



**Product Data Technology Europe 2000**  
**9<sup>th</sup> Symposium**  
**2<sup>nd</sup> - 5<sup>th</sup> May 2000**  
**ESTEC, Noordwijk, The Netherlands**

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

***Programme Announcement  
and Booking Form***

including PDM workshop:

**PDM in the Extended Enterprise**

and the only European PDT conference

**PDT Days 2000**

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



This event is co-organised with the European Commission, DGXIII (Information Society),  
and the European Space Agency

## PDT Europe – a unique event

PDT Europe is an annual event which provides a unique focus for PDT technologists from different industry sectors. The 2000 symposium brings together **PDT Days Conference** and a **PDM Workshop** which will explore and address the use of PDM principles in the extended enterprise. PDT Days has always been recognised as the major European meeting point for the industrial and scientific community engaged in Product Data Technology, and the addition of the PDM Workshop, coupled with STEP demonstrations, an exhibition, and social events, PDT Europe 2000 promises to set the scene for PDT and PDM development in the new Millennium.

## 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 shorter times to market. PDT is strongly supported by the international product data definition standards - ISO 10303 ('STEP') and ISO 15926 ('Oil and Gas'), but it is by no means limited to this scope.

The need for a concerted use of several existing standards and technologies (e.g. EXPRESS, SGML/XML, etc.) is recognised in the business community and will form an important theme for PDT Europe. The rapid rise of new and emerging technologies such as PDML and UML and their convergence with existing technologies will be of equal importance, along with new initiatives such as PLCS, FP5, IST, and IMS.

## 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** is an annual event held in a different European country each year, previously organised by PDTAG as 'PDT Days'. 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, continues 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, **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 2K**, which will be a unique a focus for PDT technologists from different industry sectors, world-wide.

## ESA and PDT Europe 2000

The ever increasing need to manage, exchange and archive large amounts of product data within the space industry, its partners and international consortia has increased awareness of the rôle and benefits of Product Data Technology for the European space sector. ESA is active in the promotion of standards in the space sector and puts emphasis on the STEP standards for product data. ESA is both host and co-organiser of PDT Europe 2K which will bring together experts from the Space sector and other industrial sectors. This industrial synergy will put the issues of PDT and PDM in a wider context, contributing to the advancement of the European Space industry as a whole. A half day session is dedicated to space-specific problems, solutions, and experiences with Product Data Technology.

## 3½ day Programme for PDT Europe 2000

At **PDT Europe 2K**, the 2 days of traditional PDT Days conference has been extended to 2½ days to allow two full days of technical presentations, followed by a one day PDM Workshop. The full 3½ day programme will be as follows:

### Day 1, 02 May

?? **Buffet lunch**

?? **Keynote speeches: setting the scene for the conference**

?? **Tour of ESTEC test facilities (optional)**

### Days 2 & 3, 03 & 04 May

?? **PDT Days, technical or industry related sessions, in two parallel streams**

### Day 4, 05 May

?? **PDM Workshop: "PDM in the Extended Enterprise"**

The 3½ day symposium will be supported by an exhibition, and various social events. Delegates will be able to book for whichever combination of events suits their needs. See page 7.

## Who should attend?

**PDT Europe 2K 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, Data Warehousing, Extended Enterprise, 'Virtual Offices', AIM, and other 'product data-dependent' business innovations.**

**PDT Europe 2K** is expected to attract more than 200 delegates from the major engineering business sectors of Automotive, Aerospace, Space, Building and Construction, Process Engineering, Ship Building, Power Generation, Petrochemical, Electrical Engineering, Mechanical Engineering, and Manufacturing.

## Delegate Fees and Payment

For delegate fees and discounts available, see page 7 of 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 Noordwijk centre is included.

To reserve your place at PDT Europe 2000 please complete the Registration Form attached to page 7 and return the Form as soon as possible to the ESTEC Conference Bureau. Payment may be made by cheque, credit card, or electronic transfer. Please indicate payment method on form, along with discount (if applicable), social event booking(s), and any other relevant information as indicated. Bookings will be acknowledged by invoice, together with venue location details, and hotel and transport details.

## Social events

Event details will be confirmed and published later. Social events include food and some drink. Costs include coach transport to and from conference hotels (where relevant). PDT Europe social events are intended for all involved to meet informally, over dinner on Wednesday, and on Thursday evening, to see some local sites as well. All delegates, speakers, partners, and guests are welcome.

?? On Wednesday evening 3<sup>rd</sup> May, there will be the traditional PDT Europe Dinner, this time at a local restaurant, "Cleyburch". Cost will be NLG100.

?? On Thursday evening, 4<sup>th</sup> May, there will be a canal boat trip through Leiden, with a buffet dinner included. Cost will be NLG150.

Final details are subject to change due to local conditions. For booking details see Registration Form attached to page 7. (Please state any special dietary requirements on back of Form).

## Prime Exhibition opportunity

Companies and research bodies involved in Product Data Technology will be participating by taking exhibition space at PDT Europe 2K. The combination of activities at PDT Europe 2K provides a unique opportunity for promotional and product/project awareness, and direct access to technology leaders. If your company or organisation is interested in participating in this exhibition please contact the ESTEC Conference Bureau (see below). The cost of exhibiting will be just NLG300 to companies and organisations sending 2 or more full fee paying delegates to PDT Days 2K. (i.e. NLG3500 total, for all 3½ days)

## For more information....

If you require more information about paper submissions, live demonstrations, exhibiting, sponsorship, or other promotional opportunities at PDT Europe 2000, contact QMS, on +44 1252 878482, email billm@qmsstep.com or visit the PDT Europe website <http://www.pdteurope.com>

If you want to know more about technical facilities at ESTEC, site access, or registration details, contact the ESTEC conference bureau on tel. +31 71 565 5005, email confburo@estec.esa.nl For hotel and accommodation queries, tel. +31 71 565 5858.

