BIS at glance

WEDNESDAY

	room 103	room 213A	room 236A
9:00 - 12:00	ASG Project Meeting		
12:00-15:00	ASG Project Meeting		Mobile Applications for the Public Sector, Paul Moore, Indra Systemas S.A., Spain
15:15-18:15		OfficeObjects® WorkFlow– an Example of the 2nd Generation BPM Environment, Rodan Systems SA, Poland	Ontology-based Information- Filtering and Retrieval, Dominik Kuropka, Hasso- Plattner-Inst. für Softwaresystemtechnik, Germany

THURSDAY

	Aula
9:30-11:00	Inauguration Session **Prof. Maria Orlowska,** The Harmonised Messaging Technology Connects Web Services
11:00-11:15	Coffee Break
11:15-12:45	**Keynote Speakers: Volker Gruhn,** From Mobile Ideas to Mobile Innovations and Mobile Architectures; **Edward Szczerbicki,** An approach to Information Management in complex systems

	room 213A	room 236A	room 115 A
13:00-14:30	Mobile Applications fof Public Administration	Information Retrieval and Filtering	Software Engineering (1)
14:30-15:15	Lunch		
15:15-16:30	**Panel e-GOVERNMENT (AULA)**		
16:30-17:00	Coffee Break		
17:00-19:00	e-Government	Technology Transfer	Software Engineering (2)
19:30	Dinner		

FRIDAY

9:30-11:00	**Keynote Speakers: W. Nebel,** SMIs: Small and Medium Size Research Institutes - Roles, Objectives and Strategies **Gregory Kersten,** E-negotiation Systems: Interaction of People and Technologies to Resolve Conflicts **(AULA)**
11:00-11:15	Coffee Break

	room 213A	room 236A	room 115 A
11:15-12:45	General BIS (1)	Web Services-based Information Systems	OntoLangBIS (1)
12:50-14:20	Panel ONTOLOGIES (115A)		
14:20-15:15	Lunch		
15:15-16:45	General BIS (2)	e-Learning for BIS	OntoLanBIS (2)
16:45	Closing Session		

Preamble

BIS 2005 is the 8th International Conference devoted to Business Information Systems that will take place in April 2005 in Poznań, Poland. BIS 2005 aims at discussion of the development, implementation, application and improvement of computer systems for business applications. It is addressed to the scientific community, people involved in the development of business computer applications, consultants helping to properly implement computer technology and applications in the industry. I hope that during the conference there will be an opportunity for interesting international discussions. This will be facilitated by a number of invited lectures presented by international experts. Over 60 scientists from diverse countries were invited to participate in the BIS 2005 International Program Committee – from the United States of America to Australia, from countries with a stable economy through to those undergoing economic transformation. This helped further enrich the conference program, which covers such topics as e-government, e-learning, information retrieval and filtering, ontologies and language technologies, software engineering, webservices-based information systems and others.

Witold Abramowicz
The Poznań University of Economics, Poland
Program Committee Chairman

Poznan, 20-22 April 2005

Sponsors

Microsoft Polska Sp. z o.o
http://www.microsoft.com/poland/

Winuel S.A.
http://www.winuel.com.pl/

ZETO S.A.
http://www.zeto.com.pl

Supporters

Bankier.pl - Polski Portal Finansowy
http://bankier.pl/

CEPIS - The Council of European Professional
Informatics Societies
http://www.cepis.org

Gazeta IT
http://www.gazeta-it.pl

Gesellschaft für Informatik, Germany
http://www.gi-ev.de

Naukowe Towarzystwo
Informatyki Ekonomicznej
http://bsd.ae.wroc.pl/ntie/

Poznań International Fair Ltd., Poland
http://www.mtp.pl/en/

Systemy IT - Magazyn
http://www.itpress.pl

The Journal of Technology Transfer and Society

Program Committee

GENERAL CHAIR
Witold Abramowicz, The Poznań University of Economics, Poland
(W.Abramowicz@kie.ae.poznan.pl)

PROGRAM COMMITTEE
Ajith Abraham, Oklahoma State University, USA
Hans-Jürgen Appelrath, University of Oldenburg, Germany
Frank Arendt - Institute of Shipping Economics and Logistics, Germany
Jay Aronson, University of Georgia, USA
Shirley Ann Becker, Northern Arizona University, USA
Wojciech Andrew Berger, The University of Scranton, USA
Richard Bonner, Mälardalen University, Sweden
Kalina Bontcheva, University of Sheffield, United Kingdom
Hans Ulrich Buhl, University of Augsburg, Germany
Hans-Dieter Burkhard, Humboldt University, Germany
Christoph Bussler, Oracle Corporation, USA
Wojciech Cellary, The Poznań University of Economics, Poland
Hamish Cunningham, University of Sheffield, United Kingdom
Peter Dadam, University of Ulm, Germany
Czeslaw Danilowicz, The Wroclaw University of Technology, Poland
Dieter Fensel, University of Innsbruck, Austria
Christoph Freytag, Humboldt University, Germany
Jan Frick, Stavanger University College, Norway
Jan Goliński, Warsaw School of Economics, Poland
Norbert Gronau, University of Oldenburg, Germany
M.P. Gupta, Indian Institute of Technology, India
Hele-Mai Haav, Concordia International University, Estonia
Ulrich Hasenkamp, University of Marburg, Germany
Harald Häuschen, University of Zürich, Switzerland
Lech Janczewski, University of Auckland, New Zealand
Heinrich Jasper, Freiberg University of Mining and Technology, Germany
Paweł Jan Kalczyński, University of Toledo, USA
Jerzy Kisielnicki, The Warsaw University, Poland
Gary Klein, University of Colorado, Colorado Springs, USA
Gerhard F. Knolmayer, University of Bern, Switzerland
Wolfgang König, Goethe-University of Frankfurt am Main, Germany
Ludwik Kondratowicz - Uniwersity of Gdansk, Poland
Jacek Koronacki, Polish Academy of Sciences, Poland
Henry Linger, Monash University, Australia
Peter C. Lockemann, University of Karlsruhe, Germany
Leszek Maciaszek, Macquarie University, Australia

