

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

Alfred Kobsa

University of California, Irvine, CA, 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

TU Dortmund University, Germany

Demetri Terzopoulos

University of California, Los Angeles, CA, USA

Doug Tygar

University of California, Berkeley, CA, USA

Gerhard Weikum

Max Planck Institute for Informatics, Saarbruecken, Germany

Marijn Janssen Hans Jochen Scholl
Maria A. Wimmer Frank Bannister (Eds.)

Electronic Government

13th IFIP WG 8.5 International Conference, EGOV 2014
Dublin, Ireland, September 1-3, 2014
Proceedings

Volume Editors

Marijn Janssen
Delft University of Technology
Faculty of Technology, Policy and Management
Jaffalaan 5, 2628 BX Delft, The Netherlands
E-mail: m.f.w.h.a.janssen@tudelft.nl

Hans Jochen Scholl
University of Washington, The Information School
Mary Gates Hall, Seattle, WA 98195-2840, USA
E-mail: jscholl@u.washington.edu

Maria A. Wimmer
University of Koblenz-Landau, Faculty of Computer Science
Universitätsstr. 1, 56070 Koblenz, Germany
E-mail: wimmer@uni-koblenz.de

Frank Bannister
Trinity College, School of Computer Science and Statistics
Dublin 2, Ireland
E-mail: frank.bannister@tcd.ie

ISSN 0302-9743

e-ISSN 1611-3349

ISBN 978-3-662-44425-2

e-ISBN 978-3-662-44426-9

DOI 10.1007/978-3-662-44426-9

Springer Heidelberg New York Dordrecht London

Library of Congress Control Number: 2014945462

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

© IFIP International Federation for Information Processing 2014

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. Exempted from this legal reservation are brief excerpts in connection with reviews or scholarly analysis or material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work. Duplication of this publication or parts thereof is permitted only under the provisions of the Copyright Law of the Publisher's location, in its current version, and permission for use must always be obtained from Springer. Permissions for use may be obtained through RightsLink at the Copyright Clearance Center. Violations are liable to prosecution under the respective Copyright Law.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

The 13th annual international IFIP Electronic Government Conference (IFIP EGOV 2014) was organized by the International Federation for Information Processing Working Group 8.5 (Information Systems in Public Administration), or IFIP WG 8.5 for short. IFIP EGOV is the core scientific conference in the domain of ICT and public administration and attracts high-quality paper each year.

Each year, scholars from all over the world present their research and share their experiences in the fields of e-government and e-governance. Since the start in 2001, the EGOV conference has provided important guidance for research and development in this fast-moving domain of study.

The IFIP e-government conference brings together leading researchers and professionals from across the globe and from a number of disciplines. Together with IFIP ePart, the sister conference on electronic participation, the two conferences have attracted participants from all continents. International scholars with different disciplinary backgrounds meet to share and discuss innovative as well as solidly grounded theories, methods, concepts and solutions for the domain of study.

As in previous years, IFIP EGOV 2014 was co-located with IFIP ePart, the 6th International Conference on eParticipation (IFIP ePart 2014), which aims at presenting advances in both social and technological scientific domains, seeking to demonstrate new concepts, methods, and styles of e-participation. Co-location of both conferences intentionally allows for exchange and cross-fertilization between the two domains of study, and hence the chairs of both conferences are committed to continuing the co-location of IFIP EGOV and IFIP ePart. Many participants attend both conferences.

Papers at IFIP EGOV are notable for their scientific credibility and rigor as well as their high relevance to practice. Likewise the keynote speakers come from both practice and academia, which presents a fruitful combination as practice can drive research, and research is needed by practice.

The IFIP EGOV 2014 call for papers attracted a wide range of topics with 70 submissions, which included 27 (accepted) full research papers and 27 posters and ongoing research papers. In addition, a workshop on “Critical Success Factors for Open Data – From Policy to Participation and Innovation” was organized. The papers were grouped under the following parts:

- Foundations
- Services and Interoperability
- Policy and Stakeholders
- Open Data
- Design and Values

Ongoing research and poster as well as workshop abstracts were published in a complementary open access proceedings volume. In contrast to previous years, this has immediate visibility for others, which the organizers hope might result in more usage and impact and will drive multi-disciplinary research. The proceedings contain contributions to both IFIP EGOV and IFIP ePart conferences.

