Proceedings
of the
12th European Conference on
eGovernment

Institute of Public Governance and Management
ESADE Barcelona
Campus Sant Cugat
Barcelona, Spain
14-15 June 2012

Edited by

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Preface

These proceedings represent the work of authors at the 12th European Conference on e-Government (ECEG 2012).

The Conference this year is being hosted by the Institute of Public Governance and Management, ESADE Barcelona, Spain. The Conference Chair is Dr Tamyko Ysa, and the Programme Chair is Dr Mila Gascó, both from the Institute of Public Governance and Management, ESADE.

The opening keynote address is given by Àlex Pèlach who is Director General, Head Office of Processes and E-Administration for the Autonomous Government of Catalonia. The topic of this presentation is “E-Simplicity”. The second day of the conference is opened by Miguel A. Amutio, Directorate General of Administrative Modernization, Processes and Promotion of E-Administration at the Spanish Ministry of Finance and Public Administration.

ECEG brings together practitioners, Government officials and researchers in the area of e-Government from around the world. Participants are able to share their research findings and explore the latest developments and trends in the field which can then be disseminated in the wider community.

With an initial submission of 228 abstracts, after the double blind, peer review process there are 94 academic papers, 8 PhD papers, 5 Work-in-Progess papers and 6 non-academic papers published in these Conference Proceedings. These papers represent research from more than 40 countries including Australia, Austria, Belgium, Boznia and Herzogovenan, Canada, Costa Rica, Croatia, Egypt, Estonia, Finland, Germany, Ghana, Greece, India, Iraq, Ireland, Italy, Jordan, Latvia, Lithuania, Luxembourg, Malaysia, Mexico, Morocco, Portugal, Republic of Macedonia, Romania, Saudi Arabia, Serbia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Tanzania, Thailand, The Netherlands, Turkey, United Arab Emirates, UK, USA and Zimbabwe. This will ensure a very interesting two days.

Selected papers will be published in special issues of the Electronic Journal of e-Government (www.ejeg.com) and the Journal of E-Government Studies and Best Practices.

I hope that you have a stimulating conference, and enjoy your time in Barcelona.

Mila Gascó
Programme Chair
June 2012
Conference Executive
Mila Gascó, Institute on Public Governance and Management, ESADE
Francisco Longo, Institute on Public Governance and Management, ESADE
Manuel Férez, Institute on Public Governance and Management, ESADE
Carlos Losada, Institute on Public Governance and Management, ESADE
Ángel Saz, Institute on Public Governance and Management, ESADE
Albert Serra, Institute on Public Governance and Management, ESADE
Esteve Almirall, Information Systems Department, ESADE
Xavier Busquets, Information Systems Department, ESADE
Carlos E. Jiménez, e-Justice project, Autonomous Government of Catalonia
Marta Continente, Smart Cities, Citilab
Joan Miquel Piqué, Maurilia Knowledge,
Fernando de Pablo, Planning and Institutional Relations Service of the Spanish Tax Agency
Gianluca Misuraca, Institute for Prospective Technological Studies, European Commission
Miguel Amutio, Directorate General of Administrative Modernization, Processes and Promotion of E-Administration, Spanish Ministry of Finance and Public Administrations
José Manuel Alonso, World Wide Web Foundation
Alex Pelach Pàniker, Directorate General Processes and E-Administration of the Autonomous Government of Catalonia
Manel Sanromà, Barcelona City Council
Ester Arizmendi, Directorate General of Administrative Modernization, Processes and Promotion of E-Administration, Spanish Ministry of Finance and Public Administrations

Mini Track Chairs
Zaigham Mahmood, University of Derby, UK
Natasa Pomazalova, University of Defence, Czech Republic.
Bruno de Vuyst, Vrije Universiteit Brussel, Belgium
Carlos E. Jiménez, Justice Department of the Autonomous Government of Catalonia, Spain
Mary Griffiths, University of Adelaide, Australia
Dr Carl Adams, University of Portsmouth, UK

Conference Committee
The conference programme committee consists of key individuals from countries around the world working and researching in the e-Government community. The following have confirmed their participation:

Bulent Acma (Anadolu University, Eskisehir, Turkey); Carl Adams (University of Portsmouth, UK,); Georg Aichholzer (Institute of Technology Assessment, Austrian Academy of Sciences, Austria); Soud Almahamid (Al Hussein Bin Talal University, Jordan); Paul Alpar (Philips-Universitaet Marburg, Germany); Hussein Al-Yaseen (Al-Ahliyya Amman University, Jordan); Nadia Amin (University of Westminster, United Kingdom); Gil Ariely (School of Government, Interdisciplinary Center Herzliya, Israel); Aykut Arslan (TU Training Centre Command, TURKEY); Medi
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Biographies of Conference Chairs, Programme Chairs and Keynote Speakers

Conference Chair

Dr. Tamyko Ysa holds a Ph. D. in political science and a Master in Public Administration and Public Policy. She is a lecturer at the Institute of Public Governance and Management of ESADE in Spain. She has acted as consultant to various public administrations. The institutions for which she has worked include several departments of the Autonomous Government of Catalonia, the Barcelona City Council and County Council, and a large number of local governments and public companies. She is the Principal Researcher of the Research Group for Leadership and Innovation in Public Management (GLIGP).

Programme Chair

Dr. Mila Gascó holds a MBA and a Ph. D. in public policy evaluation. She is a researcher at the Institute of Public Governance and Management of ESADE in Spain. She also has a lot of consulting experience on the information and knowledge society. For seven years, she was a senior analyst at the International Institute on Governance of Catalonia. She has a wide teaching experience as well as a broad researching experience. She has taken part in numerous national and international seminars, she has published both in Spanish and English and she has supervised some Ph. D thesis.

Keynote Speakers

Alex Pèlach Pàniker is Director-general of Processes and Electronic Administration. In 1983, when he finished his studies in Computing, he joined a local company in software development. In the following years, he reached higher quotas of responsibility until arrived at the technical direction of an important multinational consulting company. In 2011 he joined the Catalan Administration, where he is responsible for the promotion of administrative simplification and electronic administration. He is a member in several committees and boards dealing with issues of data protection, local administration, TIC policies, and e-governance policies.
Miguel A. Amutio  CISA, CISM, CRISC graduated in Computer Science at Deusto University (Bilbao) in 1988. He joined the Ministry of Public Administrations in 1995. Currently he is Head of Area within the DG Administrative Modernization, Procedures and Promotion of eGovernment in the Ministry of Finance and Public Administrations of Spain. He coordinates the development of the National Interoperability Framework (Royal Decree 4/2010), and its Technical Interoperability Regulations, and of the National Security Framework (Royal Decree 3/2010) of Spain. He is member of the Committee of the ISA Programme. He has been member of the managing committees of the EU Programmes IDA II (1999-2004) and IDABC (2005-2009). He is National Coordinator of Spain for the transeuropean network sTESTA. He is president of AENOR AEN GET 13 Risk Management. He is member of AENOR CTN71/SC 27; of the management committee of the Arrangement on the Recognition of Common Criteria Certificates In the field of Information Technology Security (CCRA); of the OECD WPISP (Working Party of Security and Privacy); the Advisory Committee of CENATIC. His domains of expertise include: Cross border eGovernment services, eGovernment Interoperability, eGovernment IT security, open standards, open source software.

Mini Track Chairs

Dr Carl Adams is a Principal Lecturer and Researcher in the School of Computing, University of Portsmouth, UK. He has over a decade of professional experience in the computer industry as a Software Engineer and consultant before going into academia. He is an active researcher with interests in e/m-commerce, e/m-government, e/m-payment systems and mobile information systems. He has current PhD students in e/m-commerce and e/m-government. He has published over 80 referred research papers, several book chapters and one book. His PhD is from Southampton University, UK, in the field of Information Systems.

Tom Collins lectures in International Tax and Advanced Tax in the B.A. (Hons.) in Applied Taxation and in Wealth Management for the MSc (Computational Finance) at the National Centre for Taxation Studies, University of Limerick. Tom has over 25 years experience with Big-4 tax practices in Ireland and New Zealand. Prior to joining the
University of Limerick, Tom was a Tax Director with Deloitte specialising in international tax, real estate and wealth management. Tom is NCTS director since September 2009.

Bruno de Vuyst teaches in Antwerp, Barcelona, Brussels and Valencia. He is a deputy judge in the Brussels commercial tribunal and of counsel to a Brussels law firm; in addition he is an elected member of the general assembly of Flemish Bar Associations, representing the Brussels Bar, and a member of the scientific committee of the Institute for judicial training. He is secretary-general of the spin-off fund of the Vrije Universiteit Brussel and a board member of several spin-offs in the life sciences and new materials. He has published books and articles on IP and financial law; he is also a playwright and novelist.

Mary Griffiths is an Associate Professor in the Discipline of Media at the University of Adelaide. She writes on media and e-democracy, e-learning, media ethics, and digital creative praxis. Recently completed: a co-designed comparative pilot study, ‘Young People’s Political Participation (Adelaide and Seoul)’. Currently she teaches Media Democracies and E-Participation, using a role-play on digital information flows. The e-SIM is located in a fictional polity, Incognita, which bears more than a passing resemblance to Australia at the time of Gov 2.0, and wikileaks.

Carlos E. Jiménez holds a MSc on the Information Society, a Postgraduate diploma on Information Systems Management and a Computer Engineering degree. Nowadays he works at the e-justice project of the Justice Department of the Autonomous Government of Catalonia, Spain. His main interests include information systems, e-governance or interoperability and, in these areas, he has carried out international training and consulting work for organizations such as the CLAD, the Government of Brazil, the European Commission, the Organization of American States, or the Pompeu Fabra University, in Spain. He belongs to relevant technology associations as the ACM or IEEE Technology Management Council. He is the chairman of the Spanish chapter of the latter.
Zaigham Mahmood is a Principal Researcher and Reader in Applied Computing in the School of Computing and Mathematics, University of Derby, UK. He has an MSc in Mathematics, an MSc in Computer Science and a PhD in Modeling of Phase Equilibria. He is also a Chartered Engineer and a Chartered Information Technology Professional. Zaigham has in excess of 50 publications in proceedings of international conferences and journals as well as chapters in books. He is also Editor-in-Chief of Journal of E-Government Studies and Best Practices. His research interests are in the areas of software engineering, project management, enterprise computing and e-government.

Pat Molan is a Principal Officer with the Irish Revenue Commissioners and Limerick District Manager. Pat has worked with Revenue for almost thirty years having worked in a number of government departments previously. Pat has been centrally involved in the delivery of new and innovative IT solutions that have helped transform the Irish Revenue Commissioners into an organisation that is internationally regarded as the flagship for e-Government in the Irish Public Service.

Biographies of contributing authors (in alphabetical order)

Oualid Abidi graduated in finance in 2002 at the Higher Institute of Management of Tunis. He pursued his master studies in project management at the Quebec’s University in Trois-Rivieres. He obtained his master degree in 2005. In 2006, he enrolled in a Ph.D. program in Management at Laval University and he recently graduated in 2011.

Maria Madela Abrudan, PhD, is the Director of the Department of Management and Marketing of Faculty of Economics – University of Oradea. She is also the manager of the project Establishment of R+D programmes in the field of new public management between economic faculties of higher education in Hajdu-Bihar and Bihor Counties.
Dr Ahamed Bakeri Abu Bakar. Currently holding the position of professor at the Department of Library and Information Science, International Islamic University Malaysia, Kuala Lumpur, Malaysia. Has published a good number of articles in refereed journals and has presented numerous papers at international conferences worldwide covering areas such as digital libraries, e-governments, and information access.

Carl Adams is a Principal Lecturer in the School of Computing at the University of Portsmouth. Carl Adams is an active researcher, engaged in investigating information systems, mobile information systems and technologies and the impact of technology on people, organisations and society.

Fatemeh Ahmadi Zeleti is currently a PhD student in Tampere University of Technology, Finland. She is interested in combining knowledge from various fields, motivating her to perform her doctoral studies and research on e-government and International Business (IB). Previously completed master’s studies and is MSC in Software Engineering and Business Administration.

Carlos Miguel Afonso is an assistant professor in the Computer Science Group at the ESGHT/University of Algarve. He obtained his Master from the University of Algarve. His teaching interests are information systems, e-business and information systems and technology applied to tourism. His research interests include information systems and technology adoption, e-government and e-business.

Mohammed Alhusban is a PhD student and active researcher in school of computing at University of Portsmouth, UK. He received MSc in Electronic Business from University of Huddersfield (2004). He has worked alongside consultant for several eGovernment systems in Middle East countries. He is currently involved in eGovernment implementation using Enterprise Architecture frameworks.

Obaid Almalki is a PhD candidate at BMRI/IRAC at the University of Bedfordshire, Luton, United Kingdom. Almalki awarded his Master of Engineering in Software Engineering from the University of Queensland in Australia in 2007. He received his Bachelor degree in computer and information systems from King Saud University in Saudi Arabia in 1995.

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**Davide Arduini** is Lecturer of International Industrial Economics at University of Urbino. He holds a PhD in Economics from Polytechnic University of Marche. He has collaborated with the National Centre for Information technology in the Public Administration. He works on Economics of technical change and technology policy, diffusion of ICT and e-Government.

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**Gözde Bakırli** graduated from DokuzEylul University Computer Engineering department in 2007. She completed Msc education at the same university in 2009 and she is going on her PhD education at DokuzEylul University computer engineering department. She works as data mining specialist and computer engineering at OLGU. Her specialties are data mining and urban information systems.

**Frank Bannister** is an Associate Professor and Head of the Information Systems Department at Trinity College, Dublin. He has published widely in the fields of e-government and e-democracy. He is the editor of the Electronic Journal of e-Government and one of the co-founders of ECEG. He is a fellow of Trinity College and a Chartered Engineer.

**Dušan Barać** is a assistant professor at Faculty of Organizational Sciences, University of Belgrade. His current professional interests include internet technologies, e-business, e-government, mobile business.

**Juan Carlos Barahona** Ph.D is a professor of Technology and Innovation Governance for INCAE Business School. His academic interest lies in understanding the role of digital technologies and social structures in the
diffusion of ideas, behaviors and artifacts. He has a Ph.D in Media Arts and Sciences from the MIT.

**Paul-Andre Baran** is a Director of Biblionet in Romania. For the past four years, Paul has overseen the 26.9-million-dollar, Bill & Melinda Gates Foundation-financed Biblionet program aimed at reforming Romanian public libraries.

**Samsun Basarici** works as a lecturer at Yasar University, Izmir, Turkey. His main research and teaching areas are image processing, computer graphics and game programming. Basarici holds BSc in Computer Engineering and MSc in Informatics degrees from University of Hamburg, Germany and continues his Ph.D. in International Computer Institute at Ege University in Izmir.

**Dr. Mihai Berinde** is Vice-Dean, Director of the Research Centre on Sustainable Development and Competitiveness; and Jean Monnet Professor; he holds a Ph.D. in Economics and International Business, and is specialist in International Trade and Competition Policy at the Faculty of Economic Sciences, Department of International Business, University of Oradea.

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**Sanja Bogdanović-Dinić** received the BSc and MSc degrees in computer science at the University of Niš, Serbia. She is currently a PhD student at the Faculty of Electronic Engineering and a scholar of the Ministry of Science and Technology Development. Her PhD research involves Sensor Web, GIS and E-systems.

**Elke Boudry** is a researcher at the Research Group for Media and ICT, Ghent University, Interdisciplinary Institute for Broadband Technology (IBBT). She holds a master's degree in Sociology (UGent, 2003). Her research focuses on the consequences of implementing ICT in Flemish local administrations and the challenges local governments face in aligning their organization with technology.
Ramón Bouzas-Lorenzo PhD Political Sc. and Public Administration. Senior Lecturer Dept. Political Science (University of Santiago de Compostela, Spain). Main research fields: Theory of organization and analysis; public marketing; human resources management.

Sharon Briody works with the Irish Revenue Commissioners in Limerick, Ireland. She has worked as an auditor in the Limerick District for the past 5 years. Sharon graduated with a BA in Applied Taxation (First Class Honours) from the University of Limerick in January 2012.

Dr. Nicoleta Bugnar is the Director of the Department of International Business of the Faculty of Economic Sciences, University of Oradea, and Member of the Research Centre on Sustainable Development and Competitiveness, University of Oradea; she is specialist in International Business Management and holds a Ph.D. in Management.

Andre Calitz is a Professor in the Department of Computing Sciences at the Nelson Mandela Metropolitan University. He holds a PhD (Computer Science and Information Systems) and a DBA from the NMMU Business School. He has published extensively in research journals and conference proceedings. His research interest includes usability and the development of governmental websites.

Dr. Lemuria Carter PhD is an Assistant Professor at North Carolina Agricultural and Technical State University. Her research interests include technology adoption, e-government and online trust. She has published in several top-tier information journals, including the Journal of Strategic Information Systems, Information Systems Journal, Communications of the ACM, and Information Systems Frontiers.

Pere Simon Castellano is a Junior Research Fellow and a teaching assistant at the Department of Public Law at the University of Girona (UdG), Spain. He earned in 2011 a Predoctoral Fellowship and obtained his LL.M., which received the ‘Data Protection Award 2011’, granted by the Spanish Data Protection Agency.

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Determinants of the use of eGovernment Services in Outlying Regions: A Multi-Method Approach

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Abstract: Evidence suggests that citizens outside larger urban centers are less likely to use the various functionalities of eGovernment. Thus, the purpose of this manuscript is to identify factors that influence the use of eGovernment services in outlying regions in the Province of Quebec (Canada). The study is based on the theory of planned behaviour (TPB) and on its attitude-related variables. We executed a triangulated study based on an empirical survey carried among 1,587 citizens living in four selected outlying regions of Quebec, and 2 focus groups held in each of the four regions involving respectively users and non-users of eGovernment. Our results show that attitude have a significant positive effect on the intention to use eGovernment services. Attitude is in turn influenced by perceived usefulness, perceived ease of use, perceived risk and trust. Evidence collected from focus group sessions emphasizes the underlying dimensions of these determinants as perceived by users and non-users.

Keywords: eGovernment, outlying regions, TPB, attitude, intention, Quebec

Exploring Different Levels of eGovernance Development in Romania: Case Study in Bihor County

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Abstract: This article investigates the level of development of eGovernance instruments at local levels in both urban and rural areas in Bihor County – Romania. The practicality of this topic is derived from the fact that Romania is lagging in terms of level of e-government development (UN Report 2010) when compared to Eastern-European countries or to other states. Given the fact that the usage of these instruments determines the increased efficiency in the administrative processes, as well as an increase of the institutional trust and public participation of citizens, this topic becomes particularly relevant for Romania as rates of trust in the public system and those of public and civic participation are lower than in all Eastern-European countries. This research thoroughly analyzed the eGovernance instruments used at local levels in urban and rural areas. The main research questions addressed were: which is the level of development of eGovernance at local levels in urban and rural areas? and how can we explain the disparities between Romania and other Eastern-European states in implementing these instruments? The findings presented in this paper are inferred from the field work conducted within the international research project Establishment of R+D programmes in the field of new public management between economic faculties of higher education in Hajdu-Bihar and Bihor Counties, implemented in partnership by the University of Oradea, Romania and Debrecen University, Hungary. Within this
project a distinct topic of investigation emerged related to the implementation of eGovernance instruments as well as the promotion of decisional transparency and public participation as a means for increasing the efficiency of administrative processes; key elements of New Public Management. We analyzed several data resources: we conducted a systematic analysis of all web sites available for the Mayor’s Offices in Bihor County, data that was complemented with in-depth information gathered from representatives of 30 Offices selected in the urban and rural areas from this county. The theoretical perspective is dedicated to presenting the elements, advantages and instruments of eGovernance in developing countries and Romania in particular. The research describes and assesses the level of development of eGovernance instruments used at Mayor’s Offices in urban and rural localities from Bihor County. The local factors are identified through the interviews conducted for 30 Mayor’s Offices, as well as the contextual ones – by disclosing the effects of European integration, decentralization and regionalization in Romania. Our paper concludes with the factors that explain the disparities between the level of development of eGovernance instruments in Bihor county and outlines policy recommendations in this field.

