Scientific Report

TED Conference on e-Government
Electronic Democracy: The Challenge Ahead
(TCGOV 2005)

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Summary

The TCGOV 2005 international conference on e-Government was held from 2 – 4 March 2005 in Bozen-Bolzano, Italy. The conference was initiated by the working group 'Towards Electronic Democracy' (TED) of the European Science Foundation and was jointly organized by the Free University of Bozen-Bolzano, the Municipality of Bozen-Bolzano, the TED Working Group, and the IFIP Working Group 8.5 – Information Systems in Public Administration. Almost 100 participants from more than 20 different countries including Australia, South Africa, USA, and Brazil attended the TCGOV 2005 conference that was hosted by the Free University of Bozen-Bolzano in the new Aula Magna.

A total of 92 scientific papers from 26 different countries were submitted to TCGOV 2005. Each submission was evaluated by at least two reviewers, mainly members of the Programme Committee. Approximately 30% of the submissions were selected for presentation at the conference and publication in the conference proceedings, while other 20% were selected for a poster presentation and publication in separate poster proceedings.

The conference addressed a large spectrum of issues that are relevant and have to be investigated for a successful transition from the traditional form of government to a new form known as e-Government. The organiser was particularly interested to stress on the technical aspects of e-Government and the need for contributions from the field of computer science for e-Government. This orientation was also reflected in the composition of the program committee. The main topics at the conference were the following: improving citizen participation and policy making, government application integration, semantic web technologies for e-Government, and security aspects for e-Government services. The technical program included also three keynote presentations, given by leading researchers and experts from the field.

TCGOV 2005 was a valuable contribution that helps to shape and form the e-Government community and to advance research in this field. In particular, it seems that the interest in and the awareness of e-democracy in Europe is growing and that it is definitely becoming a very active research area. It would be extremely important to organize similar activities in the future in order to advance research and practice. A regular conference on e-democracy could be an interesting event to complement the current e-government conferences.

Many people and institutions were involved in the joint organization of the conference. As a main organizer, we express our thanks to all of them for their support and the smooth collaboration during the preparation of the conference. We are particularly grateful to the TED working group of the European Science Foundation for their initiative and mentorship for the conference.

Scientific Content

Conference Proceedings

A total of 92 scientific papers from 26 different countries were submitted to TCGOV 2005. Each submission was evaluated by at least two reviewers, mainly members of the Programme Committee. The reviewing process was very selective, and only 28 contributions were accepted as full papers for presentation at the conference, and publication in the conference proceedings. The conference proceedings were published by Springer in the LNCS series:

Volume title:	e-Government: Towards Electronic Democracy International Conference, TCGOV 2005 Bolzano, Italy, March 2005 Proceedings
Editors:	Michael Böhlen, Johann Gamper, Wolfgang Polasek, Maria Wimmer
Publisher:	Springer, volume 3416 in LNAI
Date:	February, 2005

The main focus was on the following topics:

- Improving citizen participation and policy making
- Government application integration
- Semantic web technologies for e-Government
- Security aspects for e-Government services

Two sessions were dedicated to the issue of *improving citizen participation and policy making*, an emerging area within e-Government that seeks to enhance democratic processes and provide increased opportunities for individuals and communities to be involved in governmental decisions. One session covered more technical investigations and results. Macintosh et al discuss the use of weblogs to support democracy at the local community level. Berntzen et al. examine policy evaluation from a local politician's view, i.e., what web-based tools are useful for policy evaluation, and what kind of information do these tools provide? Steinmann et al. investigate the question whether and how GIS applications can improve citizen's involvement and participation in decision-making processes. The second session covered different e-Democracy experiences from Switzerland, Germany, and China. The paper by Chappelet et al. provides a classification of interactive tools for e-Democracy and discusses the use of such tools in Switzerland. Roeder et al. present a case study from the German city Esslingen, where a internet-based tool for e-participation has been used in the public budget dialogue. Lan discusses China's experience in the transition from e-Government to e-Democracy where fiscal transparency played a crucial role.

Two sessions were about *government application integration* which is an extremely important technical aspect on the agenda of e-Government research. The well-known one-stop-shop paradigm requires the integration and orchestration of back-office services within and among different public administrations. The paper by Gortmaker et al. analysed the requirements for a reference model for process orchestration. Two papers proposed different architectures for service integration, one following a peer-to-peer approach (Contenti et al.) and the other one adopting a marketplace metaphor (Mugellini et al.). Two case studies concluded this topic. Li et al. presented a paper about building an e-government solution in Shanghai which is based on grid technology. The case study by Meneklis et al. showed the use of the ISO RM-ODP Standard for the development of open distributed systems in the context of the IST eMayor project.