Ausif Mahmood, University of Bridgeport, USA
Ben Martz, University of Colorado, Colorado Springs, USA
Heinrich C. Mayr, University of Klagenfurt, Austria
Marie-Francine Moens, Katholieke Universiteit Leuven, Belgium
Ludwig Nastansky, University of Paderborn, Germany
Roumen Nikolov, Sofia University, Bulgaria
Adam Nowicki, The Wrocław University of Economics, Poland
Andreas Oberweis, Goethe-University of Frankfurt am Main, Germany
Mitsunori Ogihara, University of Rochester, USA
Maria Orlowska, The University of Queensland, Australia
Marcin Paprzycki, Oklahoma State University, USA
Eric Paquet, National Research Council, Canada
Witold Pedrycz, University of Alberta, Canada
Jaroslav Pokorný, Charles University, Czech Republic
Shen Qingguo, Nanjing University, China
Václav Řepa, VSE Praha, Czech Republic
Kilian Stoffel, University of Neuchâtel, Switzerland
Vojtech Svatek, VSE Praha, Czech Republic
Ryszard Tadeusiewicz, AGH University of Science and Technology, Poland
Deborah Tesch, Xavier University, USA
Thaddeus W. Usowicz, San Francisco State University, USA
Herna Viktor, University of Ottawa, Canada
Krzysztof Węcel, The Poznań University of Economics, Poland
Mathias Weske, University Potsdam, Germany
Viacheslav E. Wolfengagen, JMSUICE Moscow, Russia
Stanislaw Wrycza, University of Gdańsk, Poland
Xindong Wu, University of Vermont, USA
Sławomir Zadrożny, Polish Academy of Sciences, Poland
Mohammed J. Zaki, Rensselaer Polytechnic Institute, USA
Jozef Zurada, University of Louisville, USA

Organizing Committee

Agata Filipowska (a.filipowska@kie.ae.poznan.pl)
Chair of the Organizing Committee

Andrzej Bassara (a.bassara@kie.ae.poznan.pl)
Monika Kaczmarek (m.kaczmarek@kie.ae.poznan.pl)
Tomasz Kaczmarek (t.kaczmarek@kie.ae.poznan.pl)
Marek Kowalkiewicz (m.kowalkiewicz@kie.ae.poznan.pl)
Andrzej Kyć (a.kyc@kie.ae.poznan.pl)
Jolanta Skorwider (j.skorwider@kie.ae.poznan.pl)
Krzysztof Węcel (k.wecel@kie.ae.poznan.pl)
Karol Wieloch (k.wieloch@kie.ae.poznan.pl)
Marek Wiśniewski (m.wisniewski@kie.ae.poznan.pl)

The Poznań University of Economics
Department of Management Information Systems
Al. Niepodległosci 10
60-967 Poznań, Poland
phone:+48/61/ 856 93 33
fax: +48/61/ 856 93 34
bis2005@kie.ae.poznan.pl

Keynote and Invited Speakers

Maria E. Orlowska
The University of Queensland, Australia

The Harmonised Messaging Technology connects Web Services

Maria E.Orlowska (MSc, PhD, DSc) is the professor in Information Systems, Head of Data and Knowledge Engineering Group and the Director of Research Higher Degree Students at the School of Information Technology and Electrical Engineering at the University of Queensland, Australia.

She is a distinguished research fellow at the Distributed Systems Technology Centre Pty Ltd. She serves on the editorial board of several international journals, as well as program committee of major conferences in database domain. Her research interests include Distributed Database Systems, Integration of Database Systems, Data Warehousing and Data Mining and most recently Workflows Modeling and Enactment as well as Messaging Technology.

Her contributions appear in over 200 published research papers in peer reviewed international journals and conferences. Her passion for her research also contributed to 25 PhD students successfully completing their studies under her advice.

In recognition of her overall contribution to science, Professor Orlowska was elected a Fellow of the Australian Academy of Science in 2003.

Volker Gruhn
University of Leipzig, Germany

From Mobile Ideas to Mobile Innovations and Mobile Architectures

Volker holds the chair for Applied Telematics and e-Business at the Computer Science Department of University of Leipzig. His research interests are component-based software development, software architecture and distributed software processes. An application focus is on point-of-sale systems and always online solutions for mobile systems.

From 1997 to 2002 Volker Gruhn has been Professor of Software Engineering at the University of Dortmund.

From 1994 to 1996 Volker Gruhn was appointed as chief technical officer at LION, a medium sized software house with 400 employees. In this position he was responsible for software development, quality management and the mainframe computing center of LION.

In 1993 Volker Gruhn worked for the Fraunhofer Institute for Software and Systems Engineering where he was responsible for the European Professional Software Engineering Program.

He received a diploma degree (1987) and a PhD (1991) both in computer science from the University of Dortmund. Volker Gruhn is author and co-author of about 100 national and international journal and conference articles.

He founded the consulting company adesso in 1997, where currently more than 160 persons are employed. The main business of adesso is consulting in system integration and software development, process modelling and electronic business.

Volker Gruhn was program chair of the European Workshop on Software Process Technology in 1998 and is currently member of several workshops and conferences (Workshop on Software Architecture, EUROMICRO Process Modelling Workshop, International Conference on the Software Process, Working Conference on Activity Coordination, DEXA Workshop on component-based development of large systems).

Abstract

Mobility has an impact onto private life as well as on business processes. Activities are carried out at locations not known before starting processes. Data and applications are needed at these locations. We sketch which kinds of activities (letting alone whether they are of private or business nature) demand for mobile support. Mobility of business processes is particularly urgent for business processes, parts of which are carried out at the point of sale. Along the lines of an example from the insurance industry, we illustrate the needs for mobility and we sketch how these needs could be satisfied in terms of multi-channel software and IT infrastructure. Special attention is paid to the question of supporting software architectures and to the question of telecommunication services needed.

Edward Szczerbicki

An approach to Information Management in complex systems

Edward Szczerbicki (MSc, PhD, DSc) has had very extensive experience in the area of intelligent systems development, information theory, and knowledge and information management over an uninterrupted 25 year period which he spent in the top systems research centres and universities in the USA, UK, Germany, Poland, and Australia. In this area he contributed to the understanding of information phenomena and knowledge management in complex systems operating in changing environments characterised by informational uncertainties. He has published a total of 202 refereed papers, over 110 of which appeared in refereed journals and the rest in international conference proceedings. With his papers published in the beginning of the nineties in IEEE Transactions on Systems, Man, and Cybernetics and International Journal of Systems Science, E. Szczerbicki became one of the first scientists to develop autonomous systems based on information flow for the purposes of intelligent decision support. This was his unique contribution to the emerging cross-disciplinary research field of intelligent systems, for which information has a value, is treated as the main resource, and is the base for intelligent decision making. E. Szczerbicki is an Associate Editor, Guest Editor or a Member of the Editorial Board for seven international journals in the general area of systems science and knowledge based systems. He also chairs/co-chairs a number of international conference series in this area.

Gregory E. Kersten

John Molson School of Business, Concordia University, Montreal Paul Desmarais/Power Corporation School of Management University of Ottawa, Ottawa

E-negotiation systems: Interaction of people and technologies to resolve conflicts

Gregory E. Kersten is Paul Desmarais/Power Corporation professor at the School of Management, University of Ottawa; a professor of decision and information systems (on leave of absence) at the John Molson School of Business, Concordia University; and an adjunct research professor at the Carleton University Sprott School of Business.

