ASHRAE TC1.5 Computer Applications

Draft Meeting Minutes

Albuquerque, NM
2010 Annual Conference
June 28, 2010

These draft minutes have not been approved and are not the
official, approved record until approved by this committee.

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

TC/TG/TRG MINUTES COVER SHEET

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

TC/TG/TRG NO.: <u>1.5</u>

TC/TG/TRG TITLE: <u>Computer Applications</u>

DATE OF MEETING: <u>June 28, 2010</u>   LOCATION: <u>Albuquerque, NM</u>

<u>DISTRIBUTION:</u>

ALL MEMBERS OF TC

ALL COMMITTEE LIAISONS

ASHRAE TC1.5 Activity Feedback Form

TC NO. TC 1.5   **TC TITLE: Computer Applications**
CHAIR: Mike Pouchak   **VICE CHAIR/SECRETARY: Mike Galler**
DATE: June 28, 2010

TC Web Site: http://tc15.ashraetcs.org/index.html

TC# 1.5	Committee Name: Computer Applications
	Chair: Mike Pouchak

Meeting was Held	(Day) Monday	(Date) 06/28/2010

Membership		
	Number Present	Total Number on Committee
Voting Members	7	8
International Members	1	1
Corresponding Members	16	40
Visitors and Guests	6	6

Handbook Responsibilities		Standards Responsibilities	
Volume and Chapter (number only)	Next Revision Due Date	Standards Number (number only)	Next reaffirmation date
Applications, Ch. 39	CD+ '10		

Transactions	Seminars	Forums	Poster Sessions
	Seminar 30 – vav tech		

Current Research Activities		FAQs Responsibilities	
Research Project (number only)	PMS meeting held (yes/no)	FAQ number (number only)	Last time reviewed (Month/Year)
1354	No - Completed		
1468	PES meeting held		

Does Committee have Website on ASHRAE Server? _x__Yes___URL if on another Server: _____
If so, is Website up to date? __x__Yes_____

Attendance:

Name	Role	TC	Res	Prog	Emer Apps	T&P	Hand book
Voting Members							
Mike Pouchak	TC 1.5 chair	X	X	X	X		X
Larry Schaefer	Program subcommittee chair						
Xiaohui (Joe) Zhou	Emerging Applications Chair	X	X	X	X		X
Tim Dwyer	International member	X					
David Branson	PMS 1468 chair	X					X
Walter Grondzik		X					X
Ron Nelson		X					
Vernon Peppers		X					
Steven Roth	Incoming Program Committee Chair	X	X	X			X
Robert J Hitchcock	Research Chair						
Non-Voting/Corresponding Members							
Bruce Billedeaux		X					
Mike Galler	TC 1.5 Vice Chair	X	X	X	X		X
John Crosby		X	X	X			X
Brian Moura		X	X	X			
Jon Engelbert		X			X		
Bob Howe		X	X	X	X		
J. Patrick Carpenter		X					
Tianzhen Hong					X		
Rick Larson		X					
Vikrant Aute		X					
Jay Ramkumar		X					
Elyse Malherek		X					
Jim Pegues		X					
Mark Hydeman		X					
Steve Rosen		X					X
David Bornside		X					
Alison Kwok	Standards Subcommittee chair						
John Kennedy	Incoming Research chair						
Raj Setty		X					

Action Items

Responsible Member	Description	Due Date	Completion Date
Steven Roth	Submit program by due date	8/2010	8/2010
Mike Pouchak	Letter to ECC requesting ECC to consider evaluating resources necessary for ASRAE to be able to offer services like SharePoint, infrastructure services, for society use- moving to the 21st century.	1/2011	1/2011
Mike Pouchak	Branson asks Chair to request room for 1468 PMS, before handbook committee.	1/2011	1/2011

TC1.5 Computer Applications
2010 Annual Meeting
Albuquerque, NM
TC 1.5 Public Web Site http://tc15.ashraetcs.org/
TC 1.5 Private Site https://sites.google.com/site/ashraetc15/

