ASHRAE TC ACTIVITIES SHEET

DATE: January 27th 2003

TC NO. TC 1.5   TC TITLE: Computer Applications

CHAIR: W. Grondzik   VICE CHAIR/SECRETARY: M. Hydeman

TC 1.5 MEETING ATTENDANCE

First and Last Names	Affiliation	Email	TC	Research	Program	Emerging Aps.	Handbook	Internet
Bruce Billedeaux	Armstrong Service. Inc.		X					
David Bornside	Siemens Building Technologies		X					
David Branson	Compliance Services Group, Inc.		X					
J. Patrick Carpenter	Kling		X					
Charlie Culp	Texas A&M			X	X			
W. Stuart Dols	NIST		X					
Tim Dwyer	South Bank University London					X		X
Jim Forester	Marinsoft		X					
Mike Galler	NIST		X	X	X	X	X	X
Cory Grabinger	Honeywell					X		
Walter Grondzik	Florida A&M University		X	X	X	X	X	X
Jeff Haberl	Texas A&M			X				
Rob Hitchcock	Lawrence Berkeley National Lab		X	X	X	X		X
Mark Hydeman	Taylor Engineering			X	X	X	X	X
Alison Kwok	University of Oregon		X					
Ron Nelson	Iowa State University		X	X	X			
Bob Old	Siemens Building Technologies		X	X	X	X	X	X
In Gyu Park	Mando Climate Control Corporation					X		X
Vernon Peppers	Peppers Engineering		X					
Michael Pouchak	Honeywell, Inc.		X			X	X	X
Lawrence Schaefer	Carrier Corporation		X					
Mick Schwedler	Trane		X					

First and Last Names	Affiliation	Email	TC	Research	Program	Emerging Aps.	Handbook	Internet
Pornsak Songkakul	Siemens Building Technologies		X	X	X	X		X
T David Underwood	Isotherm Engineering Ltd.						X	
James Watts	Ingersoll-Rand Energy Systems		X	X	X			

TC MEETING SCHEDULE

Location, past 12 mo.	Date	Location, next 12 mo.	Date
Honolulu	Jun 2002	Kansas City	Jun 2003
Chicago	Jan 2003	Anaheim	Jan 2004

TC SUBCOMMITTEES

Subcommittee	Chair
Emerging Applications	Pornsak Songkakul
Handbook	Mike Pouchak
Internet	Rob Hitchcock
Program	Krishnan Gowri
Research	James Watts

RESEARCH PROJECTS

Project Title	Contractor	Monitoring Committee Chair	Report Made at Meeting?
TRP 1228	Scientific Computing	Dave Branson	Yes
TRP 1049			Yes
TRP 1032	PECI & Marinsoft	Dave Branson	Yes

LONG RANGE RESEARCH PLAN

Rank	Title	W/S Written	Approval	To R&T
1	Prototype demonstration of IFC/aecXML interoperability in support of HVAC&R activities.	Yes	Yes	Yes
2	On-line development of standards	No	No	No

3	Retooling the HVAC education process to better Use Computer-Aided Design	No	No	No
4	A Multimedia database for examining and comparing HVAC design alternatives	Yes	No	No
5	Software tool to aid the development of work statements that have software deliverables	No	No	No

HANDBOOK RESPONSIBILITIES

Year & Volume	Chapter Title	No.	Deadline	Approval	Handbook Committee Liaison
2003 HVAC Applications	Computer Applications	38	3-8-2004		Charles Francis, Trane

Commented [MMH2]: Get from Mike Pouchak

STANDARDS ACTIVITIES

None

TECHNICAL PAPERS FROM SPONSORED RESEARCH (PAST 3 YRS, PRESENT, PLANNED)

Title	When Presented
1017 RP (Akleman and Haberl) – Jim Watts	Chicago (1/03)
1032 TRP - Interoperable Computer Applications – Dave Branson	Chicago (1/03)

TC SPONSORED SYMPOSIA (PAST 3 YRS, PRESENT, PLANNED)

Title	When Presented
Computers in HVAC Education - Nelson/ONiel	Future
Interoperable Computer Applications – Branson	Chicago (1/03)
Symposium AC-02-9: Tools and Techniques for Calibration of Component Models - Agami Reddy	Atlantic City 1/02
Computers and HVAC Education – Nelson	Chicago 01/99

TC SPONSORED SEMINARS (PAST 3 YRS, PRESENT, PLANNED)

Title	When Presented
Network Applications of Internet, Intranet and Building Automation – Pouchak	Future
We are not alone in the universe emerging applications around the world – Forrester	Future
Methods for exchanging / integrating data among different HVAC & Control systems and business information systems - Pornsak	Future
Seminar.com: Potential & Pitfalls of Moving Business to the Internet - Grondzik	Future
Internet based training - Grondzik	Future

