

**2ND ASIAN FORUM (January 21-23, 2003) ON:
Region-specific issues related to built-environments and housing in Asia – Singapore**

Speaker:

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Title of paper:

Singapore Construction Information Standardisation Initiatives: Classification of Cost & Resources

Abstract of paper to be presented:

1. Nature of the Construction Process

a. The construction process is characterised by:

- A large number of participants from different backgrounds who co-operate to achieve the specific aims of a particular project
- A construction activity comprises a series of interrelated subtasks performed by small groups of practitioners, and the tasks are generally undertaken in an atmosphere of uncertainty, in different geographical locations and under varying organisational circumstances.
- The groups work towards achieving the same objectives under identical time and financial constraints, they all start from the same basic information about the client's requirements.
- A substantial amount of additional project information is generated in the course of work
- Owing to the inter-dependent nature of the tasks the results of one team's effort constitute inputs to those of another or other group(s); several channels of communication are required.

b. In summary:

Breakdown in communication can be attributed to construction practitioners having different backgrounds and interests...; the large volume of information generated and the variety of formats in which the different participants require them act against effective communication.

2. Information Standardisation

a. Why standardise?

- Unorganised information is difficult if not impossible to access and is therefore as good as lost. On the other hand, properly organised information store, based on a common language guarantees timely access for users and speedier transmission and exchange.
- Organised and freely accessible information would optimise the deployment of scarce manpower for increased productivity and help to make our highly diversified and fragmented construction industry more efficiently. It also allows for interoperability between/among firms.

- b. Two key attributes of a useful information classification system are:
- Common public domain information classification standards used and understood by as many as possible on a national or international basis.
 - Be capable of supporting communication in all the three generic channels of communication between:
 - Man and Man
 - Man and Machine, and
 - Machine and Machine

3. Singapore Standards for construction industry for the IT age

- Beside the many Standards in-place for construction industry i.e. materials/products, work standards, safety standards etc; the formation of the Construction Industry IT Standards Technical Committee (CITC) in 1998 is an industry effort to prepare the Singapore construction industry for the IT age of the 21st century.
- CITC's mission:
 - To establish an industry-wide framework for the development and adoption of IT standards in the construction area.
- Some of the developed Singapore Standards include:
 - SS CP80; 1999 – Classification of Construction Cost Information
 - SS CP 83: 2000 – Implementation of Computer-aided design (CAD) Standards
 - Part1: Organisation and naming of CAD layers
 - Part 2: CAD Symbols
 - Part 3: Organisation and naming of CAD files
 - Part 4: CAD Drafting conventions
 - Part 5: Colour and line type
 - SS CP 93: 2002 – Classification of Construction Resources Information

4. This paper only addresses the following:

a. SS CP80; 1999 – Classification of Construction Cost Information

This Standard comprises:

- An Elemental Classification
- A Work Section Classification
- A Mapping Dictionary for CAD layer and elements – CP83 (Part 1)
- A Mapping Dictionary for elements
- Guidance Notes

b. SS CP 93: 2002 – Classification of Construction Resources Information

This Standard comprises:

- National endorsement of CSI MasterFormat (1995 ed)
- National Amendment (Note: This is to highlight deviations and to suit local use)