BRE

Experience and Development of Training for Open Controls

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Overview

- Control systems overview
- BRE's background
- Our experiences in providing training
- Controls system design Skills
- Challenges and opportunities

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Control Technology Applications

- Lighting
- Heating
- Shutter and blinds
- Heating, ventilation and cooling
- Security
- White goods
- Potentially fire alarms
- Visual displays
- Remote control and monitoring

….combinations of all these!

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Open Control Systems

Manufacturer A

Open System

Product 1

Product 2

Customer

Heating

Lighting

Manufacturer B

Open System

Product 3

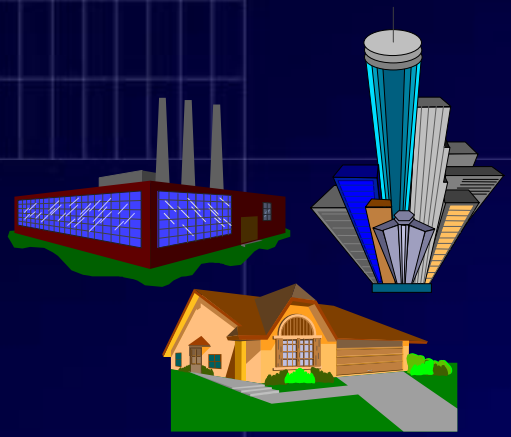
Product 4

Security

Manufacturer C

Open System

Product 4



…. interoperability is the key

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Controls and much more for smart homes…

- Share internet access via a home PC network
- Telephone, audio and video networks
- Access control and security combine with CCTV
- Energy saving
- Remote monitoring of systems and appliances
- Safety systems for fire and other hazards
- Assistive devices for the elderly and disabled
- Electricity, gas and waters consumption monitoring
- Remote fault detection and diagnosis

… it's also lifestyle thing!

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Various Media options

- Cable
  - robust
  - secure
  - cost effective, particularly for new installations
- Power Line
- Wireless

Both Power Line and Wireless offer flexible solutions and will be pivotal in opening up existing housing market

….combinations of all three!

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Target Group Needs

- energy saving
- support for daily living
- emergency support
- working from home
- health and social care
- greater security and safety
- tenant interaction
- lifestyle benefits

… specialist knowledge needed

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Meeting User needs

Identify needs of target group

Select appropriate solutions

Implement

Support, maintain and enhance

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Benefits of Open Systems

- Increased control options
- Increased flexibility
- Increased functionality at lower cost
- Potential energy saving
- Reduced re-design costs
- Remote monitoring and control
- Short reconfiguration time

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Open Controls Technology

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BRE's Training Background

- A wide range experience with all aspects of construction
- A long history in building services
- Started providing training for Open Controls Systems in 2000
- Currently offering one day and five day Konnex/EIB training
- In addition, we have provided:
  - Two day Installation and Commissioning training courses
  - One day Home Network training courses
  - Half day installation briefings
  - Presentations for building services seminars
  - Workshops for developers
  - Video link presentations

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Initial Experience in providing Courses

- Delegates attending early courses had limited exposure intelligent building/smart home concepts
- Delegates also had no or limited exposure to software programmable systems
- We needed to engage with manufactures and customer groups, such as developers and housing associations, to promote the concepts via seminars and short courses
- Focus of interest in domestic sector.

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Recent Experience in Providing Courses

- Greater awareness of basic intelligent building concepts, but not the full extent of what can and is being achieved now

Delegate Backgrounds

- Electrical contractors
- Process Control
- IT Networks
- Computing
- Care home technology

- Still the feeling that greater understanding of the capabilities of intelligent building is needed in customer groups

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Control System Design Skills

More than just controls skills…..

- Needs analysis
- Creativity
- Aesthetics
- Cost benefit
- Whole life value
- Flexibility and adaptability
- Environmental and sustainability issues
- Needs of specific customer groups
- Higher levels of customer service

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Control System Design: Energy Savings

- Heating control for individual rooms
  - Time and temperature control
- constant lighting control
- Lighting when needed (light sensors, PIRs)
- Performance monitoring
- Smart appliances

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Control System Design: Health care

Support for:

- daily living and improve quality of life
- motivating healthy behaviours, prompting
- movement tracking and mapping
- disabilities
- dementia
- carer notification
- remote monitoring and diagnosis

… and much more

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Control System Design: Media options

- New house installations predominately wired
  - New build: ~200 Thousand annually
  - ~10% new homes with networks for computing, audio and TV
- Existing houses need mixed media control solutions
  - Existing buildings 25 Million +
  - Wired, powerline and wireless solutions needed

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Smart homes have a positive future

- Increased exposure to concept
- Open Standards from home automation
- Existing and emerging standards for home networks
- Increased product availability for UK market
- Improved integration of network media options
- Development of integrated content services (TV and Internet)
- Plug and Play systems from home automation
- Developers increasing understanding of potential
- Contractors gaining experience

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Challenges and Opportunities

- Continue to increase exposure of intelligent building concepts to:
  - Ÿ customer and industry groups
- Address technical needs of different trainee groups
- Extend technical training and updating
- Address wider skills issues
- Extend understanding energy saving issues and opportunities
- Extend understanding of health care issues and opportunities
- Encourage interaction within the industry groups

… BRE is well place to move the agenda forward

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BRE Moving the Agenda Forward

- Continue to provide controls training
- Increase the scope of related training
- Continue to raise awareness of intelligent building concepts through BRE events
- Continue to run intelligent building specific events
- Work with partners to progress intelligent building agenda
- Work with partners develop demonstration facilities at BRE
- Establish working groups to take forward specific issues

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Thank you for your attention.

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