Emerging Internet Technologies Bring New Business Opportunities - Dunn, Wayne	Future
A Day in the life of ASHRAE members in the YEAR 2010 - Culp	Future
Cool Stuff that ASHRAE Could be Doing Using the Internet - Grondzik	Future
Next generation of AEC application development - Songkakul	Future
Computer Security – Pouchak	Chicago (1/03)
Apply measured data to measurement and verification – Pornsak	Chicago (1/03)
Tools and Techniques for Sustainable Design – Dwyer	Chicago (1/03)
Experiences with Electronic Collaboration on the Teamwork 2001 Project - Dwyer/Branson	Chicago (1/03)
Terms that your new engineer knows, but you don't - Schwedler	Honolulu (6/02)
Internet technology for HVAC/R business Use IT or lose it - Dwyer	Honolulu (6/02)
Self-Configuring Control Systems: Needs, Technology and Potential Benefits - Mike Brambley	Honolulu (6/02)
Seminar 14: Uses and Benefits of Electronic Collaboration, Newsrooms and Groupware - Mike Pouchak	Atlantic City 1/02
Seminar 46: Pattern-Recognition-Based Fault Detection and Diagnostics for Building Operation - Mike Brambly	Cincinnati 6/01
Seminar 18: Internet for Global Working - Tim Dwyer	Cincinnati 6/01
Seminar 35: Future NET Gains for the AE Office - Brian Kammers	Cincinnati 6/01
Seminar 27: Interoperable Computer Applications for the HVAC Industry - Mark Hydeman	Atlanta 1/01
Seminar 18: What is the Future Relationship Between DDC and the Web? - Dave Branson	Minneapolis 6/00
Seminar 35: Applications of Electronic Media for the Development and Implementation of Codes and Standards - Mark Hydeman	Minneapolis 6/00
What is the Future Relationship Between DDC & the Web - Branson	Dallas 02/00
Where is ASHRAE Going With the Web - Dunn	Dallas 02/00
Data Visualization for Building Operations - Kammers	Dallas 02/00
Business in the Year 2000? or 1900? - Schwedler	Chicago 01/99

TC SPONSORED FORUMS (PAST 3 YRS, PRESENT, PLANNED)

Title	When Presented
Collaborative Web Based Benchmarking - Norford	Future
Should ASHRAE Establish Guidelines for Electronic Media that Contains Manufacturer's Product Information? - Grondzik	Chicago (1/03)
ASHRAE Research Developed Software: Should it be free? – Hydeman	Chicago (1/03)
Forum 28: What Does the ASHRAE Membership Need from the Computer Applications Handbook? - Mike Pouchak	Atlanta 1/01
Forum 22: Sensors for HVAC: Problems, Needs & Technology - Mike Brambly	Minneapolis 6/00

Forum 8: How Should We Apply Electronic Media to the Development and Implementation of Standards? - Mark Hydeman	Minneapolis 6/00
Sensors for HVAC: Problems, Needs & Technology - Brambley	Dallas 02/00
What is the Members' View of Electronic Media Support for Standards? - Hydeman	Dallas 02/00
What is the Members' Response to ASHRAE's Web Plan? - Sun	Seattle 06/99
What Support Is Needed For ASHRAE Software? - Kammers/Webster	Chicago 01/99

JOURNAL PUBLICATIONS (PAST 3 YRS, PRESENT, PLANNED)

Title	When published
What HVAC Applications Would Benefit from Computer-Aided Instruction - Culp	TBD

SUBMITTED BY: <u>Mark Hydeman-- TC 1.5 Secretary</u>

TC 1.5 (Computer Applications) Minutes
Chicago Illinois January /2003
Monday January 27th, 2003

Meeting Schedule

- TC 1.5 Computer Applications (25/25) Monday 6:30-9:00p Monroe (6)
- TC 1.5 1228 PMS Sunday 3:00-4:00p Burnham 1
- TC 1.5 IFC/XML RTAR Sunday 4:30-5:00p Burnham 1
- TC 1.5 Internet/Emerging Applications (25) Sunday 5:00-6:30p Burnham 1 (7)
- TC 1.5 Program/Research (15) Sunday 6:30-8:30p Burnham 1
- TC 1.5 Handbook Monday 6:00-6:30p Monroe (6)
- GPC 20 [XML] Definitions for HVAC&R (10/14)(OVH/Flip) Sunday 8:00a-12 N

Main Committee Agenda

Call to order 6:35 pm.

Quorum Grondzik, Galler, Pouchak, Hitchcock, Watts, Songkakul

Motion to approve the Hawaii Minutes. Moved by Pouchak Seconded by Galler. Motion passed 6-0-0.

Chair's Report - Walter Grondzik

Announcements

There is space for TC websites on ASHRAE's server. TCs can continue to use outside sites and link it to ASHRAE's. There are some limitations on ASHRAE's site. The chair should contact David McAlister (under Steve Comstock) if the TC is interested.

The 4 volume CD of Handbook will be going to members every year.

Mike Galler has agreed to be the Handbook Chair effective 2/03.

Mark Hydeman continues to be the ALI liaison.

Research report. There is a new organization called Research Advisory Panel (RAP) to develop a strategic focus for ASHRAE research. They would like input from ASHRAE TC members. $2.5M budget this year. Lots of projects on hold awaiting more "cha-ching." 8 work statements have gone to bid. No more than 1 or 2 RTARs will be accepted from a TC. They want quality not quantity.

TEGA asked the TCs to report down to the chapters through the chapter liaison.

CIBSE/ASHRAE has an upcoming meeting in Scotland.

TCs can post seminars on their website. TCs should approve the presentations for posting. Speakers need to approve the posting.

The ASHRAE commercialism policy is still in flux. The new policy takes place after this meeting.

Manuscript central is an on-line system that manages the paper and program submission. This is mandatory starting in Anaheim (2/04).

Special Publications and the Journal are seeking material and ideas from the TCs. Contact Jim Elleson, chair of Special Publications and Fred Turner, Journal Editor.

