

**Product Data Technology Europe 1999**  
**8<sup>th</sup> Symposium**  
**13<sup>th</sup> - 16<sup>th</sup> April 1999**  
**Stavanger Forum, Stavanger, Norway**

*The Annual European Event for*  
Managers, Developers, and Users of Product data Technology

***Programme Announcement***  
***and Booking Form***

in conjunction with  
**POSC/Caesar Annual Conference**

supported by  
**ESCN STEP Seminars**

and the only European PDT conference  
**PDT Days 1999**

Continuing the work of  
**PDTAG-AM**  
Product Data Technology  
Advisory Group  
ESPRIT 9049



**This event is co-organised with the European Commission, DGXIII (Industry)**

## PDT Europe – a unique event

PDT Europe is an annual event which provides a unique focus for PDT technologists from different industry sectors. The 1999 event brings together **PDT Days 1999** with the annual **POSC/Caesar conference**, a day of **STEP training seminars** organised by ESCN (the European STEP Centres Network), and an **ESCN Cluster event** where representatives from key industrial sectors will discuss and comment on the current status and future implications of PDT and STEP in industry. PDT Days has always been recognised as the major European meeting point for the industrial and scientific community engaged in Product Data Technology, but with the addition of POSC/Caesar Association meetings, ESCN seminars, STEP demonstrations, an exhibition, and social events, PDT Europe 1999 promises to be the largest European PDT event.

## Product Data Technology

Product Data Technology includes all aspects of the defining and processing of information pertinent to a product throughout its development and operational life. PDT thus includes the entire product information required from early conception to eventual disposal of the product. PDT provides a unified perspective for all elements in this domain and offers a sound strategy for integrating and re-engineering the business processes related to the product through its entire life-cycle, leading to reduced costs and faster times to market.

PDT is strongly supported by the international STEP product data definition standards - ISO 10303 and ISO 15926, but it is by no means limited to the scope of STEP. The need for a concerted use of several existing standards and technologies (e.g. AP221, EXPRESS, XML, etc.) is recognised in the business community and will form an important theme for PDT Days, along with new technology and development initiatives such as FP5, IST, PROMISE, IIM, AIM, etc.

## PDTAG and PDT Days

PDTAG - the **Product Data Technology Advisory Group** was an 'Accompanying Measure' ESPRIT Project (no. 9049), whose goals included the promotion of European co-operation on Product Data Technology, especially in standardisation, the improvement of the European PDT infrastructure, and dissemination of information. PDTAG was a three year project which ended in July 1997.

**PDT Europe** (formerly called PDT Days) is an annual event held in a different European country each year, previously organised by PDTAG. Now the PDTAG project has concluded, the continuity of this highly successful European event is being maintained by QMS. PDT Days, within the **PDT Europe** programme, will continue to provide an opportunity for the business, industrial, and scientific communities to report, monitor, and discuss the increasingly rapid progress made in PDT methodologies and its industrial/commercial applications. Following the success of the PDTAG project as a whole, **PDT Europe** events will continue to provide a unique and influential platform to launch PDT developments into the marketplace which show tangible business benefits, and turn theory into reality.

## Conference objectives

The overall aim of **PDT Europe** is to raise awareness within industrial and commercial enterprises, of the business advantages that can be achieved by adopting and using modern PDT methods, and to share experiences on how measurable benefits can be realised. **Papers on new developments and current PDT implementations will be presented at PDT Europe '99**, which will be a unique a focus for PDT technologists from different industry sectors, world-wide.

## 4 day Programme for PDT Europe 1999

At **PDT Europe '99**, the 2 days of traditional PDT Days conference will be enhanced by other related conference initiatives to provide a unique 4 day experience of PDT and STEP training and awareness.

The full 4 day programme will be as follows:

### Day 1, 13 April

- ◆ POSC/Caesar Association annual meeting (a.m.)
- ◆ POSC/Caesar Association member meeting (p.m.)

### Day 2, 14 April

- ◆ POSC/Caesar Association member meeting
- ◆ 6 ESCN STEP Training seminars
- ◆ ESCN Cluster event with Industrial forum

### Days 3 & 4, 15 & 16 April

- ◆ **PDT Days** (*The traditional 2 days of PDT papers, with plenary and parallel 'technology or industry sector' related sessions*)
- ◆ **Break-out demonstrations showing STEP implementation to ISO 10303 and ISO 15926**
- ◆ **EC Project Reviews** (*Project members only*)

The 4 day conference event will be supported by an exhibition, and various social events. Delegates will be able to book for whichever combination of events suits their needs.

## Who should attend?

*PDT Europe '99 is for Managers, Decision Makers, Implementers, Developers, Project Engineers, and Engineering and Business Data Technologists, and all those involved in developing and introducing technologies such as Concurrent Enterprise, STEP, BPR, EDI, AIM, Data Warehousing, 'virtual offices', and other 'product data-dependent' business innovations.*

PDT Europe '99 is expected to attract more than 300 delegates from the major engineering business sectors of Process Engineering, Aerospace, Building and Construction, Automotive, Ship Building, Power Generation, Petrochemical, Electrical Engineering, Mechanical Engineering, and Manufacturing.

## Delegate Fees and Payment

For delegate fees and discounts available, see Booking Form attached to this Programme. Delegate fees include refreshments and lunch(es), delegate packs, and (for PDT Days) a copy of PDT Days Proceedings. In most cases, free coach travel to and from venue and hotels and Stavanger city centre is included.

