

21 December 2009



If you would like to have news and information included in the newsletter, please forward them to Sirina at sirinath.jamieson02@imperial.ac.uk Many thanks.



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## CIBSE Intelligent Buildings Group

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### Happy Christmas & New Year!

#### 1. NEWS

- **After over 25 years in sustainability design and consultancy Fulcrum Consulting joins Mott MacDonald**

Fulcrum Consulting has now joined the Mott MacDonald Group in a move to expand the Group's building design specialities, especially in the area of sustainability.

[More...](#)

- **CIBSE Knowledge Series: "Intelligent Buildings" is on the way**

As part of the CIBSE Knowledge Series, which focuses on key issues in Building Services Engineering, Facilities Management and Energy Management, CIBSE IBG is in the process of preparing contents for its "Intelligent Buildings" publication. It is aimed to provide information and practical advice

Special thanks to:  
*Prof. Derek Clements-Croome*  
*Dr. Mark Worall*  
*Richard Everett*  
*Aref Taidi*  
*Dr Isaac Jamieson*

for contributing to this issue.

with regard to the topic to wider readers such as architects, engineers, surveyors, consultants, clients and developers, and building occupants.

- **World's highest LEED environmental sustainability rating: Dockside Green project**

Dockside Green has achieved the highest LEED (Leadership in Energy and Environmental Design) rating in the world at the Platinum level in the category of new construction through the Canada Green Building Council.

The first phase of the development obtained a LEED rating of 63 points out of a possible 70. [More....](#)

- **2009 Livable City and Eco-architecture Technology: Seminar & Exhibitions (Chongqing, China)**

Professor Derek Clements-Croome gave the keynote address on "Intelligent Buildings for Sustainable Cities" and Andy Ford gave a talk on "Integrated Low Energy Building Design and Technologies" at the 2009 International Livable City and Eco-architecture Technology Seminar in Chongqing, China.

The seminar was organised by Chongqing Municipal Construction Commission in collaboration with Chongqing CISDI Engineering Co. Ltd. and Chongqing University, during 21-23 October 2009, alongside with "the 2009 International livable city and the eco-architecture technology exhibition".

Main topics of the seminar included fora on (1) human settlements and construction of cities, (2) multiple technologies of green building, and (3) technologies and development of low carbon economy and low carbon building.

- **Member discussion forum**

Discussion forum is now active for our members to post the topics/questions for discussion. It can be accessed through [here](#). The CIBSE IBG webpage can be found [here](#).

## 2. ARTICLE

- **Stockport College spends first Christmas in brand new green & intelligent building.**

*by Richard Everett, a specialist consultant in intelligent buildings in education, - Intelligent Builders Limited*

Stockport College's new 10,000 m<sup>2</sup> intelligent building is now being used to prove the efficacy of an integrated approach. The building (Phase 1 of 3) demonstrates that integrated design can result in cost savings in CAPEX, OPEX and Lifecycle costs.

Building staff commented that "there is a definite pride in the building" from both staff and students alike. Lighting is one element addressed, and as you walk into rooms the lights switch on, and more importantly switch off again when you exit. Equally the heating is responsive.

A positive effect is seen on teaching methods through the building's innovative use. The Cisco WiFi system allows staff to utilise modern teaching methods including tracking students' attendance with automated registration facilities. One lecturer commented "if technology makes life easier for you it will get used" the building demonstrates that fact.

One challenge was the noise created by plant while staff demonstrate, deliver or underpin knowledge, and this is where the nature of the controllability of systems in the building comes into its own. With relatively minor tweaks the system allows for staff to temporarily turn it off to allow instruction to take place.

Laura Dunlop, Head of Design at Operon M&E consultants to the project (now re-established as Environmental Design Consultants) commented on heating challenges experienced with the project. A cold spell proved the capability for remote control of the system. A heating valve was inadvertently closed preventing the heating from working properly – this was diagnosed, identified and fixed by BTS remotely from their Warrington facility 30 miles away. Any such system glitches (and emerging issues) such as this can now be responded to in this way, with obvious associated 'cost' and 'green' efficiencies. Laura commented that the implementation experience had been even better than expected – "this was down to the M&E consultants and Integration contractors (Operon and BTS) working closely together".

