The New Dimension of Energy-Efficient Homes and Buildings
The eu.bac Association

Targets
- Promotion of Home Controls and Building Automation technologies
- Quality assurance
  - Testing – Certification – Labelling
- Positioning of Energy Performance Contracting (EPC)
- Proactive support
  - CEN/ISO standardisation
  - Achievement of EU directives
    - Energy efficiency of buildings
    - Energy services
    - Reduction of greenhouse gases emitted by buildings

Foundation
- Brussels 2003

Representation
- 85% of the European BACS manufacturers
- BACS market: 4,4 billion € (2012)
eu.bac Members
Proactive fulfilment of European directives

Legislation

Energy Performance of Buildings Directive (EPBD)

Standardisation

Calculation methods for energy savings

Certification/ Labelling

Fulfilment of EU directives and national regulations
Implementation of certification and test method
Provision of certification system for national regulations
Functions

- Bundling of technical know-how
- Providing information to
  - Member companies
  - Business
  - Policy Makers
  - Research
- European platform of Home Controls and BAC system and service providers
- Representation of the European Home Controls and BACS industries
- Statistical surveys, market research and case studies, as well as other services for industry and policy makers
Presidency – Board

President
Dan Napar
Siemens

Board Members

Volker Dragon, Siemens
Heinz-Eckard Beele, IMI Hydronics
Lukas Eigenmann, Belimo
Klaus-Dieter Fuhrmann, IMI Hydronic
Nils Minert, Johnson Controls
Peter Schoenenberger, Fr. Sauter
Hans Symanczik, Kieback & Peter
Roland Schweikhardt, Honeywell
Michel Ramser, Schneider Electric
Klaus Wächter, Siemens
Ian Wood, Honeywell
Aleksander Zalaznik, Danfoss

Board Advisors

Bertrand Deprez, Schneider Electric
Roland Ullmann, Siemens
Martin Zähr, Siemens
eu.bac Structure

General Assembly

Board

Management/Secretariat
Advocacy Panel
Technical Panel
Marketing & Communication Panel
Homes Sector Group
Homes Technical Groups
Building Automation Sector Group
Building Automation Technical Groups
euESCO Sector Group
Intelligent integration of services

- eu.bac promotes the utilisation of integrated and intelligent systems at the European level.
- The integration of services offers new opportunities for energy efficiency in renovation and new construction.
- eu.bac members create new jobs in Europe within their growing markets.
Labelling of BAC equipment

Labels inform about the consumption of thermal and electrical energy and promote the use of energy efficient technologies.

**BACS Energy Performance Classes – EN 15232**

- **High energy performance**
  - BACS and TBM
  - **Class A:** Best available technology

- **Advanced BACS and TBM**
  - BACS and TBM
  - **Class B:** Advanced technology

- **Standard**
  - BACS
  - **Class C:** Reference level

- **Non-energy-efficient**
  - BACS
  - **Class D:** Inefficient systems

BACS  Building Automation and Control System
TBM  Technical Building Management System
The eu.bac label are granted for 2 areas:

- **Home Control Products** - for products used in the Residential Areas
- **Building Automation Products** - for products used in the Building automation environment
In 2012 the European building automation and controls association eu.bac launches a new system audit. The technical recommendations and Check-list will help you perform a quick assessment of an existing Building Automation and Control System, otherwise known as BACS installation or design and will provide you with targeted improvement recommendations that will save you energy and lifecycle costs, whilst improving the comfort conditions.
Energy saving potentials

BACS can reduce thermal and electrical energy consumption* up to

- 26% in educational institutions and hospitals
- 27% in residential buildings
- 41% in hotels and restaurants
- 49% in wholesale and retail buildings
- 52% in offices and lecture halls

* High energy efficiency (Class A) compared to standard equipment (Reference Class C) EN 15232 – Impact of BACS and TBM on energy performance of buildings
Successfully introduced – Quality Management System

Goal
Certification of innovative products that enable higher energy efficiency

Solutions
- Calculation methods
- Qualification of testing laboratories and certification authorities
- Implementation of a European certification system

The eu.bac Cert logo guarantees
- Conformity with standards and regulations
- Excellent quality
- Higher energy savings guaranteed
The certification system

**eu.bacCert**

- promotes the **best available technology** for system designs and efficiency of components
- shows the consequences in terms of **comfort and energy efficiency**
- enables **calculation of the best affordable technology**

**eu.bac cert Partners:**

- Certification bodies
  - Intertek
  - CSTB
  - WSPCert
  - BSRIA
- Test laboratories
  - CSTB
  - WSPLab
Standards for eu.bac certification

Technical Committee - TC 247
Building Automation, Controls and Building Management

- **EN 15500**
  - Product standards with quality and energy performance criteria

- **EN 16484-2/3**
  - BACS functions
  - Communication protocols

- **EN 15232**
  - Energy Performance of Buildings

- **EN 14908-x**
  - Impact of Building Automation

European product certification
Energy Performance Contracting (EPC)

The EU Commission demands energy services activities

eu.bac promotes EPC as the solution for more energy efficiency in existing buildings

eu.bac developed procedures to determine EPC potential

- eu.bac has founded the **European Association of Energy Services Companies (eu.ESCO)**
- Additional potentials for energy savings on national and EU-level are enabled by EPC
- Public authorities achieve sustainable development and environment goals
What EPC can achieve

EPC is the key to cost-effective energy efficiency in existing public buildings

- Austria: 3000 federal properties
- USA: $1.9 billion was invested in federal facilities
- Sweden: Nyköping Community
- UK: Royal Gwent Hospital
- UK: IBM
- Germany: City of Berlin

Additional savings of energy price increase

Energy and Operational Costs

- Baseline
- Guaranteed savings
- Reduced costs due to performance-based solutions
- Customer savings

Start of positive environmental impact

Duration of program

Time (years)

Customer to retain all savings
The European Commission expects annual energy savings of 15% in residential housing starting in 2020.

- Eu.bac promotes the standardization of components and systems for home automation.
- eu.bac guarantees the conformity of certified products with national standards and European directives.
New perspectives
Building automation secures real estate values

30 percent energy savings starting in 2012
- EU – EPBD 2012
- Germany – EnEV 2012

Ambient Assisted Living (AAL)
- Age-appropriate assistance for a healthy and independent life

Residential and home automation
- Comfort
- Security
- Entertainment
- Battery-free wireless systems

Source: Statistisches Bundesamt
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