To reserve your place at PDT Europe 1999 please complete the attached colour coded Booking Form and return to the local organiser, Stavanger Forum, as soon as possible. Payment may be made by cheque or credit card, or against invoice. Please complete attached booking form, indicating payment method, and return form to Stavanger Forum.

Bookings will be acknowledged by VAT invoice, together with venue location details, and hotel and transport details.

## For more information....

If you require more information about exhibition facilities, live demonstrations, associated events and meetings, or other promotional opportunities at **PDT Europe 1999**, please contact the **Organisers, QMS**, on +44 1252 878482 or Email [info@qmsstep.com](mailto:info@qmsstep.com)

If you want to know more about sponsorship opportunities, access, or accommodation details, contact **Stavanger Forum** on +47 51 598100 or Email [lmb@stavanger-forum.no](mailto:lmb@stavanger-forum.no)

## Break-out Sessions 15<sup>th</sup> & 16<sup>th</sup> April STEP Demonstrations – STEP Implementation

In addition to exhibitors' demonstrations, invited demonstrations of STEP implementations will be held at regular intervals during PDT Days part of PDT Europe. Demonstrations will last approximately 1 to 1½ hours, and times will be announced on the day. Special seated areas have been set aside for these demonstrations. The Statoil demonstration will feature STEP implementation to the ISO 15926 standard, and the EMSA (The European Marine STEP Association) demonstration will feature STEP implementation to the ISO 10303 standard. The first two technical papers presented at PDT Days (Session 1) will provide introductions to these break-out sessions.

### STEP in Reality: ISO 15926

The Åsgard development located 200km off the coast of mid-Norway is one of the largest and most complex offshore oil and gas developments on the Norwegian continental shelf. A total of NOK 33 billion (\$4,4 billion) is being invested in production facilities, wells and subsea installations. During the last quarter of 1996, following a study into the business benefits of introducing data warehousing for managing facility Life-Cycle Information (LCI), a decision was made to implement a POSC/Caesar based data warehouse to facilitate the sharing and exchange of technical information between project participants in the Åsgard project. The Statoil demonstration will show how Åsgard is using the LCI Data Warehouse via Internet/Intranets in the following areas:

- ◆ Provide intuitive access to design and equipment information
- ◆ Procurement of standard (catalogue) equipment.
- ◆ Change management during the follow-on engineering phase and commissioning
- ◆ Quality control of LCI.

### STEP in Reality: ISO 10303

The European Marine STEP Association (EMSA) was set up as a "not-for-profit" community of shipyards, classification societies, software vendors, model basins and research institutes in 1994. The purpose of EMSA is to co-ordinate European efforts in the development and maintenance of the Ship Product Model. EMSA benefits the industry by identifying realistic business cases in the ship lifecycle where a sub-set of the Ship Product Model is validated and promotes these as conformance classes on the ISO Application Protocols. EMSA members also benefit from; representation at ISO/STEP meetings, use of on-line STEP building blocks, promotion of STEP technology in the industry, involvement in a forum for discussion, having a source of maritime information on STEP, and a contact between maritime industries and the European Commission on STEP-related issues.

The European Maritime industry has been making a significant contribution to the development of the ISO 10303 STEP standard and the Ship Product Model. More recently, sub-sets of this model have been the subject of implementations resulting in the validation of the approach, the model and in the software being developed.

The EMSA demonstration will focus on these sub-sets using a set of typical exchange scenarios that are experienced in the shipping industry involving a number of representative systems and companies.

## POSC/Caesar Meetings, Tuesday 13th April and Wednesday 14th April, 1999

The POSC/Caesar Association is an international, not-for-profit, member organisation whose purpose is to develop, maintain, and enhance open specifications for the life cycle facility and equipment information. The business drivers are reduced cost/time and better decisions associated with usage of a common data warehouse. POSC/Caesar Association is working with oil companies and suppliers/vendors to create common data definitions in the non-competitive area of technical software applications.

### Annual Meeting, Tuesday 13th April: 09.00-12.30

The POSC/Caesar **Annual** meeting will concentrate on formal issues associated with the business of the Association.

### Member Meeting, Tuesday 13th April: 14.00-17.30, and Wednesday 14th April, 09.00-17.00

The POSC/Caesar **Member** meeting, spread over 1½ days, will include presentations, discussions and panel sessions on the business benefits currently being realised from using the international POSC/Caesar open standards. Progress updates and achievements from the data model and reference data library will be detailed and results of implementation will be shared with attendees. The final agenda for both POSC/Caesar events will be announced later on the POSC/Caesar website: (<http://www.posccaesar.com>), but main agenda topics will include:

- ◆ 1999 work program towards finalising Version 1.0
- ◆ Harmonisation with AP 221 and ISO standardisation update
- ◆ Examples of implementation technology with guidelines
- ◆ Implementation, usage and business benefits of POSC/Caesar technologies
- ◆ Case histories such as Åsgard, and Umoe.

The formal business of the meetings will be interspersed with invited guest speakers who will highlight the importance of international industry initiatives such as POSC/Caesar Association, and their impact on bottom line. Any queries about the content of either meeting should be directed by email to [pcs@posccaesar.com](mailto:pcs@posccaesar.com)

The Member meeting on Wednesday 14<sup>th</sup> April will run in parallel with the ESCN day. Attendance at both POSC/Caesar meetings is not restricted to POSC/Caesar members: all delegates are welcome. There will be a small charge of 500NOK per day per delegate to cover catering costs. For booking details, see Booking Form attached to this Programme.

