

**ASHRAE TC ACTIVITIES SHEET**

**DATE: 01 April 1999**

**TC NO. TC 1.5            TC TITLE: Computer Applications**  
**CHAIR: M. Schwedler    VICE CHAIR/SECRETARY: D. Branson**

**TC MEETING SCHEDULE**

Location, past 12 mo.	Date	Location, next 12 mo.	Date
Toronto	Jun 1998	Seattle	Jun 1999
Chicago	Jan 1999	Dallas	Feb 2000

**TC SUBCOMMITTEES**

{PRIVATE }Subcommittee	Chair
Emerging Applications	Duane Barrett
Handbook	Mike Pouchak
Internet	Wayne Dunn
Policy and Software Quality	Brian Kammers
Program	Wayne Webster
Research	James Watts

**RESEARCH PROJECTS**

Project Title	Contractor	Monitoring Comm. Chair	Report Made at Meeting?
TRP-1017		James Watts	Yes
TRP-1049		Ron Nelson	No

**LONG RANGE RESEARCH PLAN**

Rank	Title	W/S Written	Approval	To R&T
1	Identification and Preservation of Building Design Information for Use in Commissioning and Operations	Yes	Yes	Yes WS 1032
2	Development and implementation of an electronic method for interactive commenting of Research, Technical and Symposium Papers and Peer Approval of Research Project Documents	No	No	No
3	A Demonstration Multimedia Database for Examining and Comparing HVAC Design Alternatives	Yes	No	No
4	Development of a software data exchange platform for support of the development of compliance checking tools for SSPC 90.2, Energy Efficient Design of New Low-Rise Residential Buildings	No	No	No
5	Software tool to aid the development of work statements that have software deliverables	No	No	No
6	On-line development of standards	No	No	No

**HANDBOOK RESPONSIBILITIES**

Year & Volume	Chapter Title	No.	Deadline	Approval	Handbook Committee Liaison
1999 Application	Computer Applications	38	1998	Yes	Ken Cooper
2003 Applications	Computer Applications		2003		

## STANDARDS ACTIVITIES

None
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## TECHNICAL PAPERS FROM SPONSORED RESEARCH (PAST 3 YRS, PRESENT, PLANNED)

{PRIVATE }Title	Presented
From TRP - 833: Demonstration of Knowledge Based to Aid Building Operators in Responding to Real-Time Pricing Electricity Rates	Poster session
From TRP - 808: Demonstration Knowledge-Based Tool (KB) for Diagnosing HVAC O&M Problems in Small Office Buildings.	Poster session

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

Title	When Presented
HVAC Design Optimization Tools: Fact or Fantasy? - Hydeman	Dallas 02/00
Computers in HVAC Education - Nelson	Chicago 01/99
The Great Energy Predictor Shoot-out II	San Antonio 6/96

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

Title	When Presented
Automated Recognition of Data Patterns for HVAC and Building Diagnostics - Brambley	Minneapolis 06/00
Web-Based Training - What are the Status and Prospects for the Future - Pratt	Dallas 02/00
Is ASHRAE Too Soft on Software Support - Haberl	Dallas 02/00
What is the Future Relationship Between DDC & the Web - Branson	Dallas 02/00
How Could Electronic Media Assist the Development and Review of ASHRAE Standards - Hydeman	Dallas 02/00
Where is ASHRAE Going With the Web - Dunn	Dallas 02/00
Applications of Internet and Electronic Media for Chapters and Regions - Hydeman	Seattle 06/99
Data Visualization for Building Operations - Kammers	Seattle 06/99
The Demise of 2D CAD Design - Barrett	Seattle 06/99
How to Conduct a Virtual Meeting (from Home) - Barrett	Seattle 06/99
Business in the Year 2000? or 1900? - Schwedler	Chicago 01/99
Use of Internet for Collaborative Efforts in HVAC - Branson	Toronto 06/98
Does Your TC or Chapter Need Members? Retention? Communication? Action? Try Computer and the Web?	Toronto 06/98
Emerging Applications: From PID to Fuzzy Logic & Beyond - Sun	San Francisco 01/98
Demonstration of Inter-Operable Computer Applications for the HVAC Industry - Forester	San Francisco 01/98
Use of the Internet by Technical Committees - Schwedler	San Francisco 01/98
Building Life Cycle Information Systems	Boston 06/97
Internet and HVAC - Integrity, Ethics, Security	Philadelphia 01/97
An Update on Industry Alliance for Interoperability	Philadelphia 01/97
How to Become a Road Warrior on the Information Super Highway	San Antonio 06/96
BACNet Implementation in Automation and Control Systems - (co-sponsor with 1.4)	San Antonio 06/96