CSI is revising the section numbers. Check their website.

TC numbers are changing. We will remain in 1.5.

ACTION ITEM Review

Krishnan Gowri should make sure that seminar and symposium presentations are sent to Ron Nelson for posting on the TC website. DONE.

All TC Subcommittee Chairs shall send their minutes and other information to Ron to post on the TC 1.5 website. DONE.

TC members should continue to bring program ideas forward to Krishnan Gowri. DONE

Mick Schwedler has a list of subcommittees that are interested in having handbook enhancements. TC 1.5 could offer help to these people. See Handbook discussion below.

(From a unanimous motion) The chair of TC 1.5 shall write a letter to the Handbook Committee (cc SBO Committee) expressing the TC's concern at the delay in adopting available and widely used electronic enhancements and technologies for the eHandbook Furthermore the Handbook Committee shall provide guidelines for these enhancements. DONE.

Walter wrote to Ken Cooper Handbook Committee. See Attachment G.

Committee Membership

Rolling off on 7/03: Walter Grondzik, Duane Barrett, Mike Pouchak, Jim Watts

Rolling on 7/03: Wayne Dunn, Wayne Webster, Bruce Billedeaux, Dave Branson, Ron Nelson, and Allison Kwok.

Subcommittee Reports

TC Sponsored Programs – Mark Hydeman

See Attachment A

Chicago

Seminar 11, "The eClassroom: Bridging Distance and Time to Better Serve the Membership." Sunday, 1/26, 10:15 – 12:15 AM (ASHRAE Learning Institute, Course Development Committee, TC 01.05 Computer Applications) **Parlor H (6)**

Motion to post presentations from Seminar 11. Moved by Schwedler, seconded by Watts. Motion passed 6-0-0 CNV

Seminar 28, "Building Automation Computer Security After 9-11." Monday, 1/27, 10:15 am – 12:15 pm (TC 01.05 Computer Applications) **Adams (6)**

Motion to post presentations from Seminar 28. Moved by by Watts, seconded by Schwedler. Motion passed 5-0-1 CNV

Seminar 43, "New Issues with State -of-the -Art DDC Systems." Tuesday, 1/28, 10:15 am – 12:15 am (TC 01.04 Control Theory and Application; TC 4.11 Smart Building Systems and TC 01.05 Computer Applications) **Adams (6)**

Symposium CH-03-12, "Interoperable Computer Applications." Wednesday, 1/29, 10:15 am – 12:15 pm (TC 01.05 Computer Applications; TC 09.09 Building Commissioning) **Monroe (6)**

Kansas City – June 2003

4 Programs prioritized for Kansas City:

Priority	Type	Title	Chair
1	Seminar	Establishing cost effective energy baseline for M&V	Pornsak
2	Seminar	Security issues with your wireless infrastructure (warchalking c/o Bob	Schwedler

		Old)	
3	Forum	What sort of security do you need from your software?	Culp
4	Forum	What does the ASHRAE membership want from electronic Manufacturer's Product Information?	Grondzik

Motion to accept this list, moved by Hitchcock, seconded by Watts. Motion passes 6-0-0 CNV

We discussed making our own program survey forms. The Program Chair should consider adding a list of 5 potential programs with 2 blanks for write-ins to solicit input for future programs.

Moderators are responsible for picking up the evaluation forms and getting them to the TC program subcommittee chair.

ACTION ITEM: Bruce Billedeaux will create new TC 1.5 program survey forms that are scannable.

Research - Jim Watts

See Attachments D and F

Jim Watts and Rob Hitchcock updated work statement to remove jargon and provide language that even a research committee member could understand. There were mostly editorial changes but Jim added a proposal criteria ranking with percentages.

Motion to accept work statement (Attachment F). Moved by Watts, seconded by Songkakul. Motion Passed 7-0-0

ACTION ITEM: Rob Hitchcock will write a cover letter for RAC to explain how this work statement fits with GPC 20 and the January 2003 Journal article on interoperability.

ACTION ITEM Jim will send a copy of the proposal to the secretary to circulate to TC members.

Emerging Applications/ Internet - Pornsak Songkakul/Rob Hitchcock

See Attachment B

They would like to continue with the combined committee meetings

Handbook - Mike Pouchak

See attachment C

Standards - Rob Briggs

No report

Web Page - Ron Nelson

If we are going to post information on the membership we need to get member's permission.

ACTION ITEM Walter will contact committee members and ask permission to expose their contact information on the website.

As discussed above, we need an approval mechanism for posting presentations on the website and we also need written permission from the speakers.

Liaisons

GPC-20 XML Definitions – Bruce Billedeaux for Wayne Dunn. There is still a great discussion about the scope of this guideline. The people that attend are active and willing to participate. There are a number of agendas that members are trying to forward.

Initial version of the guideline is scheduled for review in 6/04. Wayne has gotten ASHRAE approval for the proposed structure of a general write up of the guideline and the appendices with the actual schema. The general portion would be the document that would be for sale and the appendices would be freely available. See Attachment E for minutes from this meeting.

Motion that the Chair write a letter to congratulate GPC 20 on their progress and encourage them to keep working hard and meet their deliverable dates for review. Moved by Schwedler seconded by Hitchcock. Motion Passed 6-0-0 CNV

No report on SPC 134P - Duane Barrett

International Alliance for Interoperability - Rob Hitchcock. The NA chapter has become a council within NIBS to reduce cost in administrative overhead. The IFC 2X model recently received ISO approval as an international standard. BS-8 project has completed their work. BS-8 is being included in the IFC 2X model. Upcoming 2-day workshop. Contact Rob Hitchcock for more details. Review of these materials is encouraged.

