

**Construction Industry Council**

**Committee on Building Information Modelling**

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Meeting No. 002/18 of the Committee on Building Information Modelling (Com-BIM) was held on Tuesday, 14 August 2018 at 2:30pm at the Conference Room, 11/F Cheng Yu Tung Tower, Centennial Campus, The University of Hong Kong

|         |   |                            |        |   |
|---------|---|----------------------------|--------|---|
| Present | : | Ada FUNG                   | (AF)   | Chairperson   |
|         |   | Ivan FU Chin-sing          | (FI)   | Council Member  |
|         |   | Robert LAM Ping-hong       | (PHL)  | Council Member  |
|         |   | Kenneth MO Kon-fei         | (KM)   | Council Member  |
|         |   | Vitus NG                   | (VN)   | Council Member  |
|         |   | YU Sai-yen                 | (SYYu) | Council Member  |
|         |   | Ben CHAN Siu-bun           | (BCSb) | Lands Department  |
|         |   | David CHAN                 | (DCCk) | The Association of<br>Architectural Practices                                   |
|         |   | Edmund CHAN Sai-chun       | (ECSc) | Hong Kong Housing Authority   |
|         |   | Greg CHAN                  | (GgC)  | The University of Hong Kong<br><i>(for Steve ROWLINSON)</i>                     |
|         |   | Neo CHAN                   | (NCKy) | Hong Kong Institute of Building<br>Information Modelling                        |
|         |   | Jack CHENG                 | (JCCp) | The Hong Kong University of<br>Science and Technology                           |
|         |   | Karen CHENG                | (KCKl) | Architectural Services<br>Department  |
|         |   | Sunny CHOI Shing-lam       | (SLC)  | The Hong Kong Institute of<br>Surveyors   |
|         |   | Daniel CHONG Kwok-<br>ming | (DCg)  | The Hong Kong Federation of<br>Electrical and Mechanical<br>Contractors Limited |
|         |   | Benny CHOW Ka-ming         | (BCw)  | Hong Kong Green Building<br>Council   |
|         |   | Clement CHUNG              | (CtCg) | The Association of Consulting<br>Engineers of Hong Kong                         |
|         |   | Calvin FU Po-wa            | (CFPw) | The Hong Kong Institution of<br>Engineers                                       |
|         |   | FUNG Siu-man               | (SmF)  | The Chinese University of Hong<br>Kong  |
|         |   | HO Ka-chun                 | (KcH)  | Highways Department<br><i>(for Terrie HUNG)</i>                                 |
|         |   | Silas LIU Kam-ming         | (SLKm) | Planning Department   |
|         |   | Ben LO Yu-bun              | (YbL)  | Water Supplies Department   |

|               |                             |        |   |
|---------------|-----------------------------|--------|---|
|               | Paul MUI                    | (PaM)  | Hospital Authority<br><i>(for Benny CHAN Chak-bun)</i>                      |
|               | NG Chun-keung               | (NCK)  | Hong Kong Institute of Utilities<br>Specialist                              |
|               | Sammy NG                    | (SNTy) | buildingSMART Hong Kong   |
|               | Andrew SIMPSON              | (ASN)  | West Kowloon Cultural District<br>Authority                                 |
|               | SO Ching                    | (CSO)  | The Hong Kong Institute of<br>Architects                                    |
|               | Clyde TUNG                  | (CIT)  | Civil Engineering and<br>Development Department<br><i>(for Terence LAM)</i> |
|               | Billy WONG                  | (BWCb) | The Hong Kong Construction<br>Association                                   |
|               | WONG Sek-cheung             | (WSCg) | Electrical and Mechanical<br>Services Department                            |
|               | WONG Sui-kan                | (WSkn) | Drainage Services Department  |
|               | Franki YEUNG                | (FY)   | Hong Kong Housing Society   |
|               | Clarice YU Po-mei           | (YPM)  | Buildings Department  |
| In Attendance | : Richard PANG              | (RPg)  | Director - Industry<br>Development (CIC)                                    |
|               | Alex HO                     | (AHKK) | Senior Manager – Building<br>Information Modelling (CIC)                    |
|               | George WONG                 | (GWCK) | Manager - Building Information<br>Modelling (CIC)                           |
|               | David MAK                   | (DMSk) | Consultant - Building<br>Information Modelling (CIC)                        |
|               | Lok FUNG                    | (LF)   | Assistant Manager - Building<br>Information Modelling (CIC)                 |
|               | Shirley LAM                 | (SLLl) | Assistant Manager - Building<br>Information Modelling (CIC)                 |
|               | Dino SO                     | (DSCb) | Lecturer – Building Information<br>Modelling (CIC)                          |
|               | Tammy TO<br>(Secretary)     | TTO    | Manager - Management<br>Support, Building Information<br>Modelling (CIC)    |
|               | Chris WONG (Note Taker)     | (CWYh) | Senior Officer – Building<br>Information Modelling (CIC)                    |
| Apologies     | : CHUNG Kwok-fai            | (CKFi) | Council Member  |
|               | Stephen LAI Yuk-fai         | (SLI)  | Council Member  |
|               | Andrew CHAN ching-<br>leung | (ACCI) | Hong Kong General Building<br>Contractors Association                       |