Another rather technical session and closely related to the integration issue was about the use of *semantic web technologies for e-Government*. The paper by Costilla et al. presented a legislative ontology which has been developed for and is now in use in parliamentary management system. Sacco argues that the dissemination of information is important for democracy and that the use of dynamic taxonomies could dramatically improve an effective and timely dissemination and search process. Apostolou et al. describe a software engineering environment for e-government services which is heavily based on the use of an ontology.

The fourth main topic was about *security aspects for e-Government services* which is equally important for e-Democracy. The proceedings include three contributions that presented new approaches to deal with security issues in the context of e-Polling, e-Voting, and inter-organisational workflows, respectively. The paper by Dimitriou et al. presents a methodology that can be applied in electronic voting and provides more complex ballot options than current systems. Bruschi et al. present a simple protocol for an accurate and anonymous e-polling system. The last paper in this session by Breu et al. proposed a new approach for a model-driven software development process of security-critical inter-organizational workflows in the context of web services.

The programme was completed with contributions from decision support system on the web, managerial and financial aspects of e-Government projects, political and societal implications, and e-Procurement.
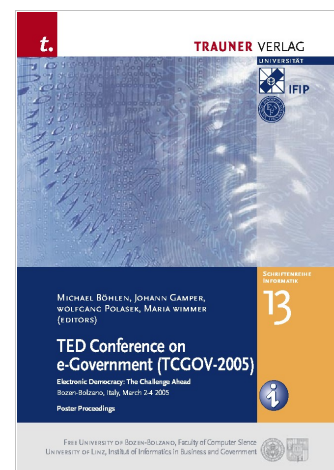
Poster Proceedings

Apart from the full papers, 17 contributions were selected and accepted as poster presentations at the conference and for publication in the poster proceedings:

Volume Title:	TED Conference on e-Government – Electronic Deomocracy: The Challenge Ahead Bolzano, Italy, March 2005 Poster Proceedings
Editors:	Michael Böhlen, Johann Gamper, Wolfgang Polasek, Maria Wimmer
Publisher:	Universitätsverlag Trauner, Linz, Austria
Date:	February, 2005

The selected poster papers addressed various aspects of e-Government and e-Democracy, ranging from more fundamental research work to practical applications and best practice experiences. The papers posters were grouped under the following six areas:

- Improving citizen participation and policy making,
- Political and societal implications,
- Knowledge management and intelligent systems,
- Cross-border services and inter-organisational services,
- Access control to information and services, and
- Best practice experiences and case studies.

Keynote Presentations

The technical programme included three keynote presentations, given by leading researchers and experts from the field: Prof. Roland Traunmüller from the University of Linz, Prof. David Basin from the ETH Zurich, and Dr. Thanassis Chrissafis from the European Commission, DG Information Society, Unit e-Government.

Parallel Events

The main conference was accompanied by two parallel events:

- 2nd eBZ Workshop on e-Government (March 3, 2005)
- European Union clustering (March 4, 2005)

The 2nd eBZ Workshop on e-Government

This workshop was organised by the Free University and the Municipality of Bozen-Bolzano. The objective of this workshop was to bring together mainly people from different local government organisations and technology providers and to discuss concrete e-Government problems, strategies, and solutions from a more practical perspective. The first two presentations gave an overview about strategies and future plans in the field of e-government of the Municpality of Bozen-Bolzano and the provincial government, respectively. The next three presentations were dedicated to best practice experiences from different cities: on-line transactions and services in South Tyrol, personalized e-government and virtual consulting in the City of Villach (Austria), and the interconnected City of Siena (Italy). The workshop concluded with a presentation of PEOPLE, one of the largest national e-government projects, followed by a retrospective analysis of "eBZ – Digital City", a strategic e-government initiative between the Free University and the Municipality of Bozen-Bolzano.

European Union Clustering Event

This European Union Clustering event about Secure Information Processing in the Public Sector for small and medium sized government organisations was organised by the 6FP project eMayor. The objective of the event was to bring together the knowledge and experience gained from other 6FP projects, to explore potential synergies and to identify interest from the European research community in the technological aspects of secure e-Government services. The event addressed a number of specific problems and questions that have to be investigated for secure e-Government services including the following ones: Organizational Goals and Problems, legal issues, policies, standards, technical problems, and proposed research issues. Representatives from 8 different European Union research projects covering various security aspects attended the clustering event and brought their individual and project experience and knowledge into the discussion.