Ad-Hoc Committee on ASHRAE's Website and Special Publication's Electronic Communication Subcommittee - Mark Hydeman. At the last meeting the BOD decided to convene a new Ad-Hoc committee on ASHRAE's website. Hugh Crowder is the chair. Kay Thrasher and Jim Elleson are the members. For the time being the Roadmap remains with Special Publications.

Old Business

None.

New Business

The chair's letter worked. David Underwood came to 1.5 to ask for help. Walter suggested that David Underwood ask the TCs to put together a list of electronic enhancement that they would like to have. Walter offered TC to review these items. Bruce Billeadeaux, Dave Branson and Mick Schwedler offered to serve as resources to these TCs. These services are only to prescreen ideas but will not include any programming or other services. The unsolicited proposal addresses these standards.

ACTION ITEM Grondzik to respond to David Underwood and offer our "consultant's" services with appropriate limitations.

Mike Pouchak will serve as acting secretary in Kansas City

Meeting times for Kansas City

No on 1228 or IFC XML RTAR.

Handbook ½ hour 6:00pm-6:30pm.

Other committees

Adjournment

Moved by Galler, Seconded by Watts Unanimous consent.

Meeting Adjourned at 8:30 pm.

Attachment A – Program

TC 1.5 Program Committee
Chicago Illinois January /2003

Hawaii Program Feedback

Seminar 6: Terms that your new engineer knows but you don't - Schwedler

Seminar 9: Internet Technology for HVAC&R Business – Use it or lose it.

Programs for Chicago

- Seminar 11, "The eClassroom: Bridging Distance and Time to Better Serve the Membership." Sunday, 1/26, 10:15 – 12:15 AM (ASHRAE Learning Institute, Course Development Committee, TC 01.05 Computer Applications) **Parlor H (6)**

- Seminar 28, "Building Automation Computer Security After 9-11." Monday, 1/27, 10:15 am – 12:15 pm (TC 01.05 Computer Applications) **Adams (6)**

- Seminar 43, "New Issues with State -of-the -Art DDC Systems." Tuesday, 1/28, 10:15 am – 12:15 am (TC 01.04 Control Theory and Application; TC 4.11 Smart Building Systems and TC 01.05 Computer Applications) **Adams (6)**

- Symposium CH-03-12, "Interoperable Computer Applications." Wednesday, 1/29, 10:15 am – 12:15 pm (TC 01.05 Computer Applications; TC 09.09 Building Commissioning) **Monroe (6)**

- 1017 has a poster paper in Chicago

Symposium Topics

Charlie Culp 1 paper and Agami 2

1017 2 papers and Ron c/o Jan Krieder 1 paper.

Program Selection

Subcommittee Reports

Pornsak – Em Aps/Internet

Kansas City Program Prioritization

See attached table

Other Items

None

Meeting adjourned at 8:30 p.m.

Mark Hydeman sitting in for Krishnan Gowri

Rank	Venue	Type	Title	Chair	Speakers
Programs for Kansas City					
1	Kansas City (6/03)	Seminar	Establishing cost effective energy baseline for M&V	Pornsak	4
2	Kansas City (6/03)	Seminar	Security issues with your wireless infrastructure (warchalking c/o Bob Old)	Schwedler	2
3	Kansas City (6/03)	Forum	What sort of security do you need from your software?	Culp	
4	Kansas City (6/03)	Forum	What does the ASHRAE membership want from electronic Manufacturer's Product Information?	Grondzik	
Programs for future meetings					
	Anaheim (1/04)	Seminar	Computer Tools for Sustainable Design	Dwyer	TBD
	Anaheim (1/04)	Forum	Should ASHRAE Establish Guidelines for Electronic Media that Contains Manufacturer's Product Information?	Grondzik	
	Anaheim (1/04)	Seminar	PS: Not in Kansas 1	Dwyer	
	Anaheim (1/04)	Seminar	PS: Not in Kansas 2	Pornsak	3 or 4
	Anaheim (1/04)	Seminar	Is that a cell phone in your bowels or are you just experiencing borborigmi?	Haberl	
	Anaheim (1/04)	Symposium	1017 RP (Akleman and Haber, 1I) & Kreider (c/o Nelson, 1) Advanced computer applications in HVAC with Agami	Watts	3
	Future	Forum	ASHRAE Research Developed Software: Should it be free?	Hydeman	
	Future	Seminar	Methods for exchanging / integrating data among different HVAC & Control systems and business information systems	Pornsak	
	Future	Seminar	Cool Stuff that ASHRAE Could be Doing Using the Internet	Grondzik	
	Future	Seminar	Internet based training	Grondzik	
	Future	Seminar	Network Applications of Internet, Intranet and Building Automation	Pouchak	4
	Future	Forum	Collaborative Web Based Benchmarking	Norford	
	Future	Seminar	A Day in the life of ASHRAE members in the 10 years from now	Culp	
	Future	Seminar	Emerging Internet Technologies Bring New Business Opportunities	Dunn, Wayne	
Past Programs					
	Chicago (1/03)	Poster Paper	1017 RP	Haberl	
	Chicago (1/03)	Symposium	Interoperable Computer Applications	Branson	3
	Chicago (1/03)	Seminar	Computer Security	Pouchak	2
	Chicago (1/03)	Seminar	Experiences in distance learning: Leveraging curriculum through media	Pouchak	