## PDT Europe 2K, Day 1: PDT Days Programme Tuesday 2<sup>nd</sup> May, 2000

|   |  |   |                          |
|---|--|---|--------------------------|
| 12.30   | Registration opens.  | Refreshments served (Buffet lunch, coffee, tea, etc.)                               | Newton Foyer & Cafeteria |
| Opening & Keynote Session   |  | Plenary Session, Newton Room  |                          |
| Chairman: Ronald Mackay, CEC DG13 (Information Society), Brussels, BE |  |   |                          |
| 13.30   | Welcome and Introduction   | Dave Dale, ESA Director of Technical and Operational Support                        |                          |
| 13.40   | Keynote address: The CEC perspective.  | Bror Salmelin, Head of Unit, "Electronic Commerce", CEC DG 13 (Information Society) |                          |
| 14.10   | Keynote address: Setting the Scene   | Constantinos Stavrindis, Head of the ESA Mechanical Engineering Department          |                          |
| 14.30   | Keynote address: PDT in the Real World: Integrating the Enterprise using the PDM Schema and the PDM Enablers | Rob Bodington, British Aerospace, Sowerby Research Centre, Filton, UK               |                          |
| 15.00   | Refreshments, Exhibition, and Viewing of ESTEC Test facilities (optional)                                    |   |                          |

## PDT Europe 2K, Day 2: PDT Days Programme Wednesday 3<sup>rd</sup> May, 2000

|  |   |  |   |
|--|---|--|---|
| 08.00  | Registration for late arrivals.                                   | Refreshments served (Coffee, tea, etc.)  | Newton Foyer                                    |
| Session A1 - The Business Case for PDM   |   | Newton 1   | Session A2 - PDT in the Space Industry (1)      |
| Chaired by Odd Myklebust, SINTEF Industrial Management, NO   |   |  | Chaired by Prof Reiner Anderl, TU Darmstadt, DE |
| 08.30  | ERP and PDM can co-exist given a sound business data model!       | 08.30 Thermal Analysis Data Exchange in the Space Industry   |   |
| Hans Timmerman, FAIR Information Services, BV, NL<br>PDM and process management are complementary technologies that have an impact over the entire product lifecycle. The basis for a good integration between them is the effective control of the business data model. STEP can help in this area, as well as in defining the lifecycle oriented product views. Managing, and controlling those different product views provides the opportunity to control the flow of product data throughout the product lifecycle. |   | Eric Lebègue, Simulog, FR; Hans Peter de Koning, ESA/ESTEC, NL; Georg Siebes, NASA-JPL, USA<br>STEP-TAS and STEP-NRF the two companion standards developed by ESA, in co-operation with NASA, are starting their industrial deployment for solving the problem of exchange of thermal related data between different industrial partners. This conference will present the status of these projects  |   |
| 09.00  | A model for cost justifying investment in Product Data Management | 09.00 Opportunities for Use of the STEP Automotive Application Protocol (AP214) in Space Industry  |   |
| Li Ying Meng, Professor Peter Sackett, Cranfield University, UK; Roger Hadfield British Aerospace Military aircraft & Earostructures, UK<br>This presentation addresses the justification of investment in Product Data Management. The presenter first gives a brief review of several cost justification models, followed by an introduction of a new cost justification model developed by the authors. A case study ends the presentation.   |   | Pascal Huau, Association GOSSET, FR<br>How a STEP application protocol, defined by and for automotive industry, can be used by other industries than automotive and, in particular, by Space industry. Illustration with a pilot implementation.   |   |
| 09.30  | Economic Benefits and Financial Justification for PDT Solutions   | 09.30 ECSS Umbrella Standard for Exchange of Product Data in European Space Programmes   |   |
| Dr Stanley Port, Consulting Engineer, UK<br>The decision cycle for implementing PDT solutions within companies is too lengthy. Pilot or initial production systems frequently do not expand rapidly to gain wide application, and some PDT solutions never match management expectations. This paper will argue that a formal financial justification should be carried out for every proposed PDT solution to speed up and smooth out the investment decision-making, and reduce the financial risks.                   |   | Charles Stroom, ESA/ESTEC, NL<br>The European Co-operation for Space Standardisation (ECSS) Working Group "Exchange of Product Data" is active since February 1999. The WG's initial 'umbrella' standard will be presented. It prescribes which (STEP) data exchange standard to use for transfer of product definition representations between any relevant combination of space (engineering) disciplines.   |   |
| 10.00  | Snecma: A model project   | 10.00 Combining STEP-NRF and HDF5 for Rich but Efficient Exchange of Bulk Engineering Results Data   |   |
| Anne-Marie Walters, Sema Group, UK<br>In 1997 Snecma began the implementation of an ERP system integrated with a PDM system in order to totally re-engineer its business. This paper describes the successes, failures and progress to date of that project.   |   | Hans Peter de Koning, ESA/ESTEC, NL; Eric Lebègue, Simulog, FR<br>ESA's STEP-NRF "Network-model Results Format" Application Protocol is a discipline-independent standard to exchange large amounts of engineering results data, coming from analyses, tests, or operations. The paper will present a "best of both worlds" solution in which the rich semantics of STEP-NRF are combined with the efficiency and rapid access of NCSA's public domain HDF5 portable binary data format. |   |
| 10.30  | Refreshment break   |  | Newton foyer                                    |