Keywords: eGovernance, eGovernance instruments, new public management, local government, local public administration

Determinants of User Acceptance of a Local eGovernment Electronic Document Management System (EDMS)

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Abstract: On numerous occasions the significant value of the investments involved in the development of eGovernment and the expectations of governmental information systems use do not correspond to the rate of effective use. This scenario makes it difficult to justify the development of electronic government by governments and local authorities among its citizens. It is therefore important to understand the factors that influence the employees’ intention of using governmental information systems. With the aim of understanding the determining factors of using an Electronic Document Management System (EDMS) in the context of Portuguese municipalities, this study develops an empirical analysis using the Unified Theory of Acceptance and Use of Technology (UTAUT) model, (Venkatesh et al., 2003). This model's application for information systems research in the governmental context has a weak expression and is unique in EDMS research. This empirical research follows a realist and positivist approach. Data was collected from a survey answered by 2,175 employees of Portuguese municipalities (EDMS users). Partial Least Squares (PLS) was used to test the model proposed. The results showed that Intention to Use is positively affected by Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions. With
respect to the EDMS Use, the results showed that it is positively influenced by Intention to Use and Facilitating Conditions. The main result indicates that EDMS users believe that the use of this information system will help them to obtain performance benefits in their work. However, the increasing use of EDMS is not very influenced by the system’s perceived ease of use. In short, this study provides a contribution to the Information Systems Acceptance and Adoption literature in local eGovernmental contexts. In addition, our contribution empirically tests the model for implementation in governmental organizations and provides a better understanding of the adoption and use of an EDMS.

**Keywords**: local eGovernment, UTAUT, determinants of use, EDMS, PLS

**ICT Influencing eGovernment Network Externalities: Is the Government Social Networking System the Road to eDemocracy and Trust?**

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**Abstract**: Effective, efficient and transparent citizen communication with government representatives raises interest of the researchers to perform academic and nonacademic studies. Nowadays, in developed countries, large numbers of citizens are benefiting eGovernment services and information which are widely accessible. Information kiosks, net bank, healthcare systems, mobile government, Internet and media are the examples of such services. However in all the offered government services and information or eGovernment context in general, citizen’s democracy and trust play a crucial role in the advancement of eGovernment implementation and progress. EDemocracy which stands for electronic democracy is the use of ICT to engage citizens to participate in government and political decision making. EDemocracy is strongly linked to trust. Trust is established when one person can rely on the decision and action other person make. In democratic countries, trust has been established. However, in Iran, government still struggle with injecting eGovernment content and value to both government employees and regular citizens. Efficient, effective and transparent e-payment, e-healthcare, e-justice, e-education and other eGovernment services can surely bring value to people’s life. What is actually lacking in the eGovernment and ICT academic studies in Iran is the study of benefits ICT emergence can have in the establishment of Government Social Networking System (GSNS) on influencing eGovernment network externalities. Thus, the researchers have studied eGovernment network externalities of Iran. The aim of the research is to examine if GSNS can contribute on eGovernment network externalities in Iran. Moreover, the researchers have deliberated if government technological support and ICT can enhance eDemocracy and trust in Iran. Both qualitative and quantitative research methods had been applied. Self-administrative questionnaire containing seven structured questions were distributed to 800 Iranians. The result was shocking. Only few numbers of respondents were fully familiar with eGovernment and GSNS. When it comes to democracy and trust issues, respondents appear to be so resistive. They make a
An Exploratory Study on eGovernment Systems Success in Saudi Arabia

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Abstract: The evaluation of information systems (IS) has been of great interest to researchers in the last few decades. However, a limited number of studies have been conducted on the assessment of eGovernment systems success. eGovernment improves services and efficiency and assists in building trust between governments and the public. The importance of evaluating eGovernment systems comes from the need of governments to ascertain what investments in the delivery of services using eGovernment systems via Information and Communication Technology (ICT) are appropriate. The aim of this research is to explore the main aspects and factors for evaluating eGovernment systems success. The study has been conducted in the context of the Saudi government. This government has invested heavily in ICT infrastructure and eGovernment systems in the last decade. This huge investment reflects the ambition of the government to exploit the advantages of using eGovernment systems to deliver government services to the public via ICT. Accordingly, the Yesser Program was established in 2005 as an eGovernment initiative in conjunction with the Communication and Information Technology Commission (CITC) and the Ministry of Finance (MoF). To achieve the aim of this study, interviews were conducted with 49 Saudi citizens to explore their perceptions of eGovernment systems and their success. The interviewees who participated in our study were varied in their demographic information. The responses of the interviewees will help to identify the success factors of eGovernments systems and establish a preliminary framework for evaluating eGovernment success. The study objectives have been achieved and the findings reveal many issues regarding the factors that affect eGovernment systems success.

Keywords: eGovernment, ICT, Saudi Arabia, eGovernment evaluation, eGovernment success factors

Platform as a Service API Ontology

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Abstract: Many organizations from the public and the private sector are planning to turn to Cloud Computing services, whose main benefits are flexibility, pay-per-use model and significant cost reduction. However, this new business paradigm for the
provision of computing infrastructure has certain obstacles, including provider lock-in. When a client chooses a specific Cloud service provider, he also gets the provider's specific protocols, standards and tools, making a potential future migration complex and costly. Cloud Computing is still immature, with no firmly established standards governing all the aspects of its utilization. The migration issue can be overcome by using interoperable Cloud services. In this paper we focus on the platform as a service (PaaS) model of Cloud Computing. This model provides a complete computing platform needed to run applications over the Internet. Every PaaS provider (such as Google, Microsoft, Amazon and Salesforce) has specified its custom application programming interfaces (APIs). However, to achieve interoperability we need to develop a standardized set of APIs that constitute an interoperability platform. In this paper, we firstly present the key concepts and relevant related work from the existing literature. Thereafter we propose a novel PaaS API ontology to share a common understanding of the main concepts from providers’ APIs. We used a prominent ontology development methodology to determine the domain and scope of our ontology, review similar existing ontologies, define the relevant classes and their hierarchy as well as to define the properties of classes and create their instances. The concepts in our ontology were derived from PaaS resources, remote Cloud functions specified in the API documentation of the most important PaaS solutions, existing Cloud ontologies, Cloud Computing models and standards for Semantic Web services. The aim of the proposed ontology is the description of PaaS resources and their operations. It was built using the Web Ontology Language (OWL) and the Protege tool. In the future, we plan to use this ontology to semantically annotate PaaS API operations and create a mechanism to determine and solve interoperability problems among two or more PaaS services provided by different vendors.

**Keywords:** platform as a service, interoperability, ontology, Cloud Computing

**What do we Know From the Literature on Public eServices?**

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**Abstract:** Public eServices are a broad and growing research field in which scholars and practitioners from different domains are involved. However, the increasing attention devoted to public eServices only partially captures the variety of aspects and implications of the diffusion of information and communication technologies at all levels of public administrations. The paper aims to develop a meta-analysis of the literature on the delivery, diffusion, adoption and impact of public eServices and examines current research trends in terms of differences in methodologies, approaches and key indicators across five service categories: eGovernment, eEducation, eHealth, Infomobility and eProcurement. We examined 751 articles appeared in 2000-2010 in the top international academic journals listed in the SSCI-ISI. We highlight a significant heterogeneity in scientific production across service domains, indicators used, and affiliation of authors. We also show an increasing diffusion of quantitative methods applied to different research fields.
which still appears to be constrained by data limitations. The overall picture emerging from the analysis is one characterized by largely unexplored service domains as well as scarcely analyzed issues both across and within individual service categories. Thus many research opportunities seem to emerge and need to be exploited from different disciplinary perspectives in this field of analysis.

**Keywords:** bibliometrics; meta-analysis; public eServices

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**From Technology Diffusion to Social use: The Case of the eID Card in Spain**

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**Abstract:** This paper describes Spanish governmental promotion of the national electronic identification card (eID) and its use by citizens since its inception in 2006. Here, we highlight the paradox regarding the high diffusion, but limited use, of the eID card in Spain, above all to complete electronic transactions with public sector agencies. This paper reviews a series of explanations about the possible causes of the abovementioned paradox. Theoretically, we focus on how the political science perspective, and especially new institutional theory, can help explain the development of digital identity policy and/or help address many of the questions raised in this paper. Methodologically, this work provides insights from a case study (on the Spanish eID card) using qualitative and quantitative data derived from various sources, and includes an analysis of official statistics about the use and diffusion of the eID in Spain. We conclude by offering an assessment on the Spanish government’s initiatives to encourage the utilization of the eID card that allows it to be compared with other international cases.

**Keywords:** promotion, use, eID card, Spain, citizens

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**Data Mining Solutions for Local Municipalities**

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**Abstract:** This study proposes data mining solutions for local municipalities to make their decision support mechanism easier. The purpose of this study is to get intelligent solutions related to local government services from past data and to
estimate the future activities. It covers socio-cultural analyses, income/expense analyses, infrastructure analyses, fraud detection analyses, simplification, verification and similarity analyses. Proposed system is based on service oriented architecture. The purposes of this project are; to give information about current state, to facilitate decision making for future activities, to increase income and decrease expense, to supply easy and correct data input to the system and to supply easier document tracking system. Seventeen scenarios were created initially. These scenarios are; Staff Analyzing, Classifying Citizens According to Real Estate Tax, Distribution of Citizens delaying Real Estate Tax, Income Operations Analyzing, Fuel Oil Analyzing, Electricity Consumption Analyzing, Cash Desk Analyzing, Distribution of Corporate Foundation, Moveable Material Analyzing, Logs Analyzing, Water Notice Analyzing, User Accounts Analyzing, Accountancy Analyzing, Employee Analyzing, Estimation of Wages, Citizen Analyzing and Corporate Foundation Analyzing. Service Oriented Architecture (SOA) is used as software architecture. Five services - Association Rule Mining Web Service (ARMWS), Outlier Detection Analysis Web Service (ODAWS), Classification Web Service (CWS), Clustering Web Service (ClustWS) and Data Preparation Web Service (DPWS) - were created. 7 scenarios used ARMWS, 3 scenarios used ODAWS, 2 scenarios used CWS and ClustWS is used by 5 scenarios.

Keywords: data mining, applications of local government, structure and urban informatics, service oriented architecture, knowledge management

New Challenge to Fulfill e-Procurement Promises

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Abstract: Worldwide public e-procurement has been linked to a myriad of promises, but in practice, it has achieved little. Even though, there is a tendency in the literature to document relative successes more than failures, partial implementations or unaccomplished objectives, there are a series of factors that can be garnered that are important to the success or failure of these initiatives. Our research, however, shows that to date all of this research has failed to recognize that e-procurement is a disruptive innovation, based on also disruptive technologies. Recognition of this fact has serious strategic and organizational implications predicted by the literature. Empirical evidence suggests the relevance of recognizing and factoring in its implications as a key success factor.

Keywords: e-procurement, eGovernance, disruptive innovation, innovation management, networked society, interoperability, public administration challenges, public service management
From Policy-Making to Community Building: A Survey On 19 Experiences of eParticipation

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Abstract: This paper analyses the results of a survey on 19 experiences of eParticipation. It focuses on the different uses of technological tools regarding the communication needs of citizen participation processes. First, it offers an analytical framework of ICT tools and functionalities, in the context of eParticipation processes. Second, it presents empirical evidence from a comparative perspective. Third, it draws some lessons from the cases analyzed and also reflects upon some theoretical aspects of eParticipation.

Keywords: eParticipation, citizens, communication, ICT tools

Alignment Dynamics in eGovernment: Behind the Scenes of Local Governments

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Abstract: Local governments are increasingly swamped by the endless possibilities that arise from information and communication technologies. They are challenged to incorporate ICTs in their daily processes and strive to thus become more efficient and effective organizations. Yet, a lot of factors come into play when ICTs are introduced within local governments. Soon organizational dynamics are entangled with the new dynamics that stem from the newly introduced ICTs. In this paper we explore the dynamic process of aligning local governments with technology by using the 7Smodel as a framework to analyze how seven different elements, both hard and soft, mutually affect each other and make out the local dynamics. We state that these elements influence how local governments deal with change, and in this respect, how they deal with technology. We stress the interrelations between the seven factors and the organizational dynamics as a result of the interplay between these factors to point out the complexity of the alignment process in local governments. Better insights in the organizational factors that encircle the implementation of ICTs will lead to a more profound understanding of how the process of alignment comes into practice in local governments. By taking into account the complex process of alignment ICT-projects will be more successful.

Keywords: eGovernment, evaluation, local government, organizational change, alignment process
Methodological Proposal for Evaluating the Usability of Sector Portals in a Multi-Level Government Environment

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Abstract: Attaining the goal of serving citizens more efficiently in a 2.0 eGovernment environment could require transition from institutional web sites that provide information regarding a specific organization to the activation of sector portals that provide complete information on an area as well as a wide range of services in which citizen participation is an indicator of success. The shift of attention towards the user in electronic services design has been reinforced by incorporating contributions to measure user satisfaction and especially to evaluate platform features that sustain the interaction of the user with the public administration. This study contributes to the exploration of new forms of evaluating portal functionality by informing on the method applied to the public health portals managed by the Spanish Autonomous (regional) Administrations in a multi-level environment that requires high interoperability. The proposed method, with conceptual bases and procedures applicable to other administrations and even other areas of intergovernmental administrative action, is inspired by usability studies carried out over the last 20 years. The unit of analysis is the network of portals an Autonomous Administration coordinates for health services. Suggestions are made for an approach that combines the various techniques (accessibility test, heuristic test, user test and mysterious e-user experiment), and indicators are proposed for evaluating features and services related to accessibility, usability, information, communication and services. In contrast with most other methods, which focus on applying a single technique - often the heuristic test - oriented towards the analysis of the most techno-centric usability parameters, the method proposed here instead combines various exploratory techniques and develops indicators based on the environmental characteristics of the sector portal. This method seeks to provide greater precision in findings and a description of web functionality that is better adjusted to public sector services and the specific nature of citizen interface.

Keywords: eGovernment; electronic services; portal functionality; multi-level government; usability; evaluation
The Role of Third-Party Reporting in Improving Tax Compliance in eCommerce

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Abstract: Tax non-compliance results in the loss of government revenue every year. Non-compliance in relation to eCommerce is a particular risk due to the anonymity of sellers, the absence of traditional audit trails and the difficulty experienced by taxing authorities in accessing transactional data. This presents traders with an increased opportunity to evade. The 'slippery slope' framework suggests that compliance is maximised when there is a balance between deterrence intervention types (Kirchler et al, 2008). Both the trust and power of authorities have an optimum, with diminishing marginal returns. Taxpayers should be given the opportunity to comply and only in the absence of a satisfactory response, should enforcement take place. This implies that if online trading cannot be effectively policed, leading to an absence of deterrence, compliance levels will fall even among otherwise compliant traders. Growing evidence shows that third-party reporting affects compliance behaviour because it is a visible deterrent, and it facilitates the detection of undeclared trading activity (Lyer et al., 2010). Currently, mandatory information reporting is limited to traditional financial intermediaries such as banks. However, in many online transactions using more novel sales platforms and payment methods, these intermediaries are absent. Newer intermediaries such as eBay and PayPal have taken their place in the transaction. This review paper initially analyses how third-party reporting from these newer sales and payment intermediaries is being used internationally by taxing authorities to increase the visibility of income and improve compliance. Having established best practice, we then examine the issues involved in introducing such third-party reporting in relation to eCommerce in Ireland. The advantages, disadvantages and obstacles to implementing such a system are discussed. The paper highlights the importance of effective tax information exchange between nations in an increasingly global economy.

Keywords: tax compliance, eCommerce, third-party reporting, information exchange, income visibility

The Rule of e-law

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Abstract: One of the most cherished ideals in international debate in the field of law and legal theory is the rule of law. This concept has traditionally been associated with both democratic values and the legal maxim stating that no person is above the law. In other words, the rule of law involves that judicial, legislative and executive powers—and its officials and agents—must be accountable under the law, which
must be clear, publicized, stable, fair, and must protect fundamental rights. In this paper the author sketched out some of the most crucial and strategic topics concerning the rule of law and its current transformations. Specifically, in the last years we have seen how Information and Communication Technologies (ICTs, hereinafter) could help us improve the rule of law effectiveness. Internet and web 2.0 are changing both the way in which citizens exercise sovereignty and the manner to participate in public and civic affairs. In the first field, we will observe that new technologies are fragmenting physical and conceptual borders amongst states, and will study the impact of ICTs on the notion of national sovereignty, which is constantly changing. Secondly, the author describes how technology creates new spaces 2.0 in which citizens can have access to public information, participate and collaborate in civic life issues. To be precise ICTs ensure the public trust and establish a system of transparency, public participation, and collaboration, not only by the way of control government, but also to give the people an opportunity to take part in the formation of law. A new paradigm of the manner to exercise sovereignty and participate in public affairs comes from Iceland. The Constitutional Council of Iceland has been working on the new constitution for a while and has been attracting some positive attention due to the openness and inclusiveness of its workings, and its use of ICTs to include the general public. We then will note how the public’s participation takes up an important role in the work process to reform the Constitution of Iceland, which even allow people to leave their comments and suggestions both on the process and the content of the new constitution itself in the most popular social networks as Facebook, Twitter or YouTube. Finally, the author draws the principal’s conclusions from an Iceland laboratory with regard to use of ICTs to improve citizen’s empowerment by participating in the development of laws and deliberating a new Constitution.

**Keywords:** rule of law, open Government, e-Participation, deliberative democracy, ICTs, citizenship empowerment

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**A way to Overcome the Crisis in eGovernment:**

**Cooperation Among the Regional and Local Authorities in Catalonia**

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**Abstract:** The economic crisis forces us to find new strategies to improve the development of eGovernment. By cooperating, regional and local governments within can save time and money by sharing their resources. In Catalonia different mechanisms have been used to drive cooperation in eGovernment which has become known as the Catalan model of eGovernment. The evolution experienced in Catalonia in the development of eGovernment has allowed us to shape a Catalan model of eGovernment, which is distinct from eGovernment models elsewhere both at nationally and internationally. The Catalan model of eGovernment aims to improve transparency, efficiency and quality in the public sector in Catalonia through the use of electronic means. It aims also to improve the relationships between public sector bodies, citizens, businesses and organizations. To achieve
this aim, regional and local governments cooperate in defining strategies for the
development of the use of the Internet. They also cooperate with the aim of finding
common solutions to problems and challenges posed by the widespread use of
electronic means both in the relations between government and citizens and in their
internal management systems. This cooperation is also reflected in the
interoperability between computer applications and information systems used by the
different public administrations in Catalonia and in the reusability of applications
created by them. This cooperation is channelled, among other means, through the
Consorci Administració Oberta de Catalunya (AOC Consortium) which not only
facilitates the cooperation between Generalitat de Catalunya (Catalan regional
government) and local entities, but also guarantees their autonomy. The Catalan
model of eGovernment takes advantage of economies of scale to offer
organizational and technological solutions for public administrations. It avoids
asymmetries, inefficiencies and costs so that computer applications and information
systems needed by everyone need only to be developed once. The Catalan model
of eGovernment is also an opportunity to transform these public bodies and to safe
public resources especially during this recession. In this paper we will analyze the
Catalan model of eGovernment and we will also show the mechanisms of
cooperation between the different regional and local authorities in Catalonia which
have also an impact to overcome the economic crisis.

