

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS,
INC.
1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400**

TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. 1.5 DATE 7/7/15

TC/TG/MTG/TRG TITLE: COMPUTER APPLICATIONS
DATE OF MEETING 6/29/15 LOCATION 304

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Dave Branson (CH)		Tim Dwyer		Mike Galler
Steven Roth		Bruce Billedeaux		J. Patrick Carpenter
Mike Pouchak		Art Hallstrom		Lindsey King
Krishnan Gowri		Steven Rosen		Carol Lomonaw
Norm Bourassa				Joshua New
Todd Gottshall				

DISTRIBUTION

All Members of TC/TG/MTG/TRG plus the following:

TAC Section Head:	
TAC Chair:	
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

ASHRAE 2015 Annual Conference – Atlanta

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/ashraetcs15/> (Contact chair or vice chair for access)

Main Committee Meeting

Monday 6:30-9:00 PM

AH 304 (3)

1. Call to Order 6:35 PM

2. Welcome: Introductions

3. Roll Call: List of Voting members from 2014-2015 TC 1.5 Roster: Billedeaux(a), Bourassa(h), Branson (ch)(h), Dwyer (NQ)(a), Gottshall(h), Pouchak(h), Rosen(a), Roth(h)

A=absent

H=here

**Quorum achieved

4. Review of Agenda

5. Approval Of Minutes from 2015 Winter Conference in Chicago—Minutes Approved with change noted

6. RAP report:

- Art Giesler rolling off. Prof. Kato becoming RAC liason; couldn't attend the meeting, but was at RAC breakfast to learn his role
- Research Subcommittee chair Todd Gottshall attended RAC breakfast
- RAP staying on as RAC vice chair, so will continue to act as mentor until new RAC Liason ready to take over
- New Residential project: Standing Committee will be reporting to Tech Council
- Going to form MTG to fulfill BOD strategic plan
- RAP sent request to TAC to form MTG on above: written scope by Tuesday night to be looked at on Wednesday morning

7. Section Head Update

- Branson attended training
- Asking TC if we want to have a mandatory position for membership, we said maybe
- Website: current website design process difficult and outdated(not just for this group, but for ASHRAE overall)—new content management system design being implemented, more user-friendly

8. Review Action Items Below from 2015 Winter Conference in Chicago:

- Update on committee website: ECC meeting with ken cooper from TAC: fast track project to redesign websites—do not need to enter info that ASHRAE already has. There will be automatic updates of roster and meeting times, (websites were requiring duplicating work). TAC wanted automated way to update websites. TC 1.4 is prototyping new updated website, so website item below will eventually go away, but leave as is until further notice

Responsible Member	Description	Due Date	Completion Date
Branson	Reserve Atlanta Room locations	March	February
Branson, Kennedy, Clayton	Draft letter for ASHRAE Society to send to software developers to enhance critical functionality (BEM capabilities vs. BIM capabilities)	Before Atlanta	Incomplete, delete from action items No longer an issue
Subcommittee Chairs	Update subcommittee web site sections. Will likely be obsolete	Continuing	1 month after mtg.
Galler	Post section announcements on web site. Waiting on reports from subcommittee	Continuing	1 month after mtg.

9. Subcommittee Reports:

- a. **DBOSS:** Art Hallstrom, not in attendance, no update
- b. **Cyber Security:** Mike Galler:
 - Good attendance at seminar and a lot of excitement
 - Inaugural Cyber Security sub-committee meeting, included representative from CIBSE who came and is already working with cybersecurity project
 - CIBSE wants to work with ASHRAE, they have larger scope than ours, but hopefully we can make collaboration work
 - Ashrae has asked us to be supportive of mutual project between TC 1.5 and CIBSE, Currently about a 25-25k budget split
 - Barassa moves to approve collaboration, Seconded by Roth
 - 6 approve with chair voting, 0 abstain, 0 opposed
- c. **Emerging Applications:** Norm Bourassa
 - He is outgoing as chair, thanks for all of the hard work!
 - Josh New accepting chair position
 - 2 new successes out of EA and into their own subcommittee:
 - DBOSS
 - Cybersecurity
- d. **Program:** Stephen Roth
 - Submitted 9 Programs for Atlanta as either main chair or sub-chair: 4 accepted so greater acceptance rate from previous conferences
 - Accepted:
 - Seminar 18: Bringing Some Reality to the Virtual World of BIM
Chaired by Tim Dwyer, 4 speakers, very well attended
 - Seminar 27: HVAC Loads, Energy Audits and Operations
Chaired by Jeff Stein, 2 speakers
 - Seminar 31: Big Data Analytics for Building Energy Management

