Programs for the Dallas Meeting (February, 2000):

Seminar 9
Sunday, February 6, 10:15 AM - 12:15 PM

Practical Experience Using DDC Systems for HVAC Commissioning and Continuing Evaluation
Sponsor: *TC 1.4 Control Theory and Application; TC 1.7 Operation and Maintenance Management, TC 4.11 Smart Building Systems, TC 9.9 Building Commissioning*
Chair: *Barry B Bridges, P.E., Member, University of Minnesota, St. Paul, MN*
APC Liaison: *Sally McInerny, P.E., The University of Alabama*

The practical experience of HVAC professional provides a real world understanding of the difficulties, challenges, and benefits which become possible using DDC for more than just control. In ten years DDC fault detection and diagnostics may range from whole campus smart building systems to chip based smart actuators. The acceptance and application of what is possible will depend on the pragmatic value now being understood and developed in detail.

1. Statistically Sound FDD Methodologies
Robert Dodier, Student Member, and Jan Kreider, Ph.D., P.E., Member, University of Colorado, Boulder, CO

2. Smart Building Operation
Paul Ehrlich, P.E., Member, The Trane Co., St. Paul, MN

3. Experience with Portable Data Acquisition and Analysis Tools for Rooftop Package Equipment Service and Maintenance
Todd M. Rossi, Ph.D., Member, Field Diagnostic Services, Inc., Langhorne, PA

4. On-Line Monitoring and Fault Detection of Control System Performance
John E. Seem, Ph.D., Member, Johnson Controls, Inc., Milwaukee, WI

5. EMS Diagnostics for Continuous Commissioning
Jeffrey Rutt, Member, NSA/DOD, Ft. Meade, MD

Forum 5
Sunday, February 6, 2000, 10:15-11:05 AM

Commissioning Documentation: How Should O&M Manuals Be Produced?
Sponsor: *TC 9.9 Building Commissioning; TC 1.7 Operation and Maintenance Management*
APC Liaison: *Charles G. Arnold, P.E., HDR Architecture, Inc.*
Moderator: *Gerald J. Kettler, P.E., Member, AIR Engineering and Testing, Inc., Dallas, TX*

One of the important products of commissioning is the documentation on the facility from design through operations. ASHRAE Guideline 1 in Chapter 12 lists some of the information that should be included but does not detail formats, arrangements, or storage methods. As ASHRAE progresses to the next levels of commissioning, a discussion is needed with providers and users to facilitate and standardize the assembly, presentation, storage, and use of the operations and maintenance data.

Seminar 18
Monday, February 7, 8-10 AM

Designing and Commissioning the Modern Hospital: Part 1
Sponsor: *TC 9.8 Large Building Air-Conditioning Applications; TC 9.9 Building Commissioning*
Chair: *Joseph F. Scolaro, P.E., Life Member, Scolaro Engineering Consultants, Dallas, TX*
APC Liaison: *Sally McInerny, P.E., The University of Alabama*

With new rules and regulations being adopted and imposed on the hospitals by the federal government, insurance companies and state and local governments, it has become a difficult task to operate, maintain, and design hospitals. The financial strain placed on the hospital creates an additional concern for what was contracted for from design to occupancy. This seminar allows designers and owners to address achieving a successful project on time and within budget. Part 2 is scheduled Sunday at 10:15 a.m.

1. User Groups Design Request
David Prusha, HKS, Inc., Dallas, TX

2. Bringing a Modern Hospital On-Line: The Challenges and Lessons Learned
Charles D. Kieffer, P.E., Member, University of Texas Facilities Planning, Austin, TX

3. Surgical Suite Pressurization and Air Flow
Milton S. Goldman, M.D., EIT, Member, Abrahamson Engineering, Laramie, WY

4. Patient Room HVAC Systems
Anand Seth, Member, Massachusetts General Hospital, Boston, MA

5. Investment in Technology
Frederick Gibson, Taylor and Partners, Boston, MA

Seminar 23
Monday, February 7, 10:15 AM - 12:15 PM

Designing and Commissioning the Modern Hospital: Part 2
Sponsor: *TC 9.8 Large Building Air-Conditioning Applications; TC 9.9 Building Commissioning*
Chair: *Joseph F. Scolaro, P.E., Life Member, Scolaro Engineering Consultants, Dallas,*