Following the POSC/Caesar Annual Meeting, Tuesday 13<sup>th</sup> April, there will be a POSC/Caesar members' social event. See page 4 of this Programme for details. For booking details, see Booking Form attached to this Programme.

## ESCN PDT & STEP Training Day and Cluster Event, Wednesday 14th April, 1999

### What is ESCN?

The European STEP Centres Network Project (ESCN) has been formed exclusively to provide Product Data Technology (PDT) expertise to European industries and research projects. This objective is reached by the execution of training seminars and the realisation of awareness and dissemination activities through the partners of ESCN. The ESCN consortium represents a wide range of PDT experts which are not only familiar with the technology, but also with the situation and needs of local industries. The ESCN partners are: GOSET (France), IVF (Sweden), ProSTEP (Germany), SINTEF (Norway), TNO (The Netherlands) and UNINOVA (Portugal). Day 2 of PDT Europe (Wednesday 14<sup>th</sup> April) will be devoted to the scope of the ESCN project.

### Objective of ESCN Day

The objective of the 'ESCN Day' is to provide a unique learning opportunity for PDT and STEP users at all levels of understanding. The ESCN day will comprise of a series of

seminars coupled with an ESCN cluster event which will bring together PDT and STEP specialists from nine key industry sectors.

### ESCN Cluster Event – Industrial Forum

The cluster event will provide a general overview of the 'State of the Art' in the development and use of PDT and STEP in European industry, followed by industry-specific reports from representatives from each key industry sector. This will be followed by an open panel discussion with the industry representatives, moderated by Prof. Horst Nowacki.

The fee for attending the ESCN Training Day is 2,500NOK, inclusive of refreshments and delegate resource pack. Delegates can choose which seminars they attend on arrival, and are free to attend any combination of seminars and/or Cluster Event.

For more details about the ESCN project, project partners, and services available, please send email to: [menken@proststep.de](mailto:menken@proststep.de) or see ESCN homepage: <http://www.uninova.pt/~escn>

08.30 Registration opens. Refreshments served (Coffee, tea, etc.)		sal Halten
<b>Seminar 1 - Introduction to Product Data Technology and STEP</b> 09.30 <span style="float: right;">sal Grip</span> <b>Learning outcome:</b> Motivation for the use of Product Data Technology and introduction to STEP and EXPRESS(-G). Overview of STEP Application Protocols. <b>Presenters:</b> <i>Dagmar Menken, ProStep, DE; and José Barata, Uninova, PT</i> <b>Training level:</b> BASIC	<b>Seminar 2 - STEP based Product Data Management solutions.</b> 09.30 <span style="float: right;">sal Runde</span> <b>Learning outcome:</b> Product Data Management (PDM) overview and business benefits. How to use STEP to make PDM solutions more open to sub-suppliers and customers. <b>Presenters:</b> Johannes Storvik, SINTEF, NO. <b>Training level:</b> BASIC to ADVANCED	
10.45 Refreshment break <span style="float: right;">sal Halten</span>		
<b>Seminar 3 - STEP based exchange of geometrical product models.</b> 11.00 <span style="float: right;">sal Grip</span> <b>Learning outcome:</b> Possibilities and limitations as experienced in test cases with commercial CAD systems. <b>Presenters:</b> <i>Christian Weidemann, IVF, SE</i> <b>Training level:</b> BASIC to ADVANCED	<b>Seminar 4 - STEP based exchange and implementation of Product Data Management information.</b> 11.00 <span style="float: right;">sal Runde</span> <b>Learning outcome:</b> Possibilities and limitations as experienced in test cases with commercial Product Data Management systems. <b>Presenters:</b> <i>Christophe Viel, GOSTE, FR, and Rainer Bugow, ProSTEP, DE</i> <b>Training level:</b> BASIC to ADVANCED	
12.30 Lunch break <span style="float: right;">sal Halten</span>		
<b>Seminar 5 - STEP implementations – first session</b> 14.15 <span style="float: right;">sal Grip</span> <b>Learning outcome:</b> Introduction to STEP based software development; STEP and Java, EXPRESS-X, SDAI, SDAI language bindings. <b>Presenters:</b> <i>Kjell Bengtsson, EPM, NO; and Michel Böhms, TNO, NL</i> <b>Training level:</b> ADVANCED	<b>ESCN Cluster Event and Industrial Forum</b> <span style="float: right;">13.30</span> Chairman and moderator: Prof. Horst Nowacki, TU Berlin, DE <span style="float: right;">sal Runde</span> 13.30 <b>Welcome and Introduction – Prof. Horst Nowacki, TU Berlin, DE</b> 13.40 <b>Overview of PDT and STEP in industry, followed by 'State of the Art' reports from invited key industry specialists:</b> - Automotive <span style="margin-left: 100px;">- Furniture</span> <span style="margin-left: 100px;">- Electronics</span> - Gas and Oil <span style="margin-left: 100px;">- Shipbuilding</span> <span style="margin-left: 100px;">- Building and Construction</span> - Aerospace <span style="margin-left: 100px;">- Process Plant</span> <span style="margin-left: 100px;">- Mechanical Engineering</span> 14.40 <b>Panel discussion</b>	
15.30 Refreshment break <span style="float: right;">sal Halten</span>		
<b>Seminar 6 - STEP implementations – second session</b> 15.45 <span style="float: right;">sal Grip</span> <b>Learning outcome:</b> Introduction to STEP based software development; STEP and Java, EXPRESS-X, SDAI, SDAI language bindings. <b>Presenters:</b> <i>Kjell Bengtsson, EPM, NO; and Michel Böhms, TNO, NL</i> <b>Training level:</b> ADVANCED	16.00 <b>Experiences from ESCN project work</b> <i>ESCN partners</i> 16.30 <b>Support of PDT and STEP</b> The 5 <sup>th</sup> Framework Programme (FP5) <i>European Commission</i>	
17.00 ESCN Day ends		

On the evening of the ESCN Training Day, Wednesday 14<sup>th</sup> April, there will be the PDT Europe Dinner. See below for further information. For booking details, see Booking Form attached to this Programme.