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

Title	When Presented
What Type of Software do ASHRAE Members Want from ASHRAE? - Kammers	TBD
ASHRAE An Electronic Society - What Pieces of the Connectivity Puzzle Are Still Missing - Branson	TBD
Does ASHRAE Commercialization Policy Need to Be Changed Because of the WWW? - Kammers	TBD
Should ASHRAE Establish Guidelines for Electronic Media that Contains Manufacturer's Product Information - Sun	Seattle 06/99
What Support Is Needed For ASHRAE Software? - Kammers/Webster	Chicago 01/99
Does ASHRAE Commercialization Policy Need to Be Changed Because of the WWW? - Kammers	Toronto 06/98
Should ASHRAE Sponsor a Cyberspace Virtual Chapter? - Hallstrom	Toronto 06/98
What HVAC Applications Would Benefit from Computer Aided Instruction? - Culp	Toronto 06/98
Who Should Champion the Transfer of Technology on the Internet? - Branson	Toronto 06/98
What Type of Software Do ASHRAE Members Want from ASHRAE? - Kammers	Toronto 06/98
What Would You Do If You Had Internet Access for Your Building Control System - Songkakul	San Francisco, 01/98
What Do ASHRAE Members Want Form The ASHRAE Homepage - Linton	San Francisco 01/98
What ASHRAE members want/ need from Manufacturer's World Wide Web Site	Boston 06/97
What to ASHRAE Members want from the ASHRAE Web page	Boston 06/97
How Can User Interfaces for HVAC Software be Improved	Philadelphia 01/97
What Should ASHRAE's Role Be In The Industry Alliance for Interoperability?	San Antonio 06/96
What Do ASHRAE Members Want/Need from the World Wide Web?	San Antonio 06/96
HVAC, Virtual Reality, and You	San Antonio 06/96
What are the CAD/Simulation Tool Needs of ASHRAE Members?	San Antonio 06/96

### JOURNAL PUBLICATIONS (PAST 3 YRS, PRESENT, PLANNED)

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

**SUBMITTED BY: Dave Branson -- TC 1.5 Secretary**

## TC 1.5 (Computer Applications) Minutes

Palmer House Hilton

Monday – January 25, 1999; 6:30 p.m. -- 9:00 p.m.

### General

- **Call to order** at 6:30 p.m.
- **Introductions/Sign up sheet** – TC info passed out by Chair
- **Agenda Review**– no additions made
- **Roll Call** (Becker, Brambley, Branson, Grondzik, Kammers, Nelson, O'Neill, Peppers, Schwedler, Watts, Webster)  
Quorum was established
- **Toronto Minutes Approval** - Motion by Grondzik/Second by Watts; Motion passed by unanimous voice vote with Chair not voting

### Chair's Report - Mick Schwedler

- Announcement – Smart Buildings Seminar at MIT – contact Joe Ting
- Review of Action Items
- \*\*\*action item\*\*\* DJB to put new Peppers website template on CSG's server
- \*\*\*action item\*\*\* all members are to let Peppers know about your vital signs on the TC website
- \*\*\*action item\*\*\* Peppers to submit website URL to ASHRAE(Comstok) to review prior to public launch
- \*\*\*action item\*\*\* all subcommittee chairs & liaisons to get minutes & write-ups to DJB by mid-February for distribution to those on TC roster

### Subcommittee Reports

#### **Program - Wayne Webster (Attachment A)**

- \*\*\*action item\*\*\* Webster to have proposed Seattle programs to Schwedler by Feb 10 for submittal to ASHRAE
- Motion by Webster/Second by Kammers to accept programs order (6 items) for Seattle; Motion passed unanimously by vote with Chair not voting

#### **Research – Jim Watts (Attachment B)**

- Kammers reported on 966-TRP. Final report was accepted via a letter ballot.
- Watts reported on 1017-TRP. The contract is on schedule to begin February 1, 1999 with finishing date of January 2000.
- Branson reported on 1032-WS
- \*\*\*action item\*\*\* DJB to get in touch with Dick Pearson to discover problem areas and revise; DJB to submit WS & cover letter to Watts (1.5) and Heinemeier (9.9) for letter ballot (e-vote) prior to submittal by Feb 15
- Discussion concerning change of developing work statements took place. Jim Watts will provide more information as it becomes firm.

