# buildingSMART®
## International home of openBIM®

*Sustainability by building SMARTER*

# China chapter takes off
## BIM forum makes an impact in Beijing

On 24 September 2013, the new chapter in China, which was launched in May, held a foundation ceremony in Beijing. Local buildingSMART officers and key influencers were joined by international speakers to pitch the buildingSMART message to an audience representing all aspects of a vibrant Chinese construction industry.

China has developed two national BIM standards relating to building information modelling: one covering the delivery of information and the other coding and classification. The standards, prepared by the standards organisation, the China Institute of Building Standard Design & Research, are due to be published in early 2014.

But with the increasing globalisation of the Chinese construction industry, forging links between national and international standards has become critical. The China Institute of Building Standard Design & Research perceived the need for collaboration and was the driving force behind the creation of the new Beijing-based chapter.

'The foundation of buildingSMART China opens up a door to lead the Chinese AEC industry into the global industry,' says Oliver Lai Wei, who is secretary general of buildingSMART China.

The September event comprised a foundation ceremony and the second China BIM Forum (the first was in December 2012).

The previous afternoon, a press conference was held, attracting around 40 journalists and media people – helping to raise the profile of bS China and the role of BIM.

In the morning of 24 September, the foundation ceremony took place, as officers of bS China and bSI put their hands on a flashing globe to indicate their commitment to global BIM standards. Chris Groome, bSI business manager, delivered a message from Patrick MacLeamy, bSI chair.

In the afternoon, over 200 delegates – including standards professionals and representatives of property companies, contractors, design companies and research organisations – gathered to hear a series of presentations on building information modelling: what it is and what it can do for you. Simultaneous translation was provided for the English-speaking presenters.

Local speakers included Zhong Chen, chief engineer, Ministry of Housing and Urban–Rural Construction; Ying Sun, president, China Institute of Building Standard Design & Research; and Yinquan Yu, chairman of bS China and vice-president, China Institute of Building Standard Design & Research. 'The China chapter will launch a series of activities, including field visits and technical discussions,' said Yinquan Yu. 'In addition, we will set up an international BIM forum for exchange and dialogue with government departments, research institutes and enterprises.'

Chris Groome, Jeffrey Ouellette, vice chair of the NBIMS V3 committee in the US and Yoshinobu Adachi from bS Japan also gave presentations.

'You can measure the success of an event by the number of people who register and attend,' said Chris afterwards. 'But even more significant is the number who are still there at the end of the day. Here, the event was packed until the very end, with very lively Q&A sessions.'

Reflecting on the significance of the new chapter, he added: 'China has a sizeable construction industry, both at home and abroad. The creation of the China chapter, with its commitment to contribute to international standards, is a big step forward for bSI.'


*Press conference held on the eve of the foundation ceremony*


*Putting their faith in a BIM future: (from left) Yinquan Yu, Ying Sun, Chris Groome and Oliver Lai Wei*


Beijing•

### Chinese construction industry

- Over 10% growth expected annually 2013–16
- Industry employs 43 million people (end 2011)
- Five Chinese construction companies entered the World Top 500 companies list in 2010
- Growth expected in housing sector
- Urbanisation promoting infrastructure development

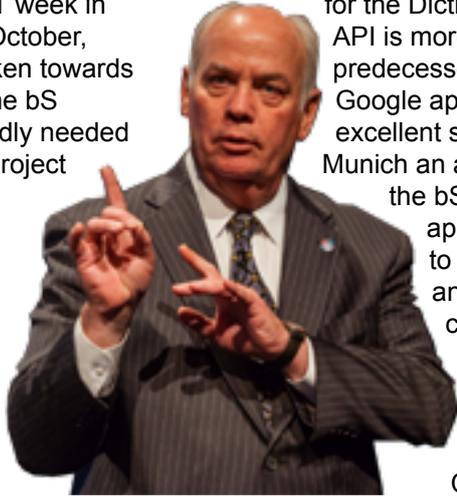Sources: companiesandmarkets.com; National Bureau of Statistics of China

# Key projects move forward at Munich week

At the buildingSMART week in Munich during 7–11 October, crucial steps were taken towards the development of the bS standards that are badly needed in the industry. New project funding was agreed in infrastructure and formal agreement was reached with a software partner in the Data Dictionary.