### Social events

Event details will be published later. All social events include food and drink. Costs include coach transport to and from conference hotels (where relevant). For booking details (please indicate special dietary requirements on Form), see Booking Form attached to this Programme.

Day	Time	Event	Location	Attendance	Cost
Tuesday 13 <sup>th</sup> April	18.30	POSC/Caesar social event	Off site	PCA Members and sponsors only	N/C
Wednesday 14 <sup>th</sup> April	19.00	PDT Europe '99 Dinner	Stavanger Forum	All delegates and guests welcome	500NOK
Thursday 15 <sup>th</sup> April	18.30	PDT Europe informal social event	Off site	All delegates and guests welcome	450NOK

## PDT Days Programme, Day 1, Thursday 15th April, 1999

08.00	Registration opens. Refreshments served (Coffee, tea, etc.)	sal Halten
<b>Opening Session</b> Honorary Conference Chairman: Prof. Horst Nowacki, TU Berlin, DE		Plenary Session, sal Grip & Runde
09.00	<b>Welcome and Introduction</b> <i>European Commission, DGXIII</i>	
09.20	<b>Product Data Technology - Moving from an Information to a Knowledge Based Society</b> <i>Tor Ulleberg, Vice President, Research, SINTEF</i> The demand for globalisation is changing the way business is run: - Extended and virtual enterprises; - Every task performed where it is cheapest at the moment; - Life long learning; - People work for more employers during their working life. As a result, the most valuable asset of any organisation is the knowledge of its employees, and one of the greatest challenges of the companies of tomorrow is how to manage this asset.	
09.40	<b>Design Process – Capturing and Transferring Design Intent</b> <i>Silvia Ansaldo, Senior Consultant, IT</i> The Design phase should output a detailed and complete definition of the product model, in terms of both form and functionalities. The Design is an iterative process in which the information dynamically changes, is modified, evaluated or increased with further details. For this reason, the possibility to capture the design intent and the ability to transfer it to the other users is a critical aspect in the design process. On the other hand, the official deliverables released by STEP are able to represent completely and unambiguously the end design model, but cannot capture explicitly the full Design intent. Describing some consequences of the loss of this information, the paper describes some proposals of solutions developed in international research projects	
<b>Session 1 – STEP in Reality: ISO 15926 and ISO 10303</b> Chaired by Prof. Reiner Anderl, TU Darmstadt, DE		Plenary Session, sal Grip & Runde
10.00	<b>Life-cycle information data warehousing in a major offshore development project.</b> <i>Bjørn Henrik Magnus, Adrian Park, Statoil, NO.</i> This paper provides an introduction to the break-out demonstration of the Åsgard LCI data warehouse deployment, implementation aspects, the concrete benefits gained to date, and future plans. Major IT aspects including the migration to a multi-tiered IT architecture. Practical experiences from implementing the POSC/Caesar standard and building web-enabled applications to deliver data including integrated 2D and 3D graphics over the Internet will be demonstrated separately.	
10.25	<b>Exchange of Product Model Data in the Shipbuilding Industry</b> <i>Tim Turner, Lloyds Register, UK, representing EMSA – The European Marine STEP Association.</i> This paper will provide a background to EMSA, the current Ship Product Model, the scope of the Ship Application Protocols, and outline the purpose of the Ship Common Model. The paper will also describe the exchange scenarios that have been acting as drivers for the validation of these models by European maritime industry which will be the subject of the demonstrations to be shown during the break-out sessions at various times during the conference.	
10.50 Refreshment break sal Halten		
<b>Session 2 – Virtual Enterprise</b> Chaired by Johannes Storvik, SINTEF, NO		sal Grip
11.20	<b>SAVE – STEP in a Virtual Enterprise: A project overview</b> <i>Rob Bodington, Phil Sims, British Aerospace, UK.</i> The SAVE project is developing an Internet and CORBA based information sharing architecture for Virtual Enterprises. This will enable suppliers and systems integrators to access a common source of product data through the OMG PDM enablers and STEP PDM schema based interfaces whilst respecting the data ownership and commercial sensitivity.	
11.45	<b>Customizing a STEP-processor in an integrated PDM-environment in a Virtual Enterprise</b> <i>Dipl.-Ing. Jörg Wirtz, Dr.-Ing. Andreas Karcher, TU München, DE.</i> The problems of introducing integration of PDM/EDM systems within a Virtual Enterprise (VE) will be described. Experience in a project with Daimler Chrysler Aerospace revealed a semantic gap between the interpretations of information objects within the VE. The article will introduce a new approach of how to define a STEP-processor.	
<b>Session 3 – STEP Implementations</b> Chaired by Alain Bezos, GOSET, FR		sal Runde
11.20	<b>POSC/CAESAR Distributed Application Development Framework</b> <i>Marleen Devos, Dag Belsnes, Marius Bergan, Bjørn Hjelle, Roy Grønmo, Arnor Solberg, POSC/CAESAR KKG Project, NO.</i> Component technologies (CORBA, DCOM) facilitate interoperability. So does the P/C product model by harmonised product information representation. Are the approaches alternatives or supplementary? We describe business object definitions based on the product model and P/C database integration in a component architecture. A prototype implementation demonstrates the feasibility of the approach.	
11.45	<b>'Multidisciplinary Product Data Management' (MPDM)</b> <i>Prof. Reiner Anderl, Marcus Krastel, TU Darmstadt, DE.</i> In today's product development process the simulation takes a central rôle considering the fact of striving for a completely digital product representation. With the increasing integration of mechatronic components within a product, new 'Multidisciplinary Product Data Management' (MPDM) systems are required that can interpret the inter-disciplinary constraints.	
12.10 Lunch break sal Halten		
<b>Session 4 – PDT, Java, and the Web</b> Chaired by Peter Willems, TNO, NL		sal Grip
13.30	<b>Harmonising Heterogeneous PDM Environments</b> <i>Dr. Matthias Doblies, Uwe Rothenburg, Siemens VT, DE.</i> Standardised access to product data residing in heterogeneous systems is gaining importance. The technical approach being presented relies on CORBA-based PDM enablers for basic document management and product structure management functionality and CORBA-based workflow support based on specifications of OMG and WfMC. Thereby communication regardless of underlying systems is ensured.	
13.55	<b>Title of Paper: Implementation of STEP product models with mapping EXPRESS to Java</b> <i>Yuki Satoh, Fumiki Tanaka, Takeshi Kishinami, Hokkaido University, JP.</i> EXPRESS language has been used for describing the STEP product models. For realizing some applications based on STEP, we must translate EXPRESS into an implementation language. In order to avoid the loss of information, we propose how to translate EXPRESS into Java through their graphical descriptions (EXPRESS-G and Java-g).	
14.20	<b>Puzzling out the conflicts between PDT definition method (EXPRESS) and Java</b> <i>Kari Kaitanen, VTT Information Technology, FI.</i> The differences between EXPRESS based data definitions and any specific programming environment data structure - in this paper Java particularly - generate mapping conflicts. One interesting possibility of handling the STEP schemata in Java environment is to separate an 'adapter' graphics that fully supports all the Java features.	
<b>Session 5 – Product Reference Data</b> Chaired by Christian Weidemann, IVF, SE		sal Runde
13.30	<b>Building Worldwide Electronic Libraries for OEM Equipment on Major Projects.</b> <i>Steve Pearson, Pearson-Harper Ltd, UK.</i> This paper explains that 95% of your equipment related documentation can be scrapped. Using natural relationships, generic documentation and data, ensures equipment specific information can be shared. Getting it right now will reduce stock holding, reduce the cost of purchasing goods and reduces the cost of many information related processes.	
13.55	<b>A Challenge of CALS Initiatives</b> <i>Jin-Kang Gui, Kari Kaitanen, VTT; Tapani Koivula, Telecom Finland; Vesa Salminen, FIMET, FI.</i> Despite efforts to make corporate engineering knowledge electronically available, the work has not yet come up to corporate-wide practice. European industry needs raising awareness of the challenge. This paper will contribute from CALS strategical viewpoints to how its relevant information standard solutions can be harmonised to corporate usage.	
14.20	<b>Making product Reference Data Work for Business.</b> <i>Julian Fowler, PDT Solutions, UK</i> This paper identifies and discusses key issues related to the definition, management, and use of product reference data; and analyzes the support for product reference data provided by a number of international standards. The paper examines how properly managed product reference data can be used as a key link between design and engineering standards and commercial data management and enterprise systems.	
14.45 Refreshment break sal Halten		

