



InSight

Summer 2006

CITE Diary

CITE AGM and buildingSMART Summer Event

22nd June 2006 at:

Institute of Physics,
76 Portland Place,
London, W1B 1NT

CITE activities which will be featured include:

- Outputs from the tendering group, international collaboration with Europe and through UN/CEFACT,
- An update on eTrading message developments in Europe and
- Work with IAI to link cost estimating with a building model.

Joint CITE / IAI meeting: Cost Modelling eTendering & Quantities Take Off

21st September 2006 at:

Venue to be confirmed.

Joint BSRIA/CITE/IAI meeting: Manufacturers & Information Providers Product Information Modelling

5th October 2006 at:

BSRIA
Old Bracknell Lane West
Bracknell
Berkshire, RG12 7AH

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CITE working with buildingSMART

Over the last couple of years CITE has been working closely with International Alliance for Interoperability (IAI). As you can see in the newsletter many of the CITE activities involve joint meetings with other working groups.

With the recent rebranding of the IAI to buildingSMART and CITE's objective to extend the operational use of electronic business across the construction industry in the widest context, there are opportunities for CITE and the IAI to continue working together.

Going forward, CITE will work with the IAI under the common banner "buildingSMART" to support information sharing in relation to tendering, trading and product/catalogue information.

What is buildingSMART?

BuildingSMART is "the route to integrated project working in design, construction and facilities management using BIM and Industry Foundation Classes (IFCs)". The International Alliance for Interoperability (IAI) has spent the last 10 years establishing standards for the use of object technology in construction and facilities management. These standards, known as Industry Foundation Classes or IFCs, are now contained within the most comprehensive model of design, construction and FM information yet created. All the main software developers in this industry segment worldwide are committed to producing IFC-compliant software. Recently the IAI has turned its attention to broader issues of achieving beneficial change in industry, using Building Information Models (BIMs) and IFCs as the trigger to smarter ways of working. This is the origin of the rebranding last year of IAI as buildingSMART.

Smarter ways of working will directly affect the processes and skill sets used in industry and indirectly other issues such as contracts, payment systems, insurance, education and training. It will also require information links with business activities such as those supported by CITE.

Under the buildingSMART banner, IAI is seeking alliances with other similarly motivated organisations to support processes which deliver faster, better, less expensive and more predictable results than can be achieved with traditional methods.

What is a BIM?

The term BIM "Building Information Model" is now being used by many software vendors. In the United States a US National BIM Standard is being developed which promotes the business requirement that such a BIM model must be interoperable based on open standards and defines the term as follows:

A Building Information Model (BIM) is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle from inception onward.

A basic premise of BIM is collaboration by different stakeholders at different phases of the life cycle of a facility to insert, extract, update or modify information in the BIM to support and reflect the roles of that stakeholder. The BIM is a shared digital representation founded on open standards for interoperability.

CITE publishes a new Tendering standard

The new draft Tendering XML Schema is the first of several Tendering related schema that will be published by CITE over the coming months.

The draft schema is currently under review by interested CITE members before being made more widely available as an open standard.

If you interested in this, or any other tendering standards work by CITE, then please contact Kevin Smith, e-mail kevin@cite.org.uk.

CITE Tendering User Group

The group met just before Christmas and in January. It had presentations on the RICS eTendering Guidance Note, about the proposed Agreed Rules of Quantification, and the international standards developments in progress. CITE has been a major contributor to the development of new eTendering message standards at both UN/CEFACT and European levels.

The most important news to bring you is that the UN/CEFACT eTendering standard (prepared by the TBG6 group) has recently finished the harmonization stage in UN/CEFACT and the official UN/CEFACT XML Schema are expected by the end of the year.

