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BACnet® In Europe

By **Bill Swan**, Member ASHRAE

ASHRAE Journal readers are regularly apprised of the various BACnet-related activities and events in North America, but many may not be aware of a similarly high level of BACnet activity in Europe. As communications and partnerships are developed across the Atlantic, both markets benefit and the beneficial effects are felt worldwide. A prime driver of this activity in Europe is the BACnet Interest Group–Europe (BIG-EU).

BIG-EU, which celebrated its tenth birthday last May, is the oldest of all the BACnet-related associations. As with the BACnet Manufacturers Association founded in 2000 in North America, BIG-EU was created as an association primarily of BACnet manufacturers.

BIG-EU is also the largest of the BACnet-related organizations. Starting off with only 18 member companies, it has grown to more than 80, and the rate of growth has been increasing. It has also taken on an international flavor beyond its European charter due to participation by companies from outside Europe, including American and Canadian companies.

The charter set for BIG-EU is two-fold: to promote BACnet in the European building automation controls market and to advance the BACnet standard, including meeting needs and requirements specific to European markets.



Photo 1: BIG-EU members in Berlin, June 2008.

One measure of the success of BACnet in Europe thus far is the publication of a couple of BACnet books in German (only). *BACnet Gebäude-Automation 1.4 (BACnet version 1.4 Building Automation)*¹ covers BACnet’s capabilities and application areas, benefits of interoperability and technical details. *BACnet und BACnet/IP—Wie funktioniert das? (BACnet and BACnet/IP—How does it work?)*² is a book for planners, system integrators and operators, covering theory and practice.

Marketing

The marketing arm of BIG-EU, Working Group–Marketing (WG-M) is involved in promoting BACnet in Europe. Over the years their presence at the biennial Light+Building show in Frankfurt (several times larger than the AHR Expo and twice as long, albeit with a somewhat different market) has grown from a small booth off in the corner to one of the show’s largest at nearly 2,000 ft² (186 m²), with 30 companies exhibiting in a demonstration of interoperability per this year’s theme, “World of Integration.”

In addition to the Light+Building exhibition, other trade shows are being evaluated by BIG-EU for opportunities to exhibit, to reach out to markets outside the HVAC industry. The number and reach of such trade shows will only increase as BACnet’s support extends through other areas of building automation including lighting, physical access control, and so on.

In 2004 BIG-EU published the first issue of the biannual *BACnet Europe Journal*, bilingual in German and English. With the March 2008 edition, it has grown to 64 full-color pages with

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Photos 2 and 3 (left): BACnet books are available in German. Photo 4 (right): BIG-EU booth at Light+Building Expo.



Photos 5 and 6 (left): BACnet Europe Journal and BACnet France Journal are bilingual publications. BACnet is truly international. BACnet China Journal was published in September. All of the journals are available at www.big-eu.org/eng/service/journal.php. Photo 7 (right): BIG-EU Interoperability Workshop.

articles featuring BACnet installations in Europe, technical looks at various aspects of BACnet, reports on the activities of BACnet-related committees, new BACnet products and more. The *BACnet Europe Journal* has a wide distribution, with copies shipped to more than 50 countries.

BIG-EU has also been helping to start national BACnet Interest Groups across Europe, though several have formed independently. BIG-EU's business office recently published the first *BACnet France Journal*, bilingual in French and English.

BIG-EU's business office is considering reaching out to other areas of the world, including discussions of formation of a BIG-China, and other possible regional editions of the Journal. The first issue of *BACnet China Journal* was published in September.

BIG-EU has teamed with the VDI Wissenforum ("knowledge forum," by the Association of German Engineers) to conduct regular two-day BACnet training sessions. These vendor-neutral sessions, intended for those in planning, designing, servicing and managing BACnet systems, present an overview of BACnet, its communications, planning and documenting BACnet systems, and much more.

Finally, BIG-EU's WG-M presents several BACnet forums each year in various European cities. Typical of such forums, a recent one in Amsterdam was held for the construction, installation and real estate industries. During the forum, which was focused on installations in the Netherlands, owners, planners and operators spoke on their experiences with BACnet systems, the benefits they've achieved, plus they shared tips on planning and bidding BACnet systems. Forums are being planned for Italy, Austria and the U.K.

The level of activity by the marketing working group has become too much for a single organization to maintain, so it is now forming subgroups to organize and supervise all these activities.

Technical

BIG-EU's technical working group, WG-Technique (WG-T), is no less active than its marketing counterpart. It was formed as a "shadow group" of the BACnet committee for discussing technical issues of BACnet particular to, or encountered by, the European market and BIG-EU member companies as well as general technical input. From a relatively small membership just a few years ago, WG-T's meetings have recently grown in

size to match those of the BACnet committee itself.

Technical discussions within WG-T sometimes result in “Clarification Requests,” typically requests for clarification or suggestions for improvement, being submitted to the BACnet committee for discussion and response. More recently, BACnet change proposals have begun to be submitted directly to the BACnet committee by WG-T members, where they are handled the same as all other change proposals.

Testing BACnet

A primary focus of BIG-EU, one heard in WG-T, WG-M and executive board meetings these days is the issue of testing BACnet devices.

As in North America, testing for interoperability began with Interoperability Workshops (in North America also called “plugfests”), which are events where multiple manufacturers bring their BACnet devices and connect them together to verify interoperability. The first North American plugfests were somewhat ad hoc, but the Europeans were able to leverage the North American developments to start out with well-orchestrated workshops. The North American plugfests are annual events whereas the European have been every other year, but the organizers of both are trying to coordinate timing to maximize the number of mutual participants in both events. The growth of the number of participants is already beginning to create problems in finding sufficient space for these events.

Another area of discussion for several years has been laboratory verification of devices’ conformance to the BACnet standard. Although the BACnet Testing Lab (BTL) has been doing such testing since 2001, market pressures to test as soon as possible resulted in the BTL’s tests being done manually until automated tools could be developed.

This was a problem in Europe, and particularly in Germany where government requirements require that finely detailed records of all tests be kept. An attempt to use the BTL’s tools proved to be too expensive, so BIG-EU contracted for the development of a fully automated

tool, one that could use the tests used by the BTL. The first application of this testing tool concluded successfully in April with the BTL Mark issued to devices that passed. Per agreements between BIG-EU and BACnet International, the two groups have been working cooperatively to establish a common, comprehensive, and automated testing system for testing labs all around the world.

Specification

Another arena in which Europe is becoming a major contributor to BACnet globally is in the methods by which one specifies BACnet devices and systems. The original system, found in the original BACnet standard in 1995, developed by the BACnet committee (a highly technical team capable of understanding the minutest details of BACnet messages), did not succeed and was replaced in 2001.

However, a German governmental specification organization, AMEV, has proposed that BACnet devices bearing the BTL Mark be preferred for German government buildings. As such it has taken a look with interest at the BACnet specification system and may consider workshops with experts in specification and BACnet participating.

Summary

In many ways the activities in Europe are parallel to those in North America, but in other ways they are complementary, drawing on particular regional and cultural requirements and strengths. The product of the developing partnerships will advance BACnet technically, promote BACnet globally, and benefit BACnet even in regions where it has long been an established standard.

Acknowledgments

Photos 1, 4, 5 and 6 courtesy of Mar Direct, Marketing Direct GbR, Dortmund, Germany.

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