Session 6 – Data Integration Chaired by Ian Bailey, EuroSTEP®, UK		sal Grip
15.15	<b>A Foundation Integration Model for Industrial Data</b> <i>Matthew West, Shell Services International, UK.</i> ISO TC184/SC4 has established a Preliminary Work Item for a data integration architecture. The objective of this is to support the integration and sharing of data from different sources, such as the different SC4 standards, and other relevant standards. The architecture requires an Integration Data Model as one of its components. This paper presents some initial proposals for this model. The proposal draws on work from SC4, EPISTLE, and the field of ontology in its development.	
15.45	<b>Components-based Product Data Models: The Future of Data Modelling</b> <i>Günter Staub, Hans Grabowski, TU Karlsruhe, DE.</i> Traditional data modelling practices works fine as long as the resulting data models are small and each data model itself is designed to work in its own autonomous environment. In our contribution we describe an improved modelling methodology based on data model components that allows interoperability and co-operative use of multiple APs.	
16.10	<b>A Communication Model for Product Information</b> <i>Dr. Terje Ulltang, Statoil, NO.</i> The area of product information is huge and complex, and necessitates some extent of standardisation to enable information exchange and sharing. This paper represents a mechanism to utilise different methods to enable communication based on distributed object technology, model integration, and standards for product information, conceptualised in "The Communication Model".	
16.35	<b>Condor Project: A Proposed Approach to Document Management</b> <i>Dr Yacine Rezgui, Dr Grahame Cooper, Salford University, UK.</i> The European Esprit 'CONDOR' project aims at providing a large range of industrial areas, including the Construction industry, with an innovative infrastructure for distributing information and achieving co-operative work between heterogeneous electronic document management software packages, while ensuring document consistency throughout ongoing projects. This paper presents the final results from the project.	