Graham Spark from BTS said planning had taken place from the very beginning to include the concepts of a green approach (low carbon), space efficiency using a smaller footprint, use of clever applications to deliver smaller CAPEX cost, lower OPEX with no

vendor lock in, and reduced lifecycle costs. He said that this had been the “key to success” as the “integration specification was included as a crucial part of the M&E specification” with an intelligent building compliance document included as a key appendix. This stopped arguments as to what was in (or out) of scope, or for future delivery, and prevented the loss of these key elements at the value engineering stage. On the lessons learned Jon Huyton from BTS commented that they had “underestimated the need for training on systems for key personnel at the college”. The advent of such intricate systems brings with it a need for all college staff involved to be up skilled to gain the best value - that is from college management through to engineers, IT and estates personnel.

The feedback from the college was very positive citing that the security system was very easy to use and gave access to incredibly detailed data – such as locations and status of doors, cameras, fire alarms etc., and the ability to drill down from a simple plan diagram into the detail ‘hidden’ below. The work of those staff has changed considerably and this is where training is really key, both from concept stage, through to response strategies in case of incident. In many cases estates staff need a higher level expertise in IT usage than would have been previously necessary in their roles. These staff are now having to cope with the complexities of systems that control the BMS, Access and ID, CCTV / Security, Fire, Lighting, Heating Ventilation and Air Conditioning, Metering and monitoring supplies (of for example Gas and Electricity) all working over an integrated IP network infrastructure.

#### Further information

Architects: ASL  
 M&E consultants: Operon (now re-established as Environmental Design Consultants Ltd).  
 Building Contractor: Waites  
 M&E contractors Mitie  
 Project integration: Building Technology Systems Ltd. (BTS)  
 Intelligent Building systems: fully integrated Continuum cyberstations integrating with: Gents Fire alarms; Dali intelligent lighting; Mitsubishi BACnet over IP; Standard BMS plant; Modbus metering; Pelco camera systems; Digital sentry; IP access control multifunction panels with Desfire ID cards.

Following the Learning and Skills Council's mismanagement of the Capital Building Programme the college is currently re-phasing its plans for the whole campus and further phases to the project are being redesigned to accommodate the funding challenges associated with the current economic realities.

### 3. EVENTS

#### • CIBSE/IBG Group Seminar Series

Some presentations from the CIBSE IBG past seminars can be found [here](#).

Upcoming CIBSE/IBG seminar:

**“System Integration”**  
 23 February 2010, 09:30-16:00

CIBSE Headquarters, London

An ideal building is intelligent and aware of its occupant. An intelligent building is responsive to and serves its occupant. A structure with these characteristics is by default sustainable, easily maintainable and economically operable. To achieve this all stakeholders, processes and systems that contribute to creating, operating and maintaining an intelligent building are to focus on these characteristics and need to integrate. This seminar is designed to raise awareness of the processes and techniques that need attention to allow this integration to take place.

Programme:

- 9:30 Welcome/tea/ coffee
- 10:00 Introduction (Derek Clements-Croome)
- 10:15 Set the scene and history (Ken Gray)
- 10:30 Cultural change required in construction industry to deliver intelligent buildings (Nigel Chapman, Concur)
- 10:50 Questions tea /coffee break
- 11:15 In the mainstream – How to bring building intelligence to people (Gareth Davies, Newera Controls)
- 11:35 Design and construction viewpoint (Martin Davis)
- 11:55 FM view (Darren Burford, Andromeda Telematics Ltd)
- 12:15 Questions
- 12:30 Lunch
- 13:30 Intelligent sensors, intelligent BMS and the future (Roger Moncur, Schneider Electric's Buildings Business)
- 13:50 Impacts of controls integration on construction management processes (Graham Gunn, domotics)
- 14:10 Integrating Human Behaviour with Building and Systems Performance (Lisa Wilkinson, t-mac Technologies)

14:30 Case study – How to automate a façade (Nick Hudleston, SE Controls)

14:50 Integration in buildings (Neil Pennell, Land Securities)

15:20 Discussion

16:00 Tea/coffee & Finish/networking

Fee: £50.00 + £7.50 VAT = £57.50  
Student fee: £20.00 + £3.00 VAT = £23.00  
(Student ID required)

For reservations: online at [www.cibse.org/ibg](http://www.cibse.org/ibg)  
or email Veron Williams at [vwilliams@cibse.org](mailto:vwilliams@cibse.org), tel: 020 8675 5211, fax: 020 8675 5449.