He is a founding member and the first Director of the Decision Analysis Lab (DAL), Carleton University Sprott School of Business, the first Director of the Information Systems and the CIT at the John Molson School of Business, Concordia University, the Principal Investigator of the InterNeg Project, and a member of the Ottawa Carleton Institute for Computer Science.

Gregory is a Vice-Chairperson of the INFORMS Group Decision and Negotiation Section, a departmental editor of the Group Decision and Negotiation Journal and member of the editorial boards of the Journal of Decision Systems, INFOR, and Control & Cybernetic Journal.

Gregory received his M.Sc. in Econometrics and a Ph.D. in Operations Research from the Warsaw School of Economics, Poland. His research and teaching interests include individual and group decision-making, negotiations, knowledge-based systems and knowledge management, decision support, web-based systems and electronic commerce.

During the last seven years he received grants totalling over $6 million. He was the principal investigator of an NSERC Strategic Grant ($385,000) awarded for 1991-95, a $168,500 Social SSHRC Strategic Grant awarded for 1995-1999, an $222,000 MEQ grant awarded for 2001-2002, a $196,000 HRDC EU-Canada TrainIT grant awarded for 2001-2004, and a $1,400,000 SSHRC INE Grant awarded for the E-negotiation project (2002-2006).

He was a visiting professor at the Naval Postgraduate School, Monterey, CA and Hong Kong University of Science and Technology, and a senior research scholar at the International Institute for Applied Systems Analysis in Austria. He has been a consultant for projects of the International Development Research Centre Canada, Association of Universities and Colleges of Canada, Department of National Defense, and a

Co-ordinator of the "Canadian management training and development program for Poland", Department of External Affairs Canada.

Abstract

The hallmarks of the new economy are all things electronic — e-commerce, e-business, e-learning, e-government and e-health, not to mention eBay. The common thread of e-anything is that it is a social and/or economic solution implemented in software applications. Being a socio-economic solution it also involves interactions among people which, just as in the past, lead to conflicts and thus negotiation, mediation or arbitration.

The negotiation, or more precisely the e-negotiation, is thus the common strand in many of the applications. Governments, businesses and individuals constantly make decisions, and in this process they negotiate roles, prices, dates, delivery terms, and so on. On-line auctions became not only an accepted market mechanism but they also replaced some types of business negotiations. Proliferation of on-line auctions and other business transactions led to construction of dispute resolution systems such as SquareTrade and other types of e-negotiations, for example, ElectronicCourthouse and SmartSettle.

The paper and talk present a review of the e-negotiation systems and processes. The focus is on:

1. Recent developments in e-negotiations and software systems used to conduct them;
2. Studies of the use of software used in e-negotiations and its impact on the process and outcomes;
3. The impact of the users' culture and other characteristics on e-negotiation process and outcomes
4. Issues of the relationship between the communication and support, and the impact of different representation and support tools on the negotiation efficacy; and
5. The potential of software to facilitate and mediate conflict resolution.

Wolfgang Nebel

Oldenburg University and OFFIS Oldenburg, Germany

SMIs: Small and Medium Size Research Institutes - Roles, Objectives and Strategies

Prof. Dr.-Ing. Nebel holds a degree in EE from Hanover University, Germany, and a Dr.-Ing. degree from the CS department of Kaiserslautern University. From 1987 to 1993 he worked with Philips Semiconductors as a development engineer, project manager and manager of the CAD Software Development. Since 1993 he is full professor at Oldenburg University, where he teaches Embedded HW/SW Systems. His research is focused on low power system design methodologies and tools as well as on system level specification and synthesis. Dr.

Nebel is a member of the board of the OFFIS research institute in Oldenburg. He served as Dean of the CS Department and 1st Vice-President of Oldenburg University. Dr. Nebel is Chairman, Chief Technology Advisor and co-founder of ChipVision Design Systems, Oldenburg, Munich, San Jose and San Ramon, CA. Dr. Nebel is a member of the IEEE, ACM, GI, VDE, EDAA and edaCentrum.

Abstract

Unparalleled by any other innovation the IT technologies had a disruptive impact on the human society in Europe, in the western world and globally. They have created a world in which access to almost any kind of information at any place at any time is possible for almost everybody. This infrastructure in itself has created a new industry offering services and content. It has also created a market for the information and people are prepared to pay for these services. It is obvious that the location of such an information provider is almost irrelevant. But similarly in many cases it is irrelevant where other products or services are created as long as an instantaneous transfer of information to the production or to the service is possible. IT has speeded up the globalization to a pace which disrupts many processes, structures and claims we have got used to – in economy, employment and social security. Our societies can purchase almost any good or service from the supplier who offers the best value for the prize irrespectively of his location. This allows us to have a high standard of living here because many products we consume are affordable due to low labor cost at their origin. On the other hand our production and services in Europe need to be competitive in their respective markets. Competition means that the complete offering in Europe must be competitive under consideration of the cost of labor, the productivity, the infrastructure, the social, legal and financial stability. It is inevitable that a competition in labor intensive business sectors not requiring highest human skills will directly lead to a competition of the labor cost. In order to maintain the high level of living for the European citizens, it is essential to seek competition not in these domains, but in industries which compete on leading edge technologies and innovations for which the rest of the world is prepared to pay premium prizes. Of course again IT is the source of many such value adding technologies, products, services and features.

Europe has a strong tradition of Small and Medium-size Enterprises (SMEs) being the driving force of innovation, employment, and wealth of a strong middle class. The SMEs draw their potential out of entrepreneurship meeting flexibility. In many cases the capital and the business on the one hand and the management and the technology are in the hands of a single owner or a small group. SMEs can react quickly, fill market niches and exploit opportunities much faster than large corporations.

These advantages of SMEs can be the applied to Research Institutes as well. Their motivation and way of working can be a blue-print for the success of Small and Medium-size Institutes (SMIs). The role of European SMIs in a globalized world is to help Europe to claim innovation in promising areas and to consolidate

the strategic lead of Europe in advanced technologies. Their role is to increase the innovation by creating inventions and transferring them into innovation. They need to be incubators of exploitation strategies of new technologies for growth and employment in Europe.