**Keywords:** eGovernment; interoperability; cooperation; Catalan model of
eGovernment

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**Taxpayer Rights in Turkey: A Survey on Income Taxpayers in Manisa**

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**Abstract:** Declaration of taxpayers’ rights is considerably new trend which has
appeared on the literature from the beginning of 1990s (Duncan,1998). Furthermore,
the concept of taxpayer rights is trying to pull taxpaying behaviour from obligatory base to voluntarily base by raising awareness on citizenship by
using taxpayer rights which recognized on the constitution and law. Therefore,
governments are trying to create an environment to solve their taxation problems
more efficiently by establishing reliable and stable links between revenue
administration and taxpayers. Many countries have declared elaborated taxpayers’
rights in a form of Taxpayers’ Charter or Bill of rights and although they have been
analysed in the literature, some countries still have not touched on such as Turkey.
Turkey is a very promising area in the international literature and differs from many
countries as a result of its population, historical roots, demographical specialties
and growing economic strength. Moreover, in last decades importance of Turkey
has became more observable. Especially, EU integration process and being the
16th biggest economy in the world by achieving the biggest growth rates among European countries in recent years drew attention from many academic circles. Furthermore, Turkey has a modern tax system and organised revenue administration which has became independent from ministry of finance at 2005 as a result of EU integration process. Moreover, in March 2006 Turkish Revenue administration has declared Taxpayers’ bill of rights and established taxpayer rights and services directorships under 29 big cities’ tax offices in Turkey. This paper aims to give a concise background information about taxpayers’ rights in Turkey. Furthermore, it introduces Turkish literature about taxpayer rights and compares main aspects of taxpayer rights in Turkey with some other OECD countries. More importantly, findings of an empirical work are introduced for the first time about taxpayer rights in Turkey. A survey has been conducted in Manisa district, a western city of Turkey, among 291 income taxpayers to measure their response to taxpayer rights and paper analysed their awareness and understanding level of it. Lastly, the paper will be finalised with some conclusion remarks.

**Key words:** Taxpayer Rights, Turkey, Tax compliance

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**Building Sustainable eParticipation Strategies Using Living Labs**

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**Abstract:** The paper explores whether Living Labs, acting as open innovation intermediaries, can address some of the challenges surrounding the sustainable adoption of eParticipation tools and methods. We begin by analysing the existing literature on Living Labs and Open Innovation, and the extent to which Living Labs can act as innovation intermediaries as envisioned by Chesborough (2006), Wolpert (2002) and others. We then consider the research on eParticipation, and in particular some of the risks and challenges surrounding the sustainability of innovation in this area. In the second part of the paper, focusing on the PARTERRE project, we present the methodology and key findings of six eParticipation pilots. Further comments and analysis based on these findings is provided, examining issues such as inter-cultural barriers, technological factors, organisational concerns and participant feedback. Finally, we present some conclusions in the light of the findings.

**Keywords:** eParticipation, living labs, innovation intermediaries, open innovation, user innovation
Increased Public Participation in Local Government Through the use of Mobile Phones: What do Young South Africans Think?

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Abstract: Apathy towards political participation is of concern for many countries throughout the world, and for many people political participation means no more than voting in an election. The South African Constitution makes several provisions for public participation but E-government solutions are not suited to the South African context, where fixed-line internet penetration is dramatically lower than that of mobile phones. Mobile phones cut across socio-economic barriers and have changed the way we communicate. They have been used to mobilise people in different parts of the world, notably those who were passive politically, into action. This research set out to investigate whether using mobile phones to increase participation in local government would be acceptable or not. A mixed-method research was conducted in Cape Town, South Africa, amongst citizens between the ages of 18 and 35 who had no access to fixed-line internet from either home or work. Constructs from a modified UTAUT model and Social Capital Theory were used to determine the individual intention to use government mobile services if they were made available. It was found that there is not only great interest in using mobile phones to interact with government mobile services, but also to interact with other members of the community. The ability to report on corruption and service delivery problems was particularly welcome.

Keywords: m-Participation, m-Government, mobile technologies, South Africa, youth

Managing eGovernment Information Resources Using Faceted Taxonomy

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Abstract: The rapid development of information technology in recent years has caused a severe increase in the amount of communication between citizens and government, which led to a considerable upsurge in the volume and complexity of information in eGovernment systems. As a result, structuring information has become a critical topic. When considering structuring information in eGovernment systems, it is important to have in mind two very important processes in the work of eGovernment: analyzing current situation and decision making. For successful completion of these processes, holistic understanding of the situation is necessary. This paper proposes a model that will ease the process of analyzing current
situation and the process of decision-making, by providing a holistic view of the situation to the employees in eGovernment. The model effectively manages information and endows decision makers, and other employees in eGovernment, with relevant pieces of information. It also facilitates the understanding of relationships between different pieces of information in the system. The model is based on faceted taxonomy. Faceted taxonomy represents a set of taxonomies, each one describing the domain of interest from a different, preferably orthogonal, point of view. Faceted taxonomy allows rich information structuring and allows users to easily correlate concepts and explore correlations between these concepts. This approach can also provide an intuitive, hierarchical, visual representation of relations between concepts. Visual representations can help better understanding complex topics. The model provides a strong foundation for further development of visualizing techniques. Using this model can also improve all search and browsing methods on the information in the system, and allow easy transformations on the structure. This paper clarifies the criteria selection process for the taxonomies used in the model and provides guidelines for practical implementation of the model. The model also offers recommendations for further exploration of this field.

**Keywords**: eGovernment, dynamic taxonomy, faceted taxonomy, information overload, decision making

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**Barriers and Facilitators to eGovernment in Spanish Municipalities: A Study Before and After the Recession**

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**Abstract**: eGovernment policies are considered as tools for creating added value to public products and services, thus increasing the administration’s efficacy, efficiency, transparency and security. For that reason, it seems crucial to analyse the importance of designing successful eGovernment practices according to the principles of strategic management and organisational change, as do private firms regarding e-business initiatives. Provision of quality services is a feasible goal for public administrations as long as their managers keep in mind that there are a number of barrier and facilitating factors that will influence their performance. In this paper, these barrier and facilitating factors will be described both theoretically and empirically, by means of a factor analysis over the responses of a nation-wide survey to Chief Information Officers (CIOs) in local administrations, in an attempt to determine which factors have more influence on the final quality of the public services provided by Spanish local administrations. Furthermore, given the dramatic changes in the economic, legal and political environments, it is interesting to find out whether the perceived consideration of these factors has also changed between current times and six years ago, when most local Governments in Spain were taking their first steps towards eGovernment. This way, this paper will reflect the effects of formulating an eGovernment strategy in times of growth, but implementing it in times of recession. Therefore, the goal of this paper is twofold: on the one hand, it provides an empirically-based classification of barrier and facilitating factors...
on the basis of two surveys carried out in 2005 and 2011; and, on the other hand, a comparison will be made of the global perceived effect that these factors may have on the municipalities’ strategy.

**Keywords**: critical success factors, quality public services, Spain, municipalities, eGovernment strategy

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**Experiences From the Development of the Greek School Profiling System**

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**Abstract**: The Greek educational system lends itself to advanced IT handling, mainly due to its highly centralized regulatory structure and operation. The administrative structure follows a 4-tier hierarchy (school, prefectural, regional and ministry-national level), where administrative entities operate under a strict jurisdictional status. Strategic educational planning takes place at the higher level, whereas the prefectural and regional levels are responsible for the monitoring and daily support of school operation and administrative workflows. Obviously, decision making within such a multilevel structure raises the need for an advanced school profiling system in order to effectively collect, project and analyse the large volume of daily produced data. Aiming at the a) rationalisation of decision making, b) quantification and improvement of public services and structure response, c) simplification of process flows, and d) enhanced provision for future needs and trends, a central data warehouse has been developed, enriched with state-of-the-art business intelligence features, based on data automatically provided and processed by information systems at the local (school) level. On-line analytical processing (OLAP) lies at the heart of the business intelligence engine, permeated by data transformations called dimensions, usually hierarchical, as dictated by the inherent operational structure of the educational system itself. Typical such dimensions include the spatial -ranging from a school unit, through the supervising prefectural and regional entities and up to the central administrative level- and temporal ones, school types, teacher employment status, teacher specialisation, teaching and other administrative assignments and roles. All data are logically linked under this concept, so “drilling through” to several dimensions and decomposing information accordingly is significantly facilitated and provided to all users in multiple dynamic representations, such as hierarchical graphs, tables, decomposition trees, etc. The benefits of this www-enhanced profiling suite include the following: key information regarding the structure and operation of the educational system at any level is effectively provided to the non-IT expert in friendly graphical forms, abstracting away the particular data sources or the technicalities and interfaces of the various underlying information systems, advanced algorithmic engines can detect and visually present anomalies and/or peculiarities in the structure and operation of the educational system so that central administration can effectively make informed
decisions, teacher handling/allocation and other critical administrative tasks can be algorithmically supported and effectively monitored. In the rest of this paper, we a) briefly explain our rationale, methodology, technical aspects and current progress of our work, and b) summarize future continuation under the eGov reform vision recently adopted by the Greek educational community.

**Keywords:** eGov, education, decision making, OLAP, decision support tool

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**The State of Open Government Data in GCC Countries**

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**Abstract:** Three countries of the Gulf Cooperation Council (GCC) (i.e. Bahrain, Saudi Arabia, and United Arab Emirates (UAE)) have launched official Open Government Data (OGD) initiatives and started offering public data openly on their national portals. These initiatives are part of a new phase of the eGovernment programs in these three countries. This case study explores and compares the current status of these initiatives in an effort to understand the key driving forces behind launching the initiatives, the countries’ approach to launching and managing them, the major challenges facing them and their plans to overcome them, and their future plans for sustaining and improving their open data initiatives. We also use data from interviews with the government officials in charge of these initiatives in Saudi Arabia and UAE to evaluate how these countries perceive the Open Government Partnership (OGP) as an example of a key global OGD initiative. Our analysis showed similarities in the countries’ motivations to open up their governments, driven by the potential economic returns. We found that the current status of these countries’ OGD portals (in terms of richness of the published data and its strategic value) does not match the desired standards. Although the studied countries follow different approaches in managing their OGD initiatives, they face the common challenge of poor cooperation between government agencies, which is mainly caused by cultural barriers, variations in agencies’ readiness, a lack of necessary policies and legislation, and uncertainties about the value of OGD for these agencies. To overcome these challenges, and to improve and sustain the OGD initiatives over the long term, we offer the following specific recommendations: develop a national OGD strategy to align OGD activities with the overall national agenda, build a framework that clearly defines the major components of OGD, such as the roles and responsibilities of government agencies and other stakeholders, and all aspects related to data gathering and publishing on the portals. We also recommend building up an open data community across government and non-government sectors to act as a platform for exchanging OGD knowledge and practices. In addition, we recommend expending more effort to fill the legislation gap, adopt and adapt international practices, and promote continuous learning and development.

**Keywords:** open government data, UAE, Bahrain, Saudi Arabia, eGovernment
Citizens’ Perception of the Egyptian eGovernment Portal After Revolution

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Abstract: The internet played an important role in the Egyptian revolution through the social networks such as face book and other applications. Internet applications become more essential day after day specially in some developing countries such as Egypt, UAE and Tunisia. Number of Egyptian researchers discussed the eGovernment issue in the context of local channels. This study is conducted to include an improved understanding for citizen’s perception regarding their eGovernment web portal after the Egyptian revolution. The shortage of related research conducted in Middle Eastern countries in general plus the increased responsibility towards Internet applications are concerned as good reasons to conduct this research. This article demonstrates the results of a survey on e-participation in Egypt and what is the perception of Egyptian citizens regarding the eGovernment. This survey will measure the eGovernment services in Egypt; this will be through a questionnaire demonstrating citizen’s perception regarding their electronic government portal. Moreover, this survey was used before the Egyptian revolution in 2009 and published in the 10th European Conference on eGovernment held in Ireland. The questionnaire will contain 5 main concepts (utility, reliability, flexibility, customization and efficiency). In addition, the questionnaire will contain 2 main sections (personal data and using technology). Concerning the five main constructs part, questions will be coded directly to 1 to 5. This part will use the Likert scale (likert scale is designed to measure how strongly subjects agree or disagree with statements on a five point scale). The result for coding the questionnaire will be 51 variables; all of them are coded 1 to 2, 5, 6 or 7. Number of respondents is 560. Around 75% of respondents are between 20 and 35 years old and 21% are under 20. The respondents opinions will produce statistical results that show emotional measures, capturing five constructs (utility, efficiency, flexibility, reliability and customization). The survey will demonstrate to what extent the participants are satisfied with the eGovernment portal. Just 25% are considering eGovernment portal as a flexible tool on the other hand majority of respondents have good impression about the eGovernment portal’s utility.

Keywords: eGovernment, ease of doing business, public services and citizens
RegulationRoom: Field-Testing an Online Public Participation Platform During USA Agency Rulemakings

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Abstract: Rulemaking is one of the U.S. government's most important policymaking methods. Although broad transparency and participation rights are part of its legal structure, significant barriers prevent effective engagement by many groups of interested citizens. RegulationRoom, an experimental open-government partnership between academic researchers and government agencies, is a socio-technical participation system that uses multiple methods to alert and effectively engage new voices in rulemaking. Initial results give cause for optimism but also caution that successful use of new technologies to increase participation in complex government policy decisions is more difficult and resource-intensive than many proponents expect.

Keywords: e-rulemaking, online participation, public participation, eGovernment, open government

Re-Inventing Democracy With a Complex Adaptive Political Crowdsourcing Platform: The Interactive Voter Choice System

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Abstract: Continuing failure of the major U.S political parties to respond to the electorate’s demands, has finally brought angry Americans into the streets. The Occupy Wall Street (OWS) movement expresses the dissatisfaction of most people with the status quo: a fallen system, closed processes and patterns, its policies, and the influence of special corporate interests. People are starting to self-organize, and form new relationships in groups and networks to reinvent a more open, interactive, deliberative democracy. Two main critiques can be heard: what are the demands and who are the leaders? What kind of solutions does eParticipation have to provide to support this reinvention of democracy, and its agenda-setting and election of representative candidates, using social media, social networks, political crowdsourcing etc. This movement has all the elements of a Complex Adaptive System (CAS) in action (self-organization, emergence, relationships etc.) But how
can we dis-intermediate and democratize the old legacy parties and the special corporate interests given the existing system and its rules? What role has eParticipation to play in solving these problems? What does a new political complex adaptive political crowdsourcing platform look like? In this theoretical paper we explore the implications of CAS theory and concepts for the re-visioning of eParticipation as a subsystem of eDemocracy. We offer a CAS framework and the functional requirements for a new complex adaptive political crowdsourcing platform and its tools. Next we describe the case of the Interactive Voter Choice System (IVCS) and its associated web platform, where a solution is being developed that we believe will meet these functional requirements. We advocate the use of this platform/tool, since it will empower voter-controlled, self-organizing voting blocs and electoral coalitions to dis-intermediate and democratize political parties, collectively set legislative agendas, and elect lawmakers they can hold accountable for enacting the agendas. This technology will overcome the existing impediments to popular control of governments by enabling the voters of any country to combine the collective intelligence of their electorate with the large-scale collective action power of the internet to ensure that their nation is governed by and for the people.

**Keywords:** eDemocracy, eParticipation, IVCS, crowdsourcing, social networks, complex adaptive systems

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An Investigative Study of Promoting Awareness and Increasing Registration of PAYE Anytime in the Border Midlands West Region

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**Abstract:** This paper discusses promoting the awareness of electronic channels of communication (eGovernment) used by tax administrations, with particular emphasis on the Irish tax administration. The purpose of the paper is to investigate awareness of electronic channels and its link to increased use of these channels by Irish taxpayers. It should be noted that in the current economic climate, the increased use of electronic channels can represent a saving to tax authorities, as there is less direct communication with customers, therefore research in this area is of particular merit to tax authorities in general. In Ireland, the electronic channel offered to PAYE (Pay as You Earn) customers is called ‘PAYE Anytime’. Statistics available from the Irish Revenue authorities (‘Revenue’) show that registration and use of PAYE Anytime is higher in the East of the country compared to the West. This paper seeks to investigate this anomaly by focusing on the use of PAYE Anytime (or lack thereof) in the West of Ireland, specifically the Border Midlands West (‘BMW’) Region. Empirical research is undertaken to investigate and understand the factors that may influence a customer’s decision to use electronic channels. This research focuses on the Technology Acceptance Model (‘TAM’) and its two underlying factors - perceived ease of use and perceived usefulness. Prior
research conducted by Revenue on PAYE Anytime is also discussed and analysed, with statistics from this research being compared with the results from a pilot survey undertaken on taxpayers in the Border Midlands West Region. Overall, the survey found that although there has been an increase in the awareness of PAYE Anytime, there needs to be a sustained programme for promoting PAYE Anytime in order to increase registrations and usage of this electronic channel of communication. The remainder of this paper is set out in five parts. Part one introduces PAYE Anytime and describes the rationale for conducting this research; part two discusses empirical research on TAM and previous literature on PAYE Anytime; part three details the research methodology, part four provides an analysis of the survey results and part five provides conclusions with recommendations arising from the study.

Keywords: eGovernment, electronic channels, PAYE Anytime, TAM, Revenue

Selecting Generic top Level Ontologies for the eGovernment Domain

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Abstract: In recent years, ontologies have attracted eGovernment developers as promising tools for developing eGovernment systems that can be easily integrated and interopera ted. As a result, a plethora of ontologies describing various aspects of eGovernment services delivery have been developed in various researches and projects. Appropriate criteria need to be defined and applied to select those of these ontologies that best conceptualize and describe the eGovernment domain; this will promote the reuse of these generic top level eGovernment domain ontologies and strengthen consistency in the development of semantic eGovernment portals. This study investigates existing eGovernment domain ontologies and applies a set of predefined criteria to select the best suited set of ontologies for the eGovernment domain. Firstly, a literature review is carried out to identify existing eGovernment domain ontologies. Secondly, the identified ontologies are analysed and classified based on their area of application in the eGovernment domain. Thirdly, various metrics including semantic coverage, open availability, codification language, and modularity are applied to evaluate and select the best set of top level ontologies for the eGovernment domain. The selected ontologies provide the best sharable and reusable conceptual representation and description of the public administration domain as well as the electronic services delivery processes; thus, they could be used as generic top level ontologies for the eGovernment domain. The main contribution of the study is the investigation and selection of generic top level ontologies for the eGovernment domain; this might (1) promote the reuse of existing
generic top level eGovernment domain ontologies, (2) save the time and cost needed for building new ontologies in eGovernment projects, (3) prevent inconsistency and confusion due to multiple semantic representations of the same eGovernment domain knowledge in the semantic eGovernment development community and (4) represent the starting point for the adoption of standard ontologies for the eGovernment domain.

