

## ASHRAE 2014 Winter Conference – New York City

### **TC 1.5 Computer Applications- Minutes -**

TC 1.5 Public Web site: <http://tc15.ashraetcs.org/>

TC 1.5 ListServ (mailing list) : tc105\_all\_lst@listman.ashrae.org (Contact chair or vice chair to be added)

TC 1.5 Members-only Site: <https://sites.google.com/site/ashraetc15/> (Contact chair or vice chair for access)

### **Main Committee Meeting Monday 6:30-9:00 PM Bryant (H2)**

Sponsoring/Cosponsoring:

**Seminar 8:** The Latest Trends and Abilities of Mobile Applications for Load Calculations and Building

Energy Evaluations

**Seminar 9:** Emerging Technologies in the Built Environment: Geographic Information Science (GIS), 3D

Printing, and Additive Manufacturing

**Seminar 19:** Energy Efficient Single Pipe Hydronic System Design for Large and Tall Buildings

**Seminar 48:** App, App and Away: Enabling Meaningful Work for the Building

Professional with the

Development of Quality Apps for Smartphones and Tablet Computers

### **Call to Order**

2. **Welcome:** Introductions

3. **Roll Call:** List of Voting members from 2013-2014 TC 1.5 Roster: Galler (ch), Kennedy, Rosen, Bourassa, Dwyer (NQ), Welle, Crosby, Billedeaux(not present), Branson, Pouchak (8 VM + 1 NQ + Chair)

4. **Review of Agenda -**

5. **Approval Of Minutes from 2013 Annual Conference in Denver Minutes were approved 7-0-0 cnv**

6. **Review Action Items from 2013 Annual Conference in Denver:**

	Description	Due Date	Completion Date
Responsible Member			

Galler	Reserve NYC Room locations	October	October
Galler	Assign Handbook Chapter review members (Billedeaux assigned Handbook Review Compliance Chair)		
Branson, Kennedy, Clayton	Continued-Draft letter for ASHRAE Society to send to software developers to enhance critical functionality (BEM capabilities vs. BIM capabilities)		
Subcommittee Chairs	Update subcommittee web site sections.	Continuing	1 month after mtg.
Galler	Post section announcements on web site.	Continuing	1 month after mtg.

## 7. Subcommittee Reports:

a. **Handbook:** Steven Rosen – steve gave update on Handbook timeline. Copies will be distributed through Email. There is a

b. **Research:** John Kennedy - Research subcommittee met yesterday. Art Geissler (research liaison) gave update on Research . Some existing RTARS are being converted to the new RTAR formats. Bing D. will be updating his RTAR for further action. John will resign as chair. Mike P. willing to mentor person willing to step up as chair.

c. **Emerging Applications:** Norm Bourassa met yesterday– good attendance for emerging applications. 5 business items were discuss. RTAR bio sensing controls discussed. Report from Bob Coleman on ASHRAE exchange. Good signup but want more. Art H. Hi resolution monitoring idea. Asked for help from TC 1.5 to educate members. There was discussion about a make generic RTAR tool. There is an apps for energy.

d. **Program:** Stephen Roth – detailed the individual programs that were submitted and accepted. 3D printing. Sem 19: Energy efficient (cosponsor 1.5) Sem 48 : quality apps ; programs for Seattle. Deadline is Feb 13 (3.5 wks!) - March 25 will announce. Jun 2 power point due. ; Workshops are more presentation and discussion and are being encouraged over forum. If you want more feedback from the audience then you can get better information from Workshops.

Future speaking topics:

Rhino is a 3d geometric shape program. Revit. Universal translator- Taylor engineering control system trend viewer analyzer. Todd G discussed the analyzer. Stephen

discussed energy visualization of data devices. Stephen discussed about 3d printing – there is an opportunity to talk further about 3d printing with HVAC applications. Would like a seminar on that. Also would like to see energy plus. Tim Dwyer – need more bim topics. TC 1.5

e. **Web Page:** Mike Galler – please get your updates to mike

f. **PMS 1468:** Dave Branson – deliverables given to ashrae . Project is complete.

g. **E&P:** Dave Branson – tc meeting available via internet

h. **T& P :** Dave Branson – no report – no activities

8. **YEA mixer with TC 1.5:** Grondzik – table with poster – students talked at each table. Excellent resources for tc recruitment.

9. **ASHRAExCHANGE update:** Pouchak – needs to have higher visibility on web site. please register. If you have registered, please find and topic and post or create a new topic and post.