17.00 PDT Days, Day 1 ends

On the evening of PDT Days, Day 1, Thursday 15<sup>th</sup> April, there will be the PDT Europe Informal Social event. See page 4 of this Programme for details. For booking details, see Booking Form attached to this Programme.

Session 7 – Product Data Strategy Chaired by Johan Vesterager, TU Denmark, DK		sal Runde
15.15	<b>A Strategy for Implementing an Extensible Information System to support BPI</b> <i>Jim Baxter, Paul Bassindale, Paul Bell, Pete Dawson, Alison McKay, University of Leeds, UK.</i> This paper reports on the implementation of an information system to support a team doing Business Process Improvement (BPI). It also describes the strategy used during implementation. The strategy uses principles from STEP, including the use of an integrated set of data models, referred to as Integrated Process Resources (IPRs).	
15.35	<b>Pre-requisite for Life Cycle Cost</b> <i>Harry Lee, Santasan International, Inc., USA.</i> Life Cycle Cost in the process industry is to be captured in life long basis. The effort to have Plant Life Cycle information, dynamic as well as static, is the pre-requisite. Integrated Data Management (IDM) as an infrastructure to create Plant Life Cycle information is advocated, to create a single 'Asset Management' with tie-ins to the Enterprise System.	
15.55	<b>New Product Structures to support the Concurrent Enterprise</b> <i>Dr. J. B. Cox, Mr. W. G. Green, British Aerospace, UK.</i> The paper describes the evolving implementation of a Product Data Management system in a concurrent engineering environment within British Aerospace. The traditional 'as-designed' product structure is no longer produced and the new requirements for product structure definitions to fully support the design, manufacturing and support business activities are investigated.	
16.15	<b>From design to business, by way of product life cycle: EAPPM</b> <i>Ricardo Goncalves, UNINOVA, PT; Raimar J. Scherer, TU Dresden, DE.</i> EAPPM aims to help organizations in the PDT field, as a pragmatic link between R&D and industry, supported by industrial associations, user groups, and networks of excellence. It deserves special attention on the industrial horizontal approaches based on consolidated know-how, results and "cases of success" coming from projects in the scope of Integration in Manufacturing.	
16.35	<b>Road Map to Data Warehouse Implementation Strategy</b> <i>Dr R C Moul, Intergraph Ltd, UK.</i> This paper will provide insight into the practical issues associated with data warehouse implementation. Following a brief overview of business benefits, the focus shifts to discussion of the project phases of data warehouse implementation, with emphasis on the areas that determine project success.	

## PDT Days Programme, Day 2, Friday 16th April, 1999

08.15 Day 2 Registration opens. Refreshments served (Coffee, tea, etc.)		sal Halten
<b>Session 8 – PDT and the SME</b> Chaired by Odd Myklebust, SINTEF, NO		sal Grip
09.00	<b>An SME-targeted Process Model for Non-conventional Processes</b> <i>F. Bonfatti, TU Modena; P.D. Monari, SATA; S. Sighinolfi, Democenter, IT.</i> Improving the management of the overall shop floor activities, by modelling knowledge on products along their whole life cycle at the highest semantic level, paying attention to unusual processes such as refurbishing, disposal and recycling. This is the aim of the ESPRIT project EP 25359 - EPSYLON.	
09.25	<b>A Product Model Supporting Co-design Activities</b> <i>Domenico Biondi, Democenter; Flavio Bonfatti, Paola Daniela Monari, University of Modena; Franca Giannini, Marina Monti, CNR, IT.</i> The paper reports some results of the Esprit project EP25360 CoWork whose goal is developing a software environment to fully support the co-design activities in SME networks. Focus is set on the Standardised Product Model that constitutes a sort of extension of the present PDMs for the distributed design process.	
09.50	<b>SMEs and the STEP Myth</b> <i>Manuel Oliveira, University College, UK; Alvaro Oliveira, Alfamicro, PT.</i> This paper will provide some insights to the SMEs perception of regarding STEP as a myth, however this malaise may be further extended to include consultancy companies that are not STEP aware of either its potential or possibilities. The issues presented are derived from on-going projects in several industrial sectors.	
10.15	<b>A Competence Repository for Small and Medium Enterprises</b> <i>Mirko Dobermann, Stefan Hassinger, ZGDV e.V., DE.</i> The Paper presents a new Internet Service for European Small and Medium Enterprises scheduled to start in summer 99. The Repository contains comprehensive information concerning the competencies of SMEs allowing a company to search for potential partners in a faster and more reliable way than currently available databases could offer.	
<b>Session 9 – STEP and PDM</b> Chaired by Dagmar Menken, ProSTEP, DE		sal Runde
09.00	<b>Encapsulating STEP and POSC/Caesar standards for effective data management</b> <i>Richard Marsh, Quillion Systems Ltd, UK.</i> A datastore implementation using STEP or POSC/Caesar data models supports the integration of data from different source applications to provide a single, coherent source of consolidated, up-to-date data. This paper presents an approach to encapsulate the complexity of the models to support users and changes in the models as they evolve, and to support application portability.	
09.25	<b>The use of STEP for data exchange between PDM systems</b> <i>Mark Kerr, IBM Consulting Group, Trisha Rollo, Dr Rob Bodington, British Aerospace, UK.</i> This paper describes the STEP data exchange capability implemented by British Aerospace Military Aircraft and Aerostructures as part of its strategic product information environment. It discusses the requirements addressed, the challenges met, the solutions adopted, and a systematic approach to implementing PDM data exchange called 'Ten STEP'.	
09.50	<b>A practical approach for rapid implementation of PDM in SME's</b> <i>R.W. Helms, BETA, T.H. Mandemaker, M.I.S., NL; S. Port, CIMdata, UK.</i> The goal of the RapidPDM project is to reduce cost, time, risk and effort of PDM implementation, particularly for SMEs in discrete manufacturing industry. Discussion with fellow researchers, developers and industry people will help solve some of the issues encountered and will give guidelines for further activities within the project.	
10.15	<b>Development of Configurable Semantic Mappers</b> <i>Alex Ehrler, SAP AG; Harald Kunze, Markus Maier, TU Karlsruhe, DE.</i> This paper describes an approach for the development of configurable semantic mappers for attribute values, as well as a concept how to integrate this approach in modern mapping languages like EXPRESS-C or EXPRESS-X. Furthermore a prototype implementation of a mapping configuration module, integrated in SAP's PDM-Enabler implementation is presented.	