| Session B1 – PDM Standards and Testing<br>Chaired by Peter Willems, TNO, NL |   | Newton 1 |
|---|---|----------|
| 11.00   | <b>Improving PDM Testability through Standards Harmonization</b><br><i>K C Morris, David Flater, National Institute of Science &amp; Technology, USA</i><br>With multiple PDM-related standards emerging harmonization between the standards is needed to support interoperability across the enterprise. This paper describes a mechanism for harmonizing two related standards, from OMG and ISO, by mapping between them and analyzes the approach.        |          |
| 11.30   | <b>Building quality into product data technology specifications</b><br><i>Julian Fowler, PDT Solutions, UK;</i><br><i>Thomas L. Warren, Oklahoma State University, USA</i><br>This paper discusses problems encountered in developing standards in an international and multi-lingual environment, and offers conclusions and recommendations for tools and techniques that can be used to achieve a consistent high level of quality in published standards. |          |
| 12.00   | <b>Graphical Support for Interpretation in STEP AP Development</b><br><i>Hiroiyuki Hiraoka, T.Tanaka, Chuo University, JP</i><br>Mapping from Application Reference Model to Resource Parts is one of the most difficult processes in developing STEP Application Protocols. The paper describes a graphical tool to generate a mapping table from ARM and Resource Part EXPRESS-G diagrams.  |          |

12.30 Lunch break

| Session C1 – Putting Product Data on the Web<br>Chaired by Anne-Marie Walters, Sema Group, UK |  | Newton 1 |
|---|--|----------|
| 13.30   | <b>XML based product model server</b><br><i>Tero Hemiö, VTT Building Technology, FI</i><br>Usability of product model servers could be largely extended if XML technology is adopted for the data transfer. Using XML at a very abstract level sets the interface of the server to the location where it belongs: the Internet.  |          |
| 14.00   | <b>MERCI: Integration of EXPRESS based and XML based component information representation</b><br><i>Dr Wolfgang Wilkes, Jens Bröking, University ofHagen, DE</i><br>MERCI's vision is to support a smooth transfer of component information from manufacturer's databases and data sheets down to end user's processing systems (CAD systems). MERCI will provide a service and a software infrastructure using P-Lib and XML based standards. |          |
| 14.30   | <b>XML Update</b><br><i>Daniel Rivers-Moore, Rivcom, UK</i><br>It is now clear that XML will be a key enabler for next-generation computing systems. This presentation examines its implications for Product Data Technology, and explores the current status of the standards and their application to our industry.  |          |

15.00 Refreshment break

| Session D1 – Decision Support and Document Management<br>Chaired by Hans Peter de Koning, ESA/ESTEC, NL |  | Newton 1 |
|---|--|----------|
| 15.30   | <b>RDSS: a Recycling Decision Support System to Pursue Green Manufacturing</b><br><i>Flavio Bonfatti, Paola Daniela Monari, University of Medena, Sebastiano Sighinolfi, Democenter, IT</i><br>Current ICT tools for the support of the recycling activities are mainly oriented to the design and the disposal phases of the product life-cycle. The support of the returned product treatment offers the reduction of the product state uncertainty side-effects.  |          |
| 16.00   | <b>Introduction of Engineering Document Management in a Multi-site Aerospace Environment to service both Civil and Military Regulation Requirements</b><br><i>Dr Ip-Shing Fan, Cranfield University; Roger Hadfield BAESYSTEMS, UK</i><br>This paper reports on an on-going project that is developing EDM based system to manage the workflow processes and control the engineering information for both civil new build components and military repairs of a large aerospace/defence company in the UK.  |          |
| 16.30   | <b>Product Technology Expert System: Implementation in Industrial Electrical Generation Plant</b><br><i>Francisco Javier Ramirez Fernandez, Prof. Javier Conde Collado, University of Castilla-La Mancha, ES</i><br>The main purpose of this paper is to present an Expert System designed by our Technological Group that make sure the connection and continuity of all factors that take part in the current technological development of the great industrial projects, satisfying in this way the installation objectives and its economic profitability, throughout its cycle of life. The System is being implanted in Sustainable Electrical Generation Plant. |          |
| 17.00   | <b>Product Information Systems Engineering : An Approach by Reuse of Patterns</b><br><i>Lilia Gzara, Michel Tollenaere, GILCO Laboratory; Dominique Rieu, LSR Laboratory, FR</i><br>This paper deals with an approach for Product Information Systems (PIS) engineering by reuse of "patterns". Patterns form generic solutions to problems frequently occurring during PIS specification and implementation. Their use would contribute to the rapid development of numerous PIS.   |          |

17.30 PDT Days, Day 2 ends

On the evening of PDT Days, Day 2, Wednesday 3rd May, there will be the PDT Europe Dinner. See page 3 of this Programme for details.

For booking details, see Booking Form attached to page 7 of this Programme.

