

# 4<sup>th</sup> RT meeting@Beijing tentative summary



# National reports

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- Greetings (Dr.Ni Jiang Bo(CIC,PRC), Prof.Minagawa(JSCE) and Mr.Kadomatsu(JACIC))
  
  - Dr. Aoyama (Japan)
    - Innovation promotion scheme focusing on ICT applications
      - common platform (geospatial information platform, XML, register etc.)
    - Promotion strategy of intelligence construction system
    - CALS/EC New Plan (AP2008)
  - Dr.Choi (Korea)
    - U-city and LBS (MLTM), New IT Strategy (MKE)
    - CALS for construction projects
    - “buildingSMART”, BIM
  - Dr.Maizura (Malaysia)
    - R&D construction industry master plan
  - Prof.P.Hsieh (C-Taipei)
    - 4D simulation, Robotics, Migration from 2D to 3D.
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# WG reports

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- Databook WG (by Shibasaki, Kawanai)
    - Revision for “databook 2007”
      - Need to provide explicit definition for each comparison items
    - New possible comparison items for comparison
      - “e-monitoring”, “new technologies”, “national project examples”
    - How to evaluate progress, outcome and impact of IT applications incl. standardization?
      - Cost/benefit analysis?
  - Terminology WG (by Dr.Akiyama)
    - Multi-linguistic dictionary: China, C-Taipei, Hong Kong can be added.
    - Mapping among different terms through English terms.
    - “conceptualization-based” terminology is needed for BIM etc.
      - New work items?
  - Virtual construction group (by Prof.Yabuki)
    - PBL, VDT, Organization model, process models
    - New work items?
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# New topics

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- ❑ Japanese construction by-product resource information system (Mr.Nakamura)
  - ❑ BIM model in Korea (by Prof.Kim)
  - ❑ Standardization for BIM (by Prof.Terai)
  - ❑ IT education in the construction field at University Level (Prof.Minagawa)
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# Presentations on Construction IT, China

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- IOC introduction (Dr.Hao)
    - e-gov for MOHURD
  - Olympic construction by IT (Prof.Ma)
    - Monitoring system
    - ePIMS+
    - 4D modeling
  - R&D on building engineering software (Prof.Chen)
    - PKPM
    - Broad applications of PKPM in construction projects.
  - Beijing Municipal Construction Information Center (by Mr.Xie)
    - Data sharing for supervision of building activities
  - R&D for Construction project quality and safety supervision management information system (by Mr.Yuan)
  
  - Earthquake Relief Works by MOHURD (by Mr.Hao)
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# Topics?

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- How to cope with or adapt to the international standardization activities associated with 3D and 4D models?
  - IT Education for civil and building engineering students?
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# Model associated discussion record

- Prof.Yabuki
- Technical
  - Integration of issues
  - How cad data really integrated for process models?
  - How integration can be achieved?
    - Column, beam design by architect
    - Height and section area for Structural analysis need to be converting from the architect design results.
    - Connection of members rigid or pin not represented by original design data
- Financial
  - Cost/benefit analysis
- Educational or training
  - Require high level expertise to use
- Human or organizational factor
  - Conservative mind sticking to the traditional way of work

# record

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- Prof.Ma
  - Research
    - to demonstrate the feasibility, show the effects.
    - To make people recognize
  - Need to select suitable area for 3D and 4D technology
    - Daily routine works may not be suitable.
  - Prof.Hsieh
  - New requirements
    - Sustainable development; new analysis targets
  - Life cycle: making 3D and 4D model more competitive.(Prof.Ma)
    - Ecologic community or eco-sensitive community
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# record

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- Asia situation: ISO standard for gov. to get involved.
  - Need to provide Statement
  - To adapt BIM and 4D models for the better future of construction industry.
  - So far, no working standards; local validation, unicode, need to establish standard documents
  - More automation is obvious in manufacturing fields.(Hsieh)
    - Integration, automation and sustainability: industrial trends
    - Think big, start small and act now
    - Workshop
  - Pilot projects? Not optimistic (Terai-sensei)
    - No Need to change.... How to push?
  - Study on non-technical aspects, management, application of technologies. (Prof.Ma)
  - IAI started in 1994. Cost estimation by keeping using 2D drawings.
- Country should help IAI to achieve higher level of integration etc.
  - Reduction of embedded cost

# Activities?

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- Workshops? Publication of Books (strategic guidance on BIM model applications for construction projects??)
  - Recommend national strategy for better “integration, automation and sustainability”.
  - “Asian product and process modeling conference”
  
  - Japan case?
    - BIM-like application?
    - How to adapt to the existing standards based on “2D” technologies
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# Follow up activities

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- Telecon among volunteers to keep moving.
    - Conference, workshops?
    - Publications?
    - Pilot projects?
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# Terminology WG

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- How to develop?
  - Common platform and increase visibility : Wiki
  - Who operate the wiki systems?
  - Collect/create public-domain dictionaries.
  - Identify synonyms, linking terms.
    - Who will do?
    - How to record, manage the links?
- How to use?
  - Support model integration?
  - Support data discovery and mining?
- Members: need to recruit more volunteers.
  - Prof.Terai, Prof.Kim, Mr.Akiyama, one from Prof.Li's lab and any others?
- Funding?
  - International project funding bodies like NSF.

# Data book

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- Complete data book 2006
    - Need your input
    - Need editing works
  - Revise for 2007 version
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# New common topic 1: model

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- How to promote model-based engineering?
  - Virtual construction: a kind of umbrella
  - Generic model for AEC: a basis of developing detailed ones.
  - Who develop models? Volunteers?
    - Who pays for product model development?
      - Change procurement system?
      - Change information management in public sectors?
    - How to add or create values with models?
      - How to expand from architectural buildings to civil engineering structures
  - Collect success stories, highlights.**
    - Anticipate technical challenges
      - Integration of heterogeneous models
      - Model registry
  - Who leads? Prof.Heng Li and Prof. Yabuki, IAI (Yamashita-san)
  - Use teleconferencing system
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# New common topic 2:

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- Geospatial information
    - International comparison of NSDI policy and Geospatial information market?
    - Technical aspects:
      - Integration of CAD and GIS?
      - System level, data model level etc.
  - “Collaboratory”: Virtual environment for experiments.
    - Data model? (experiment data, analysis results, lineage etc.)
  - Ubiquitous computing
    - Connecting virtual and real world
    - Promoting any experiment in construction sites?
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# Outreach activities

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- Special sessions or at least presentations in international conferences
    - ICCCB@Beijing
  - Special issues?
    - Automation in construction
      - 9 papers are needed.
  - Invite experts from other (e.g. manufacturing) industries:  
Yammashita-san
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# Next venue

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Tokyo?

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# Any other business?

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