Rank	Venue	Type	Title	Chair	Speakers
	Honolulu (6/02)	Seminar	Internet technology for HVAC/R business Use IT or lose it	Dwyer	
	Honolulu (6/02)	Seminar	Terms that your new engineer knows, but you don't	Schwedler	4
	Honolulu (6/02)	Seminar	Self-Configuring Control Systems: Needs, Technology and Potential Benefits	Mike Brambley	
	Atlantic City 1/02	Seminar	Uses and Benefits of Electronic Collaboration, Newsrooms and Groupware	Mike Pouchak	
	Atlantic City 1/02	Symposium	Tools and Techniques for Calibration of Component Models	Agami Reddy	
	Cincinnati 6/01	Seminar	Internet for Global Working	Tim Dwyer	
	Cincinnati 6/01	Seminar	Future NET Gains for the AE Office	Brian Kammers	
	Cincinnati 6/01	Seminar	Pattern-Recognition-Based Fault Detection and Diagnostics for Building Operation	Mike Brambly	
	Atlanta 1/01	Seminar	Interoperable Computer Applications for the HVAC Industry	Mark Hydeman	
	Atlanta 1/01	Forum	What Does the ASHRAE Membership Need from the Computer Applications Handbook?	Mike Pouchak	
	Minneapolis 6/00	Forum	How Should We Apply Electronic Media to the Development and Implementation of Standards?	Mark Hydeman	
	Minneapolis 6/00	Forum	Sensors for HVAC: Problems, Needs & Technology	Mike Brambly	
	Minneapolis 6/00	Seminar	What is the Future Relationship Between DDC and the Web?	Dave Branson	
	Minneapolis 6/00	Seminar	Applications of Electronic Media for the Development and Implementation of Codes and Standards	Mark Hydeman	

Attachment B – Emerging Applications & Internet

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TC 1.5 Internet/Emerging Application Meeting Minutes

Winter Meeting, Chicago IL

Sunday January 26th, 2003

Burnham 1, 5:00 p.m. to 6:30 p.m.

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1. The meeting was called to order at 5:00 p.m.

2. Introduction/Sign up sheet/Welcome

3. Review and rearrange existing program ideas. The table below lists results from the discussion. The results were passed to the program sub-committee chair.

Subcommittee	Venue	Type	Title	Chair	Speakers
Eapps	Kansas City	Seminar	Establish cost effective energy baseline for measurement & verification	Songkakul	Culp, Haberl, Dunn, Rossi
Eapps	Kansas City	Seminar	Computer tools and techniques for sustainable design	Dwyer	3 speakers
Internet/Eapps	Anaheim	Seminar	You're not in Kansas any more: Interesting software from far away	Dwyer, Forester	
Internet/Eapps	Anaheim	Seminar	You're not in Kansas any more: Behind the curtain of AEC software development	Hitchcock/Songkakul	2 speakers
Eapps	Future	Symposium	AI applications for HVAC design	Reddy	2 papers
		Forum	Should ASHRAE establish guidelines for electronic media that contains manufacturer's product information	Grondzik	
Eapps		Forum	AHSRAE developed software: should it be free?	Branson	
		Symposium	1017 RP	Akleman, Haberl	
		Symposium	Computers in HVAC education	Nelson/O'Neil	
Eapps	Future	Seminar	Methods for exchanging/integrating data among different HVAC & Control Systems and business information systems	Songkakul	
Internet	Future	Seminar	Cool stuff that ASHRAE could be doing using the Internet	Grondzik	
Internet	Future	Seminar	Internet-based training	Grondzik	
Internet	Future	Seminar	Network applications of Internet, Intranet, and Building Automation	Pouchak	
Internet	Future	Forum	Collaborative web-based benchmarking	Norford	
	Future	Seminar	A day in the life of ASHRAE members in the year 2010	Culp/Haberl	
Internet	Future	Seminar	Emerging technologies bring new business opportunities	Dunn, Wayne	

Potential new programs:

It was mentioned that Dr. Agami Reddy has 2 papers on the use of Artificial Intelligence in the design of HVAC system in the pipeline for Symposium. He is looking for additional papers from TC 1.5 so that a symposium program can be proposed.

4. New research ideas: No new research idea has been identified.

5. Other old businesses:

The new time slot for the combined Internet/Emerging Application sub-committee was working well. The sub-committee chairman will request the same time slot for Kansas City meeting for the combined Internet/Emerging Application sub-committee.

Sub-committee chair brought up the discussion on the objective and the name of the Internet and Emerging Applications sub committee. After further discussion, we decided to retain the existing name and the focus of existing sub-committee.

6. The meeting was adjourned at 6:30 p.m.

Pornsak Songkakul, Rob Hitchcock

Attachment C – Handbook

TC 1.5 Handbook Subcommittee
January 27, 2003
TC 1.5 Handbook
TC 1.5 Computer Applications
6-6:30 p.m. Monroe

Mike Pouchak, Handbook Chair

- **Call to order** at 6:00 p.m.
- **Introductions/Sign up Sheet**- TC info passed out by Chair
- **Attendance list** was distributed
- **Agenda Review**- no revisions made
- **Minutes –** no changes made

- **Future Revisions**- Future annual revisions of the handbook will be the electronic revision submitted on a new schedule. If revisions are pursued, the affected areas would be relatively small.
- **Congratulations** to **Mike Galler, NIST**, who will assume responsibilities as the new Handbook subcommittee chair effective immediately. Mike has significant experience in the current handbook update and revision process, and will be an excellent chair for the Handbook update process.
- **Future Handbook Meetings** will occur in the same time slot, preceding the main TC 1.5 committee meeting.