The Oldenburger Forschungs- und Entwicklungsinstitute für Informatik-Werkzeuge und –Systeme (Oldenburg Research and Development Institute for Information Technology Tools and Systems), OFFIS, is located in Oldenburg, in the North-West of Germany. It is such a SMI with its some 200 employees including more than 100 full time scientists. OFFIS was founded in 1991 by Oldenburg University, faculty of the Computer Science Department and the state of Lower Saxony. The institute is very closely co-operating with Oldenburg University. OFFIS has six research and development divisions covering a spectrum of domains ranging from Nanohandling and Microrobotics through Embedded HW-SW-Systems and Safety Critical Systems to Healthcare Information and Communication Systems and Business Information Systems, and finally to Multimedia and Internet Information Systems. The objective of OFFIS at the date of its founding was closely related to bridge the gap between fundamental research at the university to the applications needed in the region. Further it should provide a subsidy for the missing high-tech industry in the nearby region. Now, the transfer objective is going much further. OFFIS is engaged in international research projects and co-operating with industries and academic organizations throughout the entire Europe. In this presentation we will exemplify the role of SMIs and their objectives, structures, and approaches based on the experience made at the OFFIS.

Special Session

O n t o L a n g B I S
Ontologies and Language Technologies
for Business Information Systems

BIS conference provides a forum for the dissemination of research on the design, implementation and deployment of computer systems for business purposes. In the last decade, we have witnessed an ever-growing tendency towards stronger utilization of semantic and language technologies in knowledge management and acquisition processes, which are crucial tasks in the context of real-world business information systems. The goal of this special session is to present novel solutions, exchange new ideas and experiences, and to promote interdisciplinary discussion on issues concerning creation and application of ontologies as well as exploitation of intelligent natural language processing techniques in business applications.

On the one hand, ontologies provide a machine-processable semantics of information that is exchanged between humans and computer systems. Various standards, tools, services and approaches for automatic ontology acquisition emerged. It will be advantageous to compare existing resources and elaborate on proximate line of research.

On the other hand, recent advances in the field of language technology, in particular in the area of robust and efficient processing, structuring and searching of unstructured textual data attracts an enormous attention of the business community. Natural language processing will obviously play paramount role in next generation business applications dealing with processing vast amount of unstructured data.

SPECIAL SESSION CO-CHAIRS
Jakub Piskorski, German Research Center for Artificial Intelligence, Germany
Krzysztof Węcel, The Poznań University of Economics, Poland

Panel Sessions

Challenges and Opportunities of e-Government Market
Thursday, 15:15-16:30, AULA

Gertraud Peinel
FIT
Moderator

Michał Jaworski
Microsoft Polska

Piotr Kołodziejczyk
Sekretarz Miasta Poznania

Paul Moore
Indra Sistemas S.A.

The panel session on the current trends and threats for e-Government market. This session is aimed at the experience transfer between representatives of public administration and commercial organizations on previous attempts to introduce electronic services to public administration. Following themes will be debated:
– Contemporary state of e-Government solutions
– Obstacles in introduction of electronic services to public administration
– Main market drivers
– Killer application of e-Government

Ontologies - Future Directions
Friday, 12:50-14:20, 115A

Maria Orlowska
The University of
Queensland
Moderator

Dominik Kuropka
Hasso-Plattner-Inst.
für Softwaresystem-
technik

Krzysztof Węcel
The Poznań
University of Economics

Jakub Piskorski
DFKI GmbH

The Panel Session is devoted to the subject of tools used for building , translation and management of ontologies in relation to applications in different domains.

Thursday

Information Retrieval and Filtering

13:00-14:30, 236A
Session Chair: Tadeusz Tomaszewski

Dominik Kuropka, Hasso Plattner Institute for IT-Systems Engineering
at the University of Potsdam, Germany
***Uselessness of Simple Co-occurrence Measures for IF&IR -
a Linguistic Point of View***
*This paper gives a short motivation for the use of similarities of term pairs to improve
information filtering and retrieval methods. Further some simple, but often used co-
occurrence based measures for the estimation of similarity values of term pairs are
presented. The results of these measures are evaluated against the claims on term
similarities, which arise from linguistic aspects (inflection, hyponymy, meronymy, com-
position and word group) between the involved terms. The finding of this paper is the
uselessness of simple co-occurrence based measures for the improvement of infor-
mation filtering und retrieval approaches.*

Dominik Kuropka, Hasso Plattner Institute for IT-Systems Engineering
at the University of Potsdam, Germany
Formal Proof of Adequacy of Document Pre-processing in IF and IR
*In the context of Information Filtering and Retrieval the usage of pre-processing steps
like Stopword-list, Stemming and Thesaurus Substitution is very common. Indeed the
usage of those pre-processing steps seems to be sound at the first look; formal proofs
for the adequacy of those steps are still absent. In this paper those proofs are given
with the assistance of the Topic-based Vector Space Model. Additionally the hidden
implicit assumptions of the above mentioned pre-processing steps are worked out
and evaluated regarding their impact on practical usage.*

Andreas Henrich, Karlheinz Morgenroth, Faculty for Information Systems and
Applied Computer Sciences, Bamberg University, Germany
A Query Engine for RDF based Similarity Queries on Software Artifacts
*The software development process induces a strong demand for re-trieval facilities
searching for reusable artifacts. For example the new search engine koders.com
allows the search for source code within several open source projects using only text
matching within source files. In the present paper we will describe a general approach
applicable to all types of artifacts occurring during a software development process.
Using the traceability between arti-facts will allow us to recommend artifacts useful for
forthcoming activities to project workers based on their current work. The un-derlying
search engine is based on technology from the semantic web, especially the resource
description framework (RDF) as well as ontologies for describing all captured ele-
ments. A sophisticated RDF based similarity query engine allows for the retrieval of*

simi-lar artifacts based on a given example with ranked result lists.

Tomasz Kaczmarek, Marek Kowalkiewicz, The Poznan University of Econo-
mics, Poland, Jakub Piskorski, German Research Center for Artificial Intelligen-
ce, Germany
Information Extraction from CV
*The paper gives an outlook of an ongoing project on deploying information extraction
techniques in the process of converting any kind of raw application documents written
in Polish, such as CVs, motivation letters or application forms into compact and highly-
structured data. We pinpoint the challenging issues to be faced and potential benefits
in the area of learning systems, HR and recruitment modules of information systems.*

Mobile Applications for Public Administration

13:00-14:30, 213A
Session Chair: Paul Moore

Dirk Tilsner, EDISOFT, S.A., Portugal
USE-ME.GOV USability-drivEn Open Platform for MobilE GOVernment
*The present paper provides an overview of the USE-ME.GOV project, its objectives,
R&D challenges as well as an overview of results with respects to the expected bene-
fits from and functional characteristics of public mobile services. The main goal of this
project is to provide an open service platform for mobile services provided by public
administration, based on the innovative concept of shared use of this platform by
networked authorities and public organisations.*