|             |        |   |
|-------------|--------|---|
| LI Heng     | (HL)   | The Hong Kong Polytechnic<br>University                                       |
| Eric LIU    | (ELSI) | Vocational Training Council   |
| Miranda LUI | (MLCy) | Chartered Institution of Civil<br>Engineering Surveyors (Hong<br>Kong Region) |
| Eric POON   | (PSW)  | Urban Renewal Authority   |
| Kelvin WONG | (KWKw) | Airport Authority Hong Kong   |

## **PROGRESS REPORT**

### **Action**

#### **2.1 Confirmation of the Progress Report of the Com-BIM Meeting No. 001/18 held on 15 May 2018**

Members took note of the Paper CIC/BIM/R/001/18.

SLC suggested an amendment on HKIS' presentation topic from "Study of Contract Specification and SMM (QTO) for BIM" to "proposed BIM Contract Conditions".

Members raised no further comment. The progress report of the Com-BIM meeting No. 001/18 held on 15 May 2018 was endorsed.

#### **2.2 Matters Arising from the Previous Meeting**

AHKK briefed Members on the follow-up on the matters arising from the previous meeting.

##### BIM Object Development Guide

The Guide was published in the CIC's BIM Portal on 25 June 2018.

##### Invitation to Professional Institutes for Organizing BIM Training

CIC had sent invitation letters to HKIA, HKIE and HKIS. Details would be elaborated in section 2.6.

#### **2.3 BIM Training Plan for 2019**

Members took note of the Paper CIC/BIM/P/004/18.

AHKK briefed Members on CIC's BIM Training Plan for 2019.

In 2019, CIC would continue to offer both BIM modelling and management training courses. For BIM management, a new course focused on civil discipline would be launched. The updated content would be circulated to Members later. For BIM modelling, new training courses in civil discipline would be launched .

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For other feature courses, there would be new courses to be launched, including training on Fuzor and Navisworks. In a recent meeting of Task

Force on BIM Training, Task Force members proposed to combine the two Fuzor training courses into one, namely “Building Information Modelling (BIM) Course (Design, Analysis, Construction Management and Collaboration) – Fuzor”.

AHKK added that same as last year, a total of 380 training seats would be reserved for the contractors and consultants of the works projects under the Development Bureau. Compared to 2018, the total no. of classes would be increased from 68 to 78 and the total no. of seats would be increased from 1,360 to 1,560 in 2019.

PHL expressed that there might be concerns in the private sector on fair allocation of training seats, having regard to the special reservations for the Development Bureau. AF replied that CIC had examined the issue. With the establishment of CIC’s second BIM centre which would offer an additional training venue with increase in training capacity as soon as possible, the industry’s concern could be addressed.

DCg pointed out that the training needs would increase in the MEP discipline, especially for those MEP-related contractors and consultants. AF requested CIC to take this into consideration in its planning.

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## **2.4 2019 Business Plan and Budget on BIM**

Members took note of the Paper CIC/BIM/P/005/18.

The Business Plan focused on the following five areas:

1. Training;
2. Promotion and Publicity;
3. Standards and Guidelines;
4. Research & Development; and
5. BIM Facilities

For Training, CIC would continue its efforts in providing BIM training to the industry. Meanwhile, CIC would try to further maximize the training capacity and develop new BIM training courses to meet the needs of the industry.

For Promotion and Publicity, as 2019 would be CIC’s BIM Year, CIC planned to launch a series of promotion activities, such as BIM competition, international BIM conference, BIM Talks, BIM seminars, etc.

For Standards and Guidelines, CIC would develop BIM standards according to the approved BIM Standards Development Plan. Three sets of BIM standards were targeted to be published in 2019.

