding Costly IAQ Problems in the Building Envelope

John McFarland, P.E., Director of Engineered Systems, WorkingBuildings, LLC, Atlanta, GA,
Integrating Good IAQ into the Design & Construction Process

For more information about the broadcast, please call (678) 539-1206, visit www.ashrae.org/iaqbroadcast or e-mail ashrae-satellitebroadcast@ashrae.org. Online registration for satellite site coordinators and Webcast viewers will begin March 2, and viewer registration will begin March 16. There is no fee for registration

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

**Consortium to Advise DOE on High-Performance Green Building Issues**

ASHRAE leads formation

The American Society of Heating, Refrigerating and Air-Conditioning Engineers, along with nine other leading organizations, is forming a consortium in response to the U.S. Department of Energy request for consortia to advise the department on high-performance building issues. The High-Performance Commercial Green Building Partnership (HPCGBP) brings together leading organizations from all aspects of the building community to provide guidance and technical leadership on key sustainability issues to the Department of Energy's Building Technologies Program.

"This partnership will ensure that the voices of the building industry are being heard," says Bill Harrison, ASHRAE president. "At a time when reducing energy consumption in buildings is paramount, the consortium gives leaders in the built environment and in those industries affecting construction a clear path to offer advice to the DOE on our goals, concerns and new technologies."

The American Society of Heating, Refrigerating and Air-Conditioning Engineers initiated formation of the Partnership and will serve as the Partnership's Secretariat. Other members of the HPCGBP's steering committee currently includes the Air-Conditioning, Heating and Refrigeration Institute (AHRI), American Institute of Architects (AIA), Alliance to Save Energy (ASE), Building Owners and Managers Association (BOMA), International Code Council (ICC), Illuminating Engineering Society of North America (IESNA), National Association of State Energy Officials (NASEO), National Electrical Manufacturers Association (NEMA) and the U.S. Green Building Council (USGBC).

The partnership intends to be recognized as a "Partnership Consortium" by the Department of Energy as requested in response to the Energy Independence and Security Act of 2007 Section 421. Section 421 is part of the formation of the Net-Zero Commercial Building Initiative which is intended to develop a research, development, and deployment strategy toward achieving net zero energy commercial buildings.

Partnership participants reflect all disciplines necessary to design and build high-performance commercial buildings, including:

- architects and engineers
- the development, construction, financial, and real estate industries
- building owners and operators
- academic and research organizations
- building code agencies and organizations
- independent high-performance green building associations or councils
- experts in indoor air quality and environmental factors
- experts in intelligent buildings and integrated building information systems;
- utility energy efficiency programs;
- manufacturers and providers of equipment
- public transportation industry experts
- nongovernmental energy efficiency organizations

For more information, please visit www.hpcgbp.org or contact Doug Read in ASHRAE's Washington Office at dread@ashrae.org or 202-833-1830. For media inquiries, please contact Wendy Angel at wangel@ashrae.org

ASHRAE Publishes Load Calculations Manual

Guidance to help designers improve the performance and efficiency of design as it relates to load calculations is contained in a new book from ASHRAE. Load Calculation Applications Manual focuses on two methods for calculating cooling loads in non-residential buildings – the heat balance method and the radiant time series method (RTSM).

Author Jeffrey Spitler noted that understanding these methods is crucial when answering three primary design questions – what is the required equipment size; how do the heating/cooling requirements vary spatially within the building; and what are the relative sizes of the various contributors to the heating/cooling load?

"Cooling load calculations are performed primarily to answer the first and second questions, providing a basis for specifying the required airflow to individual spaces within the building," Spitler said. "Answers to the third question help designers make choices to improve the performance or efficiency of the design."

The new manual features in-depth examples, as well as bringing together the latest data for building materials, windows, weather and internal heat gains, according to Spitler. The accompanying CD contains spreadsheets that compute the factors needed by the RSTM and compute cooling loads with the RSTM.

The manual is the fourth in a series of load calculation manuals published by ASHRAE, including the first and second editions of Cooling and Heating Load Calculation Manual as well as Cooling and Heating Load Calculation Principles.

The cost of the Load Calculations Applications Manual is \$119 (\$97, ASHRAE members).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit at www.ashrae.org/bookstore

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**ASHRAE Recognizes Outstanding HVAC&R Industry Achievements**

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) recognized 46 people for their contributions to ASHRAE and the HVAC&R industry at the Society's 2009 Winter Conference held here Jan. 24-28.

The ASHRAE Award for Distinguished Public Service recognizes distinguished public service by an ASHRAE member. The recipient is Kenneth M. Fulk, P.E., principal and chief mechanical engineer, Reed, Wells Benson and Co., Dallas, Texas. Fellow ASHRAE is a membership grade that recognizes distinction in the arts and sciences of environmental technology. The honor is earned through achievement as a researcher, designer, educator or engineering executive. The Society elevated 22 members to the grade of Fellow ASHRAE

The ASHRAE Technology Awards recognize outstanding achievements by members who have successfully applied innovative building designs, which incorporate ASHRAE standards for effective energy management and indoor air quality. Four projects received first-place ASHRAE Technology Awards:

Kenneth Sonmor, Ecovision Consulting, Montreal, Quebec, Canada, in the existing commercial buildings category for his retrofit of a 13-floor office tower, 4200 St. Laurent Office Tower, Montreal

Laurier Nichols, P.E., Dessau, Montreal, Quebec, Canada, in the new public assembly category for Centre Communautaire de Mistissini, Mistissini, Quebec, Canada

Thomas H. Durkin, P.E., Durkin and Villalta Partners Engineering, Indianapolis, Indiana, in the existing institutional buildings category for HVAC renovations at George Washington Carver Elementary School, Indianapolis

Jacques De Grace, Pageau Morel and Associates, Montreal, Quebec Canada, in the new institutional buildings category for the Normand-Maurice Building, Montreal

Also in the Technology Awards, Eric Kirkland, Smithgroup, Phoenix, Ariz., receives second place in the new institutional buildings category for the National Renewable Energy Laboratory Science and Technology Facility, Golden, Colorado.

The ASHRAE Student Design Project Competition challenged teams of students to create architectural design as well as select and design HVAC&R systems for a 60,000-square-foot community recreation center. First place in the HVAC system selection category is awarded to Alyssa Adams, Calvin Douglass, James Gawthrop Jr., Justin Herzing, Amy Leventry, Michael Smith and Gregory Smithmyer of The Pennsylvania State University, University Park, Pennsylvania. First place in the HVAC system design category goes to Wiroj Ekwongmunkong, Chaowanaphan Lekham, Pakorn Nontiwatwanich, Patarapol Puangkum and Supayos Suveepattananont of Chulalongkorn University, Bangkok, Thailand. First place in the architectural design category is awarded to Alexandra Gibson, Justina Jones, Bryan Quarles and Bazigha Tufail of the University of Kansas, Lawrence, Kansas.

The E.K. Campbell Award honors outstanding achievements by engineering educators. The recipient is Judi Steciak, Ph.D., P.E. The award honors an individual for outstanding service and achievement in teaching and is presented by the ASHRAE Life Members Club. Steciak is associate professor of mechanical engineering, University of Idaho-Boise.

The John F. James International Award is given to an ASHRAE member who has done the most to enhance the Society's international presence. The recipient is Prem Jain, Ph.D., Fellow ASHRAE, chairman and managing director, Spectral Services Consultants, New Delhi, India.

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