TX
APC Liaison: *Sally McInerny, P.E., The University of Alabama*

With new rules and regulations being adopted and imposed on the hospitals by the federal government, insurance companies and state and local governments, it has become a difficult task to operate, maintain, and design hospitals. The financial strain placed on the hospital creates an additional concern for what was contracted for from design to occupancy. This seminar provide for designers and owners to address achieving a successful project on time and within budget. Part 1 is scheduled Monday at 8:00 a.m.

1. Operation and Maintenance of Hospitals
Kimball Ferguson, Member, Duke University Medical Center, Durham, NC

2. Hospital Room Pressurization: A Parameter for Airborne Hazard Control
Andrew J. Streifel, University of Minnesota, Minneapolis, MN

3. Trends in Hospital Ventilation
Richard D. Hermans, P.E., Member, Ellerbe Becket, Minneapolis, MN

4. Indoor Air Quality Considerations in Hospitals
Elia Sterling, Member, Theodor D. Sterling and Associates, Ltd., Vancouver, BC, Canada

5. Commissioning the Modern Hospital
Carl Lawson, Member, Duke University Medical Center, Durham, NC

Seminar 29
Tuesday, February 8, 8-10 AM

Existing Building Commissioning: Energy Savings Opportunities
Sponsor: *TC 9.6 Systems Energy Utilization; TC 9.9 Building Commissioning*
Chair: *Adam W. Hinge, P.E., Member, Sustainable Energy Partnerships, Tarrytown, NY*
APC Liaison: *Branislav B. Todorovic, Ph.D., University Belgrade*

Different approaches optimize the efficient operation of buildings, including better operation and maintenance practices and commissioning of existing buildings. Recent studies have shown that tune-ups of typical buildings can result in savings of 5% to 15%, with paybacks generally under two years. Most savings come from operational and behavioral changes, as opposed to purchase and installation of new equipment or technology. This seminar presents information on the existing building commissioning process, and the savings opportunities that can result.

1. Applying Commissioning to Existing Buildings
J. Michael MacDonald, Oak Ridge National Laboratory, Oak Ridge, TN

2. Case Study of Continuous Commissioning
Mingsheng Liu, Ph.D., P.E., Member, University of Nebraska, Omaha, NE

3. How to Have a Successful Retrocommissioning Project
Karl Stum, P.E., Member, Portland Energy Conservation, Inc., Portland, OR

4. Selecting Optimization Strategies for Different Markets
Steven Nadel, Member, American Council for an Energy Efficient Economy, Washington, DC

5. Motivating Facility Staff Toward Improved Operational Efficiency
Peter Herzog, Member, Herzog/Wheeler & Associates, St. Paul, MN

Seminar 45
Wednesday, February 9, 8-10 AM

What Constitutes Functional Performance Testing?
Sponsor: *TC 9.9 Building Commissioning*
Chair: *Gerald J. Kettler, P.E., Member, AIR Engineering and Testing, Inc., Dallas, TX*
APC Liaison: *Janet M. Lynch, Johnson Controls*

Commissioning includes many important functions from project inception, through design, construction, testing and operation. Functional performance testing is one critical part but is often misunderstood. Functional performance testing is more than testing and balancing. It involves verification of equipment operation to meet the design intent under all normal modes of operation. This seminar discusses the methods to specify proper functional performance testing, testing methodologies and alternatives, field application of testing along with examples, deficiency resolution, and report forms, formats and presentation.

1. Specifying Functional Performance Tests
Richard B. Casault, P.E., Member, Casault Engineering, Seattle, WA

2. Functional Performance Testing Methods
Karl Stum, Member, PECI, Vancouver, WA

3. Performing Functional Performance Testing
Cedric Truman, Member, Truman Engineering Services, Victoria, BC, Canada

4. Requirements for Preparing Functional Performance Testing Reports
Andrew P. Nolfo, P.E., Member, Senco Services Corp., St. Louis, MO