The Paper Awards Committee was again led by Committee Chair Olivier Glassey of IDHEAP, Lausanne/Switzerland. The Organizing Committee carefully reviewed the accepted papers and granted outstanding paper awards in various areas. The winners were awarded in the ceremony during the conference dinner, which has become a highlight of each IFIP EGOV conference. Their names were announced on the conference website: <http://www.egov-conference.org/egov-conf-history/egov-2014/>.

Many people are needed to make large events like this conference happen. We thank the members of the IFIP EGOV 2014 Program Committee and the additional reviewers for their great efforts in reviewing the submitted papers. Our particular thanks go to Frank Bannister and the conference organization of Trinity College Dublin, Republic of Ireland, who hosted the 2014 IFIP EGOV and IFIP ePart conferences on shortest notice. At the heart of Dublin lies Trinity College with its magnificent buildings and beautiful campus spanning 47 acres. Trinity College Dublin was created by royal charter in 1592. There were 16,646 registered students in 2012/13 and over 100,277 alumni (source: www.tdc.ie). Trinity College has a long history, whose ongoing traditions and enduring artifacts we were able to enjoy. The conference dinner was held in the marvellous eighteenth century dining hall. The welcome drinks were held in the atrium, which has a modern structure and is an obvious contrast to the more traditional dining hall.

We were grateful and had the greatest pleasure to hold IFIP EGOV 2014 at such a special place.

September 2014

Marijn Janssen
Hans J. (Jochen) Scholl
Maria A. Wimmer
Frank Bannister

Organization

Executive Committee

Marijn Janssen	Delft University of Technology, The Netherlands
Hans J. (Jochen) Scholl	University of Washington, USA
Maria A Wimmer	University of Koblenz-Landau, Germany
Frank Bannister	Trinity College Dublin, Ireland

International Program Committee

Suha Alawadhi	Kuwait University, Kuwait
Vincenzo Ambriola	University of Pisa, Italy
Kim Andersen	Copenhagen Business School, Denmark
Renata Araujo	UNIRIO, Brazil
Karin Axelsson	Linköping university, Sweden
Frank Bannister	Trinity College Dublin, Ireland
Victor Bekkers	Erasmus University, The Netherlands
Lasse Berntzen	Vestfold University College, Norway
John Bertot	University of Maryland, USA
Dana-Maria Boldeanu	Bucharest Academy of Economic Studies/ E-CAESAR Centre, Romania
Laurence Brooks	Brunel University, UK
Wojciech Cellary	Poznan University of Economics, Poland
Antonio Cerone	United Nations University, China
Bojan Cestnik	Jožef Stefan Institute, Slovenia
Jean-Loup Chappelet	Swiss Graduate School of Public Administration, Switzerland
Yannis Charalabidis	National Technical University Athens, Greece
Wichian Chutimaskul	King Mongkut's University of Technology Thonburi, Thailand
Antonio Cordella	London School of Economics, UK
Flavio Corradini	University of Camerino, Italy
Ahmed Darwish	Ministry of State of Administrative Development, Egypt
Sharon Dawes	University at Albany/SUNY, USA
Rahul De'	Indian Institute of Management Bangalore, India
Yogesh Dwivedi	Swansea University, UK
Elsa Estevez	United Nations University, China
Enrico Ferro	Istituto Superiore Mario Boella, Italy
Leif Skiftenes Flak	University of Agder, Norway