Monday, June 21, 2010, 6:30 – 9:00 pm

Notes taken by Mike Galler Vice-Chair/Secretary

TC 1.5 Computer Applications (25/25)(Screen) Monday 6:30-9:00p (CC) Brazos (GL-East)
- **TC 1.5 Emerging Applications (6/10) Sunday 5:00-6:00p (D) Copper (LL)**
- **TC 1.5 Research (15) Sunday 6:00-7:00p (D) Copper**
- **TC 1.5 Program (15) Sunday 7:00-8:00p (D) Copper**
- **TC 1.5 Handbook (15) Monday 6:00-6:30p Monday 6:00-6:30p (CC) Brazos (GL-East)**

Main Committee Meeting   Monday 6:30-9:00 p.m.   (CC) Brazos (GL-East)

1. **Call to Order –** Meeting called to order at 6:30 PM

2. **Welcome – Introductions**

    a. Mark Modera, handbook liaison, was introduced.

    b. Victor Penar was introduced

        i. Complimented 1.5 – doing a great job- we could be a role model for other committees.

        ii. Subcommittees that meet in the morning- ASHRAE is trying to have them meet on the web as they are taking up too many rooms for program.

        iii. Membership is up to 53k, up from 50k 3 years ago. We should be complimented on fantastic web site. We will be asked to come up with an RTAR to assist in revamping the method of revising the roster. The current method is too complicated. RTAR is requested by Tuesday night. Budet is in 50k range. This project will take precedence. Develop a spec to revise the roster- deliverable will be the new system.

        iv. We have no problem with members rolling off at the same time, leaving no members

    c. Introductions - members stated name, affiliation, height, and an embarrassing story.

3. **Roll Call-** Appendix A

4. **Review of Agenda-** Agenda approved

5. **Approval Of Minutes from 2010 Winter Meeting**

   a. Correction- change listing of name Dave to David (Bornside)

   b. Subcommittee minutes should be added

   c. Move to accept by Grondzak, second by Roth

   d. Approved 7-0-0 CNV

6. **Review Action Items from 2010 Winter Meeting**

   a. Power outlets- requests were made for power outlets

   b. Write letter to ASHRAE meeting and events requesting projectors under ADA requirements

      i. Letter was sent- letter and response to be included in minutes

   c. Check that location of PMS meeting is distributed.- done

7. **Chair's Report**

   a. Dinner plans
      i. 10 + Hydeman planning to attend.
      ii. Meet in Hyatt lobby 15 minutes after meeting ends.

   b. Announcements
      i. Pouchak attended chairs breakfast, has list of topics. List will be put on Google group.
      ii. Pouchak received request that those wanting thank-you letters from ASHRAE contact Pouchak.

   c. Step-up-to-the-plate awards (SUTTPA)
      i. To Roth for being program chair.
      ii. To Joe for running 3 consecutive TC subcommittee meetings due to two chairs not being present.

8. **Subcommittee Reports**

   a. Handbook – *Steve Rosen*
      i. Met at 6:30 PM
      ii. Motion to approve chapter as written for submission by end of July, with minor modifications. If there are more changes, there will be an e-mail ballot.
         1. Motion to approve by Rosen, second by Branson.
         2. Discussion- none.
         3. Vote 7-0-0 motion carries CNV.
      iii. CD+ is going to be discontinued.
      iv. Handbook will be going under continuous maintenance- details undecided.
      v. Chapter will be online, updates will be reflected in online version.
      vi. Nelson mentions access will cost $50 / year.

       vii. Billedeaux notes microphone works well for meeting.

  b. Research – *John Kennedy*

     i. Kennedy absent, Zhou reorting.

     ii. Emerging Applications, Research, and Program combined for report.

     iii. Zhou calls for better attendance at future meetings- 5 at this one.

     iv. Website will be updated by next meeting.

     v. Scope of Emerging Applications will be changed

     vi. Several ideas were listed

        1. Pouchak- research – user feedback – social network feed back to HVAC systems

          a. Based on ideas from librarything.com- social voting mechanism

          b. Pouchak/Galler will write RTAR

        2. Howe from Carrier- asks if there is collaborative website that can host central documents.

          a. Bentley has project-wise software – online collaboration server

          b. Crosby will host seminar Integrated Project Delivery- "BIM Collaboration- Why can't we just get along?"