Chaired by Krishnan Gowri, 3 speakers; Very well attended

Seminar 38: Modeling, Simulation and Application of Occupant Behavior in Buildings
Chaired by Bing Dong, 4 speakers

- List of programs not accepted on program subcommittee minutes
- Orlando: 8/10, Seminar, Workshop, Forum proposals due
- Tracks mentioned (included on Program Subcommittee minutes)
- Ideas for Orlando from Subcommittee Meeting:
 - Big Data Use Cases from Krishnan
 - Drone Technology, No Touch building audits
 - Cybersecurity
 - Residential track: a lot of potential because it's completely new (contacting NEST/WeatherBug/Michael Blasnik, Honeywell, Iris)
 - Internet: tools for the home
 - National nuclear: New's NSA drone concept idea for St. Louis
- Other ideas from main meeting:
 - Mix between home and cybersecurity
 - Consumerization of HVAC
 - HVAC techniques: IT department for next conference
 - Emerging Countries: Prioritize and Control to avoid brownouts plus ramifications to this
 - Emerging trends: Active Energy
 - National cybersecurity laws
 - Cybersecurity How to be safe when you're travelling in other countries: maybe future idea for handbook chapter?
 - Chris Ballback: recycling legal issues with software
 - Not many developers in society-how do we learn what software we are or aren't legally allowed to use
 - Energy disclosure laws: Currently drive around buildings and estimate and set EEI, how do we protect companies from this?
- New program rules coming up about who is allowed to speak, more stringier selection process
- New ASHRAE policy: gives reduced registration for speakers

e. Research: Todd Gottshall

Open :

- Closing Out RTAR 1468
- 2 rtars and work statement
- Dropped rtars because they kept falling through

- New rtars 8/15 deadline
- New RAP liason

New RTAR ideas:

Joon-Ho: research study to perform experiments where they take subjects of different ages and races, exposing to different light scenarios and looking at pupil size, determine empirical model of what best office lighting scenarios are, comfort study
Improving IAQ in office, looking for new ASHRAE standards of indoor air and daylighting control

Question raised wondering if it is this better fit for 1.4 or 7.5?

--Biosensing adaptive visual environment study by Joon-Ho Choi

--Giving feedback to him to get him to relate it back to ashrae

--Tabled until further discussion available

Rtar ideas:

Requests for topics coming out of 14.68 (BIM) research, thermal zoning, daylighting rtars

Research Ideas from Meeting:

- Cybersecurity: study and determine effect that it has had on world
 - Cibse doing project structure, right now. TC 1.5 just needs to get vote of concept: this formality is just to get process started, this way we get a vote on the committee that decides if we're going to do this
 - Step 1, we need a vote from each of TCs saying we like the mutual work idea
 - Memorandum needs to be written plus an addendum with statement of work
 - Staying within scope of budget
 - Coauthoring CIBSE cybersecurity standard: 25-25 split for 50k budget, still short on funds
 - Motion approved to partner with CIBSE on cybersecurity
- f. Handbook: Krishnan Gowri
- Chapter was published this year, no immediate deadlines, but we need to think about: Building operations and management
 - General applications: Do we fit better here than in current chapter? Currently waiting on some advice from ASHRAE
 - We think we fit into fundamentals
 - New topics to make it into our chapter
 1. Cyber security
 2. Open software licensing software
 3. Dboss
 4. RTAR 1633, Dashboard Research, can this go into our handbook?
- g. Web Page: Mike Galler
- ASHRAE is implementing new idea for website design
 - Timeline?-TC 1.4 online in month or two
 - Current demo in operation-trying to roll out quickly
 - Entire website will be revamped
 - New technology, wizzy wig-content management system, all things that ASHRAE currently has (meeting time and place, etc) will be automatically updated
 - Action to migrate valuable content away from sites
 - Getting away from google policy because they are now concerned about copyright policies

h. E&P: Dave Branson

10. YEA update: Branson

- Would like to create/provide computer tools that aren't google
- App to size a computer pump
- ASHRAE Youtube video channel

11. ASHRAExCHANGE update: Pouchak

- If you haven't used it, go out there and try it once.
- Mike Galler started post.
- Choose one topic to get used to it.
- Start threads.
- Consider for next meeting to bring tablets, sit outside and ask for people to respond.