Organization

Conference Chairs

Renzo Caramaschi, Municipality of Bozen-Bolzano, Italy
Wolfgang Polasek, University of Basel, Switzerland

Program Committee Chairs

Michael Böhlen, Free University of Bozen-Bolzano, Italy
Johann Gamper, Free University of Bozen-Bolzano, Italy
Maria Wimmer, University of Linz, Austria

Program Committee

Antonio Albano, University of Pisa, Italy
Kim Viborg Andersen, Copenhagen Business School, Denmark
Elisa Bertino, University of Milano, Italy
Jean-Loup Chappelet, Graduate School of Public Administration Lausanne, Switzerland
Klaus Dittrich, University of Zurich, Switzerland
Mario Fedrizzi, University of Trento, Italy
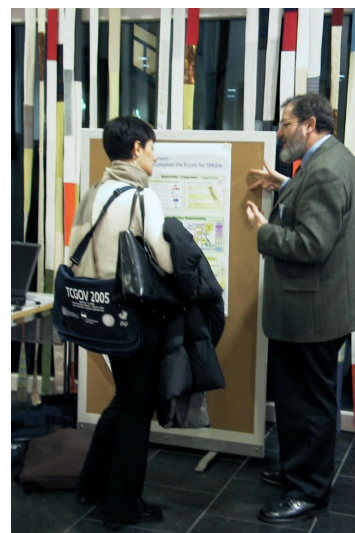Simon French, University of Manchester, United Kingdom

Assessment of the Results

e-Government has become a very active research area in the last few years and promises to revolutionise government and its interaction with customers. Yet there is a long way to go, and the community is still only at the beginning of a consolidation phase. TCGOV 2005 was a valuable contribution in this direction to help shape and form a more informed e-Government community and to advance research in this field. In particular, it seems that the interest in and the awareness of e-democracy in Europe is growing and that it is definitely becoming a very active research area.

The conference has been a success, and we got a lot of positive feedback from the participants. They appreciated the selective reviewing process for the full papers combined with a poster session that gives space to present ongoing work. The poster session was organized as follows: Each author had to prepare a poster of approx. 100 x 80 cm, which was mounted on a panel and was there during all 3 days of conference. In the official poster session, each poster author presented his/her work in a short 1-2 minutes statement (using 2-3 slides) to the audience. Afterwards, the authors were available in front of the poster for further in-depth technical discussions and explanations with interested attendees. We believe that this form of poster session provides a very stimulating and interesting forum to present and discuss ongoing research work in scientific conferences.

Somehow as a hint to stress the importance of smart cards for the implementation of e-Government solutions, an electronic badge was used. The badge served as authentication to access computers and could be used to pay in the University Cafè for the duration of the conference.

As the main organizer, we appreciate the mentorship and initiative taken by the TED Working Group of the European Science Foundation – in particular by Wolfgang Polasek. It is extremely important that similar activities are organised in the future in order to advance research and practice in the challenging and important fields of e-Government and e-Democracy. Especially for e-Democracy there is currently no European Conference that is dedicated to this emerging field. A scientific conference on e-Democracy could be an interesting event to complement the EGOV conference, the major European conference on e-government in general.

Final Program

Wednesday, March 2, 2005

Keynote presentation

e-Government Calls for e-Governance, *Roland Traunmüller, University of Linz, Austria*

e-Democracy: Improving Citizen Participation and Policy Making

Using Weblogs to support Local Democracy, *Ann Macintosh, Andy McKay-Hubbard, Danae Shell*

Web-based tools for policy evaluation, *Lasse Berntzen, Marte Winsvold*

Can Online Map-Based Applications Improve Citizen Participation? *Renate Steinmann, Alenka Krek, Thomas Blaschke*

e-Democracy: Experiences from Different Countries

Interactive Tools for e-Democracy: Examples from Switzerland, *Jean-Loup Chappelet, Pierre Kilchenmann*

"Public Budget Dialogue" - An Innovative Approach to E-participation, *Stefanie Roeder, Annika Poppenborg, Susanne Michaelis, Oliver Märker, Stefan Rene Salz*

Enhancing e-Democracy via Fiscal Transparency: A Discussion Based on China's Experience, *Ling Lan*

Political and Societal Implications

Third Way e-Government: the Case for Local Devolution, *Ailsa Kolsaker*

Urban vs. Regional Divide: Comparing and Classifying Digital Divide, *Enrico Ferro, Marco Cantemessa, Emilio Paolucci*

e-Citizen: Why Waiting For the Governments? *Armando Rech Filho*

Poster session

Thursday, March 3, 2005

Keynote presentation

E-Government: Privacy Policies and Mechanisms, *David Basin, ETH Zurich and Zurich Information Security Center, Switzerland*

Security for e-Government Services

A Zero Knowledge proof for Subset Selection from a Family of Sets with applications to Multiparty/Multicandidate Electronic Elections, *Tassos Dimitriou, Dimitris Foteinakis*

A Protocol for Anonymous and Accurate E-polling, *Danilo Bruschi, Igor Nai Fovino, Andrea Lanzi*

Model Driven Security for Inter-Organizational Workflows in e-Government, *Ruth Breu, Michael Hafner, Barbara Weber, Andrea Novak*