10.40 Refreshment break sal Halten

Session 10 – PDT and XML Chaired by Kjell Bengtsson, EPM, NO		sal Grip
11.10	<b>XML-based meta-data modelling for product data management</b> <i>Pekka Siltanen, Timo Syrjänen, Matti Kuusisto, VTT, FI.</i> An introduction to the XML and the related standards and tools; how they can be used in PDT. How XML can be used for storing the product models and exchanging data between PDM systems. Also existing implementations of the technology are discussed.	
11.35	<b>XML and Industrial Data - STEPPing out onto the Web</b> <i>Daniel Rivers-Moore, RivCom, UK</i> What is XML and why should we care? This presentation will discuss the importance of XML for industrial data. Real-world projects will be described, potential implementations considered and information given on the future development of the standard with particular reference to the relationship between the STEP standards and the W3C.	
12.00	<b>Software Implementations from EXPRESS Models</b> <i>Robin La Fontaine, Monsell EDM Ltd; Prof. Hilary Kahn, University of Manchester, UK.</i> This paper describes the different ways in which EXPRESS models can be manipulated to transform a conceptual model into models suitable for implementation. The generation of procedural interfaces, relational database table formats and file formats based on XML are considered as examples of implementation.	

12.25 Lunch break

Session 12 – PDT and PDM Futures Chaired by Stuart Lord, ICI Engineering, UK		sal Grip
13.45	<b>Target oriented Product Data Management</b> <i>Dieter Spath, Marco Lanza, Gisela Sauter, University of Karlsruhe, DE.</i> The goal is the configuration of a target-oriented Product Data Management System (TPDM) supporting distributed collaborative manufacturing system design in an 'Axiomatic Design' oriented way. Based on an axiomatic approach, the implementation of this methodology in a distributed PDM framework with the necessary metamodel is presented.	
14.10	<b>Bridging the gap between PDM and electrical engineering using STEP AP212</b> <i>Dr. Richard Alznauer; ABB; Markus Maier; TU Karlsruhe; Dr.-Ing. Anna Wasmer; IDA Inc., DE.</i> STEP AP212 was selected as a basis to establish an information flow from and to ABB Advant Engineering Workplace. This paper describes the experiences gathered during the development of this integration solution, presenting how interoperability issues between the various systems are addressed by the use of a flexible implementation mechanism.	
14.35	<b>iPDM-Systems</b> <i>Martin Arit, Prof. Reiner Anderl, Technical University of Darmstadt, DE.</i> This contribution is concerned with a new generation of PDM systems: intelligent mobile agent based PDM systems (iPDM systems). PDM systems of this kind manage semantic information about product data which is recorded as a functional representation by (mobile) agents.	

15.00 Refreshment break

Session 14 – Data Modelling and Knowledge Management Chaired by Patrice Poyet, CSTB, FR		Plenary Session in sal Grip & Runde
15.20	<b>Current approaches for an integration of product and process modeling</b> <i>Dr. Ing. Birgit Awiszus, IUU, University of Hanover, DE.</i> Current approaches to integrated product and process modeling are described regarding their use of specific product and process modeling methods. A new approach based on the event-driven-process-chain concept for business process re-engineering and the STEP product model is presented by using metal forming planning processes as an example.	
15.45	<b>MOKA - A Methodology for developing Knowledge Based Engineering applications</b> <i>Keith Oldham, Coventry University, UK; Richard Brimble, British Aerospace, UK; Catalina Vargas, PSA Peugeot Citroën, FR; Martine Callot, Aerospatiale, FR.</i> This paper describes a European collaborative project called MOKA (Methodology and tools Oriented to Knowledge Based Engineering Applications) started in January 1998. This paper will give an overview of the MOKA methodology concepts which have been developed and how industrial test cases are being used to validate the MOKA methodology.	
16.10	<b>Closing remarks</b> <i>Bill Mesley, QMS, UK, (Conference Organiser)</i>	

