

Promoting Commissioning Process in Japan

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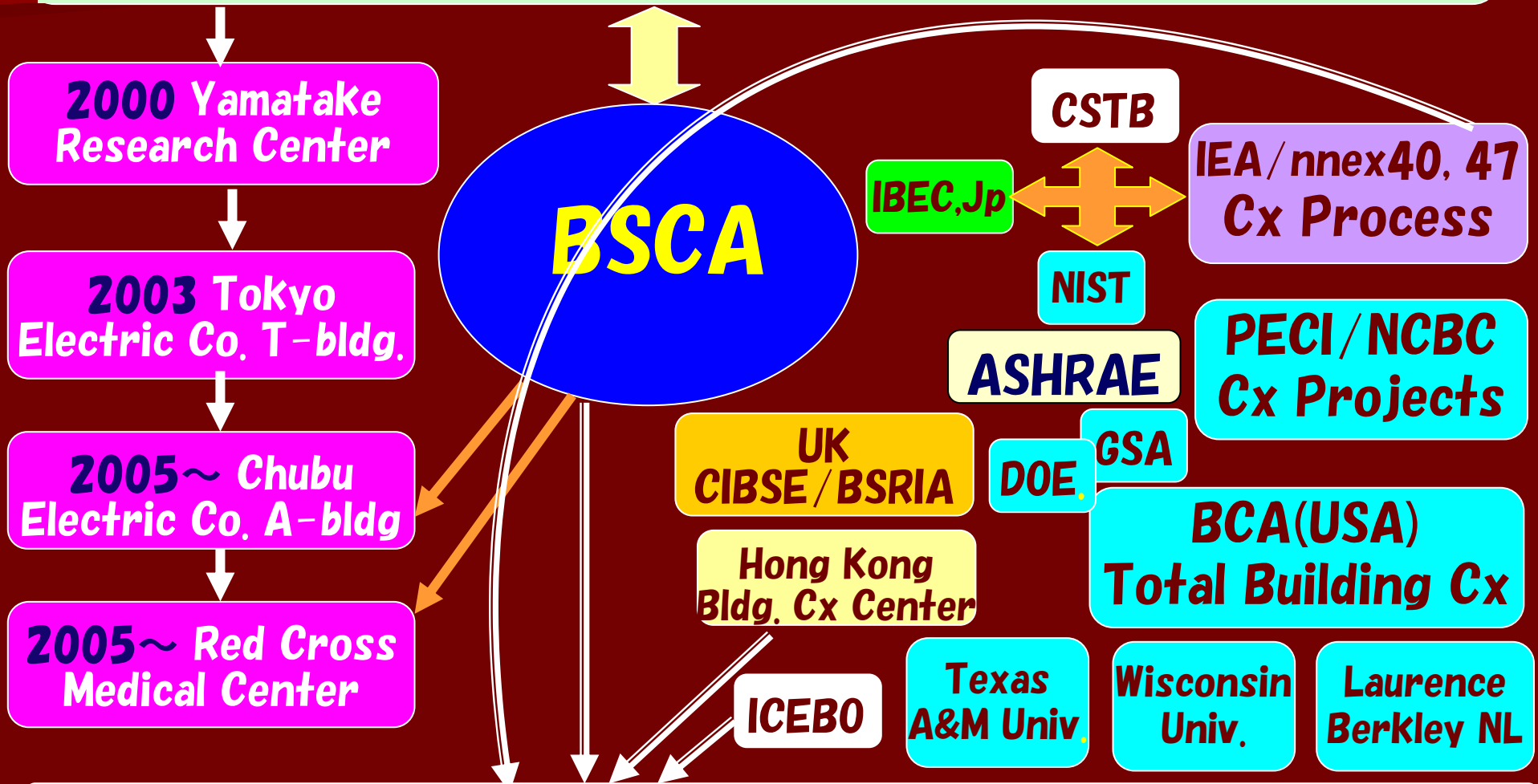
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- **Introduction and Background**
- **Activities for Promoting Commissioning Process**
 - *SHASE Activity for Commissioning Guideline*
 - *IBEC Activity for IEA/Annexes*
 - *BSCA Activity for Promoting Commissioning Business*
 - *Commissioning Projects before BSCA*
 - *Commissioning Projects after BSCA*
- **International Activities on Building Commissioning**
 - *Participation to NCBC*
 - *IEA / Annex 40 and 47*
 - *APCBC and HKCxC*

Commissioning Map, Japan and World

SHASE

BEMS Committee → Commissioning Committee



Asia Pacific Conference on Building Commissioning

Social Backgrounds

- Vain nostalgia for virtuous way of thinking
- Immature social recognition on Cx
- No monetary incentive for Cx implementation
- Strongest vested rights of A&E license
 - First class architectural engineer (A&E), different from international trend on A&E licensing system
- Unclear definition of TAB or TAS
 - No specified occupation for TAB works as in USA
- Owners' lack of understanding / neglect on O&M's role and operating energy / cost at program phase