**Keywords**: eGovernment domain ontology, ontology reuse, generic top level ontology, ontology selection metrics

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**Local eGovernment in the City of Casey: Political Barriers to Citizen Engagement**

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**Abstract**: This paper outlines the impact of political contests and negotiations on the development and implementation of participatory eGovernment practices at the local level. Drawing from a grounded research approach, this paper discusses findings from an Australian local government case study – the City of Casey (Casey). Like many Australian local governments, Casey’s online practices are predominantly limited to one-way information dissemination through its website (www.casey.vic.gov.au). While the council has attempted to provide new methods for citizen engagement online, these offer only limited and largely tokenistic means of participation rather than spaces for discourse and deliberation. Insufficient policy documentation currently guides Casey’s online initiatives and shapes councillor decisions regarding eGovernment development. In-depth interviews with Casey Councillors suggest that the actions and motives of political representatives also restrict the incorporation of participatory elements into the council’s online practices, as well as the use of citizen participation (on and offline) in decision-making. Political affiliations and divisions, and councillors’ divergent understandings of information and communication technologies (ICTs) and the role of citizens in the democratic process, inform a reluctance to cede control of communication online. The interactivity and transparency associated with participatory eGovernment are perceived by Casey Councillors as risks that will require greater accountability of political performances or potentially jeopardise councillors’ political futures. These broader political contexts of the City of Casey and its councillors currently undermine the council’s policy processes and impede eGovernment development. This paper suggests that participatory eGovernment within Casey requires supplementary education amongst policy-makers on ICTs, the value of civic involvement, the potential benefits and risks associated with ICT-enabled citizen participation, and the importance of eGovernment policy documentation. Such strategies are needed if Casey’s eGovernment is to progress to facilitate civic engagement.

**Keywords**: local eGovernment, citizen participation, engagement, policy
Lost Youth? Attitudes Towards and Experiences With eGovernment: The Case of German University Students

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Abstract: eGovernment applications are on the move (Margetts 2008). The adaptation of e-government solutions, however, differs markedly between different nations (Kim 2007, Wohlers 2009) and groups with specific socio-economic characteristics (Pew 2010) and/or attitudes towards technology and government in general. A recurring argument in the general debate claims, however, that due to the fact that younger cohorts grow up with the Internet experience, they will be more willing as well as demanding with respect to the development of eGovernment solutions. In other words they will be more inclined to use eGovernment solutions (speeding up the use of existing solutions) and more demanding (speeding up the development of new solutions). Discussions in the discipline furthermore often refer to the variables “trust in technology” and/or “trust in government” (McNeal/Hale/Dotterweich 2008) to explain the differing attitudes towards eGovernment. The present paper is based on a survey done with students of a big university in the South West of Germany. The paper reveals what variables explain the up take respectively the widespread neglect of eGovernment applications. The development of eGovernment (Coursey/Norris 2008) might change the perception of government itself (Sweeney 2008) and lead to new expectations (Gauld/Gray/McComb 2009). But a simple, further increase in eGovernment solutions by itself will not lead to more trust in the public administration and more public participation.

Keywords: eGovernment, eGovernment adoption, eGovernment in Germany, trust in government, trust in technology

The Shrinking Digital Divide - Determinants and Technological Opportunities

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Abstract: The delivery of online public services is predicated on the target population being online. Unfortunately, those who are most in need of public services are often those who are the least likely to use the Internet. In this research we develop a statistical model with the specific objective of measuring the relative impact of age, education, income, gender and urbanity on the probability of Internet usage. We observe, based on close to 30,000 observations gathered in Canada, that age is by far the most important demographic determinant of Internet usage, while urbanity, exhibiting an interesting pattern of effect, is overshadowed by the age/affluence dyad. On the basis of these results we examine two groups: seniors
who may become Internet users through the digital tablet, and the severely underprivileged who told us about their use of digital media. We ran a two-month experiment with seniors. They could freely use a desktop, a netbook or a digital tablet in a community center, asking for support if needed. We found that seniors, with no or very limited prior exposure to computers, preferred digital tablets over desktops and netbooks for prosaic reasons such as the ability to slip the device in the drawer of their night table, or to raise the tablet close to their eyes as they might have done with a book. More importantly, we found that seniors spontaneously used digital tablets in groups, either taking turns, or actively sharing in activities such as multiplayer games. We also found that vulnerable citizens – food bank users or homeless – are much less likely to rely on traditional technologies such as landline phones, than they are to use the Internet or mobile solutions, and that the problematic youths are more likely to be reached via their Facebook ID or email address than via their home phone of street address.

Keywords: internet usage, demographics, region, senior, underprivileged, tablets, mobile

Reducing IT Related Costs Using Application Portfolio Rationalization: A Study Focusing on Reducing Application Portfolio Size And Complexity in Small Municipalities

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Abstract: Organizations often deal with large and complex application portfolios. Government organizations are no different. Application Portfolio Rationalization can be used to reduce the size and complexity of the application portfolio, resulting in cost reduction. This paper focuses on rationalizing the application portfolio of small municipalities in order to reduce overall IT costs. It is shown that rationalization is a continuously ongoing process and the optimization of the portfolio, as well as managing changes made to the portfolio is key to keeping the portfolio rationalized. Case studies have been executed at four small municipalities to determine the problem areas of small municipalities with their application portfolio, as well as key focus points for rationalization. This is combined with an intensive literature research to provide an Application Portfolio Rationalization method for small municipalities. The main goal of this method is to reduce the size and complexity of the application portfolio, but it also focuses on optimization and the management of portfolio change. This research will show that these two are also key to optimizing and rationalizing the application portfolio. It is important for municipalities that the method can be applied easily and quickly in in order to be as useful as possible, this has been done by creating an online assessment, that small municipalities can fill out online. The assessment conveys the steps of the method and assesses the current situation in order to determine what has to be done. After which a report is
created showing where they have to put their focus in order to rationalize their application portfolio.

**Keywords:** application portfolio rationalization, municipalities, APR, public sector, rationalization method

### Participatory Democracy in Europe

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**Abstract:** The aim of our study is to identify and describe how the participatory democracy instruments have been regulated by the law of certain states in Europe. These instruments have been designed in order to give the citizens the possibility to participate to the life of the City on a regular basis, not just every now and then, especially during the election. We will analyze in our study a set of instruments of participatory democracy, such as: the national referendum, the local referendum, the petitionary matters, the local councils, the consultative committees, and the e-democracy. All these instruments are successfully used in a number of states with consolidated democracies. Another chapter in the study is dedicated to the way in which local participative democracy works in Romania.

**Keywords:** participatory democracy, representative democracy, citizen, community, information, engagement, participation

### Permanent Establishment: Up in the Clouds?

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**Abstract:** Permanent Establishment (PE) is the bedrock of all Double Taxation Treaties. These treaties state that a foreign entity within a country can only be taxed on its profits once it is a PE. The rules governing a PE are contained within Article 5 of the OECD Model Treaty. The rise of e-commerce in the 1990s put pressure on the OECD to modernise and update these rules (which originated from a draft convention by the League of Nations in the 1920s). The Ottawa meeting of 1998 decided that in certain instances, a server could be a PE. The paper will re-examine the server as a PE from differing perspectives: the most recent OECD commentary; relevant case law; individual countries viewpoints and Double Taxation Treaties. Within this research, the writer examines the OECD’s viewpoint of e-commerce and a server by examining emerging ICT technologies specifically, cloud computing. It
then examines the potential impact of cloud computing on a PE by interviewing four experts covering the fields of taxation, law and ICT. The paper concludes that the concept of a PE is out-dated in the modern world and requires a major overhaul, and potentially a replacement.

**Keywords:** permanent establishment, web-server, OECD model treaty, double taxation treaties, cloud computing

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**The Case of Implementing eGovernment Systems in a Less-Developed Region of the Western Part of Romania**

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**Abstract:** Most of the developing countries face lots of problems while introducing the eGovernance and sometimes they failed. According to R. Heeks (2003), who has pursued substantial research in the subject area, “Most implementations of eGovernment in developing countries fail, with 35% being classified as total failures (eGovernment was not implemented or was implemented but immediately abandoned), and 50% as partial failures (major goals were not attained and/or there were undesirable outcomes)”. This research paper addresses the issues which affect the implementation of eGovernment in a less-developed region of the Western part of Romania. It is well-known that implementing eGovernment has always been a challenge either it is social, economical or political. Besides, there are many technological problems which should be understood and meet so that a user to accept eGovernment system emerges. The purpose of our research is to identify the problems related to social, technological, economical etc. that may arise while implementing the eGovernment in a less-developed region. Furthermore, the paper will provide a clear perspective on the problems and challenges which should be considered at the time of implementing eGovernment in less-developed region of a country like Romania. This research provides a quantitative investigation of eGovernment implementation problems with emphasis on analyzing quantitative data gathered in a survey using a structured questionnaires that was generated on the basis of our theoretical study, having as starting point the following question: „What aspects are relevant to be considered when implementing an eGovernment in a less-developed region of a country like Romania?”. The target group of the research consists of practitioners and users of eGovernment systems located in the target area – Beiuș area, the Bihor County. We sampled the target group on the basis of their professional background. We have chosen the government personnel (civil servants/public functionaries) on the one side, and the citizens (the eGovernment’s beneficiaries) on the other side, to get the real world problematic issues that exist in the administrative field. From this survey we got our empirical findings. According to our research there are so many problematic issues and challenges on which local government of a less-developed region should focus to
make eGovernment effective. The paper reveals them all and proposes solutions therefore.

Keywords: challenges to eGovernment, transition, implementing eGovernance systems, local governments, Western part of Romania (Bihor County)

Exchange Formats for Office Documents - A Survey of Swiss Public Administrations

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Abstract: In April 2010 the IT department of the Canton of Vaud decided to migrate its whole office workstations’ park (10’000 machines) from Microsoft Windows XP and Office XP to Windows Seven and Office 2010. In parallel they decided to establish recommendations in terms of exchange of office document and mandated us for a survey on the situation of office document formats in use at the Swiss Federal and Cantonal levels. In our paper we will present a brief panorama of the international situation (based on a literature review) and the results of the survey we conducted between January and March 2011. We sent an online questionnaire through the Swiss Conference on Information Technology, an association grouping the IT departments of all Cantons and cities in Switzerland. The respondents were mostly IT managers from various public departments and offices. 156 completed the survey on behalf of their organization (88 from the French-speaking part of Switzerland and 68 from the German-speaking part). We found out that barely more than 25% of the public administrations we surveyed had recommendations in terms of office document formats, whereas almost 70% of the respondents do often or sometimes have compatibility problems when they exchange documents. When civil servants exchange documents that are read-only, they use the .pdf format and this usually does not raise any major issue. However when these documents have to be modified as well, it can quickly become quite complicated depending on office suites and versions being used, and on operating systems. Our phone interviews largely confirmed that a large number of issues were related to the use of advance functions such as merging, macros or VBA scripts, and that these functions are very widely used within administrative processes.

Keywords: office documents, survey, open format, public sector, strategy, recommendation, exchange
The e-Cohesion Concept - the Introduction of an On-Line System for the Submission and Evaluation of Applications for the Access to E.U. Structural Funds

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Abstract: The e-cohesion concept was introduced in the European Union's policy documents in October 2011 for the new financial period of 2013 - 2020 regarding the use of Structural Funds. The concept itself is not yet defined in the proposals for legislative documents and there are not any clear measures suggested to the Member States, nor targets for its implementation. The concept is undoubtedly related to the simplification of the management procedures, targeting the electronic submission of all documents requested by the applicants. The main solutions suggested are the digitization of the management authorities, the extension of the electronic signature system and the increase of on-line security for these operations. These developments will hopefully result in a reduction in red-tape, the avoidance of duplication and environment friendly procedures. This article intends to contribute to the academic debate related to this new concept and to research how the implementation of the e-cohesion concept might challenge existing systems. A short inventory of some good practices that have already been implemented in several Member States will give an insight on steps already made in this field.

Keywords: e-Cohesion, structural funds, innovation, regional policy, eGovernment

Climate Change Policy in Australia: Contexts and Consultation on the Clean Energy Legislative Package (2011)

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Abstract: On November 8, 2011, a minority Australian Labor government, with the help of Green and Independent MPs, successfully passed a Clean Energy Legislative Package through the Federal Senate. The substance of the individual bills – ranging from levy impositions on greenhouse gas to fuel tax legislation – had ignited stormy public controversy. Advocates on both sides of the climate change debate emerged, as the Australian legislation proposed a carbon levy for the first time. The proposed legislation was acknowledged as globally significant, although similar environment policy had been enacted in Switzerland and Sweden. The department responsible for running the public consultations, the Department of Climate Change and Energy Efficiency (DCCEE), was newly established as an agency in its own right in 2010, as part of 'Machinery of Government' changes: responsible for a broad portfolio of climate change policies and implementation,
including community, household and business sector climate action, and a remit to contribute to a global climate change solution. Its role is educative as well as instrumental. DCCEE meets freedom of information legislation and transparency expectations, and supports public consultations through rich information provided in an ongoing context of lobbying and misinformation. Using public domain material, the paper assesses the management of the complex online consultation, beginning by contextualizing the international and local policy contexts. It notes significant characteristics in DCCEE’s stewardship: achieving transparency and equity, and setting parameters for citizen input. It assesses why seemingly more conservative means were deployed to engage citizens in consultations over a multi-segmented and contentious piece of legislation, designed to effect radical social and economic change.

**Keywords:** climate change, policy consultation, contentious issues, transparency, green citizenship

### Implementation of a Contact Centre – a Local eGovernment Initiative

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**Abstract:** A case study of the implementation of a contact centre (CC) in a Swedish municipality was described and discussed. The implementation was an example of a local eGovernment initiative. Seventeen employees at the municipality were interviewed. The initial implementation of the CC was done quickly, with a top-down approach. There were initial problems with negative attitudes towards the CC from the employees at the municipal departments. The new technology systems contributed to increased efficiency and to a more process-oriented organization. The CC was largely well-functioning, and many handling officers were relieved of work tasks related to the implementation of CC. There was a need for further competence development among the service handling officers at the CC. The number of incoming matters increased, related to the increased availability to citizens of municipal services.

**Keywords:** contact centre, local eGovernment, implementation
The Critical Success Factors of E-voting Implementation in Indonesian Local Elections: The Case of Jembrana Regency Election

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Abstract: Electronic voting (e-voting) brings the idea of modernising elections through electronic systems and provides many advantages such as efficiency, presenting results more quickly, and reducing cost. In early 21st century some countries such as India, Brazil, and Estonia have conducted research and implemented e-voting system. Meanwhile, the possibility of using e-voting for Pemilihan Umum (Indonesian General Election) is still under debate. Until 2010 the Indonesian Ministry of Home Affairs and Komisi Pemilihan Umum (The General Election Commission) refused the e-voting system which was offered by Badan Pengkajian dan Pengembangan Teknologi/BPPT (The Indonesian Agency for The Assessment and Application of Technology). Surprisingly, since 2009 Jembrana Regency, Bali Province, Indonesia has developed an e-voting system from a cafeteria order system. This system has been implemented for hamlets and villages' chief elections. The e-voting project which was held by The Local Government of Jembrana Regency and supported by BPPT is recorded as the first e-voting-based election in Indonesia. It has now become the approved-procedure of hamlet and villages’ chief election. Technology-Indonesia News Portal reported that the e-voting project has been successful because people in Jembrana feel satisfied with its results and efficiency. The Public Relations Chief of Jembrana reported that e-voting saved 60% of the election budget, compared to the paper-based system. Another achievement reported by Bali Post was that no protest or conflict occured during e-voting-based elections. This demonstrates that well-developed e-voting systems can improve the democratic process, compared to Indonesian paper-based elections that sometimes cause conflicts and manipulated results. Many people are surprised that such a small regency could be so innovative. This paper focuses on how the Jembrana Regency implemented e-voting and identifies its critical success factors. The identification process was conducted by interviewing project teams and researching literature. An understanding of critical success factors of this e-voting project can provide useful information for the government and also help other regents/districts/provinces to build e-voting implementation strategies. Hopefully in the future, e-voting will be accepted as the official election procedure and bring high quality elections to the country.

Keywords: e-voting, electronic voting, critical success factor, CSF, Jembrana, Indonesia, election
Comparing Civilian Willingness to Attack Critical Infrastructure On and Off Line

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Abstract: As critical infrastructure and governmental resources are increasingly supported by the Internet, there has been a substantial increase in attacks against these sensitive targets. There has also been a concurrent increase in cyberattacks against various governmental and private industry targets by non-state sponsored groups, most notably Anonymous and LulzSec. These conditions facilitate the emergence of civilian cyberwarriors who are encouraged and emboldened by the anonymity afforded on-line to engage in malicious acts against critical infrastructure in countries around the world. As a consequence, there is a need to explore individual willingness to act as a cyberwarrior against foreign and domestic targets, and any relationship this may have to physical acts of protest and violence. This study will compare a sample of students collected at two universities in the United States and Taiwan to understand the rates of participation in physical and cyber-actions against domestic and foreign targets. Implications of this study for legal and governmental security policies will be explored in detail, along with directions for future research to understand emerging threats in cyberspace.

Keywords: cyberattacks, cyberterror, critical infrastructure, nationalism, hacking

Comparative Analysis of ICT in the Public Sector in Estonia and Republic of Macedonia

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Abstract: Computer based information systems have been increasingly proposed for solving problems in the public sector facing governments around the world. The challenges facing developing countries are even greater. Developing countries try to use ICT to help them skip whole stages in the development of their economies, and to approach the developed countries. This paper intends to present a comparative analysis of the role of ICT in the public sector in the case of two developing countries, Estonia and Republic of Macedonia. Estonia is a country with a similar historical and socio-economic setting as the Republic of Macedonia. Estonia has achieved significant economic growth in the last 20 years, and its public
sector is advanced user of ICT. Macedonia lags behind Estonia, in economic growth and in the application of ICT. Our thesis is that one of the factors that led to these differences between the two countries is the intensity of application of ICT in the public sector, in several ways: the government as a user of ICT; the government as a provider of ICT services to the individuals, private companies, NGOs, and others in the public sector; and the government as a creator of a political framework, legal framework, and climate for the diffusion and application of ICT. The comparative analysis is focused on five areas, which we consider are key to explaining the differences between two countries: the policies and legal framework regarding ICT, organizational structure of the institutions in charge of ICT, the degree of development of information society, the budget allocated for ICT development and projects, and the contribution of ICT in the governance of the public sector. Furthermore, we will compare the educational structure of the labor force in the two countries, as an important complementary asset for the application of ICT. The analysis will be based on statistical data from multiple sources and publicly available information on the situation concerning the application of ICT in the public sector in both countries. In the comparative analysis section we will offer benchmarks for Macedonia to accelerate the process of the development of ICT application. At the end of this paper, we will propose answers, based on this analysis, which are the reasons that led Estonia to its success.

Keywords: information and communication technology, public sector, strategy, Republic of Macedonia, Estonia

eGovernance and Freedom of Information Act: The Indian Experience

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Abstract: Freedom of Information is increasingly becoming an accepted part of democracy. This paper discusses the status of Freedom of Information (FOI) across a few countries and then examines the status of FOI in India. Around 90 countries have information acts in place and another 50 have legislation pending. The Indian Parliament had enacted the “Freedom of Information Act, 2002” in order to promote, transparency and accountability in administration which is referred to as Right to Information Act (RTI) in India. Since, FOI is becoming more and more acceptable; the thrust is on developing mechanisms for its implementation and in trying to measure its impact and effectiveness. There are divergent views on what should define the success of FOI and how its performance should be measured. Should the performance be based on only efficiency measures or should it include broader governance parameters on effectiveness. Zifcak and Snell developed a four-stage typology characterizing the life of an FOI regime. This paper measures the performance of RTI in India based on Zifcak and Snell framework and compares it with the FOI status in other countries. It also studies the global practices to assess FOI. Based on the Global trajectory and learning's on FOI, it tries to analyze the status of RTI in India.