10. **Chair's Report.**

**Would like to visit tps.**

**Vice chair is unable to attend. Subcommittee chairs. Walter Grondzik suggested a chair be appointed .Branson will be chair ; Mark Rosen will be vice chair; Krishnan G. to do handbook; JFK is over the edge; Todd Gottshall is stepping up for Research Chair.**

**Members need to update their profiles.**

a. Dinner plans

b. Announcements (mike g gave verbal announcements – mike g please fill in details here) – Dave Branson recognized to be a fellow.

c. Step-up-to-the-plate awards – steve rosen step up to vice chair and then chair

11. **Liaison Reports:**

a. GPC-20

b. IAI/BIM Society Subcommittee Report: Steven Rosen – completed course is published on BIM.

c. TC 7.3- WS 1609 - Defining the Capabilities, Needs and Current Limitations of Building

Information Modeling (BIM) in Operations and Maintenance for HVAC&R

d. TAC

12. **Old Business - none**

13. **New Business - none**

14. **Next Meeting Times:** ASHRAE Annual Conference, Seattle, WA June 18-22, 2014

15. **Adjournment – moved by Bentle 2<sup>nd</sup> by Rosen- adjournment**

***TC 1.5 Meeting Schedule***

**TC 1.5 Computer Applications Monday 6:30-9:00p Plaza Court 6 (PC)**

**TC 1.5 Emerging Applications Sunday 5:00-6:00p Lincoln (H4)**

**TC 1.5 Research Sunday 6:00-7:00p Lincoln (H4)**

**TC 1.5 Program Sunday 7:00-8:00p Lincoln (H4))**

**TC 1.5 Handbook Monday 6:00-6:30p Lincoln (H4)**

***TC 1.5 Programs Schedule***

**Sunday, January 19, 11:00 AM-12:30 PM, Room: Sutton South**

**SEMINAR 8 (BASIC)**

## **The Latest Trends and Abilities of Mobile Applications for Load Calculations and Building Energy Evaluations**

Track: Building Information Systems

**Sponsor: 04.01 Load Calculation Data and Procedures, 01.05 Computer Applications**

*Chair: Glenn Friedman, P.E., Fellow ASHRAE, Taylor Engineering, Alameda, CA*

Are your HVAC load calculation and energy tools current? The latest trends and abilities of mobile applications for load calculations and building energy evaluations are explored.

**1. Recent Advances in Mobile Load Calculations** *Stephen Roth, P.E., Member, Carmel Software Corp., San Rafael, CA*

**2. Residential Load Calculations and Equipment Selection in a Mobile Environment**  
*Charles S. Barnaby, Member, Wrightsoft Corp., Lexington, MA*

**3. Development of Mobile Applications for Rapid Building Retrofit Assessment at the EEB Hub** *Russell Taylor, United Technologies Research Center, East Hartford, CT*

**Sunday, January 19, 1:30 PM-3:00 PM, Room: Mercury**

### **SEMINAR 9 (INTERMEDIATE)**

**Emerging Technologies in the Built Environment: Geographic Information Science (GIS), 3D Printing, and Additive Manufacturing**

Track: Fundamentals and Applications

**Sponsor: 01.05 Computer Applications**

*Chair: Stephen Roth, P.E., Member, Carmel Software Corporation, San Rafael, CA*

This session highlights current capabilities and recent advances in both geographic information systems, 3D printing, and additive manufacturing. The GIS portion will focus on advanced research, development, and applications of geographic information and analysis systems to support the nation's energy, environment, and security programs, from local to global scales. Likewise, the next generation of manufacturing portion showcases 3D printing and additive manufacturing results and simulation methods for revolutionizing the way buildings and products are designed and built to enable energy efficient mass production.

**1. Geographic Information Science (GIS) and the Built Environment** *Budhendra Bhaduri, Ph.D., Oak Ridge National Laboratory, Oak Ridge, TN*

**2. 3D Printing for Commercial Building Design** *Mark Buckner, Ph.D., Oak Ridge National Laboratory, Oak Ridge, TN*

**3. New Frontiers in Additive Manufacturing** *Lonnie Love, Ph.D., Oak Ridge National Laboratory, Oak Ridge, TN*

**Monday, January 20, 8:00 AM-9:30 AM, Room: Trianon**

### **SEMINAR 19 (INTERMEDIATE)**

**Energy Efficient Single Pipe Hydronic System Design for Large and Tall Buildings**

Track: Hydronic System Design

**Sponsor: 07.01 Integrated Building Design, 01.05 Computer Applications**

*Chair: Joe Simmons, P.E., Member, HVAC Solution, Salt Lake City, UT*

Imagine an optimal hydronic HVAC system for commercial buildings. What benefits would it deliver? First it would

provide comfort to all zones. Second, it would be easy to install, operate and maintain. Third, it would be competitive on a first-and operating-cost basis. Lastly, it would conserve the use of materials and be energy-efficient, a must in the “green”-environment. Since the 1950's a system providing these benefits has been available, the single-pipe hydronic system. These systems, however, traditionally have been limited to residential applications. But with an innovative application of proven hydronic technology, single-pipe systems now can be applied readily to all types of commercial buildings.