#### **Emerging Applications – Duane Barrett (Attachment C)**

- \*\*\*action item\*\*\* Motion by Brambley/Second by Kammers for TC chair to write letter to ASHRAE irt Inventory & Review of Software Assets they have for the purposes of commercializing the software; Motion carried unanimously w/ chair not voting

#### **Policy and Software Quality - Brian Kammers (Attachment D)**

- Kammers reported on meeting with Programs Executive Committee
- \*\*\*action item\*\*\* Kammers to prepare survey for TC chairs concerning ASHRAE commercialism policy; Brambley & Grondzik will help review the survey draft
- Motion by Kammers/Seconded by Grondzik to have Contractor provide training session for research chairs in lieu of technical paper and for TC Chair to write letter to RAC reflecting this; motion passed by unanimous vote with chair not voting
- \*\*\*action item\*\*\* Schwedler to contact Bruce Hunn, Bill Seaton & Publishing Council about getting 966 results implemented into ASHRAE

#### **Internet - Wayne Dunn (Attachment E)**

- Dunn reported on subcommittee meeting

**Liaisons**

- Ken Cooper w/ handbook committee (liaison) – reported that handbook went well; thank-you to TC for participation; process to start over again soon
- SSPC 90.1 – call for members – contact Larry Spielvogel (incoming SSPC chair)
- ASHRAE Journal wants articles – contact Dale Cagwin (our liaison) or ASHRAE Fred Turner
- Programs liaison – Schwedler offered to work with Programs to find faster way to submit forms, etc., for Programs documents

**New Business**

- Meeting times for Seattle

Committee	Day	Time	Chair
Internet	Sunday	2:00 – 3:00	Wayne Dunn
Emerging Applications	Sunday	3:00 – 4:30	Duane Barrett
TRP-1017 PMS	Sunday	4:30 – 6:30	Jim Watts
Research & Program	Sunday	6:30 – 8:30	Jim Watts & Wayne Webster
Policy and Software Quality	Monday	4:00 – 5:00	Brian Kammers
Handbook	Monday	3:00 – 4:00	Mike Pouchak
Main TC	Monday	6:30 - 9:00	Mick Schwedler

**Adjournment**

Motion by Peppers/Second by Watts; Motion passed unanimously by voice vote with Chair not voting; Adjourned at 8:28 pm

Action Items	Person Responsible	Date
Prepare TC 1.5 web site and publish to web server	Vernon Peppers/Dave Branson	
Contact Vernon Peppers concerning whether members want their contact information accessible from the TC 1.5 web site	All TC 1.5 members	
Submit TC 1.5 web site URL to Steve Comstok at ASHRAE for review and approval of site as worthy for publishing	Vernon Peppers	
Submit completed minutes of Chicago Meetings to TC Secretary for distribution	TC 1.5 committee/subcommittee chairs	14 Feb 99
Deliver proposed Seattle programs to TC Chair for submittal to ASHRAE	Wayne Webster	10 Feb 99
Contact Dick Pearson concerning possible revisions to WS 1032; revise WS; submit revised WS and cover letter to James Watts for TC 1.5 letter ballot vote	Dave Branson	15 Feb 99
Write letter to ASHRAE recommending an inventory and review of software assets as a first step toward commercialization of the software	TC 1.5 Chair	
Prepare survey for TC chairs concerning ASHRAE commercialism policy	Brian Kammers w/ Mike Brambley and Walter Grondzik	
Contact Bruce Hunn, Bill Seaton and Publishing Council about implementing findings of RP 966 into ASHRAE	TC 1.5 Chair	
Prepare and submit articles with ASHRAE-related content to Dale Cagwin (TC 1.5 Liaison) or Fred Turner w/ ASHRAE Journal for consideration toward publication	All TC 1.5 Members	
Prepare Seminar Forms for Dallas Meeting prior to Seattle Meeting	All Programs participants	

## **Minutes of TC 1.5 Program Subcommittee Meeting in Chicago - Jan 24/99**

Started 7:30 PM with 13 attendees

Have 3 program items at this meeting.

- Seminar: Buildings in the Year 2000 => or 1900 - Schwedler
- Symposium: Computers in HVAC Education - Nelson
- Forum: What Support Is Needed For ASHRAE Software? - Haberl could not make it. Kammers & Webster to fill-in.

Reviewed previous schedule of potential program items and developed prioritized list for Seattle & potential list for Dallas.

Concluded meeting at 8:25PM.

PS: List which follows was developed after review and comments of full TC meeting Jan 25/99

## **Program: Seattle Jun 1999**

Seminar: How To Conduct A Virtual Meeting (from home)	Barrett
Forum: What is the Members Response to ASHRAE's Web Plan	Gronzik
Seminar: The Demise of 2D CAD Design	Barrett
Seminar: Data Visualization for Building Operations	Kammers
Seminar: Applications of Internet and electronic Media for Chapters and Regions	Hydeman
Forum: Should ASHRAE Establish Guidelines for Electronic Media that Contains Manufacturer's Product Information	Sun

## **Proposed Program Items: Dallas Jan 2000**

Submission dates: to HQ August ??