Andrzej Bassara, Marek Wiśniewski, Paweł Żebrowski, The Poznan University
of Economics, Poland
***USE-ME.GOV - A Requirements-driven Approach for M-gov Services
Provisioning***
*The paper presents the current state of work in USE-ME.GOV (USability-drivEn open
platform for MobilE GOVernment) project. It addresses the most relevant requirements
to m-govermnent services, taking into account their special meaning and relations to
other networked actors. It explores the increasing role of C2A communication, prolife-
ration of wireless technologies and shift in users' needs. The solution is proposed to
meet stated requirements and drive the ongoing research work.*

Software Engineering (1)

13:00-14:30, 115A
Session Chair: Volker Gruhn

Bartosz Marcinkowski, Department of Information Systems, University of
Gdansk, Poland

Isomorphism of Interaction Diagrams in UML 2

Transition from UML 1.4/1.5 standard to its 2.0 version has brought modifications extensive enough to reassess some concepts and views. One of such views is isomorphism of interaction diagrams, no longer so obvious after extending the scope of available interaction diagrams. In the paper author verifies the statement concerning isomorphism of interaction diagrams by studying possibility of unambiguous transformation of sequence diagram into any of other interaction diagrams.

Marin Fotache, Department of Business Information Systems, Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iasi, Romania

Database Designers and Normalization: Anathomy of a Divorce

Originated in Codd's seminal papers, in the 1970's normalization became the first sound theory for relational databases design, although not quite included in the relational data model. Based on functional, multivalued and join dependencies between attributes, theorems of decomposition, inference rules, closure, and normal forms, normalization was supposed to bring rigor and relevance into such a slippery domain as database design. But after more than three decades, normalization has lost its interest in research papers, it is considered too theoretical, rigid and hard to explain, and is still looking for practitioners to apply it effectively. This paper tries to outline some of the the main weaknesses of normalization and to offer some explanations why such a generous framework has failed to become the so much needed universal guide for database designers.

Sofiane Sahraoui, Noor Al Nahas, Rania Solaiman, School of Business and Management, American University of Sharjah, UAE

Open Source Software Engineering: The Case of Mozilla & Apache Projects

Open Source software development has led many to reconsider their old beliefs and conceptions about software, a critical aspect of which is its development process. In this paper, we attempt to show how "universal" software engineering (SE) principles do not fully apply to Open Source projects. We considered two such projects, Mozilla and Apache, showing that planning, specification, and design that are generally a must in conventional SE, are not as critical to the quality of the software being produced. By closely analyzing the development model of Open Source, we show how it follows what could be termed an "implementation model", based on a quick cycle of coding and testing and access to unlimited programming resources offsetting the need to plan hence to follow the conventional stages of SE

e-GOVERNMENT

17:00-19:00, 213A
Session Chair: Gertraud Peinel

Nipun Agarwal, Mahesh Kumar, Institut National des Télécommunications (INT), France

E-governance: Initiatives in India

In the present context of information technology (IT), the model of E-Governance is about revolutionizing governance. The objective of achieving e-governance goes far beyond mere computerisation of stand alone back office operations in the government departments. The governments have realized that the best way to network villages, towns, districts, and states across the nation is not only by developing roads and highways but by deploying information and communication technologies (ICTs). It is a complex, multifunctional process that has the promise of transforming government. Many governments across the world have embraced the digital revolution and continue to take advantage of the ICTs to offer public services. E-governance initiatives in recent years are being considered as a major step in providing better quality of life to citizens. The paper attempts to look at the initiatives taken by one of the fastest growing nation, India, in the field of E-governance. There are wide ranges of e-governance projects that are being implemented in different parts of India including projects aimed at reaching areas and people like that had traditionally not been connected to the outside world. This paper gives a brief outlook about projects "E-seva" and "Akshaya", which are highly rated ICTs programmes ever attempted in developing countries. While representing these projects, the paper provides a perspective of "IT- driven modernization" in India.

Vassilios Peristeras, Greek National Centre for Public Administration, Greece, Konstantinos Tarabanis, University of Macedonia, Greece

The GEA Generic Process Model for Public Administration Service Execution

In this paper we present a generic process model for execution of a public *administration service. This model is part of a family of models that have been developed for the domain of governance and includes models of both data and process. This family of models comprises the so-called Governance Enterprise Architecture - GEA. The model presented in this paper analyses the sequence of phases through which any public administration service goes through when delivered to its customers. We intend to validate this model and then apply it as part of an e-government ERP kernel that could be easily parameterised and configured for a variety of different services offered by public administration at its different levels and in different countries.*

Piotr S. Sulikowski, Wydział Informatyki Politechniki Szczecińskiej, Poland

E-government Policy as Part of the European Union's eEurope 2005 Action Plan

This article presents the cornerstones of e-government policy as introduced by the eEurope 2005 Action Plan of the European Union. The actions proposed for the development of e-government as well as supplementary policy tools are presented and the current situation is examined. The role of e-government for the transition of Europe to information society is discussed.

Software Engineering (2)

17:00-19:00, 115A
Session Chair: Jussi Koskinen

Jussi Koskinen, Tero Tilus, Henna Sivula, Heikki Lintinen, Information Techno-logy Research Institute, University of Jyväskylä, Finland, Jarmo J. Ahonen, Department of Computer Science, University of Kuopio, Finland
Using NIMSAD Meta Framework in Three Software Engineering Contexts
NIMSAD is a relatively well known meta framework for analyzing methodologies. 18 method evaluations on three important software engineering contexts were perfor-med. Component-based software development methodologies, software testing in object-oriented software engineering methods, and software modernization estima-tion methods were evaluated. NIMSAD provides 18 evaluative elements. This paper presents an analysis of NIMSAD and gathers experiences of its use.

Subhas Chandra Misra, Uma Kumar, Vinod Kumar, Eric Sprott School of Busi-ness, Carleton University, Canada
Software Innovation Process Maturity Model
It is quite important for modern day software organizations to remain competitive in the market. Being innovative is, therefore, important for the survival of the organizations. Whereas, in some organizations the processes that lead to the development of inno-vative products are well-defined, in others there are no clearly established processes. In the latter organizations the innovation activities are either undertaken in a non-systematic manner or there are no clearly defined processes that could lead to the development of innovative products. In such organizations innovation often happens whenever an idea strikes the individuals working in the organizations. This paper presents a model that organizations could use to systematically improve (mature) their innovation activities. The paper also presents a roadmap for the implementation of the model.

