

Title: Basic Concepts and Technologies for Business Process Management

Presenter: prof.dr. Manfred Reichert

Abstract:

The economic success of an enterprise more and more depends on its ability to flexibly and quickly react to changes in its environment. Companies are therefore developing a growing interest in improving the efficiency and quality of their business processes and in aligning their information systems such that they behave process-aware, i.e., to offer the right tasks, at the right point in time, to the right persons along with the information needed to perform these tasks. This tutorial deals with basic concepts and technologies for business process management.

Starting with a real-world example from the healthcare domain characteristics, concepts, and architectures of process-aware information systems are presented. This includes a discussion of basic technologies that can be used for implementing process-aware information systems (e.g., workflow management systems and orchestration engines).

URL paper:

<http://www.aiai.ed.ac.uk/project/wfmc/ARCHIVE/DOCS/refmodel/httoc.html>

Bio:

Manfred Reichert holds a Ph.D. in Computer Science and a Diploma in Mathematics. Since January 2008 he has been full professor at the University of Ulm, Germany. From 2005 to 2007 he worked as Associate Professor at the University of Twente (UT). At UT he was leader of the strategic research initiatives on E-health (2005-2006) and on Service-oriented Computing (2007), and member of the Management Board of the Centre for Telematics and Information Technology, which is the largest ICT research institute in the Netherlands. Manfred has worked on advanced issues related to process management technology, process flexibility, service-oriented computing, and databases and information systems. Together with Peter Dadam, he pioneered the work on the ADEPT process management system, which currently provides one of the most advanced technologies for realizing adaptive process-aware information systems. Manfred is General Co-Chair of the BPM'09 conference and was PC Co-chair of the BPM'08 conference in Milan.

Title: Formal Foundations of Business Process Management (Systems)

Presenter: prof.dr.ir. Wil van der Aalst

Abstract:

Over the last decade there has been a shift from "data-aware" information systems to "process-aware" information systems. To support business processes an enterprise information system needs to be aware of these processes and their organizational context. Business Process Management (BPM) includes methods, techniques, and tools to support the design, enactment, management, and analysis of such operational business processes. BPM can be considered as an extension of classical Workflow Management (WFM) systems and approaches. This tutorial introduces models, systems, and standards for the design, analysis, and enactment of workflow processes. Petri nets

are used for the modeling and analysis of workflows. Using Petri nets as a formal basis, contemporary systems, languages, and standards for BPM and WFM are discussed.

URL paper: <http://is.tm.tue.nl/staff/wvdaalst/publications/p226.pdf>

Bio:

Prof.dr.ir. Wil van der Aalst is a full professor of Information Systems at the Technische Universiteit Eindhoven (TU/e). Currently he is also an adjunct professor at Queensland University of Technology (QUT) working within the BPM group there. His research interests include workflow management, process mining, Petri nets, business process management, process modeling, and process analysis. Wil van der Aalst has published more than 90 journal papers, 13 books (as author or editor), 200 refereed conference /workshop publications, and 30 book chapters. Many of his papers are highly cited (he has an H-index of more than 50 according to Google Scholar) and his ideas have influenced researchers, software developers, and standardization committees working on process support. He has been a co-chair of many conferences and is editor/member of the editorial board of several journals.

Title: Intelligent Design ... of Business Processes!

Presenter: dr. Hajo Reijers

Abstract:

Contemporary organizations spend tremendous resources on the design of their products, corporate image, and buildings. Oddly enough, their business processes often show no signs of deliberate let alone intelligent design. Nonetheless, indications are that a conscious design (or re-design) of business processes is key in improving organizational performance. This tutorial gives an overview of the development of business process design from a management book concept into an engineering discipline. The feasibility and viability of the presented concepts will be illustrated by experiences from industrial applications and the development of various software tools.

URL paper:

<http://is.tm.tue.nl/staff/hreijers/H.A. Reijers Bestanden/bpomega.pdf>

Bio:

Hajo Reijers is an assistant professor with the Information Systems group of Eindhoven University of Technology. His research interests are in business process modeling, workflow management technology, and discrete event simulation. In 2002, he got his PhD in Computer Science from Eindhoven University of Technology, while he works as a manager for Deloitte Consulting. He is founder and member of the Dutch BPM-Forum, a platform for knowledge exchange between industry and academia related to business process optimization.

Title: Workflow Patterns: Towards a Foundation for BPM

Presenter: dr. Nick Russell

Abstract: There is increasing fervour associated with the notion of business process management (BPM) and the potential that it offers for streamlining and enhancing the operation of core organizational processes. However, a key inhibitor to the broad adoption of BPM is the lack of an accepted conceptual foundation. Over the past ten years, the Workflow Patterns Initiative has undertaken an empirical approach to the identification of core BPM concepts and has developed a catalogue of control-flow, data and resource constructs that have generic applicability. In this invited talk, we examine the range of workflow patterns that have been identified and examine their relevance to the issues of technology selection and business process design.