## Infra, bSDD and BIM guidelines

One highlight from the meetings was the funding of €200,000 – sealed in a formal MOU – secured for the infrastructure alignment project (see next story).

In the Product Room, the buildingSMART Data Dictionary (bSDD) has made progress on its software platform. Working in partnership with bSDD, Norwegian software developer Catenda has created a cloud-based API (application programming interface)

for the Dictionary. The new API is more flexible than its predecessor, is built on the Google app engine and offers excellent scaling potential. At Munich an agreement between the bSI and Catenda was approved for Catenda to host the Dictionary and support the user community.

Also progressing the bSDD project, Dutch object library CB-NL agreed to collaborate on the use of the Data Dictionary and a two-year agreement was signed.

In the Process Room, agreement was reached to develop BIM guidelines to help users understand how to work collaboratively in projects where open BIM is being used.

## Other activities

As the week drew to an end, a conference, referred to as the BIM Forum, was held for a largely German

audience. Patrick MacLeamy, CEO of HOK and bSI chair, flew over from the US to give a presentation on the impact of BIM on projects.

There were also meetings of the ITM, IUG and the bSDD group, a separate Research Day at the Technical University of Munich and meetings of ISO Technical Committee 59, SC 13, Working Groups 8 and 11.

The coverage of the meetings was immense, the input knowledgeable and progress tangible. All in all, there were some good outcomes that pave the way for future development.



*Above left: Patrick MacLeamy*
*Above: Celebrating the agreement with the Netherlands Concept Library group for the use and distribution of the bSDD – (from L) Roger Grant, Chris Groome, Radboud Baayen, Richard Petrie, Henny Stolwijk and Jaap Bakker*

# Infra Room sets its priorities
## Funding for alignment project will speed progress

Four priority areas were identified as 'must-do' projects at the meeting of the Infrastructure Room in Munich on 2 and 3 October 2013.

The work ahead had already been allocated to 12 project areas that must go forward. Of the 12, four were chosen as top priority: IFC Bridge, alignment, a data dictionary for infra and the delivery of as-built information for asset management.

And among the four, the alignment project – the topic covers the straights and curves of a road, sight distances, and so on – has secured funding from European sources. A sum of €200,000 is being earmarked for bSI, with one-third coming from the Swedish government, Dutch government and EU. An MOU was signed between the parties at Munich, with a modest degree of pomp and ceremony and much enthusiasm for this important project.

Clients spend much more on infrastructure projects than on building projects, and buildingSMART was slow off the starting blocks in an area where standards like

IFC are needed. This is now being remedied with the formal launch of the Infrastructure Room, the youngest of bS's three 'rooms' or centres of activity, and the priority projects it is pushing forward.

There is no such thing as a quick win in infrastructure – IFC for infra is a long-term goal – so work already done is of huge value. IFC Bridge was among the top priorities because

of the work already in progress in France, but much remains to be done in aspects such as cable stay systems, alignment and reference lines, and rebar (reinforcement bars). For the same reason, the data dictionary for infra is deemed important because it can build on work already done – but the Infra Room must seek to create a standard dictionary before the multiplication of local infra dictionaries becomes unstoppable.

BuildingSMART cannot do it all alone, and partnerships are an essential part of the process.

There are opportunities for collaboration with the Open Geospatial Consortium (OGC) and with countries which have programmes in similar areas. Korea and Japan are each doing valuable work on an infrastructure data model for roads.

Working groups have been set up for the top four projects. 'The very top priority is alignment,' says Christophe Castaing, who chairs the Infra Room. 'It should be included in the next version of IFC.'



