

CIB-W78 Workshop, Toronto, Canada, 7th -8th May 2004

You are invited to Submit Position Papers to

CIB W78 2004 Workshop on

“Integrated Systems to Support Sustainability”

Hosted by: **Construction Engineering Group, University of Toronto**

Friday 7th May and **Saturday 8th May 2004**

In conjunction with the

CIB Triennial World Building Congress (2nd - 7th May, 2004).

There is a growing interest in assuring sustainability (environmental, social and economic) of buildings and civil infrastructure (highways and utilities). By its very nature, sustainability is a multi-disciplinary field that requires integrating expertise and input from various jurisdictions. Neo IT tools, such as the semantic web on the softer side and grid computing on the harder side, are poised to propel knowledge management beyond the simple exchange of files and data and to promote a working environment that includes fully integrated designs, lean construction, interoperability, sustainable infrastructure, coordinated construction and optimized operation and maintenance of facilities.

CIB decided to make sustainable construction a focal point in the period leading up to the 1998 World Building Congress. A followup to the Congress was a CIB declared goal "a global collaboration to attain a sustainable future in the construction sector". "Agenda 21" is the result of that effort with its three main objectives related to sustainability: (1) create global framework and terminology, (2) create an agenda for CIB activities and coordinate this with CIB partners, and (3) provide source documents for defining R&D activities.

Achieving this goal will require a shift in the current construction IT research strategies. The new focus should be on coordinated **knowledge management** through developing interoperable **systems** to address the needs for **integrated decision support** in order to optimize projects in traditional views (costs and schedules) as well as from the sustainability perspective. These systems span the following fields:

- Common data structures that assure web-based flow of information. This includes data modeling, data exchange standards, ontologies (for example, defining sustainability and virtual team architectures) and B2B/B2C/B2G, G2C taxonomies.
- Advanced process management systems to support coordinated input of all interested fields: including, process description languages, reconfigurable process modules and virtual team communication protocols.
- Policy analysis and optimization (especially in the infrastructure domain) including asset management strategies, optimization of public investments and involvement of communities in project development.

Objectives of the Workshop

- Analyzing IT-oriented research strategies (and needs) to support integrated sustainable facilities
- Drafting a space-map of needed actions based on the lessons learned.

Workshop Format

Experts (8-10) will be selected to submit position papers in the aforementioned fields from those who have submitted abstracts. The position papers will be distributed electronically to the workshop registrants prior to the event. The authors will also be asked to present these papers in the workshop. Another pool of experts has been

selected to facilitate discussions after relevant sets of presentations. A final session will be held to draw the best practice and draft the space-map. The papers and the results of the workshop will be posted at the UofT construction group web site and will be published within one year in a peer-reviewed journal.

This CIB W78 2004 Workshop will be held in conjunction with the CIB World Building Congress (www.cib2004.ca) in Toronto (May 2 - 7, 2003). As such, many experts will be on location in Toronto and authors of the position papers will not be remunerated for travel expenses. However, they will receive free registration to the Workshop.

The first day of the CIB W78 2004 workshop will take place at the University of Toronto facilities in the downtown area and close to the CIB World Congress. The second day of discussions will take place at a retreat outside Toronto. Additional fees will be kept to absolute minimum and will be communicated no later than January 15th, 2004.

Important Dates

Paper topic & 1 page Abstract: December 15st, 2003 (approval notice by January 15th, 2004)

Full Papers: March 1st, 2004.

For paper submission and further information, contact: Prof. Tamer E. El-Diraby,
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