URL papers:

<http://www.workflowpatterns.com/documentation/documents/BPM-06-22.pdf>

http://www.workflowpatterns.com/documentation/documents/data_patterns%20BETA%20TR.pdf

<http://www.workflowpatterns.com/documentation/documents/ResourcePatterns%20BETA%20TR.pdf>

Bio:

Nick Russell has 20 years' experience in the IT industry in a variety of technical and senior management roles. During this time, he has led a number of high-profile systems integration and product development initiatives for organizations in the financial and retail sectors. He is currently conducting research into business process management and process-aware information systems at the Technische Universiteit Eindhoven in the Netherlands. Over the past five years, he has been the driving force for the extension of the workflow patterns to the data, resource and exception handling perspectives and the development of the new YAWL business process modelling reference language.

Title: Process Mining

Presenter: prof.dr.ir. Wil van der Aalst

Abstract:

More and more information about processes is recorded in the form of event logs. This can be used to diagnose and improve processes in a variety of domains. Especially business processes involving human actors are interesting to diagnose because these processes are not controlled by software and there may be a gap between what people think that happens and what really happens. Process mining provides a versatile and extendible way to analyze such processes. Using process mining techniques it is possible to extract different types of models from event logs, e.g., the construction of a process and organizational models. Moreover, other techniques support the conversion and analysis of models. Using conformance checking techniques models can also be compared with reality and existing models can be enhanced with additional information, e.g.,

indicating bottlenecks in a process. This tutorial aims to provide an overview of process mining techniques and, using many real-life examples, it will be shown how particular techniques can be applied and what kind of insights such analyses provide.

URL paper: <http://www.wis.win.tue.nl/~wvdaalst/publications/p245.pdf>

Bio:

See above.

Title: Flexibility in Business Process Management

Presenter: prof.dr. Manfred Reichert

Abstract:

In many application domains BPM technology will not be accepted by users if rigidity comes with it. Instead it must be possible to quickly implement new processes, to enable flexible process enactment (e.g., by supporting on-the-fly changes of running processes), to dynamically evolve processes during runtime, or to migrate process instance collections to new process schema versions. The ability to provide such process flexibility has been identified as one of the most fundamental needs for process-aware information systems, and different paradigms enabling process flexibility have emerged. Examples include adaptive workflows, declarative processes, late modeling of (sub-)processes, and data-driven processes (e.g., case handling).

This presentation gives an overview of these different paradigms, and discusses their commonalities and differences using characteristic application scenarios.

URL paper: <http://dbis.eprints.uni-ulm.de/335/>

Bio:

See above.

Title: iTasks - Specifying Workflows in a Functional Language

Presenter: prof.dr. Rinus Plasmeijer

Abstract:

Functional programming languages such as Haskell and Clean offer powerful language constructs for abstraction and composition. The abstraction mechanisms allow the construction of Embedded Domain Specific Languages. An EDSL combines the advantages of a domain specific language with the full power of a general programming language. The iTask combinator library enables the specification of workflows in the functional language Clean. An iTask specification results in a multi-user web application running on a server. For each worker the tasks to do are presented in a browser. On demand, iTasks can run on the client as well, resulting in a distributed evaluation of workflows. Special about the iTask system is that workflows are dynamically constructed, they are type safe, and can be higher order: the result of work can be a new workflow.

URL paper:

Bio:

Rinus Plasmeijer studied Applied Mathematics at the University of Twente (1977), and he received a PhD in Computer Science at the University of Nijmegen (1981). Since 1995 he is professor in Computer Science at the University of Nijmegen with as specialization Software Technology. His current interests are functional programming languages, type systems, rewrite systems, operating systems and web technology. He is the designer of the functional programming language Clean. For his work he recently has been awarded an honorary doctorate and professoriate by the ELTE University (Budapest, Hungary).

Title: BPM|one by Pallas Athena, use of BPM concepts and technology in commercial software

Presenter: drs. Paul Eertink

Abstract:

Pallas Athena offers with BPM|one an integrated suite of components that together cover the whole BPM cycle from process analysis to process design through to process execution, process monitoring and back to analysis. Paul Eertink will Explain the vision on BPM of Pallas Athena and will demonstrate how this vision is reflected in Pallas Athena software. Examples will also be given of how scientific research has resulted in new features in Pallas Athena software.

URL: <http://www.pallas-athena.com/>

Bio:

Paul Eertink is product manager at Pallas Athena International. He has been involved in the field of process management since his first workflow management projects at ING Group in 1996 with several different workflow systems. In 1999 he joined Pallas Athena as a business consultant and participated in many BPM projects at financial institutions, local governments, courts of law, etc. His rich business experience now facilitates him in getting the requirements right for new BPM|one releases and communicating new releases and the Pallas Athena vision to the BPM marketplace.