Seminar: Where Is ASHRAE going with the Web	Dunn
Seminar: How Could Electronic Media Assist The Development and Review of ASHRAE Standards	Hydeman
Seminar: What is the future Relationship Between DDC & The Web	Branson
Symposium: HVAC Design Optimization Tools: fact or Fantasy	Hydeman
Seminar: Is ASHRAE Too Soft on software Support	Haberl
Seminar: Web Based Training - What are the Status and Prospects for the Future	Pratt

## **Proposed Program Items: Minneapolis Jun 2000**

Symposium: Computers and HVAC Education	
Seminar: Automated Recognition of data Patterns for HVAC and Building Diagnostics	Brambley

## **Other Program Items**

Journal Article: What HVAC Applications Would Benefit From Computer Aided Instruction	Culp
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**TC 1.5 Computer Applications  
Research Subcommittee Meeting Minutes  
ASHRAE Winter Meeting, Chicago, IL  
Sunday, January 24, 1999**

**1. Call to Order/Introductions**

The meeting was called to order at 6:45 p.m.

**2. 1017-TRP Status**

James Watts presented a brief summary of the status of 1017-TRP. Contract negotiations between ASHRAE and the contractor (Texas A&M) are complete and RAC is scheduled to consider whether to approve the resulting contract during Wednesday's RAC meeting. If the contract is approved, the contractor anticipates starting the project in February with an anticipated completion by January 1, 2000.

**3. 1049 PMS Report**

A member of the PMS was not available to report on progress for this proposal so the item was tabled.

**4. Proposed Research**

No new research projects were presented for consideration by the subcommittee chairs.

**5. Discussion/Review of Work Statements and One-Pagers**

James Watts summarized the status of TC 1.5's Research Plan topic submittals (one-pagers). ASHRAE included only our top three priority submittals in the 1999 Research Plan and all of these were placed in the "non-priority" category.

Dave Branson's work statement, WS-1032, for our Priority 1 topic titled "Identification and Computer-Based Preservation of Building Design and Commissioning Information" had been submitted for consideration by RAS following the Winter meeting in San Francisco and was rejected. Dave will check with Bill Seaton's staff for any specific feedback that might be available and contact Dick Pierson of RAC to explore why the work statement is unacceptable.

Benjamin Sun volunteered to write a "two-pager" (the new version that will probably be adapted to replace one-pagers) for our Priority 2 topic "Development and implementation of an electronic method for interactive commenting of research, technical and symposium papers and peer approval of research project documents". Walter Grondzik's work statement for our Priority 3 topic titled "A Demonstration Multimedia Database for Examining and Comparing HVAC Design Alternatives" has not been changed since the last meeting and has not yet been submitted to RAC for consideration. No actions resulted from a review of our Priority 4 to 6 topic. Several members felt that our Priority 7 topic, "Development of a demonstration toolkit for visualizing building energy and environmental data", is likely to be rendered moot by outside commercial developments of similar software and would therefore not be accepted by RAC. It was agreed to therefore drop this topic.

Our revised list of current proposed topics is thus:

- (1) Identification and computer-based preservation of building design and commissioning information.
- (2) Development and implementation of an electronic method for interactive commenting of research, technical and symposium papers and peer approval of research project documents.
- (3) A demonstration multimedia database for examining and comparing HVAC design alternatives.
- (4) Development of a software data exchange platform for support of the development of compliance checking tools for SSPC 90.2, Energy Efficient Design of New Low-Rise Residential Buildings.
- (5) Software tool to aid the development of work statements that have software deliverables.
- (6) On-line development of standards.

**1. Research Topic Prioritization**

No further discussion of topic prioritization was required.

## **2. New Research Topics**

Wayne Dunn described several potential new ideas including a need for software that could be incorporated into “smart” building systems to provide feedback to control subsystems. This would help solve more complex control problems such as global hunting using a variety of approaches including "self-learning" networks taking advantage of building automation servers that contain trend data. Dave Branson volunteered to write a draft one-pager describing the idea with Wayne Dunn’s assistance.

Evidently TC 1.4 still has interoperability issues whose resolution might represent research topics to be co-sponsored by TC 1.5. For example, standardized data item labeling and new data lookup approaches could be explored. These topics will be further discussed in the Seattle meeting.

## **3. Adjournment**

The meeting was adjourned at 7:40 p.m.

**RESEARCH PLAN  
TECHNICAL COMMITTEE 1.5  
PRIORITY 1**

**PROJECT TITLE**

Identification and computer-based preservation of building design and commissioning information.

**OBJECTIVES**

- a. Identify building design and commissioning information with potential value for use in building operations and monitoring processes and future modification projects.
- b. Develop a computer-based methodology or procedure, based upon building classification, size and usage, to identify pertinent information collection domains.
- c. Determine the appropriate level of data retention for these design and commissioning information domains.