- **Adjournment at 6:20   p.m.**

Mike Pouchak, Chair

Attachment D – Research

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TC 1.5 Computer Applications
Research Subcommittee Meeting Minutes
ASHRAE Winter Meeting, Chicago, IL
Monday, January 26, 2003

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1. Call to Order/Introductions

The meeting was called to order at 18:28.

2. 1049 RP Report - "Building System Design Synthesis and Optimization"

"Really good progress" so far and the vendor requests a no-cost extension to June 2003.

3. 1032 RP Report - "Identification and Computer-Based Preservation of Building Design and Commissioning Information"

Project nearly complete and a paper is being presented.

4. 1228 RP Report - "Case Studies of ASHRAE Software Projects Using 'The Software Guide'" (966 Follow-up)

No report available.

5. ____ WS Report - "Prototype Demonstration of IFC / aecXML Interoperability in Support of HVAC&R Activities"

The work statement has been rewritten and was submitted last week to our RAC liaison for review. A couple of small wording changes are needed and the current version will be submitted to the entire TC for approval during tomorrow's meeting. Rob Hitchcock agreed to write a cover letter desciribing how the proposed effort complements the work of GPC20 (Definitions For HVAC&R).

6. Proposed Research

ASHRAE received an Unsolicited Research Proposal (URP) from Texas A&M University for a follow-on project to 1017RP (Multimedia Handbook CD Enhancements) titled "Development of Courseware for Cost Effective and Efficient Conversion of ASHRAE Handbook to a Multimedia *eBook*". The URP had made its way up to Technology Council where Bruce Hunn decreed "this is not research" and sent it back. This is a similar story to our struggle to get the original 1017 RP approved.

TC 1.5 is now being asked for a vote of endorsement for the URP which will be covered in tomorrow's meeting. Since TC members have not had a chance to see the URP, Jeff Haberl volunteered to forward an electronic copy for distribution. We will likely then seek an e-mail ballot on the subject after the Chicago meeting.

The Internet/Emerging Applications subcommittee described a research idea that could benefit and enhance ASHRAE's web site. In the first phase, various ASHRAE activities including international efforts would be studied. In the second phase the researchers would determine ways the web site functionality and content could be improved to better serve those activities. The product would be a functional specification or similar document.

7. RTAR Submissions

No formal action is needed in the Winter meeting on RTARS. Considering the current tight status for new research funding, TC's are encouraged to submit no more than one or two RTARs per year. The latest list and the feedback we got from RAC follows:

- On-line Development of Standards - "Not research", "This is a task for Standards Committee or Staff to do.", "Conventional intercommunication between parties interested in the standards is all that is necessary".
- Retooling the HVAC Education Process to Better Use Computer-Aided Design - "RTAR is too vague - needs more detail", "This is not research. This is an educational activity.", The new technologies in objective 3 would be quickly outdated. Not enough information given to convince me that the project is worth ASHRAE's support."

8. Adjournment

The meeting was adjourned at 19:01.

Attachment E – GPC-20

GPC-20 Winter 2003 Meeting Chicago Illinois.

Palmer Hours Chicago Clark Room 10

Call to Order 0800

Circulate Roster

Wayne delayed till 8:30

1. Chip Barnaby called meeting to order 0806.

2. Roster circulated

3. Review agenda. Chip recommends adding IFC interaction before new business. Marty asked to recast the agenda into 3 items. Chip states we should be to item 6 by 0830. Bob said that business case should be deferred to later. Mark Palmer There is interest to keep it consistent with FIATECH.

Moved to approve the minutes by all 0814. Moved by Hitchcock second by XU.

5.1 None

5.2 None

5.3 None

5.4 Membership

5.5 5.6 Rob asked a filing of documents. David Venters posted all document sot the GPC group website.

5.7 Mark Palmer FIATECH update. Gave a 5-minute update on FIATECH.

(Looking over draft version 0.5 fiatech xml schema)

5.8 James Forester reports that there is a incremental release of the IFC model 2.x base that has become an ISO standard. Has set out (xml zip file) property sets. Mark Palmer asked is the prop set must stand with super structure. James F. said they could be associated with anything that needs that attribute.

5.9-5.12 Mark Palmer asked is there an organizational statement on the role and tasks of liaison. ACTION ITEM: Need to create a role and task statement for our liaison and how we relate to ASHRAE and others. No motion was made.

6. New business:

6.1 –6.4 Agenda superceded by committee vote 6.5.3.

6.5.1 Motion on the floor: Marty Burns 2nd by Rob Hitchcock:

GPC 20 directs the Chair to gain authorization from the Society for GPC 20 to proceed with the following action item.

GPC 20 will produce 2 deliverables:

1. A document providing guidance, describing benefits, and defining use of XML for the delivery of commodity data and HVAC&R information. This document will include a set of appendices with GPC 20 generated schemas. This document will be distributed under the conventional ASHRAE publishing mechanism.

2. The series of schemas, which will be widely and freely available without any constraints on their acquisition and use in their native format.

