

## Parallel Session 10

Main Theatre, Bldg. 17

**Session 10: Product Data Technology in the Construction Industry (2) -**  
Chaired by: Dr Robert Amor, Building Research Establishment, UK.

- 13.45 **An Open Flexible Distributed Architecture for Large Scale Engineering**  
*Alain Zarli, Olivier Richaud, Virginie Amar, (CSTB, France)*  
New information and advanced computer technologies today provide relevant powerful and reliable tools for PDM, enhancing companies business processes. Nevertheless, their deployment in Inter/Intranet environments becomes increasingly complex. This paper investigates these technologies together with their possible interworking, and suggests an open and scalable 3-Tier architecture, business objects, and generalised plug-ins.
- 14.15 **Business Factors Affecting Information Modelling of Shared Data for Large Scale Engineering Projects in Construction**  
*Dragana Mitrovic, Steve Male, (University of Leeds, UK), Ian Hunter, (Taylor Woodrow, UK)*  
The paper describes the key characteristics of a typical LSE project information flow, highlighting business related and project related factors which affect information modelling of shared data. It also presents evaluation of the project and product models investigated in a series of case studies and the implications for the information modelling in order to achieve electronic data shearing on LSE projects.
- 14.45 **A Mapping Study**  
*Wille Nordqvist, Robert Noack, (Royal Institute of Technology, Sweden)*  
A method for exchange of information, between CAD and an indoor climate and energy simulation system is presented. The method is based on STEP technology using EXPRESS schemata to represent the conceptual models, and STEP files for data storage. Finally, the mapping is processed by means of EXPRESS-C code, an upward compatible extension of ISO is EXPRESS.
- 15.15 Refreshment break (in exhibition area)

## Plenary Session 12

Main Theatre, Bldg. 17

**Session 12: New Concepts in Product Data Technology (2) -**  
Chaired by: Hans Teijgeler, Fluor Daniel BV, The Netherlands.

- 15.30 **The funSTEP Project – Objectives, Developments, and Results Achieved**  
*Ricardo Gonçalves, (UNINNOVA, Center for Intelligent Robotics, Portugal)*  
FunSTEP is a European ESPRIT IV project with the aim to develop an integrated STEP based environment for the manufacturer-customer integration, and for the support of the information flows management in the factory. This paper will present the industrial objectives, developments and results achieved so far, describing the industrial impact on the furniture manufacturers, customers, and systems suppliers.
- 16.00 **The Development of a Standard for Product Knowledge Reuse and Sharing within KBE Systems**  
*P Sainter, Dr S Kneebone, Dr K Oldham, (Knowledge Based Engineering Centre, Coventry University, UK)*  
In recent years, there has been a movement from product information to product knowledge systems. At the moment there is no inexpensive way to reuse or share this product knowledge. This is due to the fact that there is no standard for the reuse and sharing of product knowledge. This paper discusses the proposed development and reasons for the development of a standard.
- 16.30 **Implementing Concurrent Engineering in the Tendering Process of Building & Construction**  
*Graham Storer (Taylor Woodrow, UK), Pekka Valikangas (IVO Power Engineering, Finland) and Lennart Klintmalm (Skanska, Sweden)*  
An industry perspective on the Brite-EuRam project CONCUR in which Product and Process Data Technology is used to integrate information created and shared in the construction tendering process. First year project progress and plans for future work prior to deployment trials in 2000 are reported. Anticipated industry benefits are assessed and quantified.
- 17.00 **Closing comments**  
*Hans Teijgeler, (Senior Manager Information Systems, Fluor Daniel BV, The Netherlands)*
- 17.10 **Conference ends**

## Parallel Session 11

Environmental Theatre, Bldg. 16

**Session 11: In Consideration of Standards -**  
Chaired by: Dr Jon Owen, University of Newcastle upon Tyne, UK.

- 13.45 **Macro Expression for EXPRESS Constraints of STEP Application Protocols**  
*Hiroyuki Hiraoka, (Massachusetts Institute of Technology, USA)*  
Macro expression for EXPRESS, the formal specification language for STEP, is proposed to help writing constraints, which is one of the difficulties in developing STEP Application Protocols. The macro expression is designed based on the dominant patterns identified from the investigation of constraints in the current STEP APs. A prototype program is developed which converts the macro into EXPRESS constraint.
- 14.05 **An Application of STEP Technology to Support BPI**  
*Alison McKay, Jim Baxter, Susan Bloor, (University of Leeds, UK)*  
This paper will explain how the STEP application protocol development methodology, when used in conjunction with resource models that support the description of process rather than product, can facilitate the provision of information support for 'Business Process Reengineering' processes. Experiences from the development of an early prototype that supports 'Business Process Improvement' activities will be reported.
- 14.25 **New Approaches for Tool Integration in the Development Process**  
*Mathias Grasmann, Winfrid Schneider, Prof. Jürgen Gausemeier, Lars Seifert, (Heinix Nixdorf Institute, University of Paderborn, Germany)*  
Accelerating product development while increasing product quality forces companies to join in virtual enterprises. User oriented integration of CAE-systems is the key element for realising the required infrastructure to support a continuous information flow. This paper presents a concept to reach the goal of integrated engineering systems as a basis for a successful competing in the world of virtual enterprises.
- 14.45 **Proof Planning: Methodology for Product Configuration**  
*Michal Pechoucek, (Czech Technical University, Czech Republic)*  
The paper discusses possible utilization of distributed artificial intelligence in the area of project oriented production modelling. A multi-agent system of a three-level architecture (planning, managing, and production) has been proposed. We advocate using proof planning, the theorem proving methodology, to address the problem of complexity explosiveness of the project design and configuration at the planning level.
- 15.05 **Discussion session**
- 15.15 **Refreshment break** (in exhibition area, Bldg. 17)

### Note:

This session (Session 11) is the last to be held in the Environmental Theatre.  
Please take all your belongings with you when you leave.

- ☛ The final session of the conference is a plenary session (Session 12) held in Main Theatre (Bldg. 17) after the refreshment break.

## Social Event 25<sup>th</sup> March

An informal social event is planned for the evening of **Wednesday 25<sup>th</sup> March**. Details are not confirmed at time of printing this Programme, but cost will be £30 per person and will include meal, drinks, and transport. All delegates are encouraged to attend as this event will provide a good opportunity for informal networking. Partners and friends are welcome.

Delegates wishing to attend this event should tick the appropriate box, and indicate number of people, on the attached booking form. Payment should be included with delegate payment.