Technology Transfer

17:00-19:00, 236A
Session Chair: Grzegorz Bartoszewicz

Piotr Soja, Department of Computer Science, Cracow University of Economics, Poland
The Impact of ERP Implementation on the Enterprise - an Empirical Study
This paper analyses the positive and negative effects of ERP system implementations on the basis of research conducted among practitioners dealing with ERP projects. The investigated effects were divided into technical, economic, organisational and social results. The analysis takes into account projects divided into groups on the basis of their duration, scope and company size. Furthermore, the research explores what investigated effects looked like in successful implementations.

Wm. Benjamin Martz, Jr., Morgan M. Shepherd, Al Davis, University of Colora-do at Colorado Springs, USA
Group Decision Support Systems as a Reference Discipline for Organiza-tional Memory
Information has become a strategic business resource (Peters & Waterman, 1982). Companies are generating, storing and using huge amounts of information in the day-to-day business practices. This paper posits that this pattern of information use gene-rates more than just technical issues (storage and retrieval techniques, faster IO devi-ces, more efficient hardware) for the field of organization memory. These additional issues center on: How can we assure we get the same information out that was put in? Sub-questions to this main question include: What information should be stored? How can we identify deceptive information? When we see the same data, do we get the same information? In this paper, we use the analogy of human memory to develop parallels between organizational memory and group decision support systems and use the analogy as a basis for discussion about these processes. The paper relates the results of three experiments which can be used to explore the usefulness of the analogy. Finally, the potential for future research streams aligned with this model are discussed.

Friday

General BIS (1)

11:15-12:45, 213A
Session Chair: Witold Suryn

Shazia Sadiq, Maria Orlowska, School of Information Technology and Electrical Engineering, The University of Queensland, Australia, Wasim Sadiq, Karsten Schulz, SAP Research Centre, Australia
When Workflows will not Deliver - The Case of Contradicting Work Practice
A new class of problems has been identified for workflow management wherein this technology imposes an additional overhead on users which is not adequately compensated by the benefits gained. Multiple observations from real cases identify a contradiction between the preferred work practice and some fundamental principles behind workflow systems. The focus of this paper is primarily to motivate the problem, however, we will also provide deliberations on the impact of these advanced process requirements on existing technology solutions.

Subhas Chandra Misra, Vinod Kumar, Uma Kumar, Eric Sprott School of Business, Carleton University, Canada
Strategic Modeling of Risk Management in Industries Undergoing BPR
In this paper we present a technique for modeling Risk Management in Business Process Reengineering (BPR) projects. Our approach is novel in the sense that it presents a new technique in the Risk Management literature for analyzing and modeling early-phase requirements of Risk Management that provides the motivations, intents, and rationales behind the entities and activities. We have considered a case study to illustrate this approach.

Gary Klein, Peggy Beranek, Al Davis, Ben Martz, University of Colorado at Colorado Springs, USA
The Relationship of Control and Learning to Project Performance
Organizational technology learning is important to the success of projects because of the knowledge that can be carried across project boundaries. Management controls are also helpful because they serve to define processes for efficiency and foster interaction for effectiveness. However, behavioral controls that promote efficiency also stifle much of the learning opportunity, while outcome controls that foster interaction among stakeholders add to the learning environment. This report highlights a study that confirms these expectations and explores the nature of their direct and indirect influences on project performance. Data from a sample of software development professionals confirms that behavioral controls and learning directly influence project performance, while outcome controls contribute only indirectly through their impact on learning.

Abel Matus-Castillejos, Ric Jentzsch, Masoud Mohammadian, School of Information Sciences & Engineering, University of Canberra, Australia
Temporal Dimensions for Time Series Data Management
Every day tons of data are collected in the form of time series. Time series is a set of observations sequentially recorded or measured over time on a regular or irregular basis. Time series arise in financial, economic, and scientific applications. Typical examples are the recording of different values of stock prices, consumer price index, electricity and telecommunication data, etc. In theory, such data is processed, analyzed, disseminated, and presented. However, many institutions are facing some difficult issues in organizing such a vast mass of data. Therefore, there is an increasing need for data management tools and approaches to treat time series data. This paper addresses this issue by proposing four temporal dimensions (confidentiality, definitiveness, validity, and maturity times) to correctly represent the status of time series data in a time line.

Ontologies and Language Technologies for BIS (1)

11:15-12:45, 115A
Session Chair: Krzysztof Węcel

Giang Nguyen, Michal Laclavik, Institute of Informatics, Slovak Academy of Sciences, Slovakia, Zoltan Balogh, Institute of Informatics, Slovak Academy of Sciences, Poland, Emil Gatial, Ladislav Hluchy, Institute of Informatics, Slovak Academy of Sciences, Slovakia, Alvaro Arenas, CCLRC Rutherford Appleton Laboratory, United Kingdom
Ontology-Based Experience Management for Public Organizations
In this paper, the view into the ontology-based experience management in the Pellucid project is presented. The result of the project – the Pellucid platform works in cooperation with a underlying system, that reports workflow events for employees in public organizations. Experiences produced by employees are captured, stored and re-used as useful help for novice or other employees in public organizations. This can relieve and improve work effectively and observe important knowledge when a experienced employee leaves the organization. The paper also presents the platform architecture, its functional design and the brief platform evaluation.

Alexios Lasanas, Christina E. Evangelou, Nikos Karacapilidis, Industrial Management and Information Systems Lab, MEAD, University of Patras, Greece
Ontology-Driven Decision Making in Transportation Transactions Management
This paper presents an ontology-driven, multi-agent system that addresses a series of decision making issues arising in the management of freight transportation transactions. The proposed system formulates automatically alternative transportation routes, and facilitates their evaluation through a dynamic consideration of the available carriers' services and the customer's profile and preferences. Its underlying ontology model is based on semantics extracted from the freight transportation literature and

interviews with potential users, and provides the means to efficiently accomplish tasks related to information modelling and sharing, communication between the parties involved, and coordination of activities that support the underlying decision making.

Holger Brocks, Henning Meyer, Thomas Kamps, Fraunhofer IPSI, Germany, Christian Begger, Südzucker AG, Germany
The Extended Process Model - Unifying Knowledge and Process
Knowledge-intensive processes are often open-ended can only be weakly specified in traditional business process models. The Extended Process Model provides a comprehensive integration of process and knowledge specific aspects within a single, ontological representation. In this paper we describe the transformation of standardized business process definitions into a unified conceptual process model. We then apply our methodology to the scenario of IT services.