**BENEFITS**

Vast amounts of building engineering design and commissioning information are generated during the design and commissioning processes. Typically, the majority of this information is not transferred or otherwise made available to the building owner. The ability to retrieve or reconstruct these data diminishes rapidly with time. Proper collection and computer-based preservation of this information would greatly facilitate maintenance of building operations at a high level of efficiency, future building operations and control upgrades, potential building monitoring efforts, and lastly, major renovation projects. Proper identification and preservation of this information holds great potential economic and operational benefit.

**ESTIMATED COST**

\$50,000

**ESTIMATED DURATION**

1 year

**METHOD OF PUBLISHING RESEARCH RESULTS**

Technical Paper would be presented at ASHRAE meeting.

**CONTRIBUTORS**

David J. Branson, PE, (806) 748-0040

Bob Potter, PE, (914) 938-4093

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**RESEARCH PLAN**  
**TECHNICAL COMMITTEE 1.5**  
**PRIORITY 2**

**PROJECT TITLE**

Development and implementation of an electronic method for interactive commenting of research, technical and symposium papers and peer approval of research project documents.

**OBJECTIVES**

- a. Perform a survey of other societies and organizations to determine how they conduct interactive commenting and peer approval of research, technical and symposium papers and research projects.
- b. Develop a process for online commenting and peer approval of papers and research project documents.
- c. Recommend a technology solution for implementation of 'objective b' based on ASHRAE's current and proposed computer resources.
- d. Prototype the recommended process on a sample of each category described in 'objective a' and evaluate the results.

**BACKGROUND**

Other societies are experimenting with online commenting and peer approval of papers and research project documents. ASHRAE has a need to improve on the present manual method of document review by use of online techniques. The present process is very time inefficient and expensive. This work statement authorizes a survey of other societies' and organizations' automated commenting and peer approval processes and intends to bring the best practices into ASHRAE as a coherent and formalized process.

**BENEFITS**

By providing a formal computer-based process in the conduct of interactive commenting and peer approval of research, technical and symposium papers and research projects, ASHRAE will reduce the time and cost resources necessary to manage and distribute those documents.

**ESTIMATED COST**

\$75,000

**ESTIMATED DURATION**

8 months

**DELIVERABLES**

Identification of ASHRAE software and hardware required. Implementation of the developed prototype on the ASHRAE platform using a sample of each category of research, technical and symposium papers and research projects documents. Evaluation of the process and solution of the prototype on the samples.

**CONTRIBUTORS**

Henry Amis tadi  
Fred Buhl  
David Bornside  
David Branson  
Art Hallstrom

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**RESEARCH PLAN**  
**TECHNICAL COMMITTEE 1.5**  
**PRIORITY 3**

**PROJECT TITLE**

A demonstration multimedia database for examining and comparing HVAC design alternatives.

**OBJECTIVES**

- a. Identify a broad range of existing HVAC systems that represent good design practice and successful implementation.
- b. Obtain and/or generate descriptive information about each of the installations (e.g., schematics, photographs, simulations, performance statistics).
- c. Create a prototype CD-ROM-based database that allows the rapid retrieval of HVAC system descriptions by key features.

**BENEFITS**

Design is frequently accomplished by modifying existing designs to fit the context of the current problem. This project will allow an engineer to easily gain access to an information-rich databases of existing designs that are relevant to a problem under consideration. These designs will be presented in a graphic, multimedia format, providing images and schematics that are of greatest interest and impact during design. HVAC engineers can quickly scan, search, retrieve, and compare a broad range of existing solutions that can be used as a basis for new design or as a starting point for generating new ideas. Ultimately the designs stored in the database should be directly accessible by commercial CAD systems for adaptation and modification.

**ESTIMATED COST**

\$100,000

**ESTIMATED DURATION**

2 years

**METHOD OF PUBLISHING RESEARCH RESULTS**

A Final Report and a Technical Paper will be presented at an ASHRAE meeting. CD-ROM and databases access software to be distributed by ASHRAE for IBM PC-compatible machines.

**POTENTIAL CO-SPONSORS**

Manufacturers of equipment used in the examples in the database. CAD software developers.

**CONTRIBUTOR**

Walter Grondzik, (904) 599-3244

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**RESEARCH PLAN**  
**TECHNICAL COMMITTEE 1.5**  
**(CO-SPONSORED WITH TC 9.6)**  
**PRIORITY 4**

**PROJECT TITLE**

Development of a Software Data Exchange Platform for support of the Development of Compliance Checking tools for SSPC 90.2, energy Efficiency Design of New Low-Rise Residential Buildings.