Future CIBSE/IBG seminars:

2010, Summer, seminar on education sectors  
2010, Autumn, seminar on health sectors  
2011, Spring, seminar on underground buildings  
2011, seminar on retail/commercial sectors

Please feel free to put forwards suggestions on our seminar series. Many thanks.

- **“Sustainable Healthy Intelligent Buildings for the Future”**

10-13 May 2010, Salford, UK

CIBSE/IBG, in association with CIB W098 Intelligent and Responsive Buildings, is organising the session on “Sustainable Healthy Intelligent Buildings for the Future” at the CIB World Building Congress 2010. The congress can be registered online at [www.cib2010.org](http://www.cib2010.org).

Dates & deadlines:

Full papers submitted: Mon 21 Dec 2009  
Decision on paper and referees’ comments back to author: Mon 15 Feb 2010  
Early bird registration cut off: Fri 26 Feb 2010  
Camera ready paper submitted: Mon 29 Mar 2010

Technical queries: Kaushal Keraminiyage, [kaushal@cib2010.org](mailto:kaushal@cib2010.org)  
Other queries: Professor Peter Barrett, [peter@cib2010.org](mailto:peter@cib2010.org)

- **SEB’10 - “Sustainability in Energy and Buildings”**

5-7 May 2010, Brighton, UK

<http://seb10.sustainedenergy.org>

Abstracts are invited for submissions for the SEB’10 on renewable energy and

sustainability related topics. The conference will also explore the following themes:-

- The application of intelligent sensing, control, optimisation and modelling techniques to sustainability
- The technology of sustainable buildings and combining these threads
- The Intelligent Building

Dates & deadlines:

Submission of Abstracts: 1 Jan 2010  
Notification of Acceptance: 2 weeks after submission of abstract  
Submission of Full Papers: 1 Mar 2010  
Upload of Final Publication Files: 1 Apr 2010

General enquiries: [seb@sustainedenergy.org](mailto:seb@sustainedenergy.org)  
Registration queries: [registration@kesinternational.info](mailto:registration@kesinternational.info)

#### 4. CALLS

- <http://www.epsrc.ac.uk/CallsForProposals/default.htm>
- <http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=67>
- <http://www.researchresearch.com/entry/entry.htm>
- <http://www.britishcouncil.org/science-research.htm>

#### 5. ONLINE

- <http://www.ibgroup.org.uk/index.asp>
- <http://www.buildingecology.com/index.php>
- <http://www.cmips.org.uk/index.htm>
- <http://www.bre.co.uk/page.jsp?id=725>
- <http://www.uniformat.com/intelligent-building.html>
- <http://www.ibrg.rdg.ac.uk/>
- <http://www.caba.org/index.html>
- <http://imis.bomampis.org/BOMA/scriptcontent/staticpages/IntelligentBldgsSeminar.htm>
- <http://www.automatedbuildings.com/index.htm>
- <http://www.vtt.fi/?lang=en>
- <http://www.austin.co.uk/>
- <http://www.bfrl.nist.gov/ibr/>
- [http://www.bse.polyu.edu.hk/lab\\_facilities/IB/index.html](http://www.bse.polyu.edu.hk/lab_facilities/IB/index.html)
- <http://www.health-smarthomes.org/index.html>
- [http://www.intelligentbuildings.com/ib\\_News\\_Documents.htm](http://www.intelligentbuildings.com/ib_News_Documents.htm)
- <http://www.greenintelligentbuildings.com/>

#### 7. COURSES AND TRAINING

- **MSc Intelligent Buildings**, University of Reading.
- **MSc Intelligent Building Technology and Management**, The Hong Kong University of Science and Technology.
- **LEED® & Intelligent Buildings Online Seminar**
- **CIBSE courses**
- **Intelligent NextGen Buildings**: Combining Technology with Improved Building Systems.