VIII Organization

Sabrina Franceschini	University of Modena and Reggio Emilia, Italy
Ivan Futo	Corvinus University of Budapest, Hungary
Andras Gabor	Corvinno Technology Transfer Center Nonprofit Public Ltd., Hungary
Mila Gasco	ESADE, Spain
Rimantas Gatautis	Kaunas University of Technology, Lithuania
J. Ramon Gil-Garcia	Centro de Investigación y Docencia Económicas, Mexico
Olivier Glassey	Swiss Graduate School of Public Administration, Switzerland
Dimitris Gouscos	University of Athens, Greece
Helle Zinner Henriksen	Copenhagen Business School, Denmark
Zahir Irani	Brunel University, UK
M Sirajul Islam	Örebro University, Sweden
Tomasz Janowski	UNU-IIST Center for Electronic Governance, China
Arild Jansen	University of Oslo, Norway
Marijn Janssen	Delft University of Technology, The Netherlands
Luiz Joia	Brazilian School of Public and Business Administration, Brazil
Yushim Kim	Arizona State University, USA
Bram Klievink	Delft University of Technology, The Netherlands
Ralf Klischewski	German University in Cairo, Egypt
Helmut Krcmar	Technical University Munich, Germany
Katarina Lindblad-Gidlund	Mid Sweden University, Sweden
Miriam Lips	Victoria University of Wellington, New Zealand
Euripidis Loukis	University of the Aegean, Greece
Luis F. Luna-Reyes	Universidad de las Americas-Puebla, Mexico
Gregoris Mentzas	National Technical University of Athens, Greece
Jeremy Millard	Danish Technological Institute, Denmark
Carl Erik Moe	University of Agder, Norway
José María Moreno-Jiménez	Universidad de Zaragoza, Spain
Björn Niehaves	European Research Center for Information Systems, Germany
Peter Axel Nielsen	Aalborg University, Denmark
Adegboyega Ojo	Insight at National University of Ireland, Galway, Ireland
Theresa Pardo	Center for Technology in Government, University at Albany, USA
Vassilios Peristeras	European Commission - DIGIT B2, Belgium
Rimantas Petrauskas	Kazimieras Simonavicius University, Lithuania

Michael Räckers	European Research Center for Information Systems (ERCIS), Germany
Peter Reichstaedter	Federal Chancellery of Austria, Austria
Nicolau Reinhard	University of São Paulo, Brazil
Reinhard Riedl	Bern University of Applied Sciences, Switzerland
Øystein Sæbø	University of Agder, Norway
Rodrigo Sandoval	State Autonomous University of Mexico Toluca, Mexico
Hans J Scholl	University of Washington, USA
Margit Scholl	TH Wildau, Germany
Jamal Shahin	Vrije Universiteit Brussel, Belgium
Henk Sol	Groningen University, The Netherlands
Mauricio Solar	Universidad Tecnica Federico Santa Maria, Chile
Maddalena Sorrentino	University of Milan, Italy
Witold Staniszczak	Rodan Systems, Poland
Efthimios Tambouris	University of Macedonia, Greece
Yao-Hua Tan	Delft University of Technology, The Netherlands
Lidwien Van De Wijngaert	University of Twente, The Netherlands
Mirko Vintar	University of Ljubljana, Slovenia
Jörn Von Lucke	Zeppelin Universität Friedrichshafen, Germany
Vishanth Weerakkody	Brunel University, UK
Maria Wimmer	Universität Koblenz-Landau, Germany
Petra Wolf	Technical University Munich, Germany
Adam Wyner	University of Aberdeen, UK
Chien-Chih Yu	National ChengChi University, Taiwan

Additional Reviewers

Gabriel Cavalheiro	Brazilian School of Public and Business Administration, Getulio Vargas Foundation, Brazil
Marcelo Fornazin	Brazilian School of Public and Business Administration, Getulio Vargas Foundation, Brazil
Laura Fortunato	University of Salento, Italy
Yiwei Gong	Nyenrode Business University, The Netherlands
Anton Joha	Whiteline Research and Delft University of Technology, The Netherlands
Devender Maheshwari	Delft University of Technology, The Netherlands
Eleni Panopoulou	University of Macedonia, Greece
Anneke Zuiderwijk	Delft University of Technology, The Netherlands

Table of Contents

Foundations

The EGOV Research Community: An Update on Where We Stand	1
<i>Hans J. Scholl</i>	
The Development in Leading e-Government Articles 2001 - 2010: Definitions, Perspectives, Scope, Research Philosophies, Methods and Recommendations - An Update of Heeks and Bailur	17
<i>Christian Ø. Madsen, Jesper Bull Berger, and Mick Phythian</i>	
An Online Transparency for Accountability Maturity Model	35
<i>Rui Pedro Lourenço and Leila Serra</i>	
Towards an Evaluation Model for Open Government: A Preliminary Proposal	47
<i>Rodrigo Sandoval-Almazan and J. Ramon Gil-Garcia</i>	
Contextual Factors Influencing Health Information Systems Implementation in Public Sector – Investigating the Explanatory Power of Critical Success Factors	59
<i>Karin Axelsson and Ulf Melin</i>	
PA Meets IS Research: Analysing Failure of Intergovernmental Information Systems via IS Adoption and Success Models	72
<i>Lies Van Cauter, Monique Snoeck, and Joep Crompvoets</i>	