**1. Energy Efficient Single Pipe Hydronic System Design for Large and Tall Buildings** *Greg Cunniff, P.E., Member<sub>1</sub> and Kirk T. Mescher, P.E., Member<sub>2</sub>, (1) TACO, Cranston, RI, (2)CM Engineering, Inc., Columbia, MO*

**Wednesday, January 22, 8:00 AM-9:30 AM, Room: Mercury**

**SEMINAR 48 (BASIC)**

**App, App and Away: Enabling Meaningful Work for the Building Professional with the Development of Quality**

**Apps for Smartphones and Tablet Computers**

Track: Building Information Systems

**Sponsor: 01.05 Computer Applications, Publications Committee**

*Chair: Tim Dwyer, Fellow ASHRAE, Bartlett School of Graduate Studies, University College London, London, United Kingdom*

There are literally millions of apps available for smartphones and tablet computers. Identifying useful apps is increasingly challenging, leading to many exploring the development of truly useful apps for the professional building practitioner.

This session explores the evolution of apps; the methods for developing and establishing a reliable app to provide an accessible and verifiable way for building professional to solve practical problems; examines the state of in-house and publicly available HVAC&R related apps – including the ASHRAE apps - and how those are brought to market; and finally looks at areas of potential app development.

**1. The Current State of Mobile Apps for HVAC** *Stephen Roth, P.E., Member, Carmel Software Corp., San Rafael, CA*

**2. Software Development Process for Smart Device Applications** *Richard Szydlowski, Center for Energy and Environment, Minneapolis, MN*

**3. Applying Applications** *Sara R. Tepfer, Student Member<sub>1</sub> and Alison G. Kwok, Ph.D., Member<sub>2</sub>, (1) University of California Berkeley, Berkeley, CA, (2)University of Oregon, Eugene, OR*

*Attendance (please remove email address before posting in the minutes!!!!!!!!!!!!!!!!!!!!!!)*

1. Mark Hydeman – Taylor engineering - guest
2. David Bornside – Siemens – CM
3. Stephen Roth Carmel – [sroth@carmelsoft.com](mailto:sroth@carmelsoft.com)

4. Todd Gottshall Western Allied Mech – [igottshall@westernallied.com](mailto:tgottshall@westernallied.com) – guest
5. Steve Rosen Vanderweil – [srosen@vanderweil.com](mailto:srosen@vanderweil.com) vm
6. Lindsey king jci [Lindsey.c.king@jci.com](mailto:Lindsey.c.king@jci.com) Guest – would like to be cm
7. Norm Bourassa – lbl [nibourassa@lbl.gov](mailto:nibourassa@lbl.gov) vm
8. Mike Pouchak – Honeywell [mike.pouchak@honeywell.com](mailto:mike.pouchak@honeywell.com) vm
9. Joon-ho choi usc [joonhoch@usc.edu](mailto:joonhoch@usc.edu) cm
10. Dave branson csg [djbranson@csg.net](mailto:djbranson@csg.net) vm
11. Walter grondzik bsu cm
12. galler
13. Tim dwyer ucl [tim.dwyer@ucc.ac.uk](mailto:tim.dwyer@ucc.ac.uk) member
14. Bing dong ut-san Antonio [bing.dong@utsa.edu](mailto:bing.dong@utsa.edu) – guest
15. Krishnan gowri pnnl [Krishnan.gowri@pnl.gov](mailto:Krishnan.gowri@pnl.gov) cm
16. John kennedy autodesk [john.kennedy@autodesk.com](mailto:john.kennedy@autodesk.com) vm
17. 8. Raj setty setty associates [rsetty@setty.com](mailto:rsetty@setty.com) cm
18. j. Patrick carpenter fac perf eng [facperfenge@comcast.net](mailto:facperfenge@comcast.net) cm
19. 10. mark adams ornl [adamsmb@ornl.gov](mailto:adamsmb@ornl.gov) guest
20. jibo Sanyal ornl [sanyclj@ornl.gov](mailto:sanyclj@ornl.gov) guest
21. mayami miura Azbil [m.jiura.pb@azbil.com](mailto:m.jiura.pb@azbil.com) guest
22. Shilpa anand Honeywell [Shilpa.anand@honeywell.com](mailto:Shilpa.anand@honeywell.com) guest
23. Elyse malherak Weidt group [elysem@twqi.com](mailto:elysem@twqi.com) guest

Minutes by Mike Pouchak