**OBJECTIVE**

The objective of this research is to develop a Software Data Exchange Platform (SDEP) for support of the development of compliance checking tools for SSPC 90.2. Such a platform would be similar in function to the ASHRAE Neural Model Format Translator and AIA's layering protocol for CAD. It would contain algorithms and documented computer code that developers could use for developing compliance checking tools for SSPC 90.2. This public platform would accelerate the private development of compliance checking tools in support of SSPC 90.2 including web-based tools and connections to existing cost-estimating software and CAD systems. This research includes: (1) a thorough review of the functions and database structure that would be needed to create an effective public domain platform for supporting compliance checking tools; (2) the design and development of a freely distributable computer code and thoroughly defined documentation including the implementation of one (stand-alone) user interface for the prescriptive compliance alternative; (3) implementation of all modules for input, output, and exchange of data necessary to drive a compliance checker; and (5), assembling the code into an ASHRAE Toolkit including the appropriate documentation and source code.

**BENEFITS**

The project will benefit ASHRAE membership as well as the general public as follows:

1. ASHRAE to develop a standard platform for the development of compliance checking software for support of SSPC 90.2.
2. Software suppliers as an aid for accelerating the incorporation of effective and innovative input/output techniques into compliance checking software.
3. ASHRAE for accelerating the private development of compliance checking software in support of SSPC 90.2.

**ESTIMATED COST**

\$85,000

**ESTIMATED DURATION**

18 calendar months

**METHOD OF PUBLISHING RESEARCH RESULTS**

A Technical Paper will be presented at an ASHRAE meeting. An ASHRAE special publication may also result.

**CO-SPONSORS**

TC 9.6

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**RESEARCH PLAN**  
**TECHNICAL COMMITTEE 1.5**  
**PRIORITY 5**

**PROJECT TITLE**

Software Tool To Aid The Development Of Work Statements That Have Software Deliverables

**OBJECTIVES**

- a. Improve the quality of software delivered to ASHRAE through research projects.
- b. Simplify the development of work statements that include software deliverables.
- c. Utilize ASHRAE's investment in RP-966.
- d. Test the process in RP-966 by using it to develop a work statement for software creation that aids in the development of work statements that include software.
- e. Improve the level of consistency and compliance with the work statement process relative to software deliverables.

**BENEFITS**

**This project only focuses on the part of the work statement development related to software. It is not intended to automate the entire work statement development process. This would have to be the subject of another project.**

**It turns out that the process required to assure that ASHRAE receives quality software deliverables is somewhat complex for the general membership. In addition it is not linear in nature. Both of these attributes indicates that an automated process would benefit the developers of work statements.**

This would be a follow up project to previous research. The research project RP-966 was intended to create a process that aided the Society in the area of software quality. The purpose was to create a procedure for ASHRAE members to develop work statements that required software as a deliverable.

**The most unique part of the research would be the development of a complete work statement. It is the intent of this one page work statement proposal to use the results of RP-966 to create a work statement for the automation of the RP-966 process. This would be the first use of the process created in RP-966. It will provide experience that should help determine if the process is suitable to the Society.**

An automated process would be simpler to use and therefore the membership would be more likely to follow the procedure.

**ESTIMATED COST:** \$45,000

**ESTIMATED DURATION:** 9 months

**METHOD OF PUBLISHING RESEARCH RESULTS**

Software diskette available to Technical Committees. The program would walk a member through the process of developing a work statement. The output from the process and software program would be the documentation related to software that would be included in a work statement.

**CONTRIBUTOR**

Brian Kammers, PE, (414) 274 - 5985

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**RESEARCH PLAN**  
**TECHNICAL COMMITTEE 1.5**  
**PRIORITY 6**

**PROJECT TITLE**

On-line development of standards.

**OBJECTIVES**

- a. Perform a survey of other societies and organizations to determine how they develop online standards.
- b. Develop a process for online circulation, review, comments and approval of standards in accordance with ANSI specifications.
- c. Recommend a technology solution for implementation of 'objective b' based on ASHRAE's current and proposed computer resources.
- d. Prototype the recommended process on two (2) sample standards and evaluate the results.

**BACKGROUND**

Other societies are experimenting with online standards development. ASHRAE has a need to improve on the present manual method of developing standards by use of online techniques. The present process is very inefficient and expensive, as illustrated by the problems associated with development of Standard 90.1. This work statement authorizes a survey of other societies' and organizations' automated standards development processes and intends to bring the best practices into ASHRAE as a coherent and formalized standards development process.

**BENEFITS**

By providing a formal computer-based process in the development of standards, ASHRAE will reduce the time and cost resources necessary to manage and develop those standards.

**ESTIMATED COST**

\$75,000

**ESTIMATED DURATION**

8 months

**DELIVERABLES**

Identification of ASHRAE software and hardware required. Implementation of the developed prototype on ASHRAE's hardware and software on two (2) sample standards. Evaluation of the process and solution of the prototype on the sample standards.

