Editorial

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Biographical notes: Heiko Gsell is Senior Consultant at Logica Germany GmbH & Co. KG within the Unit Business Consulting. Until the end of 2007 he was the Head of Department of Integrated Product Development at BIBA – Bremen Institute of Production and Logistics GmbH. He received his PhD in Engineering Science from the University of Bremen. His research interests include information management, concurrent engineering, product data management and innovation management.

The missing availability, incompleteness or incorrectness of product-related knowledge, information, data and documents − called content − in product development increasingly leads to trial and error processes, inefficiencies and ineffectiveness of product development activities. To cope with these negative effects, there is a need of new approaches for capturing, managing, storing, delivering and preserving this product-related content along product development processes. Besides specific models, methods and instruments for managing product-related content, methods and tools have to be found and developed which connect this content with the product development process. Thus, exactly the needed elements of the content are linked to these product development steps where they are directly used or processed, e.g. through specific algorithms.

This special issue of *International Journal of Product Development* aims at presenting innovative approaches for the management of product-related content along complex and cross-linked product development processes and for linking the product-related content to a business process. As research in this area did not proceed so far, there is a need for both theories and approaches as well as methods, instruments and tools for managing content in a product development environment. These solutions for managing product-related content may be taken from already established disciplines such as business process management, information management or knowledge-based engineering, and transferred to a content management context. Also, new solutions for this management issue must be developed to open new paths and to create new accesses how to produce, to structure and to make available all the content needed with the product development process.

This special issue gives an overview about some of these solutions. In the first paper, Marija Jankovic, Julie Le Cardinal and Jean-Claude Bocquet propose a new project management tool structure, which was developed upon the collaborative decision-making information capitalisation in order to structure and organise this phase. The necessary information in this tool is identified by a model developed using the systemic approach. The second paper of Arun N. Nambiar, Robert P. Judd and Judah Greenblatt presents a

novel approach to solve data exchange among different modules in a manufacturing or service framework: Jacopo Cassina, Maurizio Tomasella, Marco Taisch and Andrea Matta present in their paper the conceptual model behind a software component, which is responsible for the integration and management of both product data and knowledge from all lifecycle phases of mass products, on a logically consistent basis. This model also became the foundation for the proposal of a closed-loop Product Lifecycle Management (PLM) standard. Andreas Oroszi, Thomas Jung, Alexander Smirnov, Nikolay Shilov and Alexey Kashevnik describe in their paper an approach to building an ontology-driven codification system for discrete and modular products and its implementation. The codification system is based on a common ontology containing family-based product classification used in the company's Product-Differentiated Marketing (PDM) and Enterprise Resource Planning (ERP) systems. The fifth paper, presented by Samuel Gomes, Davy Monticolo, Vincent Hilaire and Benoît Eynard, gives an overview on the Atelier Coopératif de Suivi de Projet in French (ACSP) platform which is a web-based PLM system. It supports the design team members in carrying out collaborative activities in product–process–design projects. An improvement of the ACSP platform has been proposed by introducing multi-agent systems at several levels of the ACSP architecture. The paper of Sofi Elfving presents the results from a survey aiming to identify the relationships between project performance and different factors when the contextual setting varies. The paper in particular shows the importance of decision-making among actors in a distributed context. Finally, the paper by Heiko Gsell and Klaus-Dieter Thoben presents a new approach on structuring and management product-related content during the product development process – the so-called Content Circle. This method actually is underdevelopment and needs some more research.

Finally, I express my gratitude to Professor Benoît Eynard, Université de Technologie de Belfort Montbéliard (UTBM), for his great support in evaluating and selecting the high quality papers of this issue. I also thank all the authors presenting their innovative ideas, specific methods and tools in this issue. I am very happy that we have succeeded in publishing this special issue and I hope it will give a lot of benefits and additional information to the readers and to everyone who is looking for new ideas, concepts, methods and tools concerning the management of product-related content. Lastly, I would like to express my sincere appreciations to Dr. Mohammed Dorgham, the Editor-in-Chief, and Ms. Liz Harris, the Journal Manager, for their advice, help and support to make this special issue come true.