TC 1.5 Program Subcommittee Agenda

Houston, TX, June 24, 2018, 7:00 to 8:00 pm
Chair: Mike Galler

1. Call to Order
2. Review of Agenda
3. Current Programs (Submitted X program proposals total and 2 were accepted):

Sunday, June 24, 11:00 a.m. - 12:30 p.m.
Seminar 16 (Intermediate)
Urban-Scale Energy Modeling, Part 8
Track: Fundamentals and Applications
Room: 372AD
Sponsors: TC 1.5 Computer Applications, and TC 4.7 Energy Calculations
Chair: Joshua New, Ph.D., Oak Ridge National Laboratory, Oak Ridge, TN
Development of urban-scale building energy models is becoming increasingly tractable for many applications including utility-scale energy supply/demand strategies, urban development planning, electrical grid stability, and urban resilience. This seminar has assembled researchers from MIT, Lawrence Berkeley National Laboratory and commercial entities to demonstrate and empirically validate city-scale capabilities in the field of urban-scale energy models as well as discuss the data, algorithms, workflow and practical challenges addressed in their applications involving creation, analysis and visualization of useful models of individual buildings at the scale of a city, urban or metropolitan area.
1. A Comparison of Two Modeling Approaches for Establishing and Implementing Energy Use Reduction Targets for a University Campus
Shreshth Nagpal, MIT, Boston, MA
2. Impacts of Building Geometry Simplification on Energy Simulation Results of Urban Building Energy Models
Yixing Chen, Member, Lawrence Berkeley National Lab, Berkeley, CA
3. Stepping Outside the Door: Using Building Energy Modeling to Understand the Impact of Energy Choices
Matt Cox, The Greelink Group, Atlanta, GA

Monday, June 25, 6:30 p.m. – 9:00 p.m.
Seminar TC (Intermediate)
Early HVAC System Modeling and Efficiency Comparison Tool using the New Building Energy Efficiency Ratio (BEER)
Track: HVAC&R Analytics
Room:370CF
Sponsor: TC 1.5 Computer Applications
Chair: Richard M. Bostian, WaterFurnance Interntaional, Edmond, OK
OPEN SESSION: No badge required; no PDHs awarded; presented during the TC's meeting. This presentation discusses a method to compare the Energy and Life Cycle Cost of HVAC systems at the early design stage of a project. The 15 minute discussion is to seek advice and direction on peer review of the comprehensive modeling logic. Currently 30 predefined complete HVAC systems which use AHRI data as the base are corrected for basic "as applied" models. The methodology follows ASHRAE Standard 209P minimum requirements and is included in the free downloaded program.

Tuesday, June 26, 8:00 a.m. - 9:30 a.m.
Seminar 43 (Intermediate)
What is BACnet Tagging About?
Track: HVAC&R Control Freaks
Room: 372BE

Sponsors: 7.5 Smart Building Systems, 1.4 Control Theory and Application, SSPC 135 BACnet, and TC 1.5 Computer Applications
Chair: Carol Lomonaco, Johnson Controls, Milwaukee, WI
Understand what a tag is and how they may be able to benefit from their use
Understand why relationships are needed to fully define equipment and applications
Define proprietary tags within their own namespace
Understand how tags and relationships can be used with BACnet

1. Semantic Information on Building Data

Bernhard Isler, Siemens Switzerland, Zug, Switzerland
The semantic of the data is normally only recognizable by a human and binding the applications onto it is a manual configuration process, which can become very expensive in particular for applications that consume a lot of data. With the more modern concepts of semantic tagging of building data, machines can understand the semantic information and a much higher degree of automation of the binding procedures become possible. But with new tagging concepts, in order to achieve interoperability between applications and data, standardized semantic information concepts and semantic tag dictionaries are essential to
the building automation systems and more importantly to the end users, specifying engineers and product developers.

2. Why the Tagging Model is Essential to Having Interoperable Smart Devices That Can Communicate on an M2M Basis

Grant Wichenko, Member, Appin Associate, Wiinpieg, MB, Canada
This presentation covers why the tagging model is essential to having interoperable smart devices that can communicate on a machine-to-machine (M2M) basis from a specifying engineer's and/or user's point of view.

3. The Vision for Using Tags Moving Forward

Clifford Copass, Johnson Controls, Milwaukee, WI
In order to realize the full potential that is possible using tags, several improvements to the current state of affairs need to be made. Commonly used tags need to be standardized with common meanings that can apply across many vendors. Vendors need to supply appropriate tags with their products. The dictionary of commonly used tags must be expanded and made generic to apply to many building subsystems such as security, lighting, evacuation, fire protection, smoke control, energy management as well as a broad range of HVAC technologies. Rules and guidelines for tag selection must be published.