*Kobe-Awaji-Naruto Expressway, Japan* Source: 663highland under GFDL+cc2.5

# All change at buildingsmart.org

## Major overhaul of bSI website underway

The buildingSMART website is undergoing a comprehensive makeover, with a completely new structure, improved content and a fresh design. The existing website has grown organically over time, but has not evolved to do justice to bSI activities. The navigation is often mystifying and the content dated.

Patrick MacLeamy highlighted the problems in his strategy document, *The Way Forward*. 'People outside of buildingSMART do not understand our role in transforming the building industry,' he wrote. 'At bSI we must have a professionally organised website… the website must be robust, up to date and serve as the virtual portal to bSI.'

### Starting the process

Change began in July 2012 when Warwick Hunt (below) in the UK was appointed website consultant. He was asked to make quick fixes as a temporary solution, while developing proposals for the long-term future of the website. A reference group was set up to provide advice and input.

The main bSI website (visit buildingSMART.org) is complemented by three sister websites, covering technical, user and data dictionary activities.

Editorial management of the main website is done by Warwick, with technical support provided by Kjetil Espedokken from the Norwegian chapter.

In September 2013, Warwick unveiled a new prototype website to the reference group. The revised home page marks a whole new approach. 'I found the existing home page unwelcoming,' he says. 'It didn't really present a clear picture of what bSI and its website activities are all about.'

As any internet user will tell you, you have just seconds in which to make that first favourable impression on new visitors. A muddled home page, lacking a succinct, plain-language explanation of the organisation, will have first-time users clicking their way out of your website forever. And users familiar with the site must be assured of easy navigation to find what they are looking for if they are to keep on coming back.

'The new home page will offer a clear statement of bSI's rationale, role and function,' explains Warwick. The tabs have been reworked, activities grouped more logically and quick links given to sections of the website that are likely to be visited most often. Certification and training have raised their profile recently, which is reflected in the new site architecture. 'Software vendors and training providers can access these sections directly from the home page,' he adds.

### A raft of changes

The new website encourages members to get involved and will help to forge closer links between bSI and the regional chapters.

Other new material planned includes a jargon-buster section, together with FAQs – useful tools in a field where acronyms and mystique often erect an impenetrable wall. More importantly, proper coverage of technical and user projects, as they evolve, is allowed for.

The redesign also offers the opportunity to integrate the sister websites (technical, user and bSDD) into the main bSI website as a later phase of redevelopment, if the stakeholders find this useful. In the meantime, these sites will continue to be run independently by their specialist co-ordinators, with clear links from the bSI site.

All in all, the prototype provides a more rational and tightly knit design, offering new visitors and existing users a positive experience. 'I have followed, wherever possible, the "three clicks" rule,' says Warwick. 'It should be possible to locate most information within three mouse clicks.'

### Taking things forward

The feedback from the reference group was universally positive, and included several good ideas to enhance the prototype website further. Two key messages were the importance of a greater emphasis on the needs of bSI's end-users and of closer alignment of the main section headings of the website to bSI's core programmes.

Now Warwick and Kjetil have the task of making amendments to the site and taking it live. 'We will make further refinements and plan to go live in the new year,' concludes Warwick.

*The website appraisal document is available from Warwick Hunt (warwick@drs-hunt.freeserve.co.uk).*

*Left: Warwick Hunt*
*Below: The new tabs – a work in progress*

## Improvements at a glance

- Clearer tabs to help navigation (see foot of page)
- bSI's role and function clearly stated
- Certification has its own section
- Link to newsletter from home page
- Training made more prominent
- Less cramped layout

| Home | About | Standards | Major projects | Certification & accreditation | Regional chapters | News & events | Help |

# Product Room builds on bSDD pilot

The bSI Product Room continues to gain momentum. Back in October 2012 at the International User Group (IUG) meeting in Tokyo, a group of six countries participating in the Product Room formed a pilot project to use the buildingSMART Data Dictionary – a project that, a year later, has expanded to include the Netherlands, Germany, Austria, Switzerland and several interested end-users. With a recent upgrade to the Google platform, bSDD even has the attention of Google, with help coming from their technical staff.