SHASE Activity for Commissioning Guideline

- Cx WG, BEMS Committee, 1997
- Commissioning Committee, 1999~
- Commissioning Process Guideline, 2005
 - Guideline
 - Tools
 - TAS and FPT
 - MQC (Model Quality Control)

SHASE Guideline on Cx Process

- 1. Object of the guideline
- 2. Scope
- 3. Definition of terminology
- 4. Various Cx process and applications
- 5. Organization and role sharing
- 6. Cx points at program and design phases
- 7. Cx points at elaboration phase
- 8. Cx points at construction phase
- 9. Cx points at post-acceptance step
- 10. Cx points at operation phase

SHASE Guideline on Cx Process...continued

- References
- Annexes:
 - Annex-1 Division of Cx process phases and steps, marking event at the division, principal procedures and kinds of commissioning process
 - Annex-2 Detailed explanations of standard flowchart of procedures for Cx process
 - Annex-3 Organization for Cx process
 - Annex-4 Model quality control matrix, MQC
 - Annex-5 Responsibility of CA and CRP
 - Annex-6 Relationship among documentations for Cx process
 - Annex-7 Model document of RFP on Cx process
 - Annex-8 Model document of Cx plan
 - Annex-9 Division and responsibility among TAS and FPT
 - Annex-10 Definition and explanation of terminology
 - Referencing documents (28 model documents and templates)

Actual Projects of Initial Cx Process

■ Yamatake Research Center

- The first approach
- Small and short term construct, but complicated systems
- Begins at construction phase and continued continuous Cx three years after completion.
- Obtained knowledge and data were sent to SHASE committee for establishing guideline.
- Recognized importance of Cx of Program and Design phases.
- Actual amount of Cx works was analyzed.
- CA first experienced FPT.



Actual Projects of Initial Cx Process

■ Tepco Tachikawa Building

- Based on research activity for establishing in-house Cx procedures for Power company
- Large but limited floor HVAC and energy system was targeted.
- Begins at construction phase and continued for two years after completion.
- Created model documents and templates for implementing Cx process.
- Three levels of quality in Cx process was classified.
- Each procedures was discussed among research committee.



Actual Projects of Initial Cx Process

■ Red Cross Medical Center

- First and complete HVAC and energy system Cx., by BSCA.
- Large and complex medical facilities
- Begins at program phase and now at the design development stage
- Optimal energy system selection was also asked to propose and commission as a specialized task in addition to performing normal Cx process.
- Design professional had been already determined when Cx was asked to take charge.
- Documenting Owner's program and OPR was the first work to set.



BSCA, Japan

Building Services Commissioning Association, NPO

- Established in August, 2004, as NPO.
 - Corporate (supporting) members: 14 and
 - Individual members: 90, in April, 2006
- Main Activities
 - Establish practical guidelines, model documents and templates contracting provision, fee standard, etc.
 - Development of practical Cx tools
 - Social enlightenment through lectures and literatures
 - Propose/establish qualification and certification
 - Education and training for Cx engineers
- Contracting research and/or actual Cx projects, in order to take advantage for establishing technical infrastructures as above

SHASE and BSCA, Work Sharing

- SHASE Cx Committee proposed the board of directors that further activity for commissioning should be viewed as the society.
- SHASE board of directors admitted the proposal after studying possible work sharing and scope of cooperation.
- Basically the same term would be used but SHASE stands on academic stance and BSCA stands on practical business stance.
- Thus SHASE and BSCA will make effort to bring up commissioning business and provide either standards and tools to the market.
- It should be noted that both government aid and social recognition are very poor, but that practical engineers' minds desperately welcome the idea.

An idea for qualification system

- BSCA is viewing to initiate Cx qualification activities in fiscal 2006.
- Three stages of licensing is considered in my brain.
 - CxAC Candidate, who is the candidate for CA when selected as an independent Cx manager for a specific project
 - CxPE, who is the candidate for CxA after fulfilling required experience, and expert for Cx technology together with a certain level of managing capability
 - CxTE, Who will be the candidate for CxPE, but rather the field technician working under CxPE
- It should be noted that no specialized TAB engineers ever exist in Japan in contrast to USA.

Viewing international conference for Asia Pacific

- Asia Pacific Conference on Building Commissioning, APCBC has been planned to kick-off in Shenzhen in Nov. 6-8, together with
 - Annex 47, IEA/ECBCS
 - ICEBO 2006
- HKBCxC, Hong Kong Building Commissioning Center, is to co-sponsor and other bodies from mainland China and Asian countries are expected to participate.
- Commissioning bodies such as PECI, BCA, etc. in USA are desired to participate in this conference.

Thanks for Your Attention!

- Join us BSCA membership, if you are interested in Asian Cx market, though poor now, but prospective in the future.
- Join the ICEBO 2006 and APCBC, a joint conference.
- Let us enhance international cooperation, exchange information and technologies on building commissioning.