Semantic Web Technologies for e-Government

E-Government: A Legislative Ontology for the SIAP Parliamentary Management System, *Carmen Costilla, Juan P. Palacios, Jose Cremades, Jorge Vila*

No (e-)Democracy without (e-)Knowledge, *Giovanni M. Sacco*

Towards a Semantically-driven Software Engineering Environment for eGovernment, *Dimitris Apostolou, Ljiljana Stojanovic, Tomas Pariente Lobo, Barbara Thoenssen*

Architectures for Government Application Integration

Towards Requirements for a Reference Model for Process Orchestration in e-Government, *Jeffrey Gortmaker, Marijn Janssen, Rene W. Wagenaar*

A Distributed Architecture for Supporting eGovernment Cooperative Processes, *Mariangela Contenti, Massimo Mecella, Alessandro Termini, Roberto Baldoni*

eGovernment Service Marketplace: Architecture and Implementation, *Elena Mugellini, Maria Chiara Pettenati, Omar Abou Khaled, Franco Pirri*

Case Studies for Government Application Integration

Towards Building E-Government on the Grid, *Ying Li, Minglu Li, Yue Chen*

Applying the ISO RM-ODP Standard in E-government, *B. Meneklis, A. Kaliontzoglou, D. Polemi, C. Douligeris*

Friday, March 4, 2005

Keynote presentation

eDemocracy: Challenges and Actions in the EU, *Athanassios Chrissafis, European Commission, DG Information Society, Unit E-Government*

Decision Support Systems

QUIXOTE: Supporting Group Decisions through the Web, *J.A. Rubio, D. Rios Insua, J. Rios, E. Fernandez*

UNICAP: Efficient Decision Support for Academic Resource and Capacity Management, *Svetlana Vinnik, Marc H. Scholl*

A Methodology Framework for Calculating the Cost of e-Government Services, *Elias A. Hadzilias*

Managerial and Financial Aspects of E-Government Projects

Good Practice in e-Government: Management Over Methods, *Lee Eddowes*

Participatory budget formation through the web, *J. Rios, D. Rios Insua, E. Fernandez, J.A. Rivero*

On the Transition to an Open Source Solution for Desktop Office Automation, *Bruno Rossi, Barbara Russo, Paolo Zuliani, Giancarlo Succi*

e-Procurement

Public eProcurement in action: Policies, practices and technologies, Catherine Hardy, *Susan P. Williams*

An integrated approach in healthcare e-procurement: the case-study of the ASL of Viterbo, *Tommaso Federici*

Poster Session

e-Democracy: Improving Citizen Participation and Policy Making

Internet Based Citizen Participation in Planning Projects – The project 'Forum Cologne City Rings', *Stefanie Roeder, Sabine Würkner, Susanne Michaelis, Stefan Rene Salz, Nils Zierath*

City eGovernance as an Innovative Urban Public Policy Framework, *Krassimira Paskaleva*

E-cognocracy and participation of immigrants in e-governance, *Jose Mareda Moreno-Jimenez, Wolfgang Polasek*

Political and Societal Implications

Digital Divide: Lithuania case, *Rimantas Gatautis*

Preserving Public Records in an Age of e-Government: An Introduction to the Work of

InterPARES, *Evelyn Peters McLellan*

Empirical Approach and Analysis to Embodying a Local E-Government in Japan, *Seongcheol Lim*

Knowledge Management and Intelligent Systems

Towards a Framework integrating Process and Knowledge Modelling, *Olivier Glassey*

A DSS for supporting Local Government in the Selection of Energy Saving Projects, *Michael Klein*

Some Decisional Tools for knowledge improvement in e-cognocracy, *Jose Mareda Moreno-Jimenez, Juan Aguaron, Alfredo Altuzarra, Mareda Teresa Escobar, Alberto Turon*

Cross-Border and Inter-Organizational Services

Application Gateway to access Electronic Government Legacy System, *Pedro Luiz, Pizzigatti Correa, Moacir Pedroso, Jose Martins*

Ontology-Based Knowledge Management for E-Government Purposes, *Felix von Ranke, Maximilian Pühler, Petra Wolf, Helmut Krcmar*

Austrian E-Government: How to Complete the Puzzle for SMGOs, *Josef Makolm*

Multilingual Retrieval of Legal Information, *Daniela Tiscornia and Maria Teresa Sagri*

Access Control to Information and Services

Towards Identity Management for E-Services, *C. A. Ardagna, M. Cremonini, E. Damiani, S. De Capitani di Vimercati, and P. Samarati*

Algorithms for User Dependent Integration of Ranked Distributed Information, *Peter Vojtas, Rastislav Lencses*

Best practice experiences and case studies

IT supported Modernisation within an Austrian City, *Silke Palkovits, Andreas Rapp*

Solution to the Public Administration System, *Peng Zhang, Xiuli Ma, Yunhai Tong, Shiwei Tang, Dongqing Yang*