Initially, the group was charged with adding content using existing methods and starting with a single product, a ceiling tile (see bSI newsletter No 11). What quickly became apparent was that the existing toolset created a bottleneck in the process. A new content management (CM) tool being developed by Catenda to remedy the problem is undergoing prototype testing in the project's second phase.

Using a variable air volume (VAV) terminal box as the subject to model in this phase – VAV is a HVAC component –

the approach adopted was for each country to align their attributes to the IFC4 property sets already in bSDD. While only a few direct connections were found with the IFC PSets, the flexibility of the bSDD platform allows the user to build on IFC properties to include commonly used terms, which creates an extended property set that can be stored and ultimately queried by another user of the bSDD. 'It is this ability of the bSDD to create relationships that is its true value,' observed Birgitta Foster, ACAI Technologies and project leader.

In a project update presentation at the bSI IUG meeting in Munich on 7–9 October 2013, other bSDD relationships were explored, such as

the identification of terms required in an information exchange or timing of the delivery, as each country may have varying requirements. It is these types of use cases for the bSDD that this pilot project has been able to identify.

'The ongoing success of the bSDD pilot project relies on identifying these real-life applications,' said Ian Chapman, NBS Director of National BIM Library and bS UKI board member. 'We need to devote our expertise to making the bSDD the single most attractive solution for product templates.'

This next phase expects to continue to support the content management tool development, solicit input from more product manufacturers and develop the content guidelines further, incorporating recommendations by the pilot project.

Immediately following the IUG meetings, a workshop on the ongoing technical development of the bSDD was held, looking at the issues raised by the pilot project.



*Meeting of bSDD group in Munich*
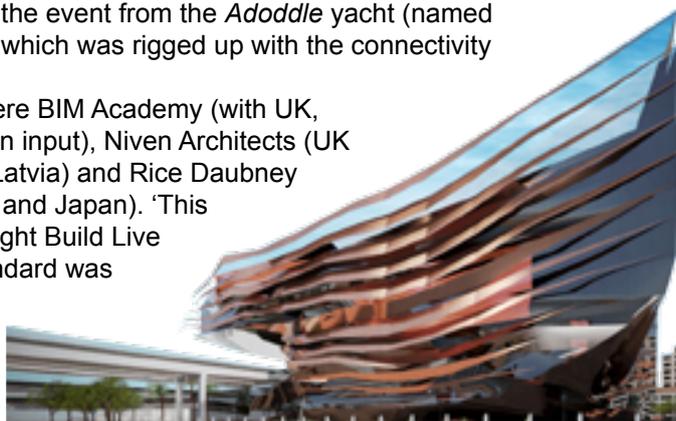
# Build Sydney Live

Darling Harbour in Sydney, Australia is to be revitalised by Hassell and Lend Lease, with a new high-profile convention centre as a key component of the master-plan. Designing the centre will take around 36 months, but this was dramatically fast-tracked in a design exercise that required design teams to build IFC models and submit their designs in just 48 hours.

This was not, of course, the real thing but the latest Build Live event – a design competition open to teams around the world. Their design submissions remain forever virtual but demonstrate persuasively the power of collaborative working with open BIM. The full brief, revealed at the start of competition on 28 October 2013, set out the criteria for designing a new green building with multiple facilities.

UK-based software company Asite, together with buildingSMART Australasia, co-ordinated the event from their temporary HQ: a yacht moored in Sydney harbour. Nathan Doughty and Tony Ryan (COO and CEO at Asite) travelled from London to manage the event from the *Adoddle* yacht (named after the Asite platform), which was rigged up with the connectivity required.

The winning teams were BIM Academy (with UK, Norwegian and Australian input), Niven Architects (UK and Australia), Zibsnis (Latvia) and Rice Daubney and Obayashi (Australia and Japan). 'This has been the closest fought Build Live event so far and the standard was impressively high,' said Nathan.

*Visit www. buildsydneylive.com*