In the meantime CEN eBes EEG5, the corresponding standards group in Europe, is producing a CEN Workshop Agreement, which although not a full CEN Standard, will represent an agreement on eTendering data exchanges within Europe. The CWA will use the same data constructs as those in the UN/CEFACT standard. There will be a six-week public review of the CWA before it becomes an official CEN Workshop Agreement. Details of the public review period will be published on the CITE web site, with links, when the review period begins. If you wish to be notified directly when this process begins, then please e-mail Kevin Smith. Other work in EEG5 includes a Message Implementation Guide for the new standard.

The new Draft CITE Tendering Standard is based on the same work and re-uses XML Schema Modules developed within EEG5 and UN/CEFACT.

Although there are additional requirements for eTendering messages identified here in the UK these have been incorporated into a CITE Reusable Schema Module. The component and modular approach, as defined in the ebXML Framework and used on standards work by EEG5 and UN/CEFACT, makes this much easier to achieve. Eventually the additional requirements we have identified will be proposed to EEG5 and TBG6 for incorporation in the International Standard.

More information about EEG, UN/CEFACT and the ebXML Framework is available on the CITE web site. If you require any further information please contact Kevin Smith, email kevin@cite.org.uk.

Links to cost estimating from a building model

With the publication of the CITE UN/CEFACT TBG6 eTendering XML schema, the opportunity now exists to investigate the derivation of significant quantity information from any Building Information Model produced by an application supporting IFCs, such as Graphisoft ArchiCAD/Constructor, Autodesk ADT, Autodesk Revit or Bentley Triforma Architecture.

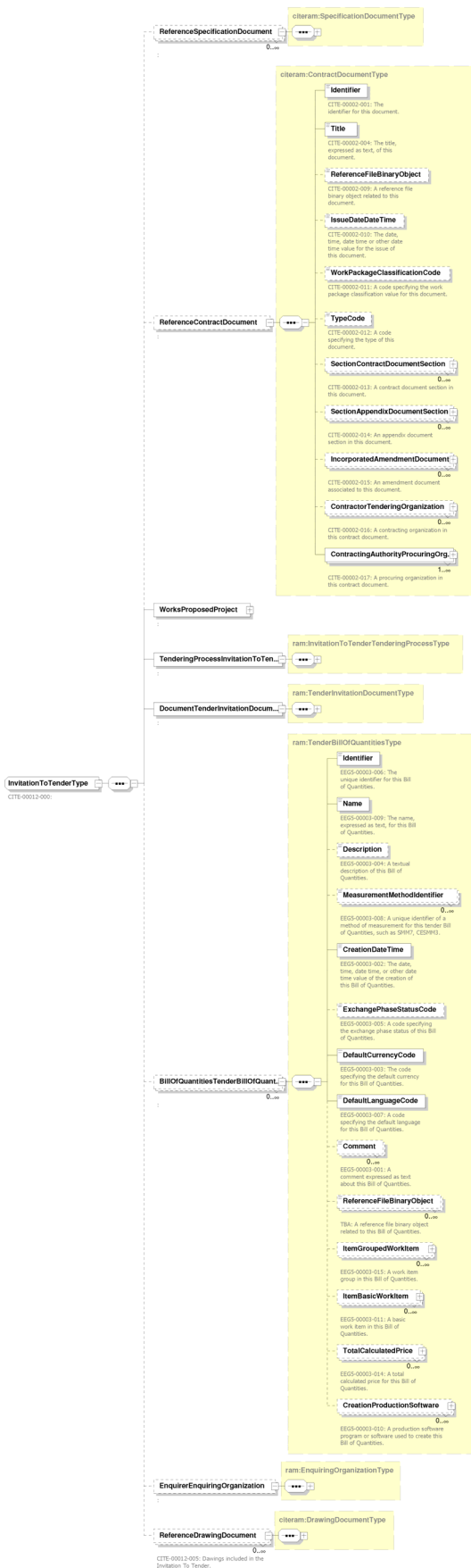
A joint CITE / IAI project has looked at how buildingSmart can be applied to the tendering process. Shepherd Construction has confirmed the lack of specification information typically available when the concept drawings are first presented. "Any computer modelling that can assist with taking outline design details and making informed, logical decisions to calculate the cost, programme etc. for a final project solution would be of great help to both contractors and clients".