        3. Roth – Follow up on 1468 – Create BIM for HVAC equipment

          a. Will write RTAR with Crosby by next meeting (Las Vegas)

        4. Crosby/Moura- Generative design of energy modeling- rule based parametric design- might be RTAR

        5. Zhou – based on his work- RTAR similar to 1468

  c. Emerging Applications – *Xiaohui Zhou*

     i. *See above*

  d. Program – *Larry Schaefer*

     i. List- see Appendix B.

     ii. Pouchak mentions TC has a poor record in getting programs approved. Programs submitted in past have not always lined up well with tracks for meetings. It is hoped that new program chair will have programs lined up.

     iii. Branson mentions part of apparent duplication in tracks is because some lower energy ideas are 'splitting off' or becoming more distinct.

     iv. Peppers mentions that CEC members are open to suggestions for new tracks, and suggests members submit any ideas.

     v. Pouchak- program chairs should submit by August 6.(ACTION ITEM)

  e. Web Page – *Steve Rosen*

     i. Web page has been updated (applause).

  f. T&P – *Dave Branson*

     i. Discussed that the committee would flourish with a new chair.

ii. Ask for volunteers to chair.

iii. Peppers remands Branson to T&P for this suggestion.

iv. Branson will remain if there is no volunteer.

g. RP 1468 PMS– Branson

i. Project is well on its way. PMS has met twice at ASHRAE and 3 times via web conference. Time frame for research was realigned to work with schedules of contractor Texas A&M, to Jan 1- now 40% of the way through. There was a presentation today, some issues that came up:

1. PMS not sure of direction to go with some issues.

2. Meeting again next month.

3. PMS evaluation form is due this Wednesday, form is complete.

4. Branson will ask if form can be distributed, or if minutes can.

a. Form- probably not, minutes probably

5. Several energy analysis tools and 3 BIM programs were used, to study which features in a BIM will the energy programs be sensitive to. It is hoped this will be the start of a set of research projects. This committee should be able to generate several of these.

6. Schaeffer is on PMS, but is retiring. There is a slot available, to be appointed by Branson.

h. Web site- Billedeoux

i. ECC discussion about TCs having na ASHRAE website, or a Google groups site, but not both.

9. **Liaison Reports**

a. GPC-20

i. Galler– The GPC 20 document came back from public review, with no comments. It will next go out for publication.

b. IAI/BIM Society Subcommittee Report

c. Others

i. Google groups learning curve- will not make a good impression the first time you use it, but once you use it a few times it gets better

1. TC 75 has used groups for discussion for several years.

2. Having all docs in one place helps new chairs or other leaders get info.

3. Groups not appropriate for standards, due to confidential nature.

4. ACTION ITEM- Branson asks chair to write letter to ECC outlining concerns

a. Requesting that ECC consider evaluating resources necessary for ASRAE to be able to offer services like sharepoint, infrastructure

services, for society use- moving to the 21st century.

10. **Old Business**

    a. **None**

11. **New Business**

    a. **Pouchak- from chairs breakfast (have list from Pouchak "Sect.Breakfast.Albuquerque.pdf")**

        i. TC "Help Wanted" Section to be added to ASHRAE website.

        ii. 2. Option for TC Subcommittee Meetings via Conference Calls and Webinars.

        iii. 3. Update on Development of Society and Research Strategic Plans – MBO #5.

        iv. 4. 10-11 Rosters Access & Distribution, check for errors- how can you get a roster?