PDT Days Programme for Day 3 continues on next page.

| Session B2 – PDT in the Space Industry (2)<br>Chaired by Kjell Bengtsson, EPM, NO |  | Newton 2 |
|---|--|----------|
| 11.00   | <b>Baghera Exchange : An Exchange Database based on STEP-AP232</b><br><i>Jean-Luc Le Gal, CNES; Jean-Christophe Honnorat, Alcatel SpaceIndustries, Eric Lebegue, Simulog, FR.</i><br>Baghera Exchange is a database for the exchange of Technical Data Packages (structured sets of documents, CAD & analysis models, simulation results), conform to the STEP-AP232 standard, between industrial partners via Internet. This paper will present and demonstrate this solution.                  |          |
| 11.30   | <b>Toward a Standardized Architecture for CAX Model Integration andSynthesis</b><br><i>Steve Waterbury, NASA/Goddard, USA</i><br>This paper will discuss the application of STEP-based information mapping technology to integrate discipline-specific product models into an interdisciplinary master model, and to generate, link, and manage discipline-specific models from the master model.  |          |
| 12.00   | <b>STEP Becomes Standard Tool for CAD Data Exchange in the European Space Industry</b><br><i>Reinhard Schlitt, OHB-System; Gerold Willmes, ProSTEP, DE; Marco Alemanni, ALENIA Aerospazio, IT</i><br>Efforts to introduce STEP protocols in the European space industry are reported and typical industrial scenarios are detailed where the STEP standard is already reliably working on a daily basis. Remaining problems with data exchange as well as future improvements will be discussed. |          |

Cafeteria

| Session C2 – Implementing and Using Libraries<br>Chaired by Julian Fowler, PDT Solutions, UK |  | Newton 2 |
|--|--|----------|
| 13.30  | <b>InterLIB; an integrated database framework for effective collaboration of Parts Library and EPISTLE Class Library.</b><br><i>Hiroshi Murayama, TOSHIBA Corporation, JP</i><br>A logical database structure accommodating EPISTLE class library and ISO13584 Parts Library (PLIB) is presented. An implementation of this structure, named "InterLIB", allows data migration from PLIB to EPISTLE-type class library through the internal structure. This reflects industry usage scenario   |          |
| 14.00  | <b>External Product Library - An Implementation of the Industry Foundation Classes Release 2.0 Model</b><br><i>Dr James Nyambayo, Robert Amor, Ihsan Faraj, Building Research Establishment, UK; Jeff Wix, Jeff Wix Consulting/AEC3 Ltd, UK</i><br>This paper describes an implementation of the IFC Release 2.0 in developing a prototype external product library access system. The developed system demonstrates the structuring of manufactured product data using the Property Set and Library models and searching for product data against product attributes. |          |
| 14.30  | <b>Product Platform Management Enabling Solution and Component ReUse</b><br><i>Anna-Maria Kapanen, Optiwise Research, Stonesoft Corp, FI</i><br>Innovative products with reusable design solutions are achievable with wide use of platforms. Platforms reduce the product development effort. Optiwise Methodology defines a 4-step approach for creating product platforms and benefiting from re-usable components and solutions.   |          |

Newton Foyer

| Session D2 – Workflow and Lifecycle Management<br>Chaired by Stuart Lord, Beneficial Consultancy, UK |  | Newton 2 |
|--|--|----------|
| 15.30  | <b>Distributed Engineering Processes: Bridging the Paradigm Gap</b><br><i>Dr. Andreas Karcher, Matthias Glander, TI Munchen, DE</i><br>Distributed Engineering processes are typically supported by different types of IT-Systems. Each system is following its specific paradigm of integrating engineering tools, data and processes along the product life cycle. The paper describes an approach how to integrate these seemingly incompatible IT-Systems on a conceptual level.   |          |
| 16.00  | <b>A 'Learning by Doing' Approach for Making Mechanical Engineering a Repeatable and Auditable Process</b><br><i>Dick Laan, MIS Organisatie-Ingenieurs, NL</i><br>This paper provides an overview of the INTEREST architecture and describes how the system supports a mixed approach of top-down enactment of the Mechanical Engineering process and bottom-up capturing of working practices. The resulting process log can be used for auditing purposes and for accumulating a reservoir of best practice as an enterprise resource. |          |
| 16.30  | <b>Engineering Work Flow - The Process in Product Data Technology</b><br><i>Jacques Spee, D.J.A. Bijwaard, P.T. de Boer, National Aerospace Laboratory NLR, NL</i><br>An Engineering Workflow Management System (EwfMS) is presented. The EwfMS enables improved engineering processes with shared and up-to-date views on processes and data across companies and disciplines. All EwfMS information is shared on the basis of open standards such as CORBA and STEP.   |          |
| 17.00  | <b>Collaborative Management of the Product Definition Lifecycle for the 21st Century</b><br><i>Jordi Portella, CIMdata, FR</i><br>This presentation will focus on the business drivers that are impacting the evolutionary development and utilization of Web-enabled PDM and related technologies, the impact that these Internet-based technologies are having on global commerce, and the opportunities that exist to improve a company's ability to compete in a global market using innovative PDM solutions.                       |          |