**CONTRIBUTORS**

Henry Amistadi  
Fred Buhl  
David Bornside  
David Branson  
Art Hallstrom

## **Minutes**

### **TC 1.5 Emerging Applications Subcommittee**

Sunday, June 24, 1999

ASHRAE 1999 Winter Meeting; Chicago, IL

The Emerging Applications Subcommittee meeting was called to order at 3:10 with 18 persons in attendance.

Recent proposed program activities were reviewed. Decisions were made to pass the following proposed activities forward to the TC 1.5 Program Subcommittee:

#### For Seattle

- Seminar: The Demise of 2D CAD - Barrett
- Seminar: How Could Electronic Media Assist the Development and Review of ASHRAE Standards – Hydeman
- Seminar: Data Visualization for Building Operations – Kammers
- Seminar: How to conduct a virtual meeting over the web – Barrett
- Seminar: Application for Internet Electronic Media for Chapters and Regions - Hyman (proposed from members of the Internet subcommittee)

#### For Dallas

- Symposium: HVAC Design Optimization Tools: Fact or Fantasy?
- Seminar: How Could Electronic Media Assist the Development and Review of ASHRAE Standards – Hydeman

Forum: What Type of Software do ASHRAE Members Want from ASHRAE? – Kammers - Was moved to the PASQ subcommittee

The status of current research projects and proposals was reviewed.

- Demonstration of the Use of Multimedia and Advanced Electronic Information Enhancements for a Chapter of the Handbook CD-ROM (Watts). Technology Council has approved funding.
- Identification and Preservation of Building Design and Commissioning Information (Branson, Potter). The TC 1.5-approved work statement has been rejected twice in spite of strong support from this TC and TC 9.9. TC 9.9 showed continued support for this research. Branson will continue to carry this forward and resubmit.
  - Development And Implementation Of An Electronic Method For Interactive Commenting Of Research, Technical and Symposium Papers and Peer Approval of Research Project Documents (Amistadi, Buhl, Bornside, Branson, Hallstrom) Ben Sun has agreed to write the 2 page RTAR provided ASHRAE research approves this new method of reasearch submission. Linda Lowrie offered to provide input.

The following information was conveyed as part of the liaison reports:

- CIB-W98 Working Group on Intelligent and Responsive Buildings (Brian Kammers) Brian has been unable to participate in any CIB-W98 activities.
- Florida Design Initiative (Walter Grondzik) Liaison report to be presented at full TC 1.5 meeting.
- International Alliance for Interoperability (Jim Forester) not discussed in Jim's absence.

A motion was passed that the TC 1.5 chair should write a letter to ASHRAE proposing to investigate outdated software programs for the possibility of updating them for public sale, or the potential of utilizing the supporting data information that may exist in these older programs in newer applications.

The meeting was adjourned at 4:40 PM.

## Policy and Software Algorithms

### Meeting Minutes Chicago

January 25, 1999

Subcommittee Chair: Brian Kammers

I. Meeting was called to order at 4:20 p.m. There were 5 people in attendance.

#### II. Research

A. It was recommended that the TC 1.5 Chair request from Bill Seaton, RAC and Program Committee a training session to communicate the results of 966-RP. This training should be at the next meeting. The intended audience is the Research Subcommittee chairs of the technical committees. This training would be in lieu of a symposium or article from the contractor.

B. It was recommended that the TC 1.5 Chair approach RAC about implementation of the results of 966-RP. The committee recommended that this be done in a step process. First 966-RP should be piloted with a couple of research projects that have software deliverables. After an evaluation, adjustments should be made as needed to 966-RP. The process should then be incorporated into the research manual. The last step would be to evaluate the need for automation of the methods in 966-RP to assist the membership. This process would have to have resources and management oversight to be successful.

C. A project was suggested that would inventory the software assets of ASHRAE. Over the years a lot of research included software as part of the deliverables. This project would inventory, categorize, evaluate media forms and access market value of software assets in the possession of ASHRAE. It was determined that this is not a research project. It was recommended that this subcommittee strongly encourage the ASHRAE Staff to conduct this inventory and evaluation process. The TC Chair may discuss or send a letter to the ASHRAE staff regarding this issue.

D. No other new research topics were presented.

#### III. Programs

A. There was a discussion about the meeting Brian Kammers had with the Program Executive Committee (Program ExCom). He was invited to discuss the topic of a forum, which had been rejected twice. The topic was "*Does ASHRAE Commercialization Policy Need to be reviewed Because of the Internet*". The result of the meeting was to drop the forum suggestion and perform a survey. This survey would assess the opinion of all Technical Committee members regarding the Commercialization Policy and its enforcement. David Branson and Henry Amistadi indicated that they would help Kammers develop this survey.