The project supported this finding, by systematically extracting all the available construction and element information from a typical building model. The geometric and attribute information is more accessible and consistent in a building model than in the equivalent drawings and documents. The building model also has more geometric information. However, there is currently little difference in the quantity of attribute information.

The demonstration should be of considerable interest to both the IAI and the CITE communities and should help introduce the eTendering format. Although the data generated is not yet comprehensive or exhaustive, it has explored the scope and potential usage of the format. This is then a bridge between IFC as the mechanism used with BIM systems and CITE eTendering as the document delivery for costing and tendering.

If you require any further information please contact Nick Nisbet, e-mail nn@aec3.com.

The diagram on the left shows a fragment of the CITE XML Tendering Schema that relates to a contract document and a tender bill of quantities.



CITE Trading User Group

The group has not met for sometime but there are developments in International Standards that members may be interested in.

At a European level standards work comes under the CEN eBes EEG1 group. Like EEG5 for the construction standards the work of EEG1 is closely aligned with the corresponding group UN/CEFACT group, in this case TBG1.

The focus for EEG1/TBG1 has been on Cross Industry:

- Ordering,
- Remittance Advices,
- Invoicing and
- e-Catalogues.

The official UN/CEFACT XML Schema for these messages are expected later in the year. In the meantime EEG1 will be looking at Special Advice Notes, delivery schedules (just-in-time) and order status.

There are other standards in this area and a significant one is UBL (Universal Business Language). UBL 1.0 covers:

- Order,
- Order response simple,
- Order response detailed,
- Order change,
- Order cancellation,
- Despatch advice,
- Receipt advice, and
- Invoice standards.

Just recently UBL 1.0 Small Business Subset has been approved. Like the new UN/CEFACT standards the definitions have been based on the ebXML Framework and there are discussions on UBL working within UN/CEFACT.

The CITE web site includes links for further information on the above.

If you require any further information please contact Kevin Smith, e-mail kevin@cite.org.uk

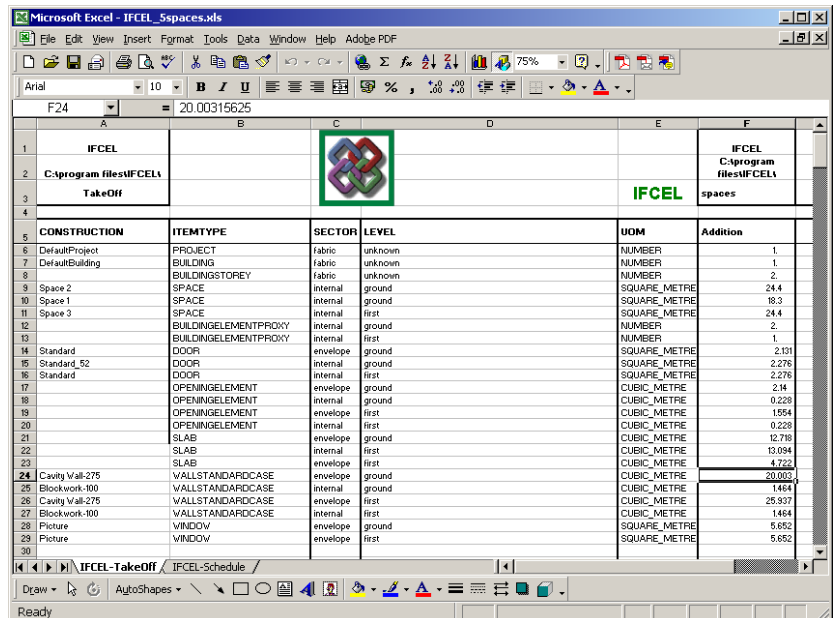
Membership Matters!