| 08.00   | Day 3 Registration opens.   | Refreshments served (Coffee, tea, etc.) | Newton Foyer  |
|---|---|---|---|
| <b>Session E1 – PDM Implementation</b><br>Chaired by Håkan Kårdén, Eurostep, SE |   | Newton 1                                | <b>Session E2 – Cross-Industry Perspectives on PDT (1)</b><br>Chaired by Prof Johan Vesteragar, TU Denmark, DK  |
| 08.30   | <b>How to use PDM and Configuration Management in “Product Development and Life Cycle Management”</b><br><i>Martijn Roelofs, EIGNER+PARTNER, BE</i><br>Most traditional PDM systems have problems to meet product liability needs and to ensure the congruence of a product and assigned documentation.doc  |   | 08.30 <b>Product Data in Small and Medium Sized Companies</b><br><i>Øyvind Hornthvedt, SINTEF Industrial Management, NO</i><br>This paper shows how small and medium sized businesses can adopt and achieve several benefits from PDM technology by implementing PDM modules, which cover selected processes in their businesses.   |
| 09.00   | <b>Standards as enabler for PDM in virtual enterprises</b><br><i>Dr.Lutz Laemmer, Bodo Machner, ProSTEP, DE</i><br>We demonstrate the relationship of the existing data exchange and data sharing standards (ISO STEP, OMG PDM Enablers, and XML standard) and highlight the requirements for their harmonisation. Our experiences are based on actual implementations in the automotive and aerospace industry.  |   | 09.00 <b>Product Data Technology in the Forging Industry- Outset for a New Generation</b><br><i>Prof. Dr.-Ing. Reiner Anderl, Regina Beuthel, TU Darmstadt; Dr.-Ing. Birgit Awiszus, Anja Gogoll, University of Hanover, DE</i><br>This contribution presents the results of a case study in the German forging industry with respect to the Product Data Technology. It reports on today's situation in data handling and develops a strategy for strengthening the branch oriented competitiveness.   |
| 09.30   | <b>Securing ROI Amidst Change</b><br><i>Jan Irene Perkins, Origin Technology in Business, USA</i><br>Product Data Management technology has progressed to “Collaborative Product Commerce”. Enterprise Application Integration (EAI), Supply Chain Management (SCM) and ECommerce are in full swing using product data. Change is constant. Overlap abounds. How do you insure the success of your technology project investments?  |   | 09.30 <b>PDT in Food Manufacture Product Development: Systems and Processes for Reduced Fat Product Success.</b><br><i>Heather Parr, Jennifer Hamilton, Barbara Knox, University of Ulster, NI, UK</i><br>Identifying barriers to reduced fat food (RFF) development is required for increasing product success and reducing diet related diseases. Interviews with UK food product developers combined with database compilation of failed and successful RFF case histories formulated a model of success factors for RFF's. Application of this PDT provides greater control and minimises risks in manufacturing RFF product development. |
| 10.00   | <b>RapidPDM: Faster implementation of PDM</b><br><i>T.H.Mandemaker, Dr H.J. Pels, MIS-Organisatie-Ingenieurs, NL</i><br>This paper will present a novel methodology for PDM implementation based on advanced understanding of the mechanisms that affect the behaviour of engineering processes. The modelling methods lead to many new insights in the behaviour of product development processes and on the basis of several cases, a knowledge base in PDM implementation is emerging. |   | 10.00 <b>Lite E-Commerce Operative Scalable Solutions for SMEs – The ECOS Project and its accompanying initiatives</b><br><i>Ricardo Gonçalves, P Sousa, J Pimentão, A Steiger-Garcão, UNINOVA, PT Miguel Borrás, Isabel Gresa, AIDIMA, ES.</i><br>The ESPRIT project ECOS aims to develop and implement a light standard-based platform to establish together with services and tools the required procedures to enable secure Electronic Commerce and allow electronic business-to-business for SMEs.   |

10.30 Refreshment break

| <b>Session F1 – Data Management and Integration</b> |  | Newton 1 | <b>Session F2 – Cross-Industry Perspectives on PDT (2)</b> |  | Newton 2 |
|---|--|----------|--|--|----------|
| Chaired by José Barata, UNINOVA, PT                 |  |          | Chaired by Jochen Haenisch, DNV, NO                        |  |          |
| 11.00   | <b>Preserving end-user semantics in heterogeneous communication environments</b><br><i>Julian Fowler, PDT Solutions, UK; William C. Burkett, P.D.I.T. Inc; William F. Danner, Seneca -IT.com; Alfred Hulsey, US Air Force, USA</i><br>A methodology for integrating enterprise functions that recognizes the key role of people in communications. Illustrated using, as an example, the Product Data Markup Language (PDML) implementation, based on STEP and XML, developed for the United States Air Force. |          | 11.00  | <b>Unfolding the differences between various data management &amp; data integration solutions</b><br><i>Arwin Zijl, Frank Groot, Peter Bakker, Morse Information Technology, NL</i><br>Most industrial companies share the need to improve the management of their data, but struggle with choosing the right solution(s). This presentation covers: The positioning of different types of solutions, with a review of information standards and technologies; listing of selection criteria; a phased implementation approach; and a new vision on data management. |          |
| 11.30   | <b>EXIST: A Language to Support Data Modelling and Data Model Integration</b><br><i>Matthew West, Chris Angus, ShellservicesInternational, UK</i><br>EXIST is a new language based on logic and set theory, that is being developed to support the demanding requirements of the ISO TC184/SC4 data architecture project such as support for modelling at different levels of abstraction, mapping, and the definition of rules in a declarative manner.   |          | 11.30  | <b>Product evaluation integrated with product data models</b><br><i>Prof. Dr.-Ing. Reiner Anderl, Harald John, TU Darmstadt, DE</i><br>The potential of product data models to add knowledge applicable to any instantiation usually remains unused. Therefore a modelling technique usable by non-modelling experts to extend a product data model with formula or rules will be proposed.  |          |
| 12.00   | <b>J-SDAI, the synergy of STEP and Java™ Technology</b><br><i>Lothar Klein, LKSoftWare, DE</i><br>J-SDAI is a complete implementation of the SDAI standard with several extensions such as remote access to data on a repository server, mapping operations, events etc. Together with reusable software components such as 3D-Viewer and PDM-Beans it is a basis for specialized Cax-applications directly based on STEP data.  |          | 12.00  | <b>Validation of the Product Data Model for Ship Operation</b><br><i>David Jaramillo, Germanischer Lloyd, DE; Jochen Haenisch, DNV, NO; Emily Weitzenböck, University of Oslo, NO.</i><br>This presentation focuses on the product data modelling and data exchange implementation strategy used in the EU-funded project MARVIN (EP29049). A software tool is developed to support internet-based virtual organisations and is validated for two scenarios: ship repair and maintenance.  |          |