Keywords: Freedom of Information (FOI), Right to Information (RTI) Act, eGovernance, performance, India
The Strategic Implementation of Data Interoperability for Better Health Care Services in Thailand

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Abstract: The Thai Government's primary mission in health care services is to provide better health care for all citizens with patient safety, quality of health care services and cost effectiveness. To achieve these goals, this paper proposes three key strategies: developing data standards enabling the seamless exchange of health information, developing the trust and willingness of data sharing, especially in multi-sectoral interoperability and enhancing data utilization for better operations, management and decision making, as well as for community empowerment. The implementation of strategies to overcome barriers in health care interoperability includes the creation of a blueprint for implementing data standardization and interoperability, channels for communication and collaboration among stakeholders at various levels, a best practices information-sharing platform, and a technology development roadmap for data utilization, as well as patient and community empowerment.

Keywords: data interoperability blueprint, best practices information-sharing platform, roadmap for data utilization, patient empowerment

ISAC6+ Delivering Smarter Administration Through Innovation - a Benefits Realisation Approach to Ensuring Success

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Abstract: The paper describes how the Project Management discipline of benefits realisation has been applied to an EU funded EGovernment initiative. It explores the benefits of using this approach, the challenges to be addressed, and suggest a framework for applying the approach to other local and national eGovernment initiatives. One of the key project objectives is to demonstrate through the pilot that implementation of the iSAC6+ system will provide value for money by delivering the
desired benefits both to government office users and citizens. The approach described here focuses on costs and benefits generated by use of the system. There are staff costs for training, support and operation, technical costs for integrating iSAC6+ into existing systems and websites, and more significantly organisational costs for designing and implementing new procedures and working practices. Citizens too will incur costs to access and use the service. In iSAC6+ we have created a model of costs and benefits which can be applied in the short term to the pilot, and in the longer term to a much larger number of public organisations. The aim of the Benefits Realisation model is to demonstrate that iSAC6+ is capable of delivering value for money, and thus to justify the investment needed for expanding its use. Information Technology project success or failure is traditionally judged against objectives set during initial project planning. Enterprises, both public and private sector, have found this approach inadequate because long term costs and benefits do not occur until after the project has completed. Benefits Realisation emerged in the 1990s and developed two roles: a discipline for anticipating and quantifying the expected value of a project in terms of the costs and benefits which will accrue after the project itself is complete; and an over-arching project management philosophy. The paper uses the case study experience to comment upon these two different perspectives. The model developed within the project is based upon the recognised public sector costing formula, the Standard Cost model (SCM) but goes much further by integrating it into a Benefits Realisation tool which creates an audit trail from organisational strategic aims through to detailed cost measures for both quantitative and qualitative incidences.

Keywords: eGovernment, benefits-realisation, SSM, citizen information services, it projects

Tax Education: A Study of Civic Responsibility Among Irish Children

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Abstract: This project strives to test the adequacy of Ireland’s education system in relation to tax. I chose to examine the subject CSPE, Civic, Social and Political education, which is a mandatory junior certificate subject, taught in Irish schools. It is the only mandatory subject in Irish schools that addresses how our country works. Is it enough? Given the economic situation in which Ireland finds itself at present, it is time to get back to basics. Children should learn as early as possible how a country works: how it pays for itself and its people. They should not first hear about tax when they receive their first payslip; they should not grow up with a feeling of entitlement to social welfare, but with a desire to contribute to the economy and power to be a part of the democratic state. In order to evaluate Ireland’s education system in relation to tax and the economy, I compiled a survey questionnaire to present to secondary school children. The survey’s first 6 questions related to the demographics of the respondents. Questions 7 to 13 queried the respondent’s attitudes towards working and tax, social welfare benefits,
reporting those who were abusing the system, uses of tax revenue and whether paying tax was necessary in our State. The results overall showed a very good understanding of tax. As was expected, the responses grew more favourable as the respondents progressed through the school years, thus showing that with education, comes a better understanding of tax. Females answered more favourably than males in this study. 100% of females surveyed responded that “tax is necessary in our State” compared to 84% of males. There has long been a sense of little or no civic responsibility in Irish people, together with a strong sense of faith for the Catholic Church. However, the youth of today are being brought up in an increasingly secular society with more openness and transparency to what is going on politically. Secularisation can only improve the civic education of Irish children. Results of this study demonstrate that the youth of Ireland are civically responsible; they recognise the importance of everyone paying their fair share and the resultant impact for a democratic society. Does this mean that Ireland is becoming more civically responsible? Well, all one can do is hope. One recommendation that developed from carrying out this project was that a website, similar to one launched by HMRC, be created by Revenue in conjunction with other Government departments. “Tax Matters” is an interactive website aimed at young people between the ages 11 and 19. The website helps users learn about tax and public spending; there is also a teacher’s area which enables the website to be used in conjunction with the school syllabus. I think this would be extremely beneficial for students and teachers alike and it would also extend Revenue’s communication channels with its future customers.

**Keywords:** tax education, civic responsibility, CSPE

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**Evolving Substantive Notions of Representation: The SOWIT Deliberation Model**

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**Abstract:** Recent deliberative innovations, such as citizen assemblies, have shown the potential for the evolution of political systems beyond preference aggregation mechanisms towards preference transformation processes among citizens. Their potential for increasing citizen trust and satisfaction in the representative system is reflected in the growing body of deliberative experiments worldwide. Yet, while such innovations show promise they face challenges of scale. Furthermore, most are episodic and with a direct effect on policy making in only a limited number of cases. Developments in the participative web have led to new opportunities for public engagement that offer the potential to scale up deliberations and overcome some of these limitations. However, the normative democratic design of an online deliberative forum remains a challenge with respect to issues of political and representative legitimacy. Important questions are 1) How can issues of scale be
overcome to enable a full citizenry to be part of deliberative processes on policy issues; 2) How could meaningful output be achieved and; 3) On what basis can these deliberations be considered inclusive and representative? In this paper we address these questions by suggesting how an online deliberative forum should proceed based on innovations in normative democratic theory. To this end we present the design for an e-deliberation model that is integrated to local authority policy decision processes. The model, entitled SOWIT, implements John Dryzek’s recent concepts of discursive representation and meta-consensus which supports a broader notion of representation particularly suited the cross-boundary political engagement of citizens online (Dryzek and Niemeyer, 2008; Dryzek, 2010). We argue how structuring deliberations using a discourse framework and meta-consensus procedures can address challenges of bias, group polarization and self-selection patterns which pose a challenge to the use of social media for legislative purposes. The contribution of this paper is providing the theoretical justification for a method in which inclusive citizen e-deliberations could be institutionalised into legislation processes.

**Keywords:** e-deliberation, semantic web, discursive representation, meta-consensus

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**Social Media and Perspectives of Liquid Democracy: The Example of Political Communication in the Pirate Party in Germany**

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**Abstract:** The recent success of the Pirate Party in the local elections in Berlin (8,9 percent) as well as their popularity in Germany on the national level (10 percent according to Forsa-palls in October) set a new round of discussion concerning the reforming of representative democracy in accordance with the new age of social media. This paper examines the reasons of success of the Pirates, in particular their strategies of political communication, and makes conclusions concerning the challenges and prospects of the idea of liquid democracy. Although among the Pirate-voters protest voting is widely spread, that doesn’t explain the phenomenon of the marginal “Internet-party” gaining a nationwide popularity. Based on both theoretical and empirical research author claims that it is the new approach to political communication in democracy that makes the party so attractive. They managed to address social milieus which don’t match with the traditional target groups division by age, profession etc. such as “modern performers” and “post-materialists” (Zolleis, Prokopf, Strauch 2010) as well as to meet the expectations of Internet-users, who are used to and who are willing to participate in politics. In their political communication ‘pirates’ use the social media tools which have been already explored and used in political campaigns all other the world, but unlike other
parties their do it consequently and authentically (e.g. they manage themselves their social media presence that leads to even bigger overlap of private and public sphere in communication of voters and politicians). This paper examines how the concept of liquid democracy works within the party, showing that structure of the party itself resembles more of a network then a political institution, which obviously correlates with the trends of the ‘network society’ (Castells), but at the same time represents the main weakness of the liquid democracy concept: it is hardly possible to control the content of the network and therefore to use it as an ultimate instrument of decision making in politics. It could still be an effective tool for the civil society to set the political agenda and influence the framing of political discourse.

**Keywords**: social media, Germany, eParticipation, liquid democracy, pirate party, political communication

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**eGovernment in a Swedish Municipality – Change Management in the Planning Process**

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**Abstract**: eGovernment continues to be an interesting area of study, especially since it is not simply about the implementation of ICTs, but rather, as this paper will show, about a larger change management process. When trying to understand the factors behind successful examples of eGovernment in the context of change management, most research so far focuses on the implementation phase in a literal sense and not on the planning phase, that precedes the implementation phase, or the evaluation phase that follows. This paper aims at remedying this by focusing on the planning phase; the development of an eGovernment strategy and vision, which is the departing point for a future implementation process. Through an in-depth case study of the work done at a Swedish municipality, the city of Vasteras, this paper aims at answering the question: “Which are the key change management aspects of an eGovernment planning process?” By focusing on the planning phase of eGovernment in a Swedish municipality, this paper develops the knowledge and understanding of this kind of endeavour. Even if ICTs can be seen as a means to modernize government, technology alone cannot break down organizational and cultural barriers – something that is necessary in order for the full benefits of eGovernment to be realized. The paper is hence primarily empirical in contribution. However, this paper also provides useful insights on the planning process for eGovernment and necessary aspects when creating an eGovernment strategy.

**Keywords**: eGovernment strategy, eGovernment planning, change management, stakeholder management, organizational set-up, eGovernment and business strategy alignment
“E-Environment” as Part of the National Strategy “E-Romania”

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Abstract: The national strategy “e-Romania” follows the European initiative “European Digital Agenda” which aims at ensuring everyone’s access to broadband services by 2013 and creating real eGovernment services which will mainly contribute to: achieving the recent development goals, reducing administrative costs and leading to a better involvement of citizens in the government act. Following the recognition of a right to a healthy environment by the case law of the European Court of Human Rights and the European and international norms related to the public access to environmental information, public participation in decision-making, and access to justice in environmental matters, we consider that launching the e-Environment will create a citizen’s liability culture in relation to the Romanian environment and nature. The implementation of e-Environment as part of eGovernance concept will lead to a better structure of the information at national and local levels in a consistent, coherent and accessible manner, as anyone may get relevant information and may use on-line services. E-Environment will optimize the implementation of different environmental projects and will reduce the risks of pollution, as an achievement of both the prevention and precaution principles. The public cooperation is important in order to promote a project. Prior to the debate of any project, it is essential to present all the benefits and impact of any potential change. E-Environment is a solution to present the initiatives of the government and to interact with the citizens on different environmental issues.

Keywords: e-Environment, e-Romania, eGovernment

Opportunities and Limits of the Application of eGovernment Solutions at Local Level in Romania

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Abstract: The implementation of eGovernment solutions in Romania is a challenge not only for local administrations but for the national government. It is acknowledged that competitiveness in Romania will increase with the development of eGovernment services, especially at the local level. National strategic priorities in the eGovernment field are related to the setting up of the e-Romania project including its eGovernment strategic component, modernization of public
administration, the large scale adoption of information technology in relation to the business environment, citizens and public administration, the improvement in the competitiveness of information and communication technology (ICT), research and development and innovation sectors and the implementation of the EU directives related to public electronic services. Despite the fact that there is a national strategy and different large-scale initiatives in the field (most of them in an on-going process of implementation), central public administration has unsuccessfully coordinated the national program for the digitization of local public administration in Romania so far. Nevertheless, through a bottom-up approach, local public administrations have implemented diverse eGovernment solutions in order to improve the lives of their citizens. Such services range from the on-line offering of information, downloading of applications for different public services, on-line registration of complaints and more sophisticated solutions such as on-line payment of local taxes and e-public procurement. Based on an analysis of the projects already implemented, our research will identify limits and opportunities in the application of eGovernment solutions at local level in Romania, building up a set of good practices. Although over recent years Romania has made significant improvements in the development and extension of broadband networks, according to the European statistics (European Commission, 2011; Colclough et al., 2010), Romania still occupies unwanted last place in the level of Internet use by population (up to 35%) and eGovernment use (less than 10%). Romania finds itself below the EU level in relation to the supply of on-line services for citizens (50%) and for companies (75%). Online sophistication of public services reaches 73% of which sophistication for business services stands at 89%, compared to 94% for the EU 27 plus Croatia, Iceland, Norway, Switzerland and Turkey (EU27+). Sophistication for citizen services is at 63% (compared to 87% for the EU27+). Despite the low level of progress, there are prospects for extending and improvement of eGovernment services in Romania, mainly to the use of structural funds which might ensure part of the financing of projects. The negative effects of the economic crisis can be overcome by the increase in the level of computerization in the public administration sector, while decreasing costs involving a human factor following recent cuts in personnel. Having regard to the actual level of development of eGovernment in Romania, the main difficulty would be to integrate local initiatives already implemented with on-going national strategies in the field.

**Keywords:** Romanian eGovernment, local administration, public services, information technology
e-Strategies to Break the Digital Divide in Various European Countries: A Comparative Perspective

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Abstract: The achievement of a knowledge society based on the expansion of digital technologies is a goal shared by governments, institutions and civil organizations in large parts of the world. The digital divide is a barrier to achieving this goal because it expresses the inability to access, in their various forms, the benefits provided by information and communication technology and, ultimately, to access digital citizenship. The scope of the digital divide is significant between developing and developed economies, but also in areas with developed economies, as in the case of the European Union, where there is great diversity among the member countries. In the current global economic crisis, and specifically in Europe, some governments have promoted the idea that ICT is a strategic sector for growth and job creation—as stated by the EU Ministers responsible for the information society in the Granada Declaration of 19 April 2010. Following this guideline, Europe would reach a high level in the global digital economy, especially as regards the information technologies’ market. At the same time, there is an inclusive policy aimed at a new European citizenship, in other words digitally prepared and active users. Consequently and according to these principles, governments should commit more to this sector, extending its use and benefits to the general population, in order to improve both individual and collective life. However, despite these general guidelines, not all countries have addressed digital inclusion equally in both content and scope. Through this paper we aim to provide a comparative analysis of some of these e-inclusive strategies.

Keywords: digital divide, digital inclusion, digital citizenship, e-inclusion policies

Transforming Government Through eParticipation: Challenges for eDemocracy

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Abstract: This paper argues that eGovernment holds much potential for transforming government activity, and, in respect to representative government specifically, it focuses upon the development of eParticipation and eDemocracy to enhance the responsiveness of the relationship between government and the
governed. Recent upheavals across the Middle East - the 'Arab Spring' - have highlighted the importance of not only the citizens' voice but also their involvement in the democratic process. Declining voter turnout and membership of mainstream political parties over the last 50 years have both been cited as being central to the 'crisis in Western democracies' which is argued to have resulted in disengaged and disenfranchised electorates. Previous work highlights significant disenfranchisement of citizens within the democratic processes. How responsive are citizens to the prospect of expressing their views to their elected representatives via e-Democratic means? The paper examines this question primarily by drawing upon the findings of a survey of citizens’ attitudes to actual and potential eDemocracy initiatives. The survey, which collected both quantitative and qualitative data, covered a number of themes including, disenfranchisement, e-Petitions, social media, single issues, influences upon elected representatives and the modernisation of current democratic processes. The results highlight both the extent to which citizens feel disenfranchised and the extent of an appetite for more transparent and empowering political processes via the use of e-Democratic tools. It is concluded that, in the light of scepticism, not only about traditional democratic systems, but also about the democratic credentials of current eParticipation tools such as e-Petitions, governments need to be more innovative in their facilitation of eDemocracy - by actually harnessing the flexibility of the Internet in a more creative manner; for instance by revisiting the design of the e-Petition. The paper concludes by probing the possibility that eDemocracy could facilitate the evolution of democracy into a more responsive system which actually improves on current systems rather than simply reproducing them in electronic form.

Keywords: eParticipation, eDemocracy, e-Petitions, disenfranchisement; democratic processes

Identifying Citizen-Demanded eGovernment Services in Tanzania

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Abstract: Adoption is one of the key factors for the success of eGovernment initiatives. High adoption requires that adoptable eGovernment services are deployed to citizens. Accordingly, Governments needs to be informed on eGovernment service requirements that their citizens want and expect. This is particularly important in developing countries context where eGovernment is still new to governments as well as to citizens. Understanding citizens’ eGovernment services requirement will facilitate the processes of designing and deploying eGovernment initiatives that meet citizens’ needs and expectations. This will enhance the possibility of the adoption of eGovernment initiatives. We present the
results of an exploratory study concerning service requirements by citizens in Tanzania, a typical developing country. The study focused on identifying priority services that citizens wish to receive electronically from the Government of Tanzania. Results show that government services that citizens are prepared to receive electronically are 1) Education Services, 2) Government Certificates, 3) Government Information, 4) Healthcare services, 5) Passport Application, and 6) Tax Payment. The study also reveals that citizens are prepared to interact and transact with the Government electronically. These results provide useful insights to the Government of Tanzania and other similar developing countries. They also extend the debate concerning designing of eGovernment services elsewhere.

**Keywords:** eGovernment, eServices, ICT4D, Tanzania, developing countries

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**eReadiness and eGovernment With Respect To Citizens’ Participation and Involvement: Towards a Citizens’ Inclusive eReadiness Assessment Model**

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**Abstract:** The advancements in the ICT and internet technologies challenge governments to engage in the electronic transformation of public services and information provision to citizens. The capability to reach citizens in the physical world via eGovernment platform and render a citizen-centric public sector has increasingly become vital. Thus, spending more resources to promote and ensure that all members of society are included in the entire spectrum of information society and more actively access government online is a critical aspect in establishing a successful eGovernment project. Hence, involving and engaging the citizens at the initial stage of eGovernment process starting with the eReadiness assessment is a high priority to ensure eGovernment reaches all the citizens regardless of geographic dispensations, economic, social and political status, age, language, or access to the Internet. People with low income, women, youth, disabled, disadvantaged and those living in rural areas should systematically benefit from newer technologies. Therefore, when pursuing eGovernment, it is imperative to conduct a comprehensive eReadiness assessment with a greater focus on direct citizens’ participation and involvement, as citizens are primarily a key player for eGovernment projects success and mostly the key main constituents for whom the eGovernment projects are undertaken by governments. Although many eReadiness tools have been developed by various agencies and individual researchers, these tools fall short of addressing citizens stakeholders participation and involvement as a critical component of the eReadiness equation. This paper therefore looks at how eReadiness has been defined over the years, presents and discusses the eReadiness and eGovernment interlinked relationship, reviews the existing eReadiness tools and applies the case study to present eReadiness model incorporating the citizens’ engagement, participation and involvement dimension.

