Parallel Sessions 3 & 5 — Main Theatre, Bldg. 17

Session 3: Product Data Technology in the Construction Industry (1) -
Chaired by: Dr Fikry Garas, Taylor Woodrow Construction, UK.

13.30 Obtaining Quality Manufactured Product Information Through ARROW
Dr Robert Amor, (Building Research Establishment, UK)
ARROW is a UK initiative which can provide access to any construction manufacturers product information through virtual warehouses. This enables designers and specifiers to correctly identify products which match the parameters of their particular design. Benefits of this approach will be reduced abortive design work and reworking, designs that can be constructed quicker, greater use of off-the-shelf components, savings in cost, etc.

14.00 The GENIAL Project: the Common Semantic Model - a Critical Gateway Towards Intelligent Data Access
Philippe Debras, Dirk Hagemann, Zsolt Pocsai, Dirk Stumpf, Lars Seifert, Jin-Kang Gui, (Fra., Ger., & Finland)
The project aims at elaborating a software infrastructure that will comply with the new trends of manufacturer-supplier relationships, allowing component information and services to be rapidly and cost effectively brought to the designers desk. Within this infrastructure, the Common Semantic Model assesses an homogeneous publishing and retrieval of information whether it relates to classifications, users, products or services.

14.30 Concurrent Engineering Support with an Advanced DMS (with live demonstration)
Mike Clift, Dr Robert Amor, (Building Research Establishment, UK)
This paper reports on the DMS development in the ToCEE project (Towards a Concurrent Engineering Environment) in the context of its support for concurrent engineering. The story-board described in this paper highlights how a DMS could be used within the life-cycle of a project to engender concurrent work practices. This includes not just parallel working, but the DMS's support for co-operative and collaborative working practices.

15.00 Refreshment break (in exhibition area)

Session 5: Product Data Technology in the Process Industries -
Chaired by: Stuart Lord, ICI Technology, UK.

15.15 Process Plant Engineering – an Integrated Approach
N Raman, Satish Kumar, (Engineers India Ltd, India)
This paper deals with the concepts evolved for an integrated approach in the total engineering design and projects execution of Process Plants. This is being achieved through transfer of information flow from basic and detailed engineering to Procurement Process, Construction Management and Project services, using various IT tools, application software packages, LANs/WANs, and Enteprise Intranet. Automation of piping material procurement process starting from P&ID stage to construction phase is a typical case.

15.45 Information Exchange Between Electric Power Systems: Achievements within the ELECTRO-NET Project
Dr Thomas Dreyer, Prof. Dr. Rainer Bacher, Dirk Lambrecht, Dave Brown, Dr Ali Azarian, (Ger., UK, & France)
The Electro-Net project is aiming to improve information exchange between high voltage electrical power systems used for planning studies and operational analysis. As a first step, existing standards have been reviewed and one of them, the German DVG standard, has successfully been mapped to existing structures of STEP AP212, namely the UOFs allocation, classification, function, installation, item designation and properties.

16.15 An Activity Model for Process Plant Operations
Tetsuya Wada, (Japan Energy Corporation, Japan), Ming Liang Lu, H. S. Li, (Aigis Systems, USA)
The ultimate goal of STEP effort is to organise an efficient operating team and configure a suite of integrated tools. To support this, a novel activity model for process plant operation has been developed. The top level distinguishes normal and abnormal situation handling through a constant monitoring, which are then further decomposed into operational decision making and action executions.

16.45 The world's first operational POSC/Caesar data warehouse
Ewan Botterill, Anne-Marie Walters, Steve Wilson, (Intergraph, UK)
This paper covers the first successful implementation of a data warehouse using the POSC/Caesar Product Data Model and Reference Data Library. The project integrates technical product data held in a POSC/Caesar data warehouse with commercial and operational data held in SAP. The paper will include a demonstration of the warehouse and the integrated data, and will show the practical use and benefits achievable by engineers, plant maintenance and operational people alike in the oil and process industries.