Web Services-based Information Systems (supported by the ASG Project)

11:15-12:45, 236A
Session Chair: Dominik Kuropka

Kamel Rouibah, Samia Rouibah, Dept of Quantitative Methods and Information Systems, College of Business Administration, Kuwait University, Kuwait
Dynamic Data Sharing and Security in a Collaborative Product Definition Management System
The formation of virtual enterprise is becoming a growing trend as companies concentrate on their core competence and economic benefits. This paper presents the concept of a Virtual Engineering Community (VEC) to support concurrent product development in a virtual community of partners. Effective implementation of virtual engineering community raises the problem "how to support share and to secure data, that span the partner borders without losing control and increase trust?" This paper describes a web based information infrastructure of a Collaborative Product Definition Management (CPDM) system and the deployed security mechanisms. This architecture extends functionalities of the commercial PDM system axalant (TM). The system enables dynamic data sharing among partners of the VEC and integrating various kinds of information (design data and knowledge), activities (generation of design alternatives and design validation and decision making). The workspace aims to improve quality of engineering process management, data communication and increase trust.

Arnd Schnieders, Frank Puhlmann, Hasso-Plattner-Institute for IT Systems Engineering at the University of Potsdam, Germany
Activity Diagram Inheritance
This paper outlines the ongoing work on the realization of a flexible inheritance mechanism for Activity Diagrams that assures the maintenance of syntactical correctness for the derived Activity Diagrams. The objective is to support the reuse of process models especially by applying Activity Diagram inheritance as a variability mecha-

nism in the context of product line oriented software development.

e-Learning

15:15-16:45, 236A
Session Chair: Tadeusz Tomaszewski

Ben Martz, Morgan M. Shepherd, Venkat Reddy, Peggy Beranek, University of Colorado at Colorado Springs, USA
Maximizing the Success of Distance Learning: Assuring Customer Satisfaction
Distance education is playing an ever-growing role in both the education and the business industries. As such, it is prudent to explore and understand key conditions that lead to success in implementing a successful program. Understanding these drivers and their corresponding concerns (Table 1) can help those considering entering the distance education field whether it is being built for the education or the business industry.

Anna Borkowska, Paweł Rubach, Warsaw School of Economics, Department of Business Informatics, Poland
Computer Based Assessment System
This paper presents the Computer Based Assessment (CBA) System which reduces the costs of examination by automating the most time - and effort consuming activities, improves the process by eliminating human factor from test-grading and giving feedback on the quality of the exam and on the lecture, manages the process of creating test questions as group work. The software is implemented on the basis of the J2EE platform, and uses the agent technology.

Maciej Kierzek, Marcin Tyburski, The Poznan University of Economics, Poland
Analysis of Needs and Expectations of Students and Faculty in Context of E-learning Development at The Poznań University of Economics -Finding a Proper Business Model
Finding proper and adjusted e-learning solutions having in mind the expectations and apprehensions of students and faculty is very hard, especially when we are dealing with higher education. This paper will present results of a survey conducted at the Pozna? University of Economics regarding e-learning and on that basis try to state the proper business model. Along with this we will propose what kind of media should be used in future courseware on the basis of current internet activity and effectiveness of specific types of media.

General BIS (2)

15:15-16:45, 213A
Session Chair: Marin Fotache

Witold Suryn, Daniel Girard, Department of Software Engineering and Information Technology, École de technologie supérieure, Canada
Suryn-Abran Consolidated Quality Lifecycle (CQL) Model - the Applicative Evolution
In 2003 Witold Suryn and Alain Abran have defined and later published the consolidated model for integrating quality engineering into software development processes. The model in its practical nature is meant to be a tool to help the quality specialist in his efforts in implementing and maintaining quality throughout the lifecycle of a software product. This paper presents the results of the analysis and the applicative verification of this model in order to allow for its evolution while maintaining applicability and usability objectives of the initial work.

Ihor Oleksiv, Nazar Podolchak, Lviv National Polytechnic University, Ukraine
Information System of Corporate Economic Risk Monitoring
Problems of using multivariate analysis methods for evaluation of corporate economic risk are described in the article. In order to increase effectiveness of quantitative economic risk analysis it is proposed to use cluster analysis and multidimensional scaling.

Debbie Tesch, Xavier University, USA, Morgan M. Shepherd, Gary Klein, University of Colorado at Colorado Springs, USA
Team Learning in Information System Development Projects
Learning is crucial in information system development so that future projects may gain from the knowledge generated during current projects. Environmental traits that an organization can control have been shown to support a learning organization. A survey of project managers and participants of system projects tested whether common traits tend to be active promoters of learning in the project team setting as well as the organizational level. Of those traits tested, clear mission and objectives, knowledge transfer mechanisms, and experimentation all proved to be significant environmental factors for learning in project teams.

Ontologies and Language Technologies for BIS (1)

15:15-16:45, 115A
Session Chair: Jakub Piskorski

Dale Dzemydiene, Mykolas Romeris University, Institute of Mathematics and Informatics, Lithuania, Egle Kazemikaitiene, Mykolas Romeris University, Lithuania
Development of the Component-Based Knowledge Management System for Assistance in Crime Investigation Processes
The scientific problem under investigation is the development of the multi-component knowledge management system for employing semantic and dynamic methods for knowledge acquisition, representation, and decision support in a crime investigation domain. New information technologies take new possibilities in detecting criminals and investigation of crimes. The methods of artificial intelligence helpful in the management of repository with impartial crime information and situation recognition are discussed. The unified approach is proposed using different data analysis methods and strategies for integration knowledge components with retrieval of relevant information from different database systems. The aiding advisory processes are helpful in relevant patterns recognition and crime investigation.

Maciej Gawinecki, Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poland, Minor Gordon, Computer Science Department, Technical University of Berlin, Germany, Marcin Paprzycki, Computer Science Department, Oklahoma State University, USA, Michał Szymczak, Zygmunt Vetulani, Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poland, Jimmy Wright, Computer Science Department, Oklahoma State University, USA
Enabling Semantic Referencing of Selected Travel Related Resources
This paper describes our efforts to enable semantic referencing of travel related resources. It focuses on the areas of lodging and gastronomy, with the goal of defining a reproducible model for enabling semantic referencing for other aspects of travel. Based on the analysis of Internet-available data, we develop an ontology of the hotel. We re-capture ontology of the restaurant implicitly defined in the Chefmoz project. Finally, we sketch a possible way to combine these two ontologies to be utilized in an integrated travel framework.

Tutorials

Mobile applications for the public sector
Wednesday, 12:00-15:00, room 236A

Paul Moore
Indra Sistemas S.A., Spain

Paul Moore is a graduate in Economics from the University of Toronto and in Computer Business Systems from Ryerson University both located in Toronto, Canada. He has 15 years experience in IT systems, the last 10 of which he has been working in the Spanish Public Administration sector in many large projects in different Ministries. He has been a Project Manager with Indra for over 6 years. He is currently the Project Manager of the Indra team in the Use-Me.Gov project which is an EC financed research project in mobile applications for the public sector.