B. No other new program topics were presented.

#### IV. Other

A. There seems to be a consensus within the committee and within ASHRAE that the Policy and Software Quality subcommittee should continue to exist. The unfortunate part is that no one could clearly articulate the work that this committee should carry out. The subcommittee is subscribing to the mission that we should be the group to ask the difficult questions and push the Society on issues related to technology and software.

# INTERNET SUBCOMMITTEE MINUTES

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JANUARY 24, 1999

The meeting opened with the acceptance of the Toronto Minutes.

Research was discussed in detail. No additional or new Internet Research Programs were put forward.

TC 1.5 web site has been initiated and is being set up on a sample site. ASHRAE have indicated willingness to allocate space for Technical Committee websites.

Most of the meeting time was invested in program review and program development. The highest priority was placed on a seminar/ forum package followed by two other programs. The Internet Subcommittee program suggestions were summarized as follows in preparation for the formal TC meeting:

Seminar: Where is ASHRAE going with the WEB?

Forum (linked to the above seminar) : What is the member response?

Seminar: What is the future relationship between DDC and the WEB?

Seminar: How to conduct a virtual meeting?

Seminar: WEB based training--What are the prospects for the future?

The meeting concluded once consensus was reached on this program.

**Subject:** Meeting with the ASHRAE Program Executive Committee  
**Date:** January 25, 1999  
**From:** Brian Kammers  
**To:** Mick Schwedler TC 1.5 Chairperson  
**CC:** David Branson TC1.5 Vice Chair  
Duane Barrett

I was invited to meet with the Program Executive Committee after having a forum rejected twice. The forum "*Does ASHRAE Commercialization Policy Need to be reviewed Because of the Internet*" had a high priority for TC1.5 Computer Applications. Although there was some feedback about the particular forum the main issue was the commercialization policy.

While everyone agreed that the commercialization policy has served ASHRAE very well not everyone was sympathetic to the problem. I described seminar ideas like virtual AHSRAE meetings, integrated computer design solutions, implementations of the IAI definitions, and data visualization techniques. Some understood the difficulty of presenting leading technologies and new ways of doing business without identification of technology providers.

A couple members did not see any problem with the policy. The suggestion was to use edited screen captures. To these individuals the commercialization policy was sacrosanct. Providing innovative ideas, having interesting and engaging sessions and exposing the society to new technology was a lower priority.

We quickly established that the Program Committee was not the group to set policy, particularly one as important as Commercialization. The Program Committee acts as the enforcer for the commercialization policy for all program sessions. The implementation of the commercialization policy is absolute. They review presentations for minute violations.

An example was given regarding a McDonalds Restaurant sign. It was in the extreme background of a picture. They made the presenter put tape over the picture. They objected to an image of a waveform on an oscilloscope because the brand name of the oscilloscope could be seen. They are justified in this behavior because they receive complains from members about these small "infractions" when they are missed.

The title of the forum was offensive to at least one member of the group. After some tongue-in-cheek exchanges about democracy, we did agree that feedback from the membership is important to the success of the society. They made the point that feedback from a forum might not provide an accurate representation of the views of the membership. A forum only collects the opinions of those members that are motivated enough by the topic to make it to the session. I felt the logic a little twisted because forums are designed to collect information from the membership.

I continued engaging in a discussion after the committee broke up into a Functional and a Policy group. The Policy group resolves issues regarding the interpretation of the commercialization policy. For example the reviewers of a symposium papers may have different opinions about commercialization within a given paper. This committee adjudicates these situations.

I felt a little ambushed by the Policy Subcommittee. I was asked for a written proposal to change the commercialization policy. I explained that it was my understanding that the proposed forum and my invitation to their meeting were meant to facilitate a discussion.

When it was over they did offer to allow a survey to be performed to capture the same information as the forum. This survey would go to the TC chairs and be shared with TC voting members. The survey would capture the feelings and opinions of a greater cross section of the membership. The Program ExCom (Executive Committee) would review the

survey before they would distribute it. While this would help collect opinions they pointed out that changing the policy was far from guaranteed regardless of the results.

I need two things. I need approval from the TC 1.5 to proceed in the development of a survey. I also need help from the members of the committee in developing the survey.

## Liaison Report

### SPC 134P - Graphic Symbols 1999 Winter Meeting - Chicago

After numerous edits over the past few months, the committee is very close to releasing the 2<sup>nd</sup> draft for public review. Air side and piping side symbols are 98% complete with only minor edits remaining. The control symbols are 90% complete with a few changes remaining.

The committee intends to incorporate the edits and vote by letter ballot on the release of the document.

## Attachment H - Page 1 of 2

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## Attachment H - Page 2 of 2

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