            1. Go to ASHRAE web site

            2. Log in

            3. Go to bio

            4. Menu selection- my committees

            5. Get roster from that link.

        v. New position created- Provisional corresponding member.

        vi. Chairs training workshop- Sunday mornings.

        vii. Section mailboxes outside headquarters office.

        viii. Useful TC/TG/TRG Chair Information on ASHRAE website .

        ix. Status on Tech. Council Steering Committees (BIM, AEDGs, Bldg. Performance Metrics).

        x. CEC proposed or recently implemented technical program changes.

        xi. Report on TC/TG/TRG websites in Section (SHs need to report to TCs which sites are not up to date.)

        xii. ASHRAE Google Groups tool for TCs/TGs and TRGs.

        xiii. 2010-2011 Hightower Award & Service to ASHRAE Research Award Nominations.

        xiv. Upcoming Conferences (ASHRAE IAQ 2010, Purdue University Conf. series, CLIMA 2010, etc.).

        xv. Thank retiring TC/TG/TRG chairs in section.

xvi.   Thank You Letters to Employers.

xvii.   Hightower Award Nomination Process and Submission Deadline – Sep. 1, 2010.

xviii.   Proposed Environmental Health and Green Buildings Position Document .

12. **Next Meeting Times** – Las Vegas (January 29 – February 2)

a.   Branson- ask chair to request room for 1468 PMS, before handbook committee (ACTION ITEM).

13. **Adjournment**

a.   Move by Peppers, second by Galler

Action Items

Date	Actor	Description
By Aug 6	Program Chair	Submit Program by due date.
	Pouchak	Branson asks Chair to write letter requesting ECC to consider evaluating resources necessary for ASRAE to be able to offer services like SharePoint, infrastructure services, for society use- moving to the 21st century.
	Pouchak	Branson asks Chair to request room for 1468 PMS, before handbook committee.

Appendix A- Roll Call

b.   **Non voting: Galler, Setty, Carpenter, Larson, Aute, Belledeaux, Howe, Ramkumar, Malherek, Crosby, Pegues, Hydeman, Rosen, Bornside,**

c.   Voting members-

i.   Pouchak (1) present

ii.   Schaeffer (2) absent

iii.   Joe zhou (3) present

iv.   Dwyer (intl) present

v.   Branson (4) present

vi.   Grondzik (5) present

vii.   Nelson (6) present

viii.   Peppers (7) present

      ix. Roth (8) present

           Quorum 8/8

Appendix B

What your phone knows about your building- don't be such a smartapp.	P	Steven Roth
Emerging energy harvesting tech for high performance buildings - already have 3 speakers	P	Joe Zhou
Emerging BIM apps outside standard AE practice - originally Schaeffers idea.	P	Steven Roth
Why can't we all just get along (BIM collaboration, integrated project delivery) - from last meeting	P	John Crosby
BIM for Retrofit - new idea at main meeting	P	Branson

AGENDA
ASHRAE 2010 Summer Meeting – Albuquerque, NM
TC 1.5 Computer Applications

TC 1.5 Computer Applications (25/25)(Screen) Monday 6:30-9:00p (CC) Brazos (GL-East)
- **TC 1.5 Emerging Applications (6/10) Sunday 5:00-6:00p (D) Copper (LL)**
- **TC 1.5 Research (15) Sunday 6:00-7:00p (D) Copper**
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Programs
Wednesday, June 30, 2010, 11:00 AM-12:30 PM
Seminar 60 (Intermediate)
Recent Advances in VAV Control Technology
Track: High Efficiency HVAC Systems
Room: Galisteo
Sponsor: 01.04 Control Theory and Application, 01.05 Computer Applications
Chair: Michael A. Pouchak, P.E., Honeywell, Golden Valley, MN
Variable air volume (VAV) air systems are a key component of modern medium to large building zone control. Most VAV systems have pressure independent terminals which use airflow control systems to operate zone dampers. Proper controls and system design will ensure that the building will be operated efficiently, resulting in strategies that maximize comfort and minimize energy usage. Recent advances in VAV controls such as additional control strategies and improvements in low air flow measurement will enhance VAV control performance for current best practice design.
1. Stability and Accuracy of VAV Boxes at Low Flow
Jin Wen, Member, Drexel University, Philadelphia, PA
Accurate VAV box control depends on the stability and accuracy of VAV box performance at low flows. This seminar will focus on the result of recent ASHRAE research that includes a survey of current VAV box technologies and a comparison of performance of the different technologies at low flow velocities. Effective minimum controllable flow setpoints are critical for energy efficient control of VAV boxes.
2. Advanced VAV System Control and Design
Jeff Stein, P.E., Member, Taylor Engineering, Alameda, CA
Variable Air Volume systems are an essential component for energy efficient control. Recent research into VAV box performance at low flows were used to develop new California and ASHRAE energy code requirements for VAV controls that are predicted to save about $0.05/sq. ft-yr across a wide cross-section of new and existing commercial buildings.
3. Flexible Control Strategies for VAV Systems
Levi Geadelmann, Member, Honeywell International, Golden Valley, MN
As modern controllers increase in power and flexibility, the opportunity to leverage proven embedded control strategies with new energy savings strategies and coordination of system control is now available. Libraries of standard

