

Commenced Publication in 1973

Founding and Former Series Editors:

Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

David Hutchison

Lancaster University, UK

Takeo Kanade

Carnegie Mellon University, Pittsburgh, PA, USA

Josef Kittler

University of Surrey, Guildford, UK

Jon M. Kleinberg

Cornell University, Ithaca, NY, USA

Friedemann Mattern

ETH Zurich, Switzerland

John C. Mitchell

Stanford University, CA, USA

Moni Naor

Weizmann Institute of Science, Rehovot, Israel

Oscar Nierstrasz

University of Bern, Switzerland

C. Pandu Rangan

Indian Institute of Technology, Madras, India

Bernhard Steffen

University of Dortmund, Germany

Madhu Sudan

Massachusetts Institute of Technology, MA, USA

Demetri Terzopoulos

New York University, NY, USA

Doug Tygar

University of California, Berkeley, CA, USA

Moshe Y. Vardi

Rice University, Houston, TX, USA

Gerhard Weikum

Max-Planck Institute of Computer Science, Saarbruecken, Germany

Christoph Bussler Ming-Chien Shan (Eds.)

Technologies for E-Services

6th International Workshop, TES 2005
Trondheim, Norway, September 2-3, 2005
Revised Selected Papers



Springer

Volume Editors

Christoph Bussler
Cisco Systems, Inc.
3600 Cisco Way, MS SJC18/2/4, San Jose, CA 95134, USA
E-mail: chbussler@aol.com

Ming-Chien Shan
HP Labs
13264 Glasgow Court, Saratoga, CA 95070, USA
E-mail: MingChien.Shan@mail.com

Library of Congress Control Number: 2006920029

CR Subject Classification (1998): H.2, H.4, C.2, H.3, J.1, K.4.4, I.2.11

LNCS Sublibrary: SL 3 – Information Systems and Application, incl. Internet/Web and HCI

ISSN 0302-9743
ISBN-10 3-540-31067-3 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-31067-9 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

Springer is a part of Springer Science+Business Media

springer.com

© Springer-Verlag Berlin Heidelberg 2006
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11607380 06/3142 5 4 3 2 1 0

Preface

The 6th Workshop on Technologies for E-Services (TES-05) was held September 2-3, 2005, in conjunction with the 31st International Conference on Very Large Data Bases (VLDB 2005) in Trondheim, Norway.

The next generation of applications will be developed in the form of services that are offered over a network, either a company's intranet or the Internet. Service-based architectures depend on an infrastructure that allows service providers to describe and advertise their services and service consumers to discover and select the services that best fulfill their requirements. Frameworks and messaging protocols for e-services in stationary and mobile environments are being developed and standardized, metadata and ontologies are being defined, and mechanisms are under development for service composition, delivery, monitoring, and payment. End-to-end security and quality of service guarantees will be essential for the acceptance of e-services. As e-services become pervasive, e-service management will play a central role.

The workshop's objective is to provide a forum for researchers and practitioners to present new developments and experience reports. The goal of the TES workshop is to identify the technical issues, models, and infrastructures that enable enterprises to provide e-services to other businesses and individual customers.

In response to the call for submissions, 40 papers were submitted, out of which the Program Committee selected 10 high-quality submissions for presentation at the workshop. Unfortunately, one author had to withdraw, and the remaining nine papers that were presented are included in these proceedings.

The workshop itself started with a keynote given by Umeshwar Dayal on "Optimization of Business Processes (& Composite E-Services)." He gave interesting insights into past, current, and future developments in the area of business process management and the application of these results to composite e-services. Afterwards the three technical sessions "Design," "Technology," and "Composite Web Services" took place and very interesting and stimulating research paper presentations were delivered, resulting in many questions and discussions.

We would like to thank the authors for their submissions to the workshop, the Program Committee for their hard work during a very brief reviewing period, the keynote speaker and presenters for their very interesting presentations, and the audience for their interest, questions, and discussions.

September 2004

Christoph Bussler
Ming-Chien Shan

Workshop Organization Committee

Christoph Bussler

Digital Enterprise Research Institute (DERI), Ireland

Ming-Chien Shan

Hewlett-Packard Laboratories, CA, USA

Program Committee

Boualem Benatallah

Fabio Casati

Emilia Cimpian

Jen-Yao Chung

Francisco Curbera

Marlon Dumas

Schahram Dustdar

Timothy Finin

Dimitrios Georgakopoulos

Paul Grefen

Juan Gomez

Armin Haller

Manfred Hauswirth

Kashif Iqbal

Mick Kerrigan

Jacek Kopecky

Frank Leymann

Adrian Mocan

Heiko Ludwig

Eyal Oren

Cesare Pautasso

Mike Papazoglou

Barbara Pernici

Krithi Ramamritham

Manfred Reichert

Dumitru Roman

Brahmananda Sapkota

Karsten Schulz

Amit Sheth

Thomas Strang

Katia Sycara

Farouk Toumani

Kunal Verma

Michal Zaremba

Liang-Jie Zhang

Michal Zaremba

Lizhu Zhou

Table of Contents

Keynote Presentation

Challenges in Business Process Analysis and Optimization <i>Malu Castellanos, Fabio Casati, Mehmet Sayal, Umeshwar Dayal</i>	1
-----------------------------------------------------------------------------------------------------------------------------------------	---

Design

Bootstrapping Domain Ontology for Semantic Web Services from Source Web Sites <i>Wensheng Wu, AnHai Doan, Clement Yu, Weiyi Meng</i>	11
Systematic Design of Web Service Transactions <i>Benjamin A. Schmit, Shahram Dustdar</i>	23
A Matching Algorithm for Electronic Data Interchange <i>Rami Rifaieh, Uddam Chukmol, Nabila Benharkat</i>	34

Technology

A Lightweight Model-Driven Orchestration Engine for e-Services <i>Johann Oberleitner, Florian Rosenberg, Shahram Dustdar</i>	48
Ad-UDDI: An Active and Distributed Service Registry <i>Zongxia Du, Jinpeng Huai, Yunhao Liu</i>	58
WS-Policy for Service Monitoring <i>Luciano Baresi, Sam Guinea, Pierluigi Plebani</i>	72

Composite Web Services

SENECA – Simulation of Algorithms for the Selection of Web Services for Compositions <i>Michael C. Jaeger, Gregor Rojec-Goldmann</i>	84
Monitoring for Hierarchical Web Services Compositions <i>Debmalya Biswas, Krishnamurthy Vidyasankar</i>	98

VIII Table of Contents

Efficient Scheduling Strategies for Web Services-Based E-Business Transactions

Erdogan Dogdu, Venkata Mamidenna 113

Author Index 127