12.30 Lunch break

Cafeteria

| <b>Session G1 – Manufacturing Data Management</b> |   | Newton 1 | <b>Session G2 – CAD Tools and Technologies</b> |  | Newton 2 |
|---|---|----------|--|--|----------|
| Chaired by Alan Bezos, Association GOSSET, FR     |   |          | Chaired by Rainer Grünagel, ESA/ESTEC, NL      |  |          |
| 13.30   | <b>Manufacturing Data Management in the Product Realization Process using STEP as the Core Enabling Model</b><br><i>Mattias Johansson, Royal Institute of Technology, SE</i><br>This paper presents the concept of MDM, Manufacturing Data Management, as a complement or extension to the traditional PDM tools. Here the ISO10303-214 (STEP AP214) is used as the integrating core model for the product realization process representing product, process and manufacturing system information.  |          | 13.30  | <b>Increasing Efficiency through Integration of Freeform-Features into the CAD/CAM Chain</b><br><i>W. Eversheim, C. Deckert, M. Westekemper, WZL, DE</i><br>Workpieces which contain freeform and regular geometries are often programmed separately. Aim of a research-project was to integrate freeform-features into an existing feature-based CAD/CAM-chain. Therefore a feature-catalogue has been deduced from existing standards and a four-layer-model for feature-combinations has been developed.                            |          |
| 14.00   | <b>Shortening and Controlling Lead Times in the Machine Tool Industry</b><br><i>Juan Carlos Astiazarán, Ismael Miguez, Beatriz Piracés, Joseba Arana, Josean Lakunza, Ikerlan S. Coop, ES</i><br>DEDALO: Shortening and controlling lead times in the machine tool industry. A new way of project control: decide what to design, register it, and then design it. Implicated software: CAD, PDM and complementary utilities for the monitoring of the bill of materials.   |          | 14.00  | <b>Research of a STEP-based tools for Product Data</b><br><i>Liu Nairuo, Yang Xiaohu, Dong Jinxiang, Li Shanping, Zhejiang University, PR China</i><br>The integration of CAD/CAPP/CAM is one of the main difficulties in CIMS. This paper introduces a STEP tool based on AP214 and AP203, which provides capability to read and write data files according to AP214 and AP203's rules, and integration with CAD systems by features formal in AP214 schema.  |          |
| 14.30   | <b>Representation of Industrial Information Through the Joint Use of ISO 15531 MANDATE and PSL - A contribution to the factory of the future</b><br><i>A.F. Cutting-Decelle, University de Savoie, FR; J.J. Michel, CETIM, FR; C. Schlenoff, National Institute of Science &amp; Technology, USA</i><br>Today, management of information is a major stake for industrial companies. We analyse to what extent a representation of manufacturing management information based on two ISO standards under development or in project (MANDATE, PSL) can contribute to the factory of the future. |          | 14.30  | <b>Automatic Extraction of Manufacturing Features from 3 D Solid CAD Model using DXF Interface.</b><br><i>A.S.Deshpande, Gogte Institute of Technology; K.K.Appukkattan, Karnatak Regional Engineering College, India.</i><br>Current trends in research on Automatic Extraction of feature-s from 3 D Solid CAD models makes use of wordy and uncomfortable interfaces such as IGES etc. supported with complex algorithms. Present work makes use of an innovative 3 segment theory making use of simple and friendly DXF interface. |          |

15.00 Refreshment break

Newton Foyer

Final session of PDT Days follows on next page

|       |   |
|-------|---|
| 15.30 | <b>A STEP interface for SAP R/3</b><br><i>Bernhard Iselborn, SAP AG; Jens Kübler, debis Systemhaus Industry, DE</i><br>A description of the implementation phases for SAP System's STEP interface given by the joint development team (debis/SAP). Relevant parts of the SAP system, information about the scope of the implementation, key implementation decisions, the toolkit chosen and a description of the translator's architecture together with procedural aspects are presented. |
| 16.00 | <b>Managing process and facility data using an integrated electronic Business Information Model</b><br><i>Andries van Renssen, Shell Global Services, NL</i><br>An Information Management strategy to enable better business optimisation during operation of process facilities, and to reduce costs of managing data about a facility over its lifetime.  |
| 16.30 | <b>Closing remarks for PDT Days, and introduction to PDM Workshop, Friday 5<sup>th</sup> May</b><br><i>Bill Mesley, QMS, UK, (Conference Organiser)</i>   |