Main Committee Meeting   **Monday 6:30-9:00 p.m.**   (CC) Brazos (GL-East)

14. **Call to Order**

15. **Welcome – Introductions**

16. **Roll Call**

17. **Review of Agenda**

18. **Approval Of Minutes from 2010 Winter Meeting**

19. **Review Action Items from 2010 Winter Meeting**

20. **Chair's Report**
    a. Dinner plans
    b. Announcements
    c. Step-up-to-the-plate awards

21. **Subcommittee Reports**

      a. Handbook – *Steve Rosen*
      b. Research – *John Kennedy*
      c. Emerging Applications – *Xiaohui Zhou*
      d. Program – *Larry Schaefer*
      e. Web Page – *Steve Rosen*
      f. T&P – *Dave Branson*

22. **Liaison Reports**
      a. GPC-20
      b. IAI/BIM Society Subcommittee Report
      c. Others

23. **Old Business**

24. **New Business**

25. **Next Meeting Times** – , Las Vegas (January 29 – February 2)

26. **Adjournment**

Emerging Applications (also includes Reseach & Programs Subcommittee)

Albuquerque, NM
June 27, 2010
SUNDAY 5:00 – 6:00pm
Doubletree Copper (LL)

1. The meeting was called to order 5:10pm. Since research and program chairs are absent, the emerging application and research/program meetings are combined in a 2.5 hour meeting.

2. Introductions – 5 people attended.

3. Emerging application subcommittee website not updated yet but EA chair will focus on revising the scope to reflect current interest and hot topics.

4. Discussion, update and brainstorming:

    o   Mike Pouchak: Discussion on from "Librarything.com" concept to using user feedback/voting mechanism on HVAC interactive control.
        ▪   Prepare a RTAR "Group feedback for HVAC control" by Mike (Pouchak) and Mike (Galler)
    o   Bob Howe: Collaborative websites for hosting construction project documents?
        ▪   "Projectwise" online from Bentley
        ▪   Seminar: Case study: Integrated Project Delivery (IPD) – BIM Collaboration – Why can't we just get alone? Champion by John Crosby
    o   Stephen Roth: Prepare a RTAR follow up research idea to 1468 – How manufactures should create BIM? BIM standards for HVAC equipments/components?
    o   Brian Moura / John Crosby champion on RTAR: "Generative Design on Energy Modeling" – Quick modeling technique using "rule-based" parametric design instead of geometric design using BIM to get faster modeling results in conceptual design stage.
    o   Joe: Plug and Play framework for HVAC controls and AHU temperature sensor auto recognition technique using IEEE 1451 smart sensors. Technical paper.

5. Adjourn 7:30pm.
Minutes submitted by Xiaohui (Joe) Zhou

Attendee list:
*Emerging Application:*Xiaohui Zhou,Mike Pouchak,Mike Galler,Jon Engelbert,Bob Howe,
*Research & Program,*Xiaohui Zhou,Mike Pouchak,Mike Galler,Bob Howe,John Crosby,Brian Moura,Stephen Roth

Subcommittee minutes submitted by Xiaohui Zhou