16.15 PDT Days, Day 2 ends. Conference closes.

Session 11 – Data Warehousing and Data Quality Chaired by Christophe Viel, GOSÉT, FR		sal Runde
11.10	<b>Information Quality in Product Models</b> <i>Thomas Mestl, Stian RuudDet Norske Veritas, NO.</i> Information will often be produced by one system. The information quality will normally be well understood by the information producer and the first user of the information. For other users the information quality will be unknown. A draft framework for exchange of standardized information quality attributes is presented.	
11.35	<b>Implementation of EXPRESS data models: a solution to computer-processable and unambiguous specifications.</b> <i>Jorulv Rangnes, Hans Karsten Dahl, EPM, NO.</i> EXPRESS is designed to be computer-processable and to provide unambiguous specifications. It is widely used by PDT Standards such as CALS, STEP, IAI, OIL&GAS and POSC. In this paper, it is explained how EXPRESS is different to most other specification languages and why new implementation technology is required to take the full advantage of this new paradigm.	
12.00	<b>Object-Oriented implementation of AP221</b> <i>Hans Tejjgeler, Fluor Daniel, NL; Patrick Laureri, Espri Concept, FR.</i> Data Network Architecture (DNAtm) is intended to become Fluor Daniel's new cornerstone technology for storing, sharing, retrieving, and analyzing lifetime data of plant and technical installations. The conceptual problem of process plant life cycle developed in the AP221 data model is addressed, and how an OODBMS associated to the Java technology solves the problem of its implementation.	

sal Halten

Session 13 – New Markets for STEP Chaired by José Barata, UNINOVA, PT		sal Runde
13.45	<b>A Data Model for Power Systems Planning and Operational Information</b> <i>Dr A Azarian, et al, Electronet project members, UK, FR, IT.</i> The ELECTRONET project has developed a data model for exchanging planning and operational data between HV and EHV electric power networks. These two papers provide an overview of the various components of the data model covering connectivity and state, properties, activities, schematics and location, and the associated model class libraries.	
14.10	<b>An integrated architecture to promote furniture business.</b> <i>Ricardo Goncalves, P. Sousa, J. Pimentao, A. Steiger-Garcao, UNINOVA, PT; M. Borrás, I. Gresa, Aidima, ES.</i> funStep aimed to develop a STEP-based environment for the manufacturer-customer integration in furniture industry. Devoted for this industrial sector, results can be used as a reference for other sectors, where integration of product and business data is a demand. To take in and extend project results, an interest group (FSIG) was set-up, with strong industrial participation of 100 members from 15 countries.	
14.35	<b>Product Models in Construction: The Changing Business Case</b> <i>D Mitrovic, A Watson, University of Leeds; I Hunter, Taylor Woodrow, UK.</i> The paper will bring together experience from the Eureka CIMsteel project and the Esprit eLSEwise project to better understand the relationship between technology and the changing business case. Changing business practices are likely to widen and evolve the development and use of product models.	

sal Halten

### Prime Exhibition opportunity

Companies and research bodies involved in Product Data Technology will be participating by taking exhibition space on 2, 3, or all 4 days of **PDT Europe '99**. The combination of events at **PDT Europe 1999** provides a unique opportunity for promotional and product/project awareness, and direct access to technology leaders from all industrial market sectors.

If your company or organisation is interested in participating in this exhibition please contact Bill Mesley at the Organiser's office, +44 1252 878482, or send email to [billm@qmsstep.com](mailto:billm@qmsstep.com)

The cost of exhibiting during ESCN and PDT Days will be free to companies and organisations sending 2 or more full fee paying delegates to PDT Days '99 (15<sup>th</sup> & 16<sup>th</sup> April).

## Venue Location and Facilities

PDT Europe will take place in the Conference Centre at Stavanger Forum, N-4001 Stavanger, Norway. Getting to and from Stavanger in the south of Norway is easy - by air, rail, road, or sea. Stavanger Forum is 10-15 minutes both from Stavanger's Sola airport, and from Stavanger city centre. Norway's southern railway terminates in Stavanger, with several departures daily for

Kristiansand and Oslo. There are also regular high-speed passenger ferries from Stavanger to Bergen, and vehicle ferries link Stavanger with the UK and Denmark.

Stavanger Forum has all latest presentation and communication facilities, including meeting rooms with fax, telephone, and email access. All Stavanger Forum facilities cater for the requirements of disabled delegates. Lunches include vegetarian and other dietary options (please specify on Booking/Registration Form).

## PDT Europe: PDT Days '99 Organisation

Continuing the work of

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Product Data Technology  
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ESPRIT 9049

*To further the work of PDTAG, the Programme Committee for PDT Europe 1999 includes many active members of the former PDTAG-AM project, which was led by Prof. Horst Nowacki (TU Berlin), and to whom an unqualified acknowledgement is readily given. The Programme Committee further expresses its thanks and appreciation to Prof. Nowacki for his rôle as 'Honorary Conference Chairman' for PDT Days 1999.*

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- ◆ Bill Mesley *Quality Marketing Services  
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### Useful websites related to PDT Europe 1999:

- ◆ QMS <http://www.qmsstep.com>
- ◆ Stavanger Forum <http://stavanger-aftenblad.no/stavanger-forum>
- ◆ POSC/Caesar <http://www.poscaesar.com>
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## Next Year.....

The 9<sup>th</sup> PDT Symposium, **PDT Europe 2K**, will be held in The Netherlands, 11<sup>th</sup> to 14<sup>th</sup> April 2000. Interested sponsors and contributors should contact QMS. The 10<sup>th</sup> Symposium, **PDT Europe 01**, is likely to be held in Finland. Details will be announced on QMS website.



# PDT Europe 1999 – Booking and Registration Form

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