4. List of proposed seminars not accepted: (info not available!)
5. Speaker Ratings:

Session Type	Oral Presentation	Graphical Presentation	Technical Quality	Free of Commercialism	Composite Score	# Attendee Evaluations	# Registrants
Workshop	**4.17**	**3.92**	**4.42**		**4.167**	**6**	**70**
003 - ASHRAE Building Energy Quotient: A Building Rating System and More	**4.17**	**3.92**	**4.42**		**4.167**	**6**	**70**
Speaker #1	4.00	4.33	4.33		4.167	6	70
Speaker #2	4.33	3.50	4.50		4.167	6	70
Total	**4.17**	**3.92**	**4.42**		**4.167**	**6**	**70**

Session Type	Oral Presentation	Graphical Presentation	Technical Quality	Free of Commercialism	Composite Score	# Attendee Evaluations	# Registrants
Seminar	**4.64**	**4.50**	**4.60**	**100%**	**4.593**	**6**	**85**
027 - Urban-Scale Energy Modeling, Part 7	**4.64**	**4.50**	**4.60**	**100%**	**4.593**	**6**	**85**
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Speaker #1	4.50	4.60	4.20	100%	4.450	6	85
Speaker #2	4.80	4.40	5.00	100%	4.750	5	85
Total	**4.64**	**4.50**	**4.60**	**100%**	**4.593**	**6**	**85**

6. Atlanta 2019 Program Details:
   a. Atlanta 2019 Winter Conference, January 12-16, 2019.
   b. Deadlines
      - *Monday, March 26, 2018 - Conference Paper Abstracts, Technical Papers and Paper Session Requests Due*
      - *Monday, April 9, 2018 - Conference Paper Abstract Accept/Reject Notifications*

- *Thursday, June 7, 2018 – Website Opens for Seminar, Workshop, Forum, Debate and Panel Proposals*
- Monday, July 9, 2018 - Final Conference Papers Due - Submitted for Review (Includes Bio, Learning Objectives and Methods of Assessment); Request for Conference Paper Sessions Due
- Monday, July 23, 2018 - Conference Paper Accept/Revise/Reject Notifications
- Friday, August 3, 2018 – Seminar, Workshop, Forum, Debate and Panel submissions due
- Monday, August 6, 2018 - Revised Conference Papers/Final Technical Papers Due
- Monday, August 20, 2018 - Conference and Technical Paper Final Accept/Reject Notifications

c. Tracks
   1. Systems and Equipment
   2. Fundamentals and Applications
   3. Refrigeration
   4. Construction, Operation, and Maintenance of High Performance Systems
   5. Common System Issues and Misapplications
   6. The Convergence of Comfort, Indoor Air Quality, and Energy Efficiency
   7. Building Integrated Renewables and Natural Systems
   8. The Engineer's Role in Architecture

7. Future Program Ideas (and random notes):
   1. Blockchain (Tim Dwyer)
   2. Demo: Fly a drone during seminar: Title: Stick up your duct
   3. Computer Security Basics (Mike Galler)
   4. "Emerging computer technologies for HVAC: New and innovative user interface for HVAC" – BuildingIQ / NEST API / ecobee
   5. Arduino for HVAC
   6. "Optimize HVAC Energy consumption through data mining approach" (Ziang/Ron):
   7. "Capturing Design Intent in BIM"
   8. "Interoperability Software and Schema Technologies for Purposes of Building Energy Modeling"
   9. "Using gbXML To Run Loads and Build Your HVAC System BIM Schematics "
   10. "Emerging Computer Technologies for HVAC"
   11. More mobile app seminars????
   12. Reality capture (geometry capture) ->
   13. Jeff Haberl -> Take GIS images
   14. "Put building geometry capture in your pipe and smoke it" MagicPlan/ Phil Haves/ John K. (3D Printing) -> Todd will work on it
   15. Jeff Haberl: Follow up to 1468 -> Dave Branson
   16. Commissioning tools: HVAC-Cx / UT (Mike Galler)
   17. Art Halstrom->DBOSS
   18. Big Data for HVAC – Krishnan
   19. Free software tools for HVAC
   20. And You Thought You Owned Your Buildings Data In The Cloud!: Bruce B.
   21. NetZero Analysis Strategies – Krishnan.
   22. Free software tools: HVACR and looking at low cost software tools like apps and open source software / usage of Excel
   23. Imagine 3 killer apps for ASHRAE -> just make them up.
   24. Fake apps.
   25. AI, MI, predictive analytics