12. Chair's Report:

- a. Updates from TAC and RAC
- b. Discussion on changes to TPS
- c. Note to members to update ASHRAE profile when info changes
- d. New Roster for 2015-2016
Voting Members: Rosen, Roth, Dywer, New, Gotchall, Pouchak, secretary is a maybe-few people in que to become corresponding members
- e. Announcements
- f. Dinner plans

13. Liaison Reports:

- a. GPC-20: looking at Sunsetting itself: going into periodic update status
- b. IAI/BIM Society Subcommittee Report: Steven Rosen
- 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

14. Old Business

- a. N/A

15. New Business

- a. If any changes need to be made on schedule let him know
- b. Updates to scope:

Current TC 1.5 Scope:

TC 1.5 is concerned with the determination of computer applications to the design and optimization of refrigeration, heating, and air-conditioning systems, equipment and components thereof; and with programs for all such uses.

Proposed TC 1.5 Scope:

TC 1.5 is concerned with promoting an increased understanding of current and emerging trends in digital technology applications with respect to the design, operation, optimization and interaction of refrigeration, heating and air-conditioning systems, equipment and components.

Motion to propose new scope:

Motion passes, 6 approve with chair, 0 abstain, 0 oppose

- c. Motion to adjourn-passes

16. Next Meeting Times: ASHRAE Winter Conference, Orlando, FL, Jan 23 – 27, 2016

17. Adjournment

TC 1.5 Meeting Schedule

TC 1.5 Computer Applications	Monday	6:30-9:00p	AH 304 (3)
TC 1.5 DBOSS	Sunday	3:00-4:00p	AH 304 (3)
TC 1.5 Cyber Security	Sunday	4:00-5:00p	AH 304 (3)
TC 1.5 Emerging Applications	Sunday	5:00-6:00p	AH 304 (3)
TC 1.5 Research	Sunday	6:00-7:00p	AH 304 (3)
TC 1.5 Program	Sunday	7:00-8:00p	AH 304 (3)
TC 1.5 Handbook	Monday	6:00-6:30p	AH 309 (3)

TC 1.5 Program Schedule

Sunday, June 28 3:15 – 4:45 PM

SEMINAR 18 (BASIC)

Bringing Some Reality to the Virtual World of BIM

Track: Modeling throughout the Building Life Cycle

Room: Grand Ballroom C

Sponsor: 01.05 Computer Applications, CIBSE ASHRAE Liaison, MTG.BIM Building Information Modeling

Chair: Tim Dwyer, Fellow ASHRAE, University College London, London, United Kingdom

This seminar explores the practical challenges, and demonstrates solutions, for bringing real-world products and procedures into the virtual world of building information modeling (BIM). It considers how components that make up buildings and their systems are represented in common software; explores how manufacturers can dispense with much of their traditional printed information for a simple universal digital form that carries information right through from design to operation; sees how the building operation can be enhanced through proper application of BIM standards; and reaches into the (very near) future as BIM increasingly enables improved efficiency, collaboration and build assurance.

1. What Does BIM Have to Do with Family Planning?

Dennis Knight, P.E., BEMP, Member, Whole Building Systems, LLC, Charleston, SC

2. Standardizing Manufacturer Product Data for BIM Applications

Jose Fandos, Andekan, LLC, Oakland, CA

3. How to Bimify Your Asset Management Program

Robert Hitchcock, Ph.D., Member, Hitchcock Consulting, Kelsey, CA

4. The Future of Smart Building Design

Steve Butler, Autodesk, Inc., San Francisco, CA

Monday, June 29 11:00 AM – 12:00 PM

SEMINAR 31 (INTERMEDIATE)

Big Data Analytics for Building Energy Management

Track: Building Operation, Maintenance and Optimization/Commissioning

Room: Salon E

Sponsor: 01.05 Computer Applications, 07.01 Integrated Building Design

Chair: Krishnan Gowri, Ph.D., Member, Autodesk, Inc., San Francisco, CA

The big data revolution is offering new opportunities and challenges for improving the operation of buildings and achieving energy savings using data analytics. Utility billing data, sub-metered data and trend data from building automation systems are some of the sources of data that can be analyzed using innovative methods to identify energy saving opportunities. The objective of this seminar is to introduce state-of-the-art capabilities of software tools and services currently available to ASHRAE members for technology adoption. Three industry experts share their experiences and strategies for data collection, storage, processing, visualization, ownership and security. Potential energy savings realized and equipment diagnostic capabilities of big data analytics are presented.

1. ASHRAE DBOSS (Dynamic Building Operation Systems and Services) Initiative

Art Hallstrom, P.E., BEMP, Fellow ASHRAE, AD Hall and Associates, Lexington, KY

2. Data Mining BAS Controls Data for Retrocommissioning

Frank Mayfield, M2M Systems Integrators, Dallas, TX

3. Energy Management Using Real-Time Data: Predictive Analytics for Managing Peak Demand

Nathan Gould, Lucid Design Group, Oakland, CA
