Communications in Computer and Information Science

Editorial Board

Simone Diniz Junqueira Barbosa
Pontifical Catholic University of Rio de Janeiro (PUC-Rio), Rio de Janeiro, Brazil

Phoebe Chen
La Trobe University, Melbourne, Australia

Alfredo Cuzzocrea
ICAR-CNR and University of Calabria, Italy

Xiaoyong Du
Renmin University of China, Beijing, China

Joaquim Filipe
Polytechnic Institute of Setúbal, Portugal

Orhun Kara
TÜBİTAK BİLGEM and Middle East Technical University, Turkey

Tai-hoon Kim
Konkuk University, Chung-ju, Chungbuk, Korea

Igor Kotenko
St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, Russia

Krishna M. Sivalingam
Indian Institute of Technology Madras, India

Dominik Śleżak
University of Warsaw and Infobright, Poland

Xiaokang Yang
Shanghai Jiao Tong University, China
Preface

The International Conference on Subject-Oriented Business Process Management, S-BPM ONE 2013, started in 2009 and celebrated its fifth anniversary this year. During these years, S-BPM has become a well-known method for understandable, agile, and communicative modeling of business processes in research, teaching, and practice. Simultaneously, S-BPM ONE has been established as the most important event in which to present and discuss new ideas and approaches in the context of S-BPM. The 2012 conference in the beautiful city of Vienna focused on “Education and Industrial Developments.” With the 2013 conference at the University of Applied Sciences in Deggendorf we took a step further to concentrate on: “Running Processes”!

The Program Committee of S-BPM ONE consisted of 29 international scientists and practitioners. In all, 25 submissions were reviewed via an anonymous peer-review process. Finally, the Program Committee accepted 19 contributions that are published in these conference proceedings. The Program Committee also selected the “best paper,” which was presented and awarded at the conference.

We were proud to present Ralf Helbig as the keynote speaker. The title of his keynote was “S-BPM: The Game Changing Approach.” His talk was an exciting introduction to the conference focus on running processes. Another highlight was the dinner talk by Mario Herger on “Enterprise Gamification – How Using Gaming Principles Can Improve Company Success.”

The conference was organized in subject areas that were partially presented in time-parallel sessions. The following sessions were offered:

Running Concepts
This session focused on innovative concepts in business process management. The contributions ranged from “Managing Absences,” to “Intuitive Comprehensibility,” to “Domain-Specific Languages for S-BPM.”

Running BPM Types
Selected types of “business process management” (BPM) were presented in this session. Example contributions were “Rule Agent-Oriented Scientific Workflow Execution” and “Exception Handling” in process execution.

Running Applications
“Running Applications” presented interesting examples together with critical analysis of usual as well as unusual use cases of business process management. We considered applications in the areas of “ERP” and “Activity-Based Costing” as well as new approaches to a “Subject Phase Matrix” and the “Use of Qualitative Research Methods.”
Running Ideas
This session was something special. We facilitated discussions about new ideas, projects, and experiences.

Running Solutions
The final session presented case studies and reports on proven solutions in the area of business process management.

We would like to thank the members of the Program Committee for providing high-quality reviews on the papers published in this volume. In some cases, there have been major improvements from the originally submitted papers to the finally published versions. We also thank all authors for sharing their “running concepts, BPM types, applications, ideas and solutions.” We hope that this publication will support further work in the field.

We particularly thank our Organization Chairs, Jennifer Hauer and Max Dirndorfer. They were a great support in planning and running the conference. Working in this team was a continued pleasure. Furthermore, the expert support from Metasonic by Katrin Kindermann and Marion Wagner contributed to the success of this venue. We are also obliged to the E-Learning Center of the university and the video team organized by Ernst Jürgens for producing the video documentation of the presentations during the conference. The Institute of Innovative Process Management (I2PM) gave strong support during the planning process. Many thanks to Werner Schmidt!

For the opportunity to host this conference at the University of Applied Sciences Deggendorf we especially thank President Peter Sperber and the Dean of the Faculty of Management, Economics, and Computer Science, Johannes Grabmeier.

We also would like to thank Leonie Kunz and Aliaksandr Birukou from Springer for their assistance and support during the preparation of the proceedings.

Finally and most importantly, we are very grateful for the generous support by our sponsors who are listed on the following pages. The conference and the proceedings would not have been possible without their help.

March 2013

Josef Schneeberger
Herbert Fischer
Organization

Organizing Committee

Herbert Fischer (Chair) Deggendorf University of Applied Sciences, Germany
Josef Schneeberger (Chair) Deggendorf University of Applied Sciences, Germany
Max Dirndorfer Deggendorf University of Applied Sciences, Germany
Jennifer Hauer Deggendorf University of Applied Sciences, Germany