Vote at 0941 unanimous approved.

6.5.2 Meeting times are agreed to return to 8-12 on Sundays. Current meting end time of 1100 was in error.

6.5.3 Motion on the floor: Paul Ehrlich 2nd by Marty Burns

We review Bob Old skeleton documents first and then assign task list afterward.

Vote at 0957 unanimously approved.

6.5.4 Review of skeleton document:

Bob envisioned that we reference or include schema for other sources. Paul Ehrlich (Trane) stated he is not sure that BacNet is not the best data model for XML. Mark Palmer has suggested that we add these ideas to the to the outline. Dave V. holds master.

Motion on the floor: Mark Palmer 2nd by Rob Hitchcock

Establish two sub work groups to focus on section 3 and 4. Groups to establish meetings that will enable the group have a product for review one month prior to next ASHRAE meeting.

Discussion – Chip Barnaby, Larry, Shafer, Krishhnan Gowri, will contribute on 4. Mark Palmer will work on 4. Bob Old will head 3. Rob H., James Forester, Dave Branson, Phil H., and Marty Burns. will contribute on 3. Dave Venters will be the master document manager

Vote at 1115 unanimously approved

Motion form the floor: Mark Palmer 2nd by Marty Burns

Committee shall task an individual to work on section 2.

Discussion - Wayne Dunn has been tasked to lead with Larry to contribute.

Vote at 1118 unanimously approved

Meeting adjourned at 1120.

Attachment F – IFC/XML Workstatement

WORK STATEMENT

Title: Prototype Demonstration of IFC/ifcXML Interoperability in Support of HVAC&R Activities

Technical Committee: TC 1.5, Computer Applications

Research Category: Design, Commissioning, and O&M Tools

Research Classification: Software Data Interoperability

TC/TG Priority: 1

Estimated Cost: $115,000

State-of-the-art (Background):

Many different people ultimately work with HVAC&R systems, from the initial designer to the building maintenance staff, and they use a wide variety of software programs as part of their work. Different software is used to design HVAC&R systems, to facilitate construction, to direct how best to operate, and to manage equipment maintenance. For the most part, each software program is used on a standalone basis with no way to communicate with other programs. Users must reenter into each individual program all the data related to a building and its systems. This is a time-consuming and error-prone process.

The International Alliance for Interoperability (IAI, 2002), of which ASHRAE is a member, has developed the Industry Foundation Classes and ifcXML (IFC/ifcXML) data model standards to address this problem. These industry-standard data models provide a common "definition" for building data which software programmers can then use when creating software programs. These models thus facilitate the exchange of data between the various software tools employed across the life cycle of a building project.

Demonstrations of this capability have to date focused primarily on the exchange of geometric CAD-related data. Yet, to achieve the maximum added value of this capability for HVAC&R practitioners it must also include the exchange of non-geometric building information (e.g., HVAC equipment and system data). This level of data exchange would more fully support critical information sharing between the owner and design team, between design team members, and from design to downstream participants in construction, commissioning, and operation phases of the building life cycle.

A number of software programs that incorporate the IAI data standard have now become available. This list includes well known CAD tools as well as energy- and HVAC&R-related tools. However, to-date the data exchanged between these tools include only the geometric representations of physical objects such as walls, windows, doors, and ducts.

Justification and Value To ASHRAE / Advancement To State-of-the-art:

Developing data models requires substantial effort and the wide support of the industry that would use the models. This project seeks to begin that effort and building support by demonstrating the feasibility and value of exchanging non-geometric HVAC&R data using IFC/ifcXML in support of HVAC&R activities and software applications. Such a

demonstration would more concretely illustrate the benefits of this capability, generating interest in further development of both the IFC/ifcXML data standard and encouraging software developers of commercially available HVAC&R software to adopt this standard in their products.

For this technology to benefit ASHRAE and the HVAC&R industry, the current poor level of data exchange must be extended to more fully address the data requirements of our community. A demonstration of data exchange supporting HVAC&R software programs would attract more involvement from ASHRAE members in the further development of these standards. It would also help create market demand for data exchange between tools that support HVAC&R activities. This type of data exchange can ultimately lead to an improved building design, delivery, and operation process by dramatically improving the flow of information between project participants and phases; better designs, in less time, with reduced error, that operate as designed.

However, without the active involvement of ASHRAE, the information requirements of its members will not be adequately addressed in these data standards. The likely result is the eventual development by other professions of partial data models that poorly serve the HVAC&R professional. Or worse yet, no data model standard at all for HVAC&R equipment as vendors promulgate their own incompatible data models.

Objectives:

This research project is intended to accomplish the following primary objectives:

- Explore non-geometric data requirements related to data exchange between HVAC&R software.

- Develop a tangible demonstration of data exchange between selected HVAC&R software through a prototype software implementation using the IFC/ifcXML data standards.

- Assess and document the potential costs and benefits of moving from current practice to a practice supported by improved data exchange.

Scope:

The work should be accomplished in three phases as described below, with interim reports being reviewed and approved between each phase by the TC1.5 Project Monitoring Subcommittee.

Please note that ASHRAE retains all intellectual rights and any copyrights for any guidelines or software developed in this project. Licenses for software purchased as part of the project will either be registered as owned by ASHRAE or transferred to ASHRAE at the conclusion of the project.

Phase I: Data Requirements Assessment

Task 1.   Identify a set of software tools used in the HVAC&R industry that would benefit from improved data exchange.