Subscriptions for 2006

The membership subscriptions for the period 1st January 2006 to 31st December 2006 are now due.

IFCEL takeoff: IFC and Excel

The IFCEL project (the name joins together 'IFC' and 'cel' from Excel) has developed an interface between the IFC model and Microsoft Office Excel. This desktop measurement tool allows the user to take off quantity and cost information from IFC building models. The application will be of particular benefit to Small and Medium sized Enterprises (SME).



CONSTRUCTION	ITEMTYPE	SECTOR	LEVEL	UOM	Addition
6 DefaultProject	PROJECT	fabric	unknown	NUMBER	1
7 DefaultBuilding	BUILDING	fabric	unknown	NUMBER	1
8	BUILDINGSTOREY	fabric	unknown	NUMBER	2
9 Space 2	SPACE	internal	ground	SQUARE_METRE	24.4
10 Space 1	SPACE	internal	ground	SQUARE_METRE	18.3
11 Space 3	SPACE	internal	first	SQUARE_METRE	24.4
12	BUILDINGELEMENTPROXY	internal	ground	NUMBER	2
13	BUILDINGELEMENTPROXY	internal	first	NUMBER	1
14 Standard	DOOR	envelope	ground	SQUARE_METRE	2.131
15 Standard_52	DOOR	internal	ground	SQUARE_METRE	2.276
16 Standard	DOOR	internal	first	SQUARE_METRE	2.276
17	OPENINGELEMENT	envelope	ground	CUBIC_METRE	2.14
18	OPENINGELEMENT	internal	ground	CUBIC_METRE	0.229
19	OPENINGELEMENT	envelope	first	CUBIC_METRE	1.554
20	OPENINGELEMENT	internal	first	CUBIC_METRE	0.228
21	SLAB	envelope	ground	CUBIC_METRE	12.719
22	SLAB	internal	first	CUBIC_METRE	13.094
23	SLAB	envelope	first	CUBIC_METRE	4.722
24 Cavity Wall-275	WALLSTANDARDCASE	envelope	ground	CUBIC_METRE	20.003
25 Blockwork-100	WALLSTANDARDCASE	internal	ground	CUBIC_METRE	1.484
26 Cavity Wall-275	WALLSTANDARDCASE	envelope	first	CUBIC_METRE	25.937
27 Blockwork-100	WALLSTANDARDCASE	internal	first	CUBIC_METRE	1.484
28 Picture	WINDOW	envelope	ground	SQUARE_METRE	5.652
29 Picture	WINDOW	envelope	first	SQUARE_METRE	5.652

IFCEL is a small desktop application which can link several of your building models into a spreadsheet, giving a basic breakdown of the building and allowing you to associate costs or other rates such as degrees of completion, Whole Life Cycle Costs, etc.

In essence each building or rate is allocated a column within the spreadsheet: Buildings and Rates are read or re-read on opening and Rates are written on saving the spreadsheet. Hence the data on the spreadsheet is always synchronized with the IFC files stored in the nominated directory. Up to twenty distinct building or rate models can be considered together, and up to 600 distinct measures and rates can be managed.

For more information contact: Nick Nisbet, email nn@aec.com.

CITE Standards

CITE Tendering XML standard

CITE XML Schema standards have been developed for Trading Documents and a new Tendering standard is being developed.

The Tendering standard will allow not only Bills Of Quantities to be exchanged in the tender phase of a project but also other tender documentation such as drawings, specification and contract information.

CITE ASCII BofQ version 4.2

The most recent software to be re-accredited is:

- CDS Computer Design Systems Limited:
Q-Script version 4.00.010

CITE EBQ File Reader

The CITE Excel Bill of Quantifies file reader can be downloaded from: http://www.cite.org.uk/Software_Bill_Of_Quantities.html