For Research & Development, CIC would continue with the work of BIM adoption survey and the development of BIM certification and accreditation scheme in 2019.

For BIM Facilities, in order to increase the training capacity and provide a place to showcase BIM's good practices, CIC planned to establish the second BIM centre in 2019. The centre should also act as a place for practitioners to seek advice on BIM-related issues.

FI asked if the budget for training could be aligned with the BIM Training Plan for 2019. He pointed out that the budget for training was relatively small. AF replied that the preparation of the budget was based on the proposed Training Plan. However, with the setup of the second BIM centre, AF suggested CIC to consider reviewing its training plan with the increased training capacity when new facilities are available.

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BCw pointed out the importance of establishing standards and guidelines in BIM development and suggested CIC to consider increasing the 2019 budget in the area.

AF mentioned that 2019 would be CIC's BIM Year and encouraged Members to contribute to and participate in the events actively.

**All to note**

Members raised no further comment and endorsed the business plan.

## **2.5 BIM Tasks by CIC**

AHKK presented the progress of CIC's recent BIM activities.

### **1. BIM Awareness Seminars and Workshops**

From January 2018, 15 BIM Awareness Seminars and Workshops had been organized to promote the awareness and understanding of BIM technologies with a total of 644 attendees. The seminars were video recorded and the videos would be uploaded to CIC's BIM Portal.

### **2. BIM Training**

As at July 2018, 39 classes of BIM training had been organized.

### 3. BIM Talks

The first BIM Talks was held at ZCB on 23 May 2018. The objective was to bring together bright minds to give talks related to the successful implementation of BIM in real project and on a wide range of topics to accelerate BIM adoption. Six speakers presented their projects and the recorded video clips had been uploaded to CIC's BIM Portal. The next BIM Talks would be held at the Hong Kong Academy for Performing Arts on 29 August 2018. Online enrolment form was available at the BIM Portal.

### 4. BIM Portal

AHKK presented the updated information in CIC's BIM Portal since its launch on 30 April 2018. Members were requested to provide useful information they had to CIC for sharing with the industry, including information on BIM events, BIM standards and guidelines (local and overseas), good showcases on BIM, and BIM Objects. Members were welcome to provide feedback to CIC for further enhancement of the BIM Portal.

**Members**

### 5. Survey of BIM Training

To understand the status of BIM training (in degree courses or higher) in the local higher education institutions, a survey questionnaire was sent to the AEC related faculties on 10 Apr 2018. Key observations from the returns were as follows:

- Only the Hong Kong Polytechnic University (PolyU) offered BIM courses in Building Services (BS) discipline with 6 training hours. Other universities were encouraged to incorporate BS BIM training in their relevant programmes.
- The City University of Hong Kong (CityU) showed the highest adoption of BIM in their surveying programme.
- Only a few programmes such as BEng in Civil Engineering from the Hong Kong University of Science and Technology (HKUST) had incorporated BIM as an integrated subject in their courses. It would be useful if BIM collaborative capabilities could be introduced in all the universities.

### 6. BIM Adoption Survey

To obtain a basic understanding of Hong Kong's BIM adoption situation, apart from the planned BIM Adoption Survey which would be carried out in late 2018, CIC would first conduct a simple survey in August 2018. The simple survey would be aim to collect

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preliminary data in a short period of time. Members were encouraged to participate in the survey and distribute the survey questionnaire to their respective members.

## 7. BIM Related News

Members were updated about the following BIM related news:

### Local

- BIM Contract Alliance
- The Development Bureau's Revised Technical Circular on BIM

### Worldwide

- Artificial Intelligence (A.I.) for Construction Site Management (Holland)
- Standards for Classification and Coding of Building Information Model (China)
- BIM Models (U.S.)
- Autodesk & Esri Collaboration (U.S.)
- RIB and Microsoft Collaboration (U.S.)

AF pointed out that in order to make use of BIM technologies throughout the whole project life cycle, it was important for all stakeholders to be involved.

**All to note**

PHL expressed his worries in the development of BIM education among the tertiary education institutes. If the university students were not well trained on BIM technologies during their university studies, the training would need to be done by the industry upon their graduation. AF agreed and requested professional institutes to consider including BIM as one of the accreditation requirements for university courses.

**HKIA,  
HKIE,  
HKIS**

On behalf of the HKIE, CFPw replied that he would pass on the suggestion to the HKIE's BIM Committee for their consideration.