Task 2.   Specify the data that must be exchanged between this set of applications to achieve the benefit.

Task 3.   Compare the Task 2 specification with existing data specifications in IFC/ifcXML.

Phase II: Prototype Software Implementation

Task 4.   Implement a prototype software demonstration of data exchange between the applications selected in Task 1 using the IFC/ifcXML data standards to the extent possible.

Task 5.   Document a demonstration scenario for this prototype implementation.

Phase III: Costs and Benefits Assessment

Task 6.   Assess the potential costs and benefits of moving from current practice to a practice supported by improved data exchange for the selected set of software applications.

Task 7.   Prepare final report documenting the results of each of the three phases.

Deliverables:

The Contractor shall provide the following items as deliverables for this research project:

An interim report giving detailed specifications of the data identified for exchange between the selected software applications of Phase I, including a comparison with relevant data specifications in IFC/ifcXML.

An interim report describing the prototype software implementation developed in Phase II, including a software demonstration scenario.

A final report including documentation of the costs and benefits analysis of Phase III in addition to the documentation in the interim reports for Phases I and II.

Bi-monthly progress teleconferences shall be conducted, and shall be initiated by the Chair of the Project Monitoring Subcommittee (PMS). The Contractor shall submit a copy of the meeting minutes to each member of the PMS at the conclusion of the teleconference.

Progress and Financial Reports shall be made to ASHRAE through its Manager of Research at quarterly intervals - specifically on or before each January 1, April 1, June 1 and October 1 of the contract period.

The Principal Investigator shall report in person to ASHRAE Technical Committee (TC) 1.5 at the Annual and Winter Society Meetings, and answer such questions regarding the research as may arise.

A Final Report shall be prepared and submitted to the Manager of Research by the end of the contract period covering complete details of all research carried out on the project. Six (6) draft copies of the Final Report shall be furnished for review by the PMS.

Following approval by the PMS and TC 1.5, final copies of the Final Report will be furnished as follows:

1. An Executive Summary suitable for wide distribution to the industry and to the public;

2. Six (6) bound copies;

3. One unbound copy, printed on one side only, suitable for reproduction;

4. Four (4) copies on CDROM media – two (2) in ASCII format and two (2) in Microsoft Word format.

A Technical Paper shall be submitted in a form suitable for presentation at a Society meeting. The paper shall conform to the Society's "Submitting Manuscripts for ASHRAE Transactions" which may be obtained from the Special Publications Section.

All papers or articles submitted for inclusion in any ASHRAE publication shall be made through the Manager of Research and not to the publication's editor.

A Technical Article suitable for publication in the ASHRAE JOURNAL may be requested by the Society. This is considered a voluntary submission and not a deliverable.

Level of Effort:

This project is estimated to take no more than eighteen calendar months to complete. The estimated total cost is $115,000. The level of effort is estimated to be:

Experience Level	Person-months
Principal Investigator	2
Data Modeler	2
Application Developer	4
Analyst	4

Proposal Evaluation Critieria:

Bidders will be evaluated on the following criteria:

- The bidder's understanding of the Work Statement as revealed in the proposal (20%)

- The bidder's familiarity with the current IFC/ifcXML data standards (20%)

- The bidder's familiarity with HVAC&R equipment and applications (20%)

- The bidder's familiarity with, experience in using, and involvement in defining data exchange between software tools supporting the HVAC&R industry (10%)

- The bidder's experience in implementing software products (20%)

- The bidder's familiarity with the use of computer tools for simulation of building systems operations and life-cycle costing (10%)

A combination of data modeling, software development, and cost/benefit analysis expertise by any one contractor is not expected. Teaming of contractors with backgrounds in each area is encouraged in order to ensure the success of the project.

References:

IAI. (2002) International Alliance for Interoperability. World Wide Website: www.iai-international.org

IAI Implementer Support Group. (2001) International Alliance for Interoperability. World Wide Website: http://www.bauwesen.fh-muenchen.de/iai/iai_isg/

Attachment G – Chair's EMail to Ken Cooper 1/21/2003

Tue, 21 Jan 2003 22:24:53 -0500

From: Walter Grondzik <gzik@polaris.net>

To: ken.cooper@poolpak.com

Ken Cooper, Chair

Handbook Committee

I am writing this message on behalf of the membership of ASHRAE TC 1.5
(Computer Applications). The TC has discussed the electronic handbook at
several recent meetings and it appears that there are four concerns
regarding the electronic handbook development that continue to surface
in these discussions:

1. That conversion to electronic format, with state-of-the-art
capabilities, is not progressing quickly enough.

2. That the electronic enhancements should use all available
state-of-the-art capabilities.

3. That there should be some standardization of software approaches (and
related guidance) so that unconventional techniques are not used by
authors in such a way as to make usage difficult (or expensive).

4. That authors developing electronic enhancements be provided with
support and encouragement.

I believe that the Handbook Committee has grappled with each of these
concerns and provided informational sessions to assist with this
transition. The sense that I'm getting is that people are unsure whether
this development is in pilot mode or full speed ahead mode.

Several members of TC 1.5 have been participating in Handbook Committee
discussions regarding electronic enhancements. I assume that they would
be willing to elaborate upon these points upon request. TC 1.5 fully
supports your efforts to advance the effectiveness of the Handbooks.

Sincerely,

Walter Grondzik
Chair, TC 1.5