Commentary

The Broadening Scope of BACnet

When the first group of “BACneteers” gathered in a room in Nashville in 1987 to contemplate the monumental task of getting vendor and customer agreement for a standard interoperable protocol for building data, they knew that a focused scope could make the difference between getting something published and just talking and talking for years. Should they broaden the scope to include non-EMCS data, like Fire and Security? Other such efforts have allowed well-intentioned “scope creep” that ultimately turned into a quagmire.

But somehow, through perseverence and vision, the early BACneteers found, and published, a balance between flexibility and simplicity that has stood the test of time. As the visionaries anticipated, the EMCS-centric starting point of Analog Inputs, Binary Outputs, and Schedule Objects was only the start of a growing list of building-related systems, which are now part of BACnet, including integration into the larger enterprise with Web services and IP networking.

Now, with a firm foundation, scope can increase without risk. And, it is. The committee is working at a tremendous pace, meeting four times a year, for a total of 23 days of face-to-face meetings. The work is divided into 12 Working Groups, covering diverse topics such as life safety and security, lighting, wireless communications, network security, XML, and Web services.

And now, BACnet is extending beyond the building. At the 2009 ASHRAE Annual Conference, the modern BACneteers considered how their suite of technologies could be used to aid important new effort for a national Smart Grid, spurred by the Energy Independence and Security Act (EISA) of 2007, and led by the National Institute of Standards and Technology (NIST). For many years, the committee has had a Utility Integration Working Group, working with national labs and utilities on grid-related technologies like real-time pricing and automated demand response. The leader of that Working Group is also the leader of NIST’s Building to Grid (B2G) Domain Expert Working Group, and we expect to continue to work closely with NIST, Lawrence Berkeley National Labs, and other public and private industry organizations as this group expands BACnet’s scope to meet the demands of the modern building.

With the solid foundation of extensibility laid in those early days, BACnet will continue to grow and adapt to the needs of our changing building environment well into the future.

David Robin, Chair,
Standing Standards Project Committee 135

BACnet and the Smart Grid
By David G. Holmberg, Ph.D., Steven T. Bushby

An Untangled Web
How BACnet Is Connecting at ASHRAE’s Headquarters
By Steve Tom, Ph.D., P.E.

Visualizing BACnet
By Roland Laird

BACnet & Trigeneration
By Tim Davis

BACnet Gets Smaller
By David Fisher

This article was published in ASHRAE Journal, November 2009. Copyright 2009 American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. Posted at www.ashrae.org. This article may not be copied and/or distributed electronically or in paper form without permission of ASHRAE. For more information about ASHRAE Journal, visit www.ashrae.org.