16.40 PDT Days, Day 3 ends.

**PDT Europe 2K, Day 4: PDM Workshop-“PDM in the Extended Enterprise” Friday 5th May, 2000**

**What is PDM?**

PDM is 'Product Data Management', and refers to all data related to a product, regardless of its origin, its content, its meaning, or its format, over the whole of the product lifecycle. Modern PDM systems provide companies with the ability to manage their entire product range as a whole, with information structured on standards such as XML, STEP, UML, CORBA and EXPRESS. PDM systems provide possibilities for enterprise integration which stretch well beyond accepted concepts of concurrent engineering, whilst web-based PDM solutions provide a mechanism for secure sharing of engineering data across a distributed project environment - managing and enabling the supply chain.

**The Extended Enterprise**

The Extended Enterprise is one of the hot topics of today, when companies are looking into gaining a competitive advantage through the sharing of resources across company borders. The Extended Enterprise reaches out beyond the traditional concept of material supply, and includes co-operative design as well as co-operative after market support. More information than ever before needs to be transferred between business partners, or shared, and in addition, the information exists in many versions requiring efficient PDM to support the many and varied organisations in the Extended Enterprise.

**Sponsored by Eurostep**

The PDM Workshop at PDT Europe 2K is sponsored by Eurostep, one of the leading competence providers in Strategic Planning, Design, and Implementation of Open Solutions. Eurostep is actively involved in the development of information standards such as STEP, SGML, XML, IAI, GIS, etc., and has unrivalled experience in product data across a number of industries. Eurostep has its headquarters in Sweden, with offices in Finland, Germany, UK, and USA.

For more information, see <[www.eurostep.com/pdm](http://www.eurostep.com/pdm)>

**Objective of the Workshop**

The purpose of the day is to provide a unique learning opportunity for PDM users, and to share and examine the main business drivers for the Extended Enterprise, the demands for Product Data Management in the EE, and to provide examples of how software vendors are currently addressing these demands. At the end of the day, all delegates will have:

- ? ? Received a checklist of things to consider when selecting or developing IS/IT support for the EE
- ? ? Developed an understanding of state-of-the art of EE.
- ? ? Seen examples of what is, and will be, provided by both large and small PDM vendors to support the EE.

**Programme for PDM Workshop, 5th May**

|       |  |   |   |
|-------|--|---|---|
| 08.30 | Registration   | Refreshments served (coffee, tea, etc.) | Newton Foyer  |
| 09.00 | Welcome and introduction   |   | <i>Håkan Kårdén, Managing Director Eurostep Group, SE</i>   |
| 09.10 | The Extended Enterprise-The business strategies that are enabled by the EE and the bottom line justification for creating an EE. |   | Speaker:<br><i>Dr Steven Goldman*, Lehigh University USA</i>  |
| 10.00 | Is there a checklist to define the IS/IT requirements in the EE? Presentation and discussion. (Part 1)                           |   | Moderator and speaker:<br><i>Torbjörn Holm, Eurostep, SE</i>  |
| 10.30 | <b>Refreshment break</b> Newton foyer  |   |   |
| 11.00 | Is there a checklist to define the IS/IT requirements in the EE? Presentation and discussion. (Part 2)                           |   | Moderator and speaker:<br><i>Torbjörn Holm, Eurostep, SE</i>  |
| 11.30 | EE examples and future requirements  |   | Moderator: <i>Per Brorson, Eurostep, SE</i><br>Speaker: <i>Lutz Völkerath, Hella, SE</i>  |
| 12.10 | <b>Lunch break</b> Cafeteria   |   |   |
| 13.15 | EE examples by end users   |   | Moderator: <i>Per Brorson Eurostep, SE</i><br>Speaker: <i>John Dunford, Eurostep, UK</i><br><i>(previously Manager of the NATO CALS Office)</i> |
| 13.45 | Software applications addressing the needs for PDM in the Extended Enterprise  |   | Moderator: <i>Dr Steven Goldman*, Lehigh University USA</i><br>Presentations from SAP, ISS and Eurostep.  |
| 15.00 | Wrap-up and closure  |   | <i>Håkan Kårdén, Eurostep, SE</i><br><i>Dr Steven Goldman*, Lehigh University, USA</i>  |
| 15.10 | <b>PDM Workshop finishes.</b>  | <b>Refreshments</b>                     | <b>Newton foyer</b>   |
| 15.30 | PDT Europe 2K closes, exhibition finishes.   |   |   |

\*Steven L Goldman, PhD, co-authored in 1991 a report – named by the Economist as “The most important study of manufacturing in a decade” – that presented a detailed vision of post mass-production commerce. In the report, which was commissioned by the U.S. Department of Defense, Goldman and his team argued that if the US Manufacturing Industry was to regain its global competitiveness, companies would have to do three things: **Stop** emulating the Japanese; **Begin** offering integrated “solutions” to customers, not simply products; and **Focus** on building the company's core competencies.

In the report about manufacturing competitiveness, Goldman coined the term “Agile Manufacturing”. During the 1990's Dr Goldman has written several books and he is now at work on a new book called “Thrive to Survive” in which he details the integration of people, organizational structures, and technology that is required for companies to become Next Generation Enterprises (NGEs). One of the things that a NGE needs to do is to collaborate with suppliers and customers in order to produce a constantly changing range of solutions. This is then realised by the implementation of the virtual/extended enterprise.