**Keywords:** eGovernment; eCommerce; eReadiness; ICTs and internet
Implementing eGovernment Projects: Challenges Facing Developing Countries

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Abstract: Globalisation of world societies, cultures, politics and economies is compelling countries world over to initiate and reinvent government systems to deliver efficient and effective services to citizens, businesses and other agencies. This transformation and reform in the way governments operate presents significant challenges and issues that developing countries need to fully take into account when implementing eGovernment projects. Governments in developing countries face challenges different from those in developed countries, challenges include amongst others; limited resources with competing national priority needs; lack of interoperability standards for build up of eGovernment systems; and limited and weak telecommunication platforms resulting into inaccessibility and poor internet connections speed and efficiency. The potential for eGovernment in developing countries remains largely unexploited despite that information and telecommunication technologies (ICTs) offers considerable potential for sustainable development of eGovernment. Developing countries in comparison to developed countries lack in (1) history and culture; (2) technical capabilities; (3) Infrastructure; (4) e-citizen development and (5) public service focus. There is digital divide between developed and developing countries, notwithstanding that the world is in reality a one globally competitive market. Hence a need for eGovernment research specifically focused on developing countries. This paper takes both the theoretical and empirical approaches to address the study, a theoretical approach is used to explore and discuss the general challenges faced by developing countries with a view to create adequate awareness of the challenges to give focus and enable developing countries to capture in their plans effective strategies to tackle these challenges when formulating implementation programmes. Whereas the empirical approach applies a case study based research conducted in Botswana mainly not to provide the solution at this point, but rather to highlight that though there are generic challenges facing developing countries, there is however, no one size fits all solution as some challenges are peculiar and specific to countries and would need differentiated approaches and strategies. Further the paper discusses the present benefits of eGovernment to developing countries in three broader categories of; political and public sector administration benefits; economic benefits; and social and cultural benefits. Presentation of how developing countries can benefit from implementing eGovernment projects coupled with awareness of what challenges to address and specification of challenges per each country is expected to assist developing countries to set appropriate goals for pursuing eGovernment, define and set clear vision, mission and priorities for eGovernment as well as determine the eGovernment their nations may be ready for.

Keywords: eGovernment, e-citizens, ICTS, internet
A new Population Targeted Survey Based Sampling Method (NPTSBS- Model)

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Abstract: Methodology is a cornerstone of research as it looks at how the researcher constructs knowledge in his/her works that is, how the research is conducted. Within the broader research methodology framework, research is mostly conducted to collect data on any particular phenomenon and critical to gathering data is the sample selection. Therefore sampling becomes the most critical part of any population survey based research. This is because when conducting 'research study', in most surveys, access to the entire population is impossible, therefore applying the right sample using appropriate sampling technique gives confident results that reflect extremely closely to those that would have been obtained had the entire population provided the data. Given that selecting a sample is a crucial step in any research project as is rarely practical, efficient or ethical to study the whole population as aforementioned. This paper looks at the various literatures and techniques applied, arguments raised for preferring a particular approach as opposed to other and how various researches have approached the issue of what constitutes an appropriate sample size. The literature reveals different divergent views on sampling selection and sample size and this position has prompted this paper to investigate further the sampling selection approaches and ultimately develop and present a new population targeted survey based sampling model (NPTSBS- Model), which model is based on the methods, approaches and techniques employed by the researcher when carrying out data collection for a PhD programme on eGovernment implementation for Botswana government. The NPTSBS model is a hybrid of probability and non probability models; it comprises cluster, stratified random and purposive sampling techniques. The fundamental question being addressed in the model is that given the various characteristics of a population, “How can the research ensure a balanced representative or most inclusion of the various composite characteristics of the population within the envisaged sample selection.” Although the new model is developed based on an eGovernment research survey, it is however broadly flexible, adaptive and applicable in any survey based research irrespective of the discipline, though minor adjustments or variations may be necessary as the case may be.

Keywords: eGovernment, methodology, sample selection, techniques and methods
Innovative Business Models for Smart Cities: Overview of Recent Trends

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Abstract: Several projects have been developed in Europe addressing the 'Smartness' of Cities. This concept is normally associated with sustainable economic development and high quality of life, being made possible by the use of advanced information and communication technologies (ICT) and Future Internet infrastructures. This paper takes on the perspective of digitalisation of public administration, to focus on the creation of a new eGovernment stage, where citizen's experience of public service – being considered as an intrinsic quality of the latter – is enhanced by the contribution of ICT and Future Internet technologies. This in turn drives proactive mass behavioural transformation ('Smart Citizenship') and helps define innovative forms and channels of shared value production between governments ('empowered' policy makers or public sector employees), citizens ('intelligent' customers or service users/beneficiaries), and market players (technology vendors or developers). According to this perspective, the four key questions become: How does user experience manifest itself with a superior value across co-produced (rather than simply delivered) services? What would be a viable pricing model for these co-produced services? Who are the 'right' business partners to public administration and what kind of partnership arrangements would be more appropriate? And, finally Who should own and/or operate the underlying ICT (Future Internet) infrastructure? The paper offers some preliminary answers to the above questions, based on a market analysis that was recently performed in the context of a EU-funded project (PERIPHÉRIA) belonging to the CIP Smart Cities and IoT (Internet of Things) clusters. Drawn implications possibly affect well-known (and sometimes abused) terms such as sustainability, quality and impact of public service in the Future Internet era, calling for additional research on the relationship between personal/collective experience of a Smart Service and the proactive transformation of individual and group behaviours.

Keywords: eGovernment, public service, smart cities, business models, future internet

Best Practices for Improved Usability of eGovernment for the Ageing Population

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Abstract: EGovernment as an idea provides great opportunities for improving governmental processes and interactions on the G2C level, but one of the major problems remains unsolved: acceptance of services by the general population. The development of eGovernment is currently at a comparable state as e-commerce was about 10 years ago. Systems are on verge of wide adoption by the majority of
population, but wide diffusion is hindered by usability issues. This however is becoming more and more a major problem as successful eGovernment is seen as stepping stone for new concepts, as eParticipation. The demographic change in European countries is one of the key factors which is connected to this issue. Paradoxically, one of the largest groups, the elderly would profit the most from the idea of “one-stop-government”; however these cohorts show the lowest acceptance for any new system. This is caused by the low experience of this group with computers and the Internet, but can be solved by systems which are built in accordance to the needs of the elderly. The goal of the research project was therefore to find a way to map the special needs of the elderly and create guidelines for the implementation of electronic government systems, which provide a higher user-experience and promote usage. The research was built upon the ISO 13407 cycle, which was modified in order to understand the needs, specify the requirements and produce design solutions which meet expectations. These 3 steps were done between 2009 and 2011 in 2 European countries, Germany and Hungary, with the assistance of the Humboldt-University Berlin, the Fraunhofer FOKUS, the Corvinus University Budapest and the German Federal Interior Ministry. The needs of the elderly were mapped with interviews (n=70) based upon standardized scenarios and questionnaires. The supplied results enabled to chose a “live” system for testing with the target group. For these tests the new German ID Card had been selected, which represents the pinnacle of eGovernment, and served as a platform for further research. The data gathering was based on 2 scenarios (online banking and online age verification) which mirror every day transactions that require an identification procedure, and are theoretically simplified using an electronic interface. The tests were conducted in both countries (n=75). These were followed by an iterative prototyping phase, which included user tests and concurrent evaluation with identical procedures, with 75 participants from both countries, based on the scenarios and methodology of the earlier tests. This approach enabled the development of verified and valid best-practice guidelines based upon the results gathered from the prototyping. These guidelines compile the development process of an electronic government application, the usability criteria of general usability standards, like the ISO9241-110, with the special context and requirements of applications for the elderly. The designed development cycle is broken down into actual functions and actives, which can followed in application development and redesign, leading to higher acceptance in future eGovernment applications for the ageing population.

Keywords: eGovernment, usability, acceptance, guidelines

An Analysis of UK Council use of the Social Network – Twitter

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Abstract: Over the past five years there has been substantial growth in citizen engagement within the context of social media networks. This paper provides the presentation and discussion of results from research undertaken into the analysis of
local government interaction in the social network Twitter. The research builds on a growing number of studies linked to social media platforms and their use across governmental, organisational and community spaces. These platforms offer relatively new channels of exploration; in particular, the identification of good practice within these spaces can help to provide guidance for other organisations in similar spheres on engaging within the context of spaces such as the ‘Twittersphere’. The aim of the research detailed within this paper was to gain an understanding both of the use of a social media network such as Twitter by a selection of councils in the UK, analyse the directionality of the data (e.g. if it is primarily used as a broadcast network) and finally to discover what is happening outside of official Twitter channels. The hypothesis was that at present UK councils are only using social media spaces such as Twitter as broadcast channels and are not engaging with these channels as social platforms. The general feeling at the outset of the research was that councils who did engage in conversation around particular local issues would have more success (measured through quantitative indicators as a percentage of local populace engaging). The Twitter analysis process consisted of the selection of ten UK Borough councils with active accounts in the ‘Twittersphere’. The analysis focused on both the official spaces of these active council bodies and also an analysis of tweets occurring around their council spaces (e.g. an active approach of gaining an understanding of critique occurring in the public ‘Twittersphere’). The authors used a mixture of social network analysis approaches, including text based analysis of tweet contents, analysis of the directionality of the flow of tweets, and the collection of statistics related to re-tweets, individual ‘tweeters’, followers and those following. The analysis demonstrates a lack of true engagement with social media spaces such as Twitter where emphasis should be on the social, not on the use of the networks as primarily broadcast mechanisms. It demonstrates that engagement with the collection and analysis of social media data may help councils to gain better understanding of citizen concerns in their local area.

Keywords: social media networks, social network analysis, eGovernment, communication channels

A Case Study of Internet Voting for the University’s Senate in the National Distance Education University of Spain (UNED)

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Abstract: This work presents a study case of internet voting for the University’s Senate Election in the National Distance Education University (UNED) of Spain, which took place on June 2010. This is the first case of a complete internet voting
system of a Collegiate Body election at University in Spain, with more than two thousand voters. The initiative was promoted by the General Secretary of UNED, in order to contribute to modernization of the administration and to drive the eDemocracy, under the terms of Act 11/2007, of 22 June, on Electronic Access of Citizens to Public Services (LAECSP). The internet voting system allows electors to vote through their own personal computer with internet connection, and the complete process is automated. The plan began with a new adaptation of the General Electoral Regulations. The infrastructure implemented is open to be inspected, and guarantees conditions of security, confidentiality, authenticity, and non-traceability and uniqueness of the vote. In order to ensure the authenticity and integrity of the vote, voters must employ recognized electronic certificates that are included both in the electronic national identity card (dni-e) of Spain and the University Card. The vote period took place from May 21 to June 2, and the outcome was given in a few seconds. The percentage of participation achieved was 46.43%, a figure above the 41% for the previous Election. This work describes this case study with a successful result, the precedents, and the entire procedure from the selection of the voting infrastructure to the counting moment. As conclusion, the internet vote system achieved greater efficiency, productivity, security and a reduction of costs and time.

**Keywords:** eParticipation, internet voting, electronic voting, electronic certificate, university election

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**The Intention to use E-Audit Technology: An Integration of the Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM)**

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**Abstract:** The intention to use technology represents an important dimension of technology utilisation in organisations. Increasingly auditors from Ireland’s Revenue Commissioners are required to respond to technological developments to perform their roles. This study explored auditors’ intentions to use an e-audit system utilising an integrated explanatory model based on the Theory of Planned Behaviour (TPB) and the Technology Acceptance Model (TAM). Using a structured questionnaire and data derived from a sample of 205 auditors, the study found significant support for the proposed model. The auditors’ perceptions of the expectation to use the e-audit technology, the perceptions of control over its use, general attitudes towards the software and perceptions of the usefulness of the technology were most significant in explaining variance in the intention to use e-audit technology. The overall model explained approximately 27% of the variance to use e-audit technology. Strong support was found for the proposed integrated model, however it may not meet the requirement to be parsimonious as a research model.

**Keywords:** Intention to use e-audit technology, theory of planned behaviour, technology acceptance model
The P23R Principle – Reducing Bureaucracy Costs
Through Rule-Based Business-To-Government
Communication Processes

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Abstract: Companies continuously need to transmit corporate or personnel data to
public authorities. In Germany, for example, national legislation currently stipulates
over 10,000 reporting duties, resulting in annual bureaucracy costs of approximately
50 billion Euros. Often, similar or identical data have to be submitted for different
purposes to different government agencies. As of today, these reportings are often
paper-based processes which belong to different workflows and are spread over
different organizational units. Besides, the legal framework changes regularly,
which results in high expenses for adapting to the new reporting rules. In order to
deal with these challenges, our paper focuses on the following research questions:
How can reporting duties requiring the transmission of similar or identical data be
systematically identified? How can fulfilling reporting duties be made more efficient
using a rule-based approach? The paper describes how these questions are
addressed by the P23R principle, a holistic approach for engineering efficient
process chains between business and government. Concerning the first question,
the P23R principle offers methods to analyse reporting duties on a meta level and
with the help of domain models. As far as the second question is concerned, the
P23R principle assumes that laws are mapped onto a formal, executable
representation, which provides all information needed by P23R systems to compute
and compose legally correct reportings. In this paper, we will describe the process
of meta-analysis and the building of domain models. Both methods will be illustrated
with an example from the domain of environmental reporting. We will also give an
overview of the P23R framework and security architecture, which adheres to the
paradigm of rule-based systems. In order to prove the validity of the P23R principle,
it\'s methodological and technical concepts were successfully implemented and
piloted in the domain of reporting duties for employers and environment. The
findings resulting from piloting the P23R principle will be described.

Keywords: rule-based eGovernment, process chains, G2B process engineering,
process bundling, interoperable eGovernment architectures, bureaucracy costs
eGovernment Among US Local Governments: Current Status and Recent Trends

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Abstract: Using data from two nationwide surveys (2004 and 2011), this paper addresses the current status and recent trends of local eGovernment in the U.S. and compares this with the trajectory predicted by mostly optimistic early writings on this subject. Our findings show that while local governments in America have expanded their adoption of eGovernment, they use it primarily to deliver basic information and services, and a limited number of transactions and interactions. eGovernment remains mainly one-way – from governments to citizens. There is little or no evidence that eGovernment is transforming governmental service delivery, governments themselves, or the relationships between governments and their citizens.

Keywords: eGovernment, e-servces, local government, impacts, barriers


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Abstract: Elections represent the highest level of democracy, where citizens choose their leaders and representatives. Merging technology with the election process in order to facilitate voting and solve the problem of declining turnout is already an existent reality, and several countries are using or testing different types of electronic voting systems. Jordan is one of the countries that have not yet started testing this technology. This research explores the readiness of the Jordanian society to trust e-voting technology, including identifying the requirements that should be considered to build this trust, and investigating the social and technical issues that can play a role in accelerating or slowing down the adoption process. Based on previous research, a trust model is developed and examined. The model is comprised of two components: e-voting trust parameters and e-voting issues. The questions of the research are do the “trust” requirements (security, usability, privacy, audit, reliability and equity of access) really affect citizens’ trust in e-voting? And do some e-voting issues (social and technical, authentication type, the conduit digital divide, and user expectation) influence trusting the e-voting system? For answering these questions, the quantitative method is adopted and a questionnaire was used to collect the needed data. Several statistical methods were used to analyze the data. The results show that there exists a considerable trust in technology and its ability to provide users with the needed e-voting systems. The results of the first question showed that trust in e-voting is positively affected by the
fulfillment of the trust requirements, which, from the citizen’s perspective, have different priorities. For the second question, the outcomes showed that these issues (authentication type, the conduit digital divide, and user expectation) also have a positive relation with creating a trust environment for e-voting.

**Keywords**: trust, e-voting, Jordan

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**eGovernment Cloud: Should Governments Move to the Cloud? Requirement Considerations**

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**Abstract**: Cloud computing is a model for enabling ubiquitous, on demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction, using different deployment models, such as ‘software as a service’ (SaaS), ‘platform as a service’ (PaaS), and ‘infrastructure as a service’ (IaaS), with public, private community, and hybrid clouds as deployment models. In general, cloud computing can be defined by considering its characteristic attributes, such as multi-tenancy, scalability, elasticity, pay as you go, and self provisioning of resources. Governments around the world are actively looking into cloud computing as a means of increasing efficiency and reducing cost. Apart from the potential benefits, such as increased flexibility, cost reduction, elastic scalability, and service quality that cloud computing could offer governments, different concerns, such as security, performance, availability, ability to customise, investment or regulatory requirements also have to be taken into consideration. In this study, first the cloud computing attributes that are needed for government use, such as governance, legal requirements, risk management, outsourcing, and security issues, and the requirements for eGovernment applications that are used in clouds were analysed, and second eGovernment use cases were analysed and categorised according to their fit to the cloud deployment models and then the GOV.Cloud Dashboard is introduced. The results of the study revealed that parameters, such as security management by vendors, security architecture, user, access, and identity management, are key success factors for clouds being used for governments. Apart from that, government applications themselves have to fulfil special requirements to be included in clouds, such as availability, authenticity, transparency, and interoperability.

**Keywords**: application, cloud computing, eGovernment, government, success factor
Towards Transformational Government: An Ecological View of eParticipation in Africa

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Abstract: This paper elevates the need to enhance global understanding of how the transformational government artifact is unfolding as the concept of eGovernment continues to gain greater visibility in developing countries of Africa. The interest in this paper is not to question the global commitments to the notion of transformational government, but to bring to the fore inadequacies of universal conceptualization and interpretation of eGovernment, evidenced through the various evolutionary models and frameworks, but rather to argue that a focus on regional ontologies as inevitable in realizing transformational government. We see the quest for a regional ontology as urgent, since most African governments are currently involved in eGovernment initiatives as part of a broader set of governance reforms that date back to the 1980s. Therefore, the aim of the paper is to provide a rationale for a transformational government vision for developing nations, rooted in an ecological perspective, particularly taking into account the socio-cultural context. The Socio-Cultural construct is seen to be active only when it acts in conjunction with the e-readiness construct, which is geared more towards a country’s ICT access capacity, related to information and computer literacy in developing countries of Africa. The paper reports results from a regression and correlational analysis of eGovernment data for selected African countries that allowed us to link the socio-cultural context to eParticipation. The results enabled us to confirm that the information and computer literacy problem can only be addressed by enhancing various organizing forms as mediation centers that citizens interact with to improve eParticipation. The mediating role of the organizing forms is critical in galvanizing local community participation, for instance in capturing and accumulating cultural knowledge as a basis of developing relevant content for enhancing community participation in eGovernment. This requires understanding local communities so that services can be tailored to their needs. Service delivery thus becomes 'nomadic' in the sense that diversity is celebrated by presenting an eGovernment interface that is capable of being interpreted by the local communities. This will address the myth that "Africa is all the same", discounting the socio-cultural homogeneity notion that is prevalent about Africa.

Keywords: transformational government, eGovernment; Africa, information ecology, eParticipation, eGovernance
Is it Possible to Expand the Universal Social Charge to Include Income tax and PRSI?