17.20 Closing comments and finish

Parallel Sessions 4 & 6 — Environmental Theatre, Bldg. 16

Session 4: Product Data Technology in Manufacturing (1) -
Chaired by: Alain Bezos, Association Goset, France.

13.30 The Concept of View in Parts Library – an Integrative Feature for the Design Process?
Andreas Ort, Peter Dietz, (Techncal University Clausthal, Germany)
The paper is an analysis of the feature of views in the ISO 13584 "Parts Library" standard. It investigates the possibilities to use this feature in the design process with respect to design support methods. The paper shows also documentation and feedback strategies in the design process using the power of parts library.

14.00 Analysis of Human Perception of the Real World – APEX
Ben Marx, (TU Darmstadt, Germany), Dr Francisco Sastrón, (Universidad Politécnica de Madrid, Spain)
The APEX project aims at the underlying mental processes of conceptual modeling with EXPRESS. It develops an evaluation tool that collects empirical data about reaction and modeling times, the creation process, and the congruence of the actually created models. The tool is embedded in an EXPRESS tutorial system written in Java and accessible via web.

14.30 Standardisation of Industrial Manufacturing Management Data: The MANDATE (ISO 15531) Approach
A F Cutting-Decelle,(UdS, France), J Deuse, (WZL, RWTH, Germany), Jean-Jacques Michel, (CETIM, France)
This paper describes the work undertaken within the international standardization ISO TC 184/SC4 committee, on the modelling of manufacturing management (ISO 15531 MANDATE) and the results already achieved. It will also examine the benefits expected from the use of this type of standard (alone, and in relation with other standards) for the management and exchange of manufacturing information.

15.00 Refreshment break (in exhibition area, Bldg. 17)

Session 6: Data and Activity Modelling -
Chaired by: Prof Reiner Anderl, Technical University of Darmstadt, Germany.

15.15 Extending Activity Modelling in STEP Development
Ming Liang Lu, (Aigis Systems, USA), Tetsuya Wada, (Japan Energy Corporation, Japan)
To make STEP APs easier to be implemented in industrial applications, first, it is suggested to carry out an entire system modeling in which informaiton modelling should be carried out interactively with activity modelling.Then, several aspects of activity modelling have been analyzed and an activtity modelling guidelines has been presented. Finally, to extend IDEF0, we propose a hypermedia based modelling tool.

15.45 Product Classification and Breakdown Structure versus Data Modelling:
A Ship Mechanical System's Perspective
Dr Zabi Bazari, Dr D Radosavljevic, (Lloyds Register, UK)
Data modellers are faced with a significant diversity of breakdown structures and classifications of physical assets due to variant experts' viewpoints, obscure physical boundaries and lack of sound principles on development of breakdown structures. This paper elucidates the subject and identify the principles which could help to reduce the above problems, and suggests how to reduce the complexity of product data models.

16.15 RISESTEP: A User Driven Project to Develop a Platform for Product Data Sharing in a
Concurrent Engineering Context
Nicolas Figay, (Aerospatiale, France)
RISESTEP is one of the AIT projects dealing with the Integration platform. The main objective of this user-driven project is to test the feasibility of the sharing of distributed digital mock up units in an heterogeneaous environment using CORBA (distributed environments) and STEP (product data exchange AP214). The paper will present the final results of the project.

16.45 An overview of CIREP methodology
Donald Radley, Wolfgang Wilkes, Michael Balzer, Jens Broeking, (University of Hagen, Germany)
CIREP was set up to develop standardised procedures for describing electronic components in forms which could be integrated into corporate information systems. The CIREP project uses the standards ISO13584 and IEC61360 to establish direct information chains from component manufacturers to component users. CIREP has extended the standards by introducing CDILs (Component Class Item Lists).

17.20 Closing comments and finish