Program Committee

Herbert Fischer Deggendorf University of Applied Sciences, Germany
Josef Schneeberger Deggendorf University of Applied Sciences, Germany
Rafael Accorsi University of Freiburg, Germany
Martin Adam University of Applied Sciences Kufstein, Austria
Christian Anhalt Bundesagentur für Arbeit, Germany
Stefan Buttschardt IBM Global Business Services, Germany
Max Dirndorfer Deggendorf University of Applied Sciences, Germany
Alexander Gromoff Moscow National Research University, Higher School of Economics (HSE) Russia
Stefan Jablonski University of Bayreuth, Germany
Markus Kammermeier T.CON GmbH & Co. KG, Germany
Franz Lehner University of Passau, Germany
Gerald Lüttgen University of Bamberg, Germany
Erich Meier method park Software AG, Germany
Jürgen Mottok University of Applied Sciences Regensburg, Germany
Michael Müller sciNOVIS GbR, Germany
Stefan Obermeier Bavarian Ministry, Germany
Ines Reinbach Deutsche Post DHL, Germany
Wolfgang Renninger University of Applied Sciences Amberg-Weiden, Germany
Gabriele Saueressig University of Applied Sciences Würzburg, Germany
VIII Organization

Werner Schmidt  
University of Applied Sciences Ingolstadt, Germany

Thorsten Schöler  
University of Applied Sciences Augsburg, Germany

Detlef Seese  
KIT – Karlsruhe Institute of Technology, Germany

Robert Singer  
FH Joanneum University of Applied Sciences, Austria

Christian Stary  
University of Linz, Austria

Carsten Tauss  
ABSC GmbH, Germany

AlexandraTotter  
ByElement GmbH, Switzerland

Nikos Vidakis  
Technological Educational Institute of Crete, Greece

James Weber  
St. Cloud State University, USA

Guido Wirtz  
Universität Bamberg, Germany

Cornelia Zehbold  
University of Applied Sciences Ingolstadt, Germany

Erwin Zinser  
FH Joanneum University of Applied Sciences, Austria

Sponsoring Institutions

Platinum Sponsors

Fabrici Management Consulting, spol. s r.o., Bernolákovo, Slovakia
Metasonic AG, Pfaffenhofen-Hettenshausen, Germany

Gold Sponsor

iQser AG, Walldorf, Germany

Silver Sponsors

IANES (Interactive Acquisition, Negotiation and Enactment of Subject-Oriented Business Process Knowledge) – EU FP 7 Marie Curie IAPP
Infomedia Services GmbH, Vienna, Austria
Reiner ConsSys, Cham, Swiss
Stadt Deggendorf, Germany
T.CON GmbH & Co. KG Plattling, Germany

Bronze Sponsors

Bayern Innovativ GmbH - Geschäftsfeld BayTech, Nuremberg, Germany
Deggendorf University of Applied Sciences, Germany
# Table of Contents

## Part I: Running Concepts

Managing Absences: An Application of Subject-Oriented Procedures

*Clemens Krauthausen*

Integration of Dynamic Role Resolution within the S-BPM Approach

*Alexander Lawall, Thomas Schaller, and Dominik Reichelt*

Business Process Modeling *Pluralized*

*Oktay Turetken and Onur Demirors*

Intuitive Comprehensibility of Process Models

*Doris Weitlaner, Annemarie Guettinger, and Markus Kohlbacher*

A Domain Specific Language for Describing S-BPM Processes

*Kai Michael Höver, Stephan Borgert, and Max Mühlhäuser*

Mapping PASS Graphs to Petri-Nets: Possibilities and Limits for Converting PASS Graphs to Petri-Nets

*Matthes Elstermann*

## Part II: Running Business Process Management Types

Rule Agent-Oriented Scientific Workflow Execution

*Zhili Zhao and Adrian Paschke*

Planning for the Unexpected: Exception Handling and BPM

*Matthias Kurz, Albert Fleischmann, Matthias Lederer, and Sebastian Huber*

## Part III: Running Applications

Enabling a SAP ERP Based Standard Software Solution for BPM

*Michael Götzfried, Michael Guppenberger, Maximilian Reiter, and Frank Plechinger*

Activity-Based Costing for S-BPM

*Cornelia Zehbold, Werner Schmidt, and Albert Fleischmann*

A Meta-model and a Web Based Editor for the Subject-Phase Matrix

*Barbara Handy, Max Dirndorfer, Josef Schneeberger, and Herbert Fischer*
  Jürgen Hirsch and Torsten Greiner
Managing Complexity in Adaptive Case Management ..................... 209
  Sebastian Huber, Adrian Hauptmann, Matthias Lederer, and Matthias Kurz

Part IV: Running Ideas

Case Study on the Interoperability of Business Process Management Software .......................................................... 229
  Max Dirndorfer, Herbert Fischer, and Stephan Sneed
Subject-Orientation for Human-Centred Production: A Research Agenda .......................................................... 235
  Udo Kannengiesser and Harald Müller

Part V: Running Solutions

  Matthias Lederer, Peter Schott, Sebastian Huber, and Matthias Kurz
Case Study @ Swisscom (Schweiz) AG: iPhone 5 Self-service Order App and Process-Workflows ........................................ 264
  Thomas Walke, Markus Witschi, and Martin Reiner
Business Process Monitoring with S-BPM .................................... 274
  Werner Schmidt and Albert Fleischmann

Part VI: Running Projects

Open S-BPM = Open Innovation .............................................. 295
  Albert Fleischmann, Werner Schmidt, and Christian Stary

Author Index .......................................................... 321