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Abstract: Ireland has always favoured progressive rates of taxation on income rather than flat-rate models implemented in other jurisdictions. The Universal Social Charge (USC) introduced by the Irish Government in 2011 is no exception. Its introduction has now resulted in 3 charges operating on the same income but in completely different ways and at completely different rates. The possible incorporation of the 3 charges on income into one “universal” charge (to include the current USC, Income Tax and Employee’s PRSI) would result in a much more simplified method of taxing income. Using the current operational procedures of the USC as a basis for a proposed expanded USC, income would become liable to one set of progressive rates and one set of “inclusion” and “exclusion” criteria. The current methods of operating income tax and employees’ PRSI simultaneously, without any clear relationship between them may not be the most efficient resulting in higher costs of administration and compliance. Tax simplification is a much debated topic which calls for attention and the introduction of the USC has contributed to bringing simplification to the forefront of Revenue’s topical interests. If it is to be used as a form of simplification, the USC, in an expanded state, must be fair in its implementation and operation. Revenue’s implementation of progressive taxation maintains a high degree of fairness by excluding certain classes of individuals from the incidence of taxation while ensuring that those earning the most pay the most. The model proposed in the presentation shows the integration of Income Tax, PRSI and the USC into one inclusive tax chargeable on a progressive scale. The net effect on income is negligible - a slight increase in take-home pay for all individuals.

Keywords: universal social charge, simplification, fairness, tax reform

Connecting the Majority, Getting Digital Dividends

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Abstract: ICT is changing the way people live and do business globally, and is creating new social and economic development opportunities for lower-income populations and vulnerable groups, by enlarging markets and facilitating greater access to information, public services and economic activity. ICT is an effective tool that, when supplemented by investments in innovation, education, social inclusion and flexible government policies, increases competitiveness and contributes to economic growth, social development and poverty reduction, contributing to the creation of a knowledge economy. Yet, these opportunities cannot be effectively
and fully realized if left to market forces alone, and require the active participation of the public, private and civil society sectors under an integrated effort towards the development of a socially inclusive knowledge society. This paper, that is descriptive in nature, provides references and examples of eGovernment pilot and investment initiatives in the Latin America and Caribbean (LAC) Region pursuing the Millennium Development Goals (MDGs), showing the ICT pivotal role in the social and economic development of the developing countries. The examples considered in the paper show how favorable development can be achieved through the effective deployment of ICT tools and solutions, especially those based on mobile and wireless technologies, in the priority sectors of education, health, government, finance and social inclusion of vulnerable groups, including ageing people and people with disabilities. These examples also form the basis for a proposed action-oriented strategy that, under a multi-sector approach, aims at the creation of the necessary conditions to facilitate investments in technological infrastructure and connectivity, facilitate access, foster digital education and training, promote the development of local content, and delineate the participation of various stakeholders in the implementation of ICT-based development programs. In the paper four development scenarios benefitting the LAC Region are suggested that can be achieved through the coordinated efforts of the governments, the private sector and civil societies under the described strategy. Although these scenarios are specifically conceived for the LAC region they can be easily transferred to other developing regions.

Keywords: ICT4DEV; knowledge economy; knowledge society; eGovernment; eGovernance; millennium development goals; south-south cooperation

The South African User Experience Maturity Status for Website Design in Provincial Governments

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Abstract: The growth in Africa’s Internet and broadband sector has significantly increased in recent years, specifically in the eGovernment sector. The Internet has become a crucial tool to disseminate information to citizens, but poorly designed websites can drive a wedge between a government and its citizens. Designing a user friendly and functional provincial government website is a challenging task. A website that is difficult to navigate and does not meet the user’s needs and requirements increases the task difficulty and complexity. The lack of user-centered design methodologies and poor usability of government websites are major obstacles in several countries. The consensus amongst researchers is that usability is an important factor in designing eGovernment websites; however, there is some disagreement as to the extent that usability has been achieved in the majority of eGovernment websites. African eGovernment websites generally have higher failure rates and usability problems. In South Africa, the government did not have any direct policies or guidelines relating to website design initially. Today a number of guidelines and principles exist for eGovernment website design; however, there
are limited indications that these principles and guidelines are being applied by South African Provincial Government website designers. These guidelines can further not be implemented if there is no executive support, adequately trained staff, budget or the use of usability methodologies and user-centered design processes. There is a need to measure how well organisations conduct usability and UX in their organisations (Earthy, 1998). The research question addressed in this paper is: What is the maturity of usability and user experience (UX) in South African Provincial Governments? A survey was conducted amongst stakeholders in each of the nine Provinces in South Africa. The goal of the survey was to determine the usability and UX maturity of each of the Provinces. The results of the study indicates a lack of usability and UX processes in South African Provincial Governments and the limited use of a standardised user-centered design methodology. Usability and UX are not an established best practice or standard in South African National, Provincial or Local Governments. The results further highlight the need for a methodology to institutionalise usability and UX in the nine Provincial Governments. The results of this study will be of value in South African and emerging market Provincial Government environments. The recommendations have implications for government officials, information technologists, website designers, usability evaluators and eGovernment website designers.

**Keywords:** usability; user experience; eGovernment; provincial government; UX maturity models

**Re-Tweet to Democracy? The Social Media #Revolution in Perspective**

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**Abstract:** As the Twitter/Facebook revolution swept across the Middle East and North Africa (MENA) in the spring of 2011, western media marveled with surprise and pride as the tools of the information superhighway liberated oppressed people from dictatorships that the west detested. Democracy and the freedom of the Internet were heroes of the day. However, roll forward to the autumn of the same year and the same tools were producing angst and fear amongst the very same western governments in their own backyards. The global Occupy movements and the determination with which they took over prominent squares in cities throughout the western world in order to make a statement against the handling of the financial crisis once again illustrated the speed of the social media word, but this time sought to challenge the wrong leaders in western eyes. Pictures of forceful evictions from Wall Street and threats of legal procedures have opened up debate around the issue of what constitutes legitimized protest in an increasingly digitised world. This paper will examine the contradictory positions by governments and media in the west and seek to present the conundrum faced by society in ensuring that we stay safe from harm, but retain the right to have free protest that should be the lifeblood of our democratic society. It will draw on examples going back to the Seattle protests of the nineties, the governmental drawing in of power and establishment of
a digital watchdog as part of the war on terror and the recent efforts to harness the potential of the social media landscape. Moreover, as we adopt and embrace more digital options in our daily lives, eGovernment, eHealth, etc, it is only inevitable that eProtest is one of the ways most regularly to organize and mobilize actual physical protest. Thus, it will challenge the notion that some protest is good, while other is bad despite the fact that it uses the same means and it will present the notion that a hypocritical position will only undermine the notions of freedoms that we hold so dear and ultimately prove more costly for democracy and western society as a whole.

**Keywords:** protest, cyber security, e-protest, democracy, freedom

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**eDemocracy in Policies and Practices in a Transition Society: Country Cases From Slovenia and Estonia**

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**Abstract:** This paper links the eDemocracy agenda at policy level and the real participatory practices to wider theories of democracy and eDemocracy. As eDemocracy potential cannot be assessed without mapping the responsiveness of society to democracy as a whole, the development of civic culture and traditional participation are also analysed. These processes can be observed in new democracies which have been pioneers in using technology for building a functioning state after regaining independence. Slovenia and Estonia are countries that have these characteristics. Both countries, next to sharing the experiences of fast liberation and democratization, have also developed effective eGovernment frameworks and figure in high positions on different information society indexes (United Nations EGovernment Survey 2010 etc). Both have also implemented similar national eParticipation projects – *Today I Decide* in Estonia and *My.suggestion.gov.si* in Slovenia. However, despite similarities in development, the level and practices of participatory democracy are different in both countries. The paper explores the reasons why, despite many similarities in development and the construction of information society, the outcome and the level of participation are different in Estonia and Slovenia. The paper also discusses the question whether the potential of technology in rebuilding traditional democracy has been realised.

**Keywords:** Estonia, Slovenia, transition context, democracy, eDemocracy, eParticipation, information society policies, usage practices
Effects of Data Entry Tools on Health Professionals’ Productivity: A Survey

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Abstract: The use of electronic health records (EHR) has become an important issue for accurate medical diagnosis. However, there exist two main difficulties in the creation of electronic health records which make EHR systems hard to deploy: collection of EHR data is time consuming and it is an error prone process. Selection of the most appropriate methods and tools is, therefore, significant for data entry by the health care providers at the point of care in order to maximize productivity. We have conducted a questionnaire to record health care professionals’ perceptions of data entry process and determine the functions that, in the view of the professionals’, would facilitate the process. The questionnaire consists of 18 basic questions, posted on several web sites which host questionnaires, and was also mailed to health care professionals working in various hospitals over a period of 10 months. 533 medical care professionals from 29 different countries participated in the survey, of which 284 were M.D., 127 were nurses and the remainder was other medical professionals. The questions focused on the following: workload, performance, productivity, data entry methods that are currently in use or preferred, potential productivity increase from using technological tools in creating EHR and motivational factors for the acceptance of a convenient data entry tool. The results indicate that the health care professionals have an excessive workload, and the use of convenient data entry tools would contribute to increase in productivity. While the clear majority of participants involved in data entry use keyboard and mouse, most expressed a preference for more convenient methods, such as voice recognition or touch screen. Furthermore, physicians reported rarely spending more than 15 minutes for each consultation and conducting 21-30 examinations a day. The main motivation for creating an efficient direct data entry was therefore, to increase time for patient examination and improve accuracy of the diagnosis.

Keywords: e-Health, physicians productivity, data entry, technology in medicine
The Power of Citizens Using Twitter in Political Campaigns: Relationship or Communication?

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Abstract: The spread use of social media in political campaigns is just starting. However the power of citizens through the use of this platform is unknown. Many citizens criticize political candidates using Twitter, others build relations and some others try to collaborate with candidates. We try to understand this kind of behavior used in political campaigns and provide some lessons learned from the political marketing and the technological side. The findings on this paper are part of an ongoing research on the use of social media in political campaigns. It has five sections: First section - introduction and background of the social media phenomena in Mexico. Second section: addresses a literature review of social media, elections and web 2.0 components to properly contextualize the phenomena. Third section - describes the context of the case study: Peña Nieto’s background and the analysis of Twitter messages in a particular situation. Fourth and final section, describes main findings and conclusions.

Keywords: Twitter, social media, elections, political marketing, politics 2.0

Interconnection of European Criminal Record Systems

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Abstract: Intensification of illegal immigration, trafficking of drugs, weapons and human beings and the advent of terrorism have made necessary a stronger judicial collaboration between European countries. Each national judicial system is independent from the others both in legal and infrastructural terms and for that reason, the abovementioned cooperation demands mutual recognition of judicial decisions, collaboration in investigation phases and approximation of national penal legislations. During investigations, an exchange of information on criminal offences and administrative infringements take place between judges and investigators belonging to different countries. This exchange consists of complex time-consuming processes which are still mainly based on paper support. Therefore, the effective cross-border support of the various transactions demanding criminal record extracts becomes essential. To achieve this, interconnection of European states criminal
record systems will drastically change the standardised exchanging practices, introducing new ways of criminal records networking. This paper studies and assesses the existing alternatives to facilitate the exchange of criminal record information among European states.

**Keywords:** criminal record, criminal register, eGovernment, eJustice, public administration

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**The Austrian Approach Concerning the European Data Retention Directive’s Translation into National Law and its Technical Implementation**

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**Abstract:** Since March, 15th 2009 it is obligatory for every Member Country of the European Union to implement the European Data Retention Directive 2006/24/EC into national legislation. This Directive is about the retention of data generated or processed in connection with the provision of publicly available electronic communications services or of public communications networks. This paper takes a closer look at the Austrian approach to enforce this Directive. The Austrian implementation has been delayed by nearly 3 years and has brought the corresponding national regulations into force with April, 1st 2012. The major concern was to design and implement a legal and technical system within the conditions given by the Directive, but guaranteeing a maximum protection of the Austrian citizens’ personal data and privacy. Therefore it allows a centrally managed access in conformity with the law to necessary retention data for corresponding responsible authorities. One of the core aspects to ensure citizens privacy is the fact that all retention data may only be stored by the respective telecommunication providers and authorities have to request required data only in entitled cases. Access to retention data has to comply to regulations of the four-eye principle and conforming logging has to be carried out, as well as further authorities must be notified about such a data request. Any communication between the enumerated actors has to be performed via a specifically constructed communication system, called DLS. The DLS is implemented in a way to ensure confidentiality, authenticity, integrity and non-repudiation for all requests and responses as well as to carry out legally required notifications. Therefore, this system on the one hand implements high confidential encryption and authentication techniques and on the other hand automatically performs all the required notifications and logging, all without being able to have insight to the transmitted sensitive data. The article gives a comprehensive overview about the whole system designed to implement the Data Retention Directive regarding both the legal environment and the corresponding technical implementation. Moreover should be shown how this system is able to ensure that data accesses to retention data only
happen in conformity with the law and breaches of citizens’ privacy could be prevented.

**Keywords**: data retention directive, privacy, DLS, personal data, 2006/24/EC

### An Empirical Investigation of eGovernment Adoption Using a Commitment-Based Model

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**Abstract**: The implementation of Information and Communication Technologies (ICT) in the public sector has the potential to produce countless benefits. Government administrators are aggressively seeking ways to enhance the development and implementation of more effective and efficient government services. One electronic government initiative that has rapidly grown in importance and popularity is electronic tax filing. Every year, United States (U.S) citizens flock to e-file vendors to submit their taxes in hopes of a quicker, simpler, less painful process. The Internal Revenue Service (IRS) and the e-file vendors are jointly interested in retaining existing users, because citizens’ outright adoption and continuous consumption of the associated products and services is critical to long-term success. Thus, continuous use of e-file by citizens is of supreme importance to the IRS as well as customer retention is of the utmost importance to vendors. Thus this topic is of research interest, both theoretically and practically. This study explores the factors that contribute to e-file adoption. Specifically, we develop a research model with a theoretical foundation coming from several theories of commitment to understand how and individual's decision to continue to use a website is influenced by their commitment towards e-file and the vendor that supports it. Results of a multiple linear regression analysis derived from data collected from 249 U.S. taxpayers and users of a variety of e-file vendors indicate that affective commitment, quality of alternatives, and trust were significantly associated with an individual's behavioral intention to e-file. The proposed model explains over seventy percent of the variance in a citizen’s intention to re-use an e-file service. Implications for citizen/customer retention and decision-making strategies are discussed.

**Keywords**: electronic tax filing, eGovernment, technology adoption, commitment, intention to reuse

### How can eGovernment Information Centre Improve Cross-Border Cooperation?

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**Abstract:** Cross-border cooperation comprises many levels of cooperation between regions of bordering states. The purpose of cooperation in border and cross-border regions is to develop cooperative structures, procedures and instruments that facilitate the removal of obstacles. Paper is focused on a cross-national empirical survey on the current situation and future potential to cross-border cooperation in the Alps-Adriatic region that was carried out in 2010 in Slovenia, Carinthia (Austria) and Friuli-Venezia Giulia (Italy). The results of the survey highlight great future potential to cross-border cooperation in the Alps-Adriatic region, many advantages in cross-border regions institutions and in the economy as a whole. However, there are also potential obstacles that need to be removed or reduced. The respondents' answers include several suggestions on how to improve cross-border cooperation. One of these suggestions exposed in all three regions, Slovenia, Carinthia and Friuli-Venezia Giulia, is an establishment of a coordinated and jointly run eGovernment information centre for cross-border cooperation in the Alps-Adriatic region. The proposed e-information centre could be a sort of electronic one-stop-shop for cross border activities coordinating all the separate efforts currently in place. Such an eGovernment information centre can provide useful and accurate information in one place, what is essential for the implementation of efficient and successful cross-border cooperation.

**Keywords:** cross-border cooperation, eGovernment information centre, efficiency, benchmarking

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**The Influence of Governmental Economic Policy to Business Activity: Textual Information as a Motivation Tool**

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**Abstract:** The more the gap between the governments and the society goes deeper, the more governments are using the most innovative information and communication technologies in order to push their decisions and policy to the public. With the explosion of the Web 2.0, platforms such as blogs, discussion forums, peer to peer networks etc, are the social media that express the feeling of the society. Data mining in those media really corresponds to the measurement of the public opinion, also called *Society's Temperature*. In this paper we examine the question: Does the "Society's Temperature" correspond to reality and especially to business activities? Taken into consideration the paradigm of solar energy investments in Greece, we prove that for each legislation act, there has been a bright discussion in blogs and social networks, followed by investments. The reaction time from a legislation act to the highest level of the "society's temperature" has been measured to 2-3 months. The same reaction time has been measured also between the "society's temperature" and the real world investments. Taking into account that the "society's temperature" can be positive, negative or neutral, it
has been proven that the polarity label of the public opinion directly influences the amount and type of investments.

**Keywords**: web mining, textual information, economic policy, econometric analysis

**Digital Divide in the European Union: Evolution From 2006 to 2010**

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**Abstract**: The last twenty years have been marked by the increasing presence of information and communications technology (ICT). While some societies, or part of them, quickly adapted and triggered the benefits of their use, others employed the new technologies in a rather limited way. The term coined to describe this new reality, “digital divide”, points to a classic cleavage based on access to resources. However, a significant part of the relevant literature describes a much nuanced reality where other factors such as tradition, social and individual values or bureaucracy are playing a major role. Following this reasoning, we are offering a perspective on the evolution of the digital divide within the European Union between 2006 and 2010. Our comparative analysis focuses on certain major changes reflected at a state and society level in order to discover the characteristics of this evolution. We observed that no spectacular progresses have been made in the five year period, although all countries made significant efforts. Moreover, the results suggest that improving the e-infrastructure and the governmental e-services could not be enough for closing the European digital gap.

**Keywords**: digital divide evolution, eGovernance, ICT, EU countries

**MiCoGo, an Integrated System That Automatically Detects the Presence of Opinion in web Texts Regarding eCommerce and eGovernment**

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**Abstract**: The growth of Web 2.0 has facilitated interactive information sharing and interoperability on the World Wide Web, allowing users not only to retrieve
information, but also the opportunity to interact or articulate their opinions on different topics. Platforms such as blogs, discussion forums, and various other types of social media provide citizens unprecedented power to share their experiences and opinions positive or negative, regarding any topic, including products or services. Therefore the Web can be considered as a big data repository and source consisting of a variety of data types as well as a large amount of unseen informative knowledge, which can be discovered via a wide range of data mining or machine learning paradigms. In this work, we present the concept and the initial results of a proposed system named MiCoGo. MiCoGo aims at providing an integrated set of tools that will automatically detect the presence of opinion in web texts regarding eCommerce and eGovernment. Research employs Semantic Web technologies, as well as linguistic knowledge and advanced machine learning and statistical techniques in order to: i) Separate accurately and promptly opinions about a product or service, or governmental decisions, into positive or negative, ii) weight the user’s comments according to the presence or not of arguments justifying their opinion about a certain service or product; iii) create a tool able to provide valuable, compact, but not deficient feedback about the users’ opinions regarding a company’s products or services; and v) make available to the participating enterprises a robust and objective tool for measuring customer satisfaction regarding a product or service. The proposed project will advance research in the specific domain and will provide valuable prototypes/linguistic tools. Moreover, MiCoGo will be applied to fora or blogs using Modern Greek, a language that imposes many specificities and difficulties in linguistic and resource level. The creation of such prototypes is innovative especially for the Greek language where the availability of linguistic tools is very limited.