On behalf of the HKIS, SLC agreed to pass on the suggestion to the HKIS for their consideration.

On behalf of the HKIA, CSO replied that discussion had been held between HKIA and some of the local tertiary education institutes on the issue. Those institutes found difficulties in promoting BIM with lack of resources such as trainers and training facilities.

DCg pointed out that other training institutes such as the Vocational Training Council could also be an important supply of BIM personnel.

On behalf of the HKIS, SLC agreed such accreditation criteria arrangement and would pass the message to the HKIS for their consideration.

JCCp supported that including BIM as one of the accreditation criteria for those professional institutes would be helpful in accelerating BIM education development in universities. Besides, launching BIM related courses with Continuing Professional Development (CPD) hours could also attract young professionals to learn BIM technologies.

PHL emphasised again the importance of introducing BIM training to the tertiary education institutes.

On behalf of HKU, GgC replied his department had experience in organizing BIM management training, rather than modelling training for their students. However, students were not interested in such BIM training which was not specially designed for their disciplines. Also, universities usually have a tight class schedule and might not be easy to create a course solely on BIM topics. Instead, a feasible approach was to add BIM related content into the existing undergraduate courses but the teaching hours would still be limited.

On behalf of HKUST, JCCp mentioned that limited number of BIM trainers would be a major hurdle to overcome for increasing BIM training in universities.

On behalf of CUHK, SmF replied that the current BIM training being offered in the universities were usually different from the training required to meet practical industry needs. He suggested CIC and universities could explore to design tailor-made courses with appropriate content. AF agreed and suggested CIC to follow up on the issue.

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FI suggested CIC to increase the 2019 Budget in the promotion area so as to benefit more practitioners in the industry.

In essence, AF agreed on the importance of including BIM education in the existing syllabus of undergraduate programmes. On the problem of lack of training resources, AF suggested that the institutes and universities could seek help from CIC, and CIC would render assistance to the industry and tertiary institutions. As regards follow up actions by HKIE, these should be generally confined to Civil, Structural, Geotechnical Disciplines and M&E/Building Services Disciplines instead of all other engineering disciplines for the time being.

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## **2.6 Task Force on BIM Training**

Members took note of the Paper CIC/BIM/P/006/18.

CtCg briefed Members on the progress of the work under the Task Force on BIM Training. Since the last Com-BIM meeting, two Task Force meetings had been held. In the meetings, Members reviewed CIC's existing BIM training and explored ways to execute the Com-BIM approved BIM Training Roadmap.

Three types of BIM training were proposed as below:

1. BIM Products Training;
2. Discipline specific BIM Training; and
3. Advanced BIM Training;

For products training, the Task Force suggested CIC to offer more types of BIM software training which had been included in the BIM Training Plan for 2019. The Autodesk Civil 3D training course had also been enhanced to incorporate members' suggestions.

For discipline specific BIM training and advanced BIM training, the Task Force proposed to send a letter to various professional institutes to invite them to organize disciplinary BIM training for their members. Invitation letters were subsequently sent to HKIA, HKIE and HKIS.

The Task Force had also suggested CIC to collect BIM models from the works departments for teaching purposes. CIC would liaise with the Development Bureau on this.

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Members raised no further comment. The progress report of the Task Force on BIM Training was endorsed.

## **2.7 Task Force on BIM Standards (Phase 2)**

Members took note of the Paper CIC/BIM/P/007/18.

JCCp briefed Members on the progress of the work under the Task Force on BIM Standards (Phase 2). Since the last Com-BIM meeting, one meeting has been held. Before the Task Force meeting, discussion was held with various stakeholders to understand more about the current needs in the market. Members then discussed and explored ways to implement the Com-BIM approved BIM Standards Development Plan in the Task Force meeting.

The following three types of BIM Standards were proposed by the Task Force:

1. Building Plan Submission;
2. Civil Engineering Discipline (Underground Utilities); and
3. E&M Engineering Discipline (for BIM Objects LOD 300 to 500).

For proposed BIM Standards on Building Plan Submission, the assignment brief on BIM Standards for General Building Plan Submission had been drafted and sent to Buildings Department (BD) for review. After discussing with BD's representatives, it was decided that the proposed BIM Standards be developed via two phases under one consultancy project. The first phase would focus on GBP submission. It was expected that after the first phase, a set of documents including topics such as presentation style and templates of related BIM software would be developed. The second phase BIM Standards would include standards for submission of other statutory plans such as structural plans, foundation plans and drainage plans.