Outline
What is Mobility?
– An Overview of Mobility in the World and the EU
– Mobility in Spain
– The Actors in Mobility (Operators/Service Developers/Companies/End users...)

The Mobile Operators
– The Key Movers in Mobility

Process Reengineering and mServices
– Factors for Success
– The Art of Process Reengineering
– Target Organizations for Process Reeingineering
– mServices in Different Sectors of the Economy and Government
– Special Needs of the Public Administration
– mGov Solutions for Citizens
– mGov Solutions in the Working Environment
– The Digital City

The Development of Mobile Applications
– Special Requirements of Mobile Applications
– Architecture, Components and Standards
– Client Application Development - Server Client vs Web
– User Interfaces

The Future of Mobility
– Universal Covergence (Fixed/Mobile/Internet/Media/Content/...)
– User Interfaces and Input Modalities
– Mobile Services
– The USE-ME.GOV Project

OfficeObjects® WorkFlow – an Example of the 2nd Generation BPM Environment (supported by the ASG Project)

Witold Staniszkis
Rodan Systems S.A. President and CEO. PhD on databases in Central School of Planning and Statistics. MSc in University of Gdansk. Industry experience on positions ranging from programmer to project leader in Polish and abroad companies (Computer Center of the Polish United Shipyards, National Bureau for Informatics, Logica London Ltd., Zeto-Rodan Ltd.). Research work on University of Maryland, Polish Research and Development Center for Informatics. Director of the Applied Research Division in Consorzio per la Ricerca e le Applicazioni di Informatica (CRAI). Teaching experience on Polish Academy of Sciences, The UNESCO Computer Science School, Dept. of Engineering of University of Calabria, Warsaw School of Economics. Recently, President of Rodan System, and then Rodan Systems (more than 30 successful medium size turn key systems development projects). Experience in several European research projects (coordinator of IST-2001-32429 ICONS - Intelligent CONtent Management System, www.icons.rodan.pl). Senior architect of the OfficeObject® product line (a group of products for content, document, knowledge, workflow management). Member of several conference programme committees. Over 60 published scientific and technical papers and 2 books (co-author).

Bartosz Nowicki
PhD in software engineering in Technical University of Gdansk. MSc in local networks computer protocols in Technical University of Poznan. Currently, the head of Research and Development Department in Rodan Systems S.A. Previously responsible for software process improvement and quality assurance. Involved, on different positions, in several development and consulting projects. Consultant on knowledge, content and workflow management, software engineering, software process improvement, quality assurance, project management, requirements engineering and object orientation. Author and co-author of more than 20 papers presented on national and international conferences. Experience in several European sponsored research projects (Copernicus, Environment, Information Society Technologies). Head of Polish part of the IST-2001-32429 ICONS research and development project. Supervision and consultancy for Polish teams of the FP6-2003-IST-2 4617 ASG – Adaptive Services Grid, IST-1999-

20162 COMPONENT + and IST 2001-33529 INFOMIX research and development projects. Member of the Polish National Conference on Software Engineering programme committee.

Mariusz Momotko
MSc in Advanced Computer Science on University of Birmingham and MSc in Computer Science on Technical University of Gdansk. Project manager of the document and workflow management system for public administration (Office-Objects®DocMan) and general use workflow engine (OfficeObjects®WorkFlow). Special focus on databases (Oracle, INGRES, MS SQL), object oriented analysis, design and programming as well as workflow technology. Several TEMPUS sponsored scholarships. The author of several Polish as well as international publications on workflow systems. Responsible for procedural knowledge representation in the IST-2001-32429 ICONS project. Project manger of Polish part of the IST- IST-1999-20162 COMPONENT + and ASG FP6-2003-IST-2-004617 projects. Currently doing PhD research at Institute of Computer Science, The Polish Academy of Sciences on tools for monitoring workflow processes to support dynamic workflow changes.

The Business Process Management (BPM) technologies enabling the prevalently growing importance of the process-oriented management paradigm play an important role in advanced architectures of modern information systems. One can only recall importance of the database management technologies, supporting data independence of the application software, to realise that the underlying workflow management paradigm freeing the application programs from the business process status data represents a comparable advance in the software engineering field.

Our aim is to provide practical information to design and implement advanced information systems availing of the modern BPM technologies. We focus on the use of the OfficeObjects® WorkFlow product to provide its users with sufficiently detailed technical information, yet the breadth of presented material constitutes a solid methodological base for use of any standards-compliant Business Process Management System (BPMS). The proudly claimed compliance with the feature requirements of the 2nd generation BPMS grounds on formal semantic foundations, to be addressed during the tutorial.

The tutorial provides a well balanced mixture of sound theoretical BPM knowledge, deep insight into relevant standards, practical experiences of the workflow engine development and best practices in process-oriented information system commercial deployments.

OfficeObjects® WorkFlow ontology based on standard BPM terminology and workflow process as well as process instance meta-model, methodological base - process-oriented information system life-cycle, integration with third parties conceptual design software tools, workflow process control features, dynamic

work participant assignment (WPA) rules, business process query language (BPQL), time modelling and monitoring, formal semantics defined with the use of the Petri Net formal model, compliance with workflow patterns, team collaboration management (TCM), mapping of MS Project-like schedules to process definitions, dynamic process modification, data container, process data model, and the user-visible functions, visualisation of the process instance execution, archiving workflow process history, business process reporting and analysis, The presentation is supported by a running workflow process example spanning all phases of the BPM project life-cycle.

Ontology-based Information-Filtering and Retrieval

Dr. Dominik Kuropka
Hasso-Plattner-Inst. für Softwaresystemtechnik
Germany

Cheap mass storage and the increasing interconnectivity of computers lead to a rapid increase of available documents. This has risen the flow of information in business, sciences and administration to a point, where its exceeds the human processing capacity. To cope with this problem automated systems for Information Filtering and Retrieval are needed. This tutorial will give a short overview on linguistics and a classification and theoretical evalutation of popular IR&IR models which motivates the need for ontology based IF&IR models. The main part will deal with two ontology based IF&IR models: the Topic-based Vector Space Model (TVSM) and the Enhanced TVSM. Finally some implementation aspects and practical issues of those models as well as quantitative evaluation methods on IF&IR systems in general will be addressed.

Outline
1. Introduction to the issue of Information Filtering (IF) and Information Retrieval (IR)
2. Basic definitions
2.1 Architecture of IF&IR systems
2.2 Basics of computer linguistics
2.3 Ontologies
3. Classification of popular IF&IR models and theory based evaluation
3.1 Models without term interdependencies
3.2 Models with immanent term interdependencies
3.3 Models with transcendent term interdependencies
4. Topic-based Vector Space Model (TVSM)
4.1 Concept