

COMMENTARY

BACnet® Now

BACnet was created 14 years ago so engineers could specify equipment from different vendors for the same building. It was simple and flexible, and made economic sense. The ASHRAE standard makes even more economic sense now that the protocol has expanded throughout the building, and the number of BACnet products continues to grow.

This edition includes the eighth annual BACnet Today magazine. Like its predecessors, it is filled with case studies and state-of-the-art examples. One of the best is “BACnet and the Smart Grid,” which is featured on the cover.

When available, the Smart Grid will use real-time, two-way digital information so utilities can more efficiently provide power and consumers can better manage energy use and costs.

This article covers some of the work at the National Institute of Standards and Technology (NIST), which is developing industry standards for the Smart Grid. It also explains how BACnet is providing the functionality for energy management and load control, and how BACnet Web Services (BACnet/WS) is providing secure communications infrastructure for utilities and building clients.



Fred Turner

OTHER ARTICLES describe:

- BACnet’s role in the ASHRAE headquarters, which is being turned into a “living lab” for building performance. In our building, BACnet integrates information from 23 types of equipment from seven manufacturers into a single user interface.
- How BACnet has evolved so it can be used in smaller and smaller devices. This is expanding its use and value, and has dramatically increased the number of vendors. As of September, more than 380 vendors make BACnet products.
- What’s under BACnet’s hood. “Visualizing BACnet” explains how BACnet performs eight typical day-to-day building operations.

What They Wanted to Know

What are the ice-making requirements to chill one pound of turkey? Can I use a brass fitting in an ammonia refrigeration system? The salesmen for natural gas and electricity both claim their fuel is best for the job. Who is right?

These are some of the questions in They Wanted to Know, an interesting department that ran in the November 1959 edition of ASHRAE Journal. Each question included a response. For example, the response to the last question was:

“... Your problem is essentially one of economics since it may be assumed that adequate performance is available in either type. You should compare first the cost of installation and second the operating cost. To a degree, both of these factors are related to local conditions. ...”

THIS MONTH’S 50th anniversary article is “Energy Savings From Pump Impeller Trimming” from the April 1998 edition. It covers a study that shows that pumps are often oversized, and substantial saving can be realized by trimming the impeller.

The authors are Gurvinder Singh and John Mitchell, Ph.D., Fellow ASHRAE. Singh is now a senior resource planning analyst with Puget Sound Energy. Mitchell is Kaiser Chair Professor of Mechanical Engineering, Emeritus, at the University of Wisconsin in Madison.

- The use of BACnet in the trigeneration (power, heating and cooling) system at Canberra International Airport in Australia. The system involves almost 5,000 BACnet objects connected through a BACnet-based system.

DAVID ROBIN, chair of the BACnet standard committee, attributes the standard’s success to early visionaries who created an information protocol that balances simplicity and flexibility, and a committee structure that can quickly respond to technical evolution. His comments can be found on Page B4.

“With this solid foundation... BACnet will continue to grow and adapt to the needs of our changing building environment well into the future,” he says.

ASHRAE® Journal | 1791 Tullie Circle NE | Atlanta, GA 30329-2305 | Phone: 404-636-8400 | Fax: 404-321-5478 | ASHRAE Online: www.ashrae.org

Publisher

W. Stephen Comstock

Editor

Fred Turner | fturner@ashrae.org

Managing Editor

Sarah Foster | sfoster@ashrae.org

Associate Editors

Rebecca Matyasovski | rmatyasovski@ashrae.org
Charlotte Tubbs | ctubbs@ashrae.org
Christopher Weems | cweems@ashrae.org

Copy Editor

Jeri Eader | jeader@ashrae.org

Publishing Services Manager

David Soltis

Production

Jayne Jackson
Tracy Becker

Advertising Sales Manager

Greg Martin | gmartin@ashrae.org

Advertising Production Coordinator

Vanessa Johnson | vjohnson@ashrae.org

Circulation Specialist

David Soltis | dsoltis@ashrae.org

ASHRAE OFFICERS President

Gordon V.R. Holness, P.E.

President-Elect

Lynn G. Bellenger, P.E.

Treasurer

Ronald E. Jarnagin

Vice Presidents

William P. Bahnfleth, Ph.D., P.E.
James R. Fields
Sheila J. Hayter, P.E.
Thomas E. Watson, P.E.

Secretary & Executive Vice President

Jeff H. Littleton

POLICY GROUP

2009-10 Chair
Publications Committee
Stanley A. Mumma, Ph.D., P.E.

Washington Office

washdc@ashrae.org

Member of the
Audit Bureau of Circulation