## Venue Location and Facilities

PDT Europe will take place in the Newton Room, ESTEC Conference Centre, at the European Space Agency, Keplerlaan 1, 2201 AZ, Noordwijk, The Netherlands. Noordwijk is situated on the W coast of The Netherlands, 30km SW of Amsterdam centre, 15km NE of Den Haag, and approximately 20km SW of Schiphol airport. Noordwijk is well served by public transport. The nearest rail station is Leiden, which is 20mins. from Schiphol airport. Trains run every 15 minutes. A bus or taxi will get you to ESTEC from Leiden station in about 15 mins, or 30 mins. direct from the airport.

The climate in Noordwijk in early in May is very pleasant, mild, and fresh, but being near to the North Sea coast, it can some times be windy.

ESTEC has all latest presentation and communication facilities, including meeting rooms with fax and telephone. ESTEC facilities cater for the requirements of disabled delegates. Lunches with vegetarian and other dietary options are always available.

## Delegate fees, and how to Register

The basic registration fee for the 2½ days of PDT Days, 2<sup>nd</sup> to 4<sup>th</sup> May, is **NLG1700**. The fee for the PDM Workshop on 5<sup>th</sup> May is **NLG550**. The organisers are pleased to offer the following discounts. Only one discount shall apply:

- ? ? Business registrations for PDT Days 2<sup>nd</sup> to 4<sup>th</sup> May, received before 31st March: discount of NLG100, i.e. NLG 1600.
- ? ? Genuine academic registrations for PDT Days 2<sup>nd</sup> to 4<sup>th</sup> May, received at any time: discount NLG100, i.e. NLG 1600.
- ? ? Delegates booking for both PDT Days **and** PDM Workshop, 2<sup>nd</sup> to 5<sup>th</sup> May inclusive: discount NLG150, i.e. NLG 2100.
- ? ? Delegates booking for PDT Days **and** PDM Workshop, **and** both social events should tick the **PDTWise** option. The single payment of **NLG2300** provides a total discount of NLG200

All registrations include:

- ? ? Name badge on entry
- ? ? Free access to all conference sessions and exhibition
- ? ? Refreshments and lunches
- ? ? Delegate bag
- ? ? Copy of PDT Days Proceedings, ISBN 1 901782 04 2
- ? ? List of delegates

## PDT Europe 2K: Organisation

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

To further the work of PDTAG, the Programme Committee for PDT Europe 2000 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.

### Sponsored by and co-organised with:

- ? ? European Commission, DG XIII (Information Society)
- ? ? European Space Agency, ESA.
- ? ? European STEP Centres Network, ESCN

### Programme Committee:

- ? ? Ronald Mackay *European Commission, Brussels, BE*
- ? ? Constantinos Stavrinidis *European Space Agency, NL*
- ? ? Hans Peter de Koning *European Space Agency, NL*
- ? ? Rainer Grünagel *European Space Agency, NL*
- ? ? Jean-Luc Le Gal *Centre National d'Etudes Spatiales, FR*
- ? ? Peter Willems *TNO, NL*
- ? ? Julian Fowler *PDT Solutions, UK*
- ? ? Alain Bezos *Association GoSET, FR*
- ? ? Reiner Anderl *TU Darmstadt, DE*
- ? ? Odd Myklebust *SINTEF Industrial Management, NO*
- ? ? Stuart Lord *ICI Engineering, UK*
- ? ? Håkan Kårdén *Eurostep, SE*
- ? ? Anne-Marie Walters *SEMA Group, UK*
- ? ? José Barata *UNINOVA, PT*
- ? ? Johan Vesterager *TU Denmark, DK*
- ? ? Patrice Poyet *CSTB, FR*
- ? ? Paco Sastrón *DISAM, Univ. Politéc. de Madrid, ES*
- ? ? Kjell Bengtsson *EPM, NO*
- ? ? Jochen Hæmisch *DNV (Det Norske Veritas), NO*
- ? ? Luciano Lauro *CeSTEP Centre, UNINFO, IT*
- ? ? Ian Bailey *PISTEP & Eurostep, UK*

### Conference Manager:

- ? ? Bill Mesley *Quality Marketing Services,(QMS), UK*  
(Organisers of PDT Days 1996 to 2000)

### Conference Secretariat:

- ? ? Gonnje Elfering *ESTEC Conference Bureau, NL*

### Useful Websites Related to PDT Europe 2K

- ? ? PDT Europe <http://www.pdteurope.com>
- ? ? QMS <http://www.qmsstep.com>
- ? ? ESA/ESTEC <http://www.estec.esa.nl>
- ? ? Eurostep/PDM w'shop <http://www.eurostep.com/pdm>
- ? ? ESCN <http://www.uninova.pt/~escn>
- ? ? PDTAG <http://www.cadlab.tu-berlin.de/~pdtag>
- ? ? CEC DG13 <http://www.cordis.lu>

## The Organisers

**Quality Marketing Services,**

**Telephone: +44 1252 878482**

Fax: +44 1252 890957

Email: [info@qmsstep.com](mailto:info@qmsstep.com)

Beech House, 1 Yorktown Road, Sandhurst,  
Berkshire, GU47 9DX, UK

*QMS is an ISO 9001 Registered Firm*