Services and Interoperability

Interconnecting Governments, Businesses and Citizens – A Comparison of Two Digital Infrastructures	84
<i>Bram Klievink, Anneke Zuiderwijk, and Marijn Janssen</i>	
The Role of Trust in the Prioritization of Channel Choices	96
<i>Kai-Jo Fu and Chung-Pin Lee</i>	
Identifying a Public Sector Information Systems (PSIS) for E-service: A Case of Land Records E-service in Bangladesh	106
<i>Muhammad Shahanoor Alam and Laurence Brooks</i>	
Source and Channel Choices in Business-to-Government Service Interactions: A Vignette Study	120
<i>Yvon Van den Boer, Willem Pieterse, Rex Arendsen, and Manon De Groot</i>	

Connecting People: Semantic-Conceptual Modeling for Laws and Regulations	133
<i>Tom Van Engers and Sjur Nijssen</i>	
Modelling Process Intensive Scenarios for the Smart City	147
<i>Riccardo Cognini, Flavio Corradini, Andrea Polini, and Barbara Re</i>	
Shared Services: Maverick or Originator?	159
<i>Paolo Depaoli, Maddalena Sorrentino, and Marco De Marco</i>	

Policy and Stakeholders

Assessing Policy Making for ICT Innovation: A Decision Support Research Agenda	171
<i>Ciara Fitzgerald and Frédéric Adam</i>	
Open Government Data: Facilitating and Motivating Factors for Coping with Potential Barriers in the Brazilian Context	181
<i>Claudio Sonaglio Albano and Nicolau Reinhard</i>	
Analyzing Stakeholders in Complex E-Government Projects: Towards a Stakeholder Interaction Model	194
<i>Vanessa Greger, Dian Balta, Petra Wolf, and Helmut Krcmar</i>	
LAN House* Implementation and Sustainability in Brazil: An Actor-Network Theory Perspective	206
<i>Carla Danielle Monteiro Soares and Luiz Antonio Joia</i>	
Bridging the Digital Divide at the Regional Level? The Effect of Regional and National Policies on Broadband Access in Europe’s Regions	218
<i>Pau Palop García, Basanta Thapa, and Björn Niehaves</i>	
Designing a Second Generation of Open Data Platforms: Integrating Open Data and Social Media	230
<i>Charalampos Alexopoulos, Anneke Zuiderwijk, Yannis Charapabidis, Euripidis Loukis, and Marijn Janssen</i>	
Categorization of Brazilian Internet Users and Its Impacts on the Use of Electronic Government Services	242
<i>Marcelo Henrique De Araujo and Nicolau Reinhard</i>	
A Decision Model for Data Sharing	253
<i>Silja M. Eckartz, Wout J. Hofman, and Anne Fleur Van Veenstra</i>	
Policy, Process, People and Public Data	265
<i>Ann-Sofie Hellberg</i>	

Is the Public Motivated to Engage in Open Data Innovation?	277
<i>Gustaf Juell-Skielse, Anders Hjalmarsson, Paul Johannesson, and Daniel Rudmark</i>	

Design and Values

Dialectics and Contradictions in Public Procurement of Information Systems	289
<i>Carl Erik Moe and Maung Kyaw Sein</i>	
Strategic Aspects for Successful E-government Systems Design: Insights from a Survey in Germany	301
<i>Catherine G. Mkude and Maria A. Wimmer</i>	
Proposing an Entrepreneurial Process for the Co-creation of IT Value	313
<i>Hans Solli-Sæther and Leif Skiftenes Flak</i>	
Developing Value-Centric Business Models for Mobile Government	325
<i>Chien-Chih Yu</i>	
Author Index	337