

## The world of building automation speaks BACnet.

Welcome to the first training of the BACnet Academy Europe in Zurich.

BACnet is the world wide communication standard EN ISO 16484-5, a non-proprietary, licence free and system-spanning standardisation and the market has witnessed its great potential. Open systems can be realised with BACnet. Open building systems offer a variety of technical and economic advantages. They allow the easy integration of different systems – such as security, access control, wireless applications and energy management – to efficient overall systems. Due to their interoperability, these systems' easy expandability applies to all manufacturers as well as all integrated solutions. The result is powerful, non-proprietary, overall systems, which are elementary for modern building automation.

This BACnet training introduces the global communication standard for building automation and it gives an overview of the dynamic development of open standards. It will show where BACnet is located within the ISO/OSI reference model, and which data transfer methods are provided. Moreover, how BACnet objects are referenced in the standard object types will be both introduced as well as explained.

## Training – 9.00 a.m. – 5.30 p.m. Introduction to Building Automation via BACnet

### Basics of interoperable building automation (BA)

- Introduction to building automation and terminology e.g. “common” data points, data types and functional levels

### BACnet, the global BA network standard (why BACnet?)

- The BACnet committee with ISO/CEN servicing contract: ASHRAE SSPC 135
- Introduction of the world standard EN ISO 16484-5
- BACnet world-wide: interest groups and their web pages: BACnet Interest Group Europe, BI, BTL
- Trade fairs with BACnet communal booths, reference projects

### BACnet DATA Link Layer (Whereby is communicated?)

- BACnet in the ISO/OSI reference model
- The planned standardised data communication methods (transport protocol as a reference to standards)
- Representation of the network topologies, router and half router
- Explanation of a BACnet network example

### “The BACnet language” and its components (How does BACnet work?)

- Introduction to standardised object types
- Presentation on communication services with access functions and groups
- Special functions like value-discrete transmission (COV – Change of VALUE) based on threshold value
- BACnet incident and alarm management, object-internal and rule-based messages (Intrinsic and Algorithmic Change Reporting), message classification
- BACnet procedures for command prioritisation
- Example of an operating calendar and a schedule
- Data recording with the help of the BACnet trendlog object

### The (automatic) data flow control in the network

- Referencing BACnet objects
- The application of object names
- Project rationalisation and “offline” configuration
- Using the EDE-file
- Project overview using B-PAT file

### Integration of BACnet in IT environments

- BACnet communication in an Ethernet/IP environment
- Use of BACnet tunneling routers
- Special situations with BBMDs and foreign devices

### Testing and demonstrating the conformity of BACnet products

- Manufacturer's declaration “PICS” and “Epics”
- Working with the interoperability of “BIBB” building blocks
- Presentation on the device profiles and device classes

### BACnet, the overall BA network standard

- Possibilities for manufacturer-specific extensions

### Target group

The training is aimed at developers and product managers, project engineers and planners, consultants and integrators as well as all who run and operate building automation.

### Objective

Each participant will learn the basic technical knowledge of BACnet for interoperable building automation with the world wide standard EN ISO 16484-5. This way he will learn how to evaluate the BA network techniques and how simple the specifications of interoperability areas are.

### Head of Training

Frank Schubert,  
Head of Sales and Marketing, MBS GmbH,  
Krefeld, Germany  
Member of the BIG-EU Advisory Board

### Documentation

Each participant will receive a detailed documentation of training with all the lectures and working tools on a USB stick.

### Certificate of attendance

Participants will receive a certificate of attendance.

### Cost savings and energy conservation with non-proprietary data communication

*“Hard to reach goals such as cost savings and energy conservation in addition to advanced flexibility of technical building equipment can only be attained with a non-proprietary, high-performance and future-proof data communication norm. The sensible integration of diverse systems and trades enable this achievement.”*

H. Michael Newman

Founder of the BACnet standardisation committee SSPC 135

## Registration

Please register at your own convenience by email, fax or letter.

E-mail: info@big-eu.org  
Tel. +49 231 567772-69  
Fax +49 231 427867-32

BACnet Interest Group Europe (BIG-EU)  
Droste-Hülshoff-Straße 1  
44141 Dortmund  
Germany

### Participant:

Company: \_\_\_\_\_

Name: \_\_\_\_\_

Function/Position: \_\_\_\_\_

Department: \_\_\_\_\_

Street/Postbox: \_\_\_\_\_

Postal code, City: \_\_\_\_\_

E-mail: \_\_\_\_\_

Telephone: \_\_\_\_\_

Date/Signature \_\_\_\_\_

- Registration as BIG-EU member
- Please send me information about the BIG-EU membership

### Training venue

World Trade Center Zürich AG  
Leutschenbachstrasse 95, 8050 Zürich, Switzerland  
Tel. +44 309 11 11

### Directions from Zurich Airport or Zurich main station

- Glattalbahn line 10 to Glattpark, 5 min. walk along Schärenmoosstrasse
- Tram 11 or Bus 781 (from station Oerlikon) to Fernsehstudio

### Participant fee

588.00 Euro  
528.00 Euro for Members of BIG-EU  
VAT will be added.  
A USB stick with the documentation of the entire training, as well as lunch and drinks during breaks are included.

### Payment and cancellation conditions

Please pay only upon receipt of invoice. You will receive a bill with the confirmation of registration. The participant fee is due immediately upon receipt of invoice. For written cancellation applied for, on or before 4 May, 2010 half the fee will be refunded. For cancellations after that date, the full conference fee will be due. Participants are entitled to training documentation. Of course, a substitute participant may be named. We reserve the right to cancel the event if participating interest is lower than expected.

### Expert supervision

BACnet Interest Group Europe (BIG-EU)  
Droste-Hülshoff-Straße 1  
44141 Dortmund, Germany

### Organisation and administration

MarDirect Marketing Direct GbR  
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*Learning, understanding, planning  
and specifying building automation  
management with BACnet*

**Zurich  
18 May, 2010**

**Training  
Introduction to building  
automation via BACnet**

**Deadline for  
registration:  
19 April**

**ISO 16484-5**

- Basics of interoperability
- Why BACnet?
- Object types and services
- Project planning
- Conformance testing, BTL Logo and European Certification

*The training will be conducted in English*