For the proposed BIM Standards on Civil Discipline (Underground Utilities), discussion had been held with the relevant government departments. Key stakeholders involved were identified, including the Drainage Services Department, the Electrical and Mechanical Services Department, the Highways Department, the Water Supplies Department, the Airport Authority and the Lands Department. The key stakeholders would be further consulted on their requirements. The proposed BIM Standards would be aligned with the standards developed by the Hong Kong Institute of Utilities Specialist .

For the proposed BIM Standards on E&M Discipline (for BIM Objects LOD 300 to 500), as there were relevant BIM Standards developed by other stakeholders in the market, it was suggested that CIC could review the current standards and prepare a common standard for the industry. The proposed BIM Standards would make reference to the relevant BIM standards of China.

**All to note**

JCCp suggested to adopt GB standards on classification and coding for the BIM Standards on E&M Discipline. AF agreed on the suggestion and pointed out that most of the E&M equipment are manufactured in China which follow the GB. Members agreed.

**Task Force**

JCCp suggested Members to share with CIC if their organizations had developed any BIM standards and BIM Objects.

JCCp added that the reason for choosing the Underground Utilities as one of the first BIM Standards in Civil Discipline was to align with the smart city development.

**Task Force**

AF suggested that other types of BIM Standards could be developed in parallel so as to speed up the process.

Members raised no further comment. The progress report of the BIM Standards (Phase 2) was endorsed.

## **2.8 Asia-Pacific Regional BIM Forum (cum Seminar) 2018**

AF updated Members on the Asia-Pacific Regional BIM Forum (cum Seminar) 2018.

The arrangement of the event has been confirmed as follows:

### Day 1

Wednesday, 26 September 2018

Venue: New World Millennium Hong Kong Hotel

| Time | Programme   |
|------|---|
| AM   | Inaugural Asia Pacific Regional BIM Group Meeting (Part I)<br>Overview of BIM development in Asia Pacific countries – sharing by government/public sector officials   |
| Noon | Lunch   |
| PM   | Inaugural Asia Pacific BIM Regional Forum<br><br>Case studies on the implementation of BIM technology in various territories<br><br>Showcase of the Integrated Use of BIM-GIS by HKGISA<br><br>Panel Discussion |

Day 2

Thursday, 27 September 2018

Venue: The Construction Innovation and Technology Application Centre (CITAC) of the CIC

| Time | Programme  |
|------|--|
| AM   | Inaugural Asia Pacific Regional BIM Group Meeting (Part II)<br><br>The way forward and work plan of BIM adoption |
| Noon | Lunch  |
| PM   | Visit to BIM Centres in Hong Kong (CIC, Hong Kong Housing Authority & Airport Authority Hong Kong)               |

AF added that a post-event report would be prepared by a consultant.

Members were invited to attend the event.

**Members**

## **2.9 BIM development in Buildings Department**

YPM presented a progress update on BIM development in the Buildings Department.

## **2.10 BIM & 3D Spatial Data Integration**

BCSb gave a demonstration presentation on Lands Department's project on BIM & 3D Spatial Data Integration.

AF suggested CIC to arrange a meeting with the Lands Department and the Planning Department to better understand the development work being carried out by the two departments in their BIM-GIS integration work.

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## **2.11 Any Other Business**

AF updated Members on CIC's work on BIM accreditation. In the last Com-BIM meeting, certification of BIM personnel and accreditation of BIM training courses were mentioned as key focus areas for CIC to establish itself as a Centre of Excellence for BIM. Preparation work was in progress and the certification and accreditation scheme was targeted to be launched in 2019. Related consultation forums would be held later this year and Members were invited to attend.

To get the best benefit from CIC's coming BIM Year, Members were invited to:

**Members**

- Participate in CIC's BIM events such as BIM Talks and BIM Conference;
- Participate in the CIC's BIM related assessment panels as panel members;
- Contribute to the content of BIM showcases in the second BIM centre when it is established;
- Share their BIM related R&D work and results;
- Provide suggestions on the BIM standards development; and
- Update CIC and committee members on any BIM activities they plan to organise to avoid clash of dates

## **2.12 Next Meeting**

The 3<sup>rd</sup> meeting in 2018 would be held on Tuesday, 4 December 2018 at 2:30 pm.

**All to note**

There being no further business, the meeting was adjourned at 5:50 pm.

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**September 2018**