**Keywords:** data mining; decision trees; eGovernment; support vector machines; web opinion mining

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**Deliberation or Updating? The Case of Southern Stockholm Activists Online**

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**Abstract:** Based on a (n)ethnographic inspired study of middle class activists in southern Stockholm, the aim is to understand contemporary political action and to discuss changing practices of participation in digital and late modernity. More specifically this paper addresses the Internet and its promise of deliberation. However instead of echoing techno-deterministic and optimist accounts of the Internet and online social networking affording a digital public sphere where deliberation can flourish, this paper argues that it is more accurate to understand the practices among the activists in southern Stockholm as updating. Updating is described here as a two-way practice, to be updated what is happening in your social networks as well as updating your social networks what is happening. These practices of updating are understood in light of late modern theories of reflexivity, identity negotiation and maintenance, practices that arguably are heightened in digital and networked societies. Hence to avoid determinism without resorting to the
idea of technology as neutral, the paper is based in a techno-social dialectical understanding of our time as digital late modernity. The paper will end with a brief discussion of the implications of updating on political participation in digital late modernity. Even though not deliberation, practices of updating has consequences for participation and political action that perhaps could be considered positive and encouraging for democratic tradition in general.

**Keywords:** deliberation, updating, activism, digital late modernity, identity, reflexivity

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**Public Input for City Budgeting Using E-Input, Face-to-Face Discussions and Random Sample Surveys: The Willingness of an American Community to Increase Taxes**

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**Abstract:** Regular public input into a city’s budget is frequently associated with municipal budgeting in Brazilian cities, successes in public engagement that have been emulated around the world. American communities are adopting the practice to varying degrees. This paper will report on a five-year old public input program that is taking place in Lincoln, Nebraska, the capital city of a politically conservative state in the U.S. We discuss the processes we use to engage the public about the City’s budget. The process includes regular online input as well as face-to-face, deliberative discussions. On occasions, random sample surveys also have been used. The public’s input has been helpful to City Hall in budget prioritization, and has even resulted, pursuant to residents’ recommendations, in raising taxes to preserve programs rather than eliminating them to balance the City’s budget. In an era of concern that the American public will not endorse tax increases, the recommendation was surprising. Our work to date indicates the public welcomes the invitation to participate in governance and responds positively to the opportunity to provide input and is willing to endorse policy options that have been thought to be unpopular by a majority of Americans.

**Keywords:** public budgeting; eParticipation; deliberation

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**e-PRIOR: Enabling Pan-European Interoperable Electronic Public Procurement**

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Abstract: The present paper begins by outlining the political context resulting from the Digital Agenda for Europe and the major European-wide initiatives in the area of eProcurement. It describes how the European Commission has cooperated with the Pan-European Public Procurement Online (PEPPOL) project in order to facilitate the cross-border exchange of eProcurement documents, such as catalogues of goods or services, orders and invoices, between European public administrations and suppliers of any size. The paper explains that, while the European Commission’s main objective was the promotion of cross-border eProcurement as a matter of policy, its own experience as a public purchaser in a wide range of economic sectors and with suppliers of varying sizes and operating from different countries has been instrumental to understand the needs of these suppliers and of the contracting authorities they work for. In this context, it presents the e-PRIOR initiative and reports on its main achievements, as well as Open e-PRIOR —the open source version of e-PRIOR—, which covers the same functionality and could help public administrations in Europe (and, potentially, other regions of the world) to take the leap towards eProcurement. Finally, it refers to the next steps and, in particular, on moving from post-awarding to pre-awarding eProcurement.

Keywords: interoperable eProcurement, open-source, pan-European, standards

Knowledge Management: Critical Factors for Successful Implementation of eGovernment Applications in Ghana

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Abstract: eGovernment applications employ information technology, telecommunication network incorporating government policies over Internet to serve the citizens better. This electronic strategy does not only require considerable amounts of knowledge in Information and Communication Technology (ICT), it also produces considerable amount of knowledge, which, is useful for planning and decision-making. The paper concedes that Knowledge Management (KM) is pivotal for achieving processes and service improvement, executive decision-making and organizational adaptation and renewal. However, KM concepts and approach should not be viewed as universal because different countries or economies have different institutional dynamisms and cultural concepts which affect how knowledge is managed within such setups. The ideas presented in the paper reinforce that Ghana has a unique institutional culture and other social-economic characteristics that need to be considered in discussing KM, which is key impetus to eGovernment implementations.

Keywords: knowledge, knowledge management, governance, eGovernment
GIS and Interagency Decision Making: A Study of Child Services in South Dublin

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Abstract: A frequently encountered problem in government is the engagement of multiple agencies in provision of a single social service. Conflicts of interest, problems of coordination, communication difficulties and turf wars can all contribute to reducing the effectiveness and efficiency of delivery. This paper reports a study into how geographical information systems have been used in an effort to improve the quality of collective decision making in one such service in Ireland. The findings show that the innovative use of a GIS by the partners involved in the areas of calculations, integration, visualization, communication and transparency have not only improved decision-making, but also enabled local agencies to cooperate more effectively.

Keywords: eGovernment, GIS, local government, decision making

The Development of the e-Health System in Romania

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Abstract: During the latest decades, many governments across the globe have resorted with varying degree of success, to the use of ICT applications in healthcare delivery in an effort to increase efficiency. Thus, e-Health has been adopted by many countries across the globe in response to cut down cost and improve the quality of life. In 2004, the European Union, as a single market and as a regional unit, adopted the “e-Health Action Plan”, in order to facilitate a more harmonious and complementary European approach to e-Health, which required the member states to formulate tailored national and regional e-Health strategies meant to respond to their own specific needs. This has resulted in a range of projects being implemented or in progress in most of these countries, among which, according to the “e-Health ERA Report” (March, 2007), there are: fully functional ICT infrastructure for e-Health (e.g. Denmark, Sweden, and Norway); Electronic Health Record systems (e.g. Austria, the Czech Republic, Denmark, Estonia, Finland, Romania, Slovakia, Sweden, and Spain); national health portals (e.g. Denmark, Finland, France, Hungary, Luxembourg and Slovakia); e-Cards forms (e.g. Austria,
France, Germany, Italy, and Slovenia) and e-Prescription forms (e.g. UK, Finland, Greece, Northern Ireland, Portugal, Spain, and Sweden). The Romanian e-Health project was launched in 2009 by the MH, in the frame of an ICT Policy Support Programme, but it was suspended due to overrun deadlines and technical demands issues. In 2010 the National Health Insurance House (NHIH) announced the intention to realise, by the end of 2011, a national e-Health project, in connection with its Unique Integrated Information System. The Health Reform Law foresees that the National Health Insurance Card will be used to access electronic health records and will contain a kind of patient summary. The main aim of this research paper is to present answers to the following research questions: What strategies could guide the development of web-based health care services in Romania? What technical and financial barriers exist in relation to the development and usage of web-based health care services? The paper is an exploratory research conducted through a survey based on e-questionnaire that was applied to all main authorities in the Romanian Health system. The results show us the main factors which represent the major challenges impeding the development of web-based health care services in Romania, as part of the national e-Health project.

**Keywords:** eGovernment, e-health, public policy, web-based services, Romanian ICT strategy

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**Raising Voice or Effectiveness? The Role of eGovernment on the Quality of Political Institutions**

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**Abstract:** It is commonly accepted that transparency can make political institutions more effective, improve economic development, enforce accountability, and increase the quality of democracy. The recent expansion of the Internet around the world has led governments and organizations to emphasize the role of online access to public information and data in fostering accountability of public processes, and public participation. The empirical assessment of the benefits of eGovernment on governance has been limited by the lack of systematic data, but the recent publication of the UN eGovernment Survey offers the possibility to use cross-sectional data to assess the role of eGovernment. This paper combines cross-sectional data from the UN eGovernment Survey and the World Bank Governance Indicators to explore the impact of governmental online initiatives on different aspects of governance. Our research shows that although some of the optimistic views regarding the potential benefits of eGovernment policies are well grounded, the nature of a political regime is a key factor to qualify the effects of eGovernment.

**Keywords:** eGovernment, governance, political regime, transparency
From “Rules to Interpret” to “Rules to Follow”: ePrescription in Greece

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Abstract: This paper aims to contribute to the on-going discourse on how to design appropriate governance technology for highly reliable professional work within healthcare. With this aim, we study the Greek ePrescription initiative which was recently launched for controlling medication costs, improving patient safety and providing support for policy development. The empirical data used in this paper were collected over a nine month period from three different pharmacies implementing the new ePrescription platform. The analysis of data collected led to the identification of tensions between the established way of performing work (which was based on professionalism and discretion) and the new way imposed by e-prescribing (which is based on activity control and monitoring). Pharmacists traditionally interpreted rules in the light of knowledge, practice/habitude and contextual specificities but with e-prescribing the rules are solidified. From “rules to interpret” they turned to “rules to follow”. The tensions are currently resolved by pharmacists with the employment of workarounds. We view workarounds as indications of incongruence between technology and task that can be productively used for design improvement. We propose the analysis of workarounds as a way to develop recommendations for redesign and we provide some examples of such recommendations based on a selection of workarounds identified. Furthermore, we attempt to generalise the case-specific insights by linking redesign recommendations to the concepts of usability, tailorability, and generativity of information systems. Usability is a rather mature concept which relates to the capability of software to be easily appropriated when introduced under specified conditions and is a prerequisite for the success of eGovernment initiatives. Tailorability enables systems to continue functioning in the face of perturbations by offering users the option to adopt alternative predefined courses of action. Generativity is the capability of technology to evoke new thinking enabling professionals to gradually develop and rejuvenate their own practices.

Keywords: ePrescription, workaround, usability, tailorability, generativity

Adoption of Web 2.0 Technologies in the Developing Countries on the Balkans

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Abstract: With the advances in information and communication technologies over the past few years eGovernment was put in the centre of the attention. Under the influence of WWW innovations and Web 2.0 technologies eGovernment shifted to a new model known as eGovernment 2.0. This paper examines the influence of Web 2.0 technologies on the new government model and provides insight in how
strategic goals of eGovernment 2.0 can be achieved in the Web 2.0 era. Moreover, it presents assessment results on the usage and adoption of Web 2.0 applications in eGovernment context for the developing countries of the Balkan region. For assessment purposes, 164 websites of public authorities in eleven Balkan countries were analysed. Research results have shown that Balkan countries are slower in adoption of Web 2.0 technologies and that they have a delay in achieving open, participatory and transparent relations with users.

**Keywords:** web 2.0, eGovernment 2.0, developing countries, adoption of eGovernment 2.0

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**eParticipation in Jamaica: Can Facebook Encourage Political Talk Among Politically Apathetic Jamaican Youth?**

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**Abstract:** Youth participation through political talk appears to be shifting to the online public sphere. Many attribute the shift to Online Social Networks such as Facebook. Emerging discourses seem to suggest that this is a cure to the problem of political apathy among the youth around the world. In this study I explore the possibilities of Facebook as a means of addressing political apathy among young people in Jamaica. The findings of this study indicate that Facebook does not encourage Jamaican youth, with active Facebook accounts who do not usually participate in political talk offline to participate in political talk online. Rather, Facebook serves as an extension to the voice of the politically charged.

**Keywords:** electronic participation, political participation, political talk, Jamaica, Facebook, online social network, eParticipation

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**Social Networking Media and Government-Citizen Relations: A Conceptual Model**

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**Abstract:** In this paper, the commonplace phenomenon of internet social networking is examined in terms of its relationship with government-citizen relations. While both the practice of social networking and press statements about
democratic governments' daunting task of controlling citizens' malicious social networking activities are real, they are yet under-researched in e-government research. This absence of a conceptualisation of these relationships creates concern about what the future holds for government-citizen relations. The paper, therefore, takes up this challenge and conceptualises the relationships in terms of technology, information, citizen and economic constructs. By the model, the paper shows that emerging internet-based mechanisms of engagement in socio-political discourse within national entities continue to present a worrying challenge to democratic governance systems in place. It predicts, however, that democratic governments will use the selfsame internet technologies to curtail the freedoms of their citizens, and to regain some of the control lost to citizens according to their aspirations for state autonomy.

Keywords: social networking, government, citizen, control, democracy

Public Organization in the eGovernment era

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Abstract: This paper examines emergent public organizational challenges occurring during the eGovernment or digital era. As organizations are changing in structure they are also changing in technology. Increasingly, the most difficult of public problems requires interagency coordination, buttressed by information support. In Growing Up Digital Tapscott (2009) observes that there is great potential for government to create new forms of value by participating in networks and similar forms on web-based platforms that can offer greater innovation, choice, and services variety. In Wikinomics Tapscott and Williams (2006: 11) attribute new communications technology to placing the tools required to collaborate at everybody's fingertips, joining forces in low infrastructure cost self-organized collaborations, from the internet to global outsourcing platforms. Related, Dawes, Cresswell, and Pardo (2009: 392) conclude from their study “that it is misguided to conceive of information-intensive public management problems as mainly information technology (IT) problems, and therefore it is useless to focus on IT as a silver bullet.” Among others are organizational concerns. The organizational implications of eGovernment as linkage devices are thus of concern. Just as eGovernment technology and applications are ever changing (Norris and Moon 2005) so are the public agencies that employ them. In particular we examine relationships between eGovernment and four contemporary challenges in public organizing: conductive agencies, that is public bureaucracies that continually work with external agents and partners; crossing boundaries by the development and maintenance of communities of practice; multi-organization goal-directed networks that are self-governed by collaborarchies; and networked structures or entities that engage in interoperable joint production (Agranoff 2011). Each of these arrangements is contemporary organizational hallmarks that need to be merged with information age concerns and depend heavily on eGovernment.

Keywords: interoperability, eGovernment networks, collaborative structures
Open Data Policies: Impediments and Challenges

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Abstract: Up till now, there has been a public demand for opening up non privacy-sensitive governmental data. In 2003, the EU Public Sector Information (PSI) directive was released, which aims to enable the availability of public sector data to third parties at low prices, unrestrictive conditions and ensuring a level playing field. From that moment many countries and public agencies have started to open their data. The open data movement is guided by PSI-directives and national policies and the definition of open data indicates that the data are accessible without any restrictions on usage and distribution. However, the current use of open PSI is accompanied by many impediments. Hence, in this paper the question is asked which policy measures could be proposed to overcome the impediments that open data policies currently encounter. Based on a literature overview and two use-cases the impediments that open data policies currently encounter are analyzed and categorized in four categories: 1) political, economical, technical and social impediments, 2) data access impediments, 3) data deposition impediments and 4) data use impediments. The impediments are categorized using a fishbone diagram. The analysis shows that open data policies provide scant attention to the user perspective. Based on the impediment overview important challenges for open data policies are identified. To broaden the use of open data we recommend to introduce 1) incentive policy guidelines to stimulate centralization of open data collections and to rectify the fragmentation, 2) creating access to open data to enable the use of open data for any user, 3) creating interoperability by adding structured metadata when making data available to ensure easy discovery and understanding of its potential and 4) creating an infrastructure for the processing of PSI.

Keywords: open data, open data policies, impediments, challenges, open data users, user perspective
PhD Papers
Towards Connected Government

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Abstract: The concept of connected government constitutes the current tendency in the context of government service provision. Connected government enables public agencies to share their objectives across organizational boundaries, whereby information can be shared among ministries and government entities in a way that avoid data redundancy, boost up the efficiency of internal government processes, increase employees’ productivity and ultimately provide citizen with high quality services and better level of governmental interaction. Connected government objective should not only be identified as better public service delivery, but also it should enforce new improvements in the quality of governance and the effectiveness and responsiveness of the government to empower citizens. In that sense, this transformation from government-oriented to citizen-oriented government through connected governance will offer the potential of changing the traditional roles of government and citizens, as government will be working with citizens rather than working for them, and citizens will be given the chance to play a role in influencing the eGovernment solutions. This transformation towards more transparent, open and participatory government requires shifting from government-oriented to citizen-oriented government, and understanding the need to establish a digital dialogue with citizens, and one way to achieve this is through the integration of eGovernment policies, strategies and technologies internally and externally. Consequently, the concept of “connected government” serves towards this direction. However, the establishment of connected government stipulates new requirements, such as cross-organizational connectivity whereas back-office to front-office technologies should be highly integrated. This paper presents the nature and the scope of connected government and collects together the current concepts of connected government. This paper emphasises the need for connected government and provides a new perspective on citizen-oriented government in which government works with citizen rather than working for them. This paper underlines the challenges and opportunities throughout the transformation process from government-oriented to connected government that can be perceived as a citizen-oriented government.

Keywords: connected government, citizen-oriented government, whole-of-government, integrated government
Determining Success Factors of eGovernment Implementation in Yemen: An Analytical Hierarchy Process Approach

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Abstract: Since the turn of the 21st century, there has been a worldwide paradigm shift heading toward knowledge-based information society and information and communication technology (ICT) is being regarded as a key element of national development in many countries. This paper aims to explore the current situation of one of the biggest changes in the last two decades – the rapid progress and diffusion of ICT. This study analyses several factors that have contributed to the successful implementation of eGovernment in the Republic of Yemen. During the last few decades, the government of Yemen has given attention to the importance and potential utilization of eGovernment and has been trying to introduce and implement this new system of governance; however, most of its trials resulted in severe failure. These results can be attributed to many factors, the most critical of which is that, before designing and implementation of eGovernment system, no in-depth study or analysis utilized a proper survey to investigate the opinions and preferences of users, developers, and government authorities or quantitative analysis to assess the relative importance of the various success factors. This study applies Analytical Hierarchy Process (AHP) to examine and prioritize the underlying success factors needed to implement eGovernment system in Yemen. Therefore, this study conducted a survey among government officials in Yemen to analyze their judgment regarding the most critical factors that contribute to the successful implementation of eGovernment in Yemen. According to that and to the current situation of eGovernment and ICT in Yemen, the study examined success factors of the introduction and implementation of Yemeni eGovernment and proposes policy recommendations based on the analysis of the survey.

Keywords: analytical hierarchy process, eGovernment in Yemen, eGovernment success factors, ICT in Yemen

A Participation Framework for ICT Development: A Method to Achieve Acceptance and to Realize Benefits from ICT

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Abstract: Research over the last twenty years has shown that 70% of ICT projects fail to deliver the benefit that are expected of them. Many processes and
methodologies have been developed in an effort to improve this success rate, including strategic planning, system development, project management, change management, and benefit management. However, recent surveys indicate that such approaches have failed as successful solutions. Rather than focusing on technical issues, many researchers are now focusing on human behavior as a promising area of study. This paper introduces a stakeholder participation approach combined with a benefits realization technique and framework in order to ensure successful outcomes. A field study was performed in the public sector. Results indicate that the proposed framework was successful in realizing benefits from ICT investment.

**Keywords:** ICT acceptance, benefit realization, participation framework, attitude and intention model, benefit creation

**Incorporating Context in OWLS-Based Public Services Description Framework**

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**Abstract:** Semantic Interoperability for eGovernment services is a main research area within Semantic Web Services (SWS) community. This technology has been adopted in eGovernment domain because it combines the flexibility, reusability, and accessibility that characterize Web Services technology, with the expressivity of Semantic Web technology. For this purpose, several frameworks, models and ontologies, such as OWL-S (Ontology Web Language for Services) framework and WSMO (Web Service Modeling Ontology) framework, have been developed to enable SWS description. Furthermore, for modeling efficiently public services, some aspects must be taking into account in these frameworks. These aspects are reusability and cognitive semantics definition of services, specifically the Usage Context of Services. Indeed, eGovernment services which share the same functionalities have to be grouped in one class (service). Therefore, both levels must be defined unambiguously in service ontology: the MetaService level that contains abstract services and the InstanceService level that contains concrete services. In our work, we adopt OWL-S framework as service ontology for modeling public services. However, OWL-S doesn’t enable a complete reusability of services. In addition, it defines semantics from machine perspective, whereas public services are often used by human beside of systems. To tackle these problems, we propose to use Cognitive Semantics approach to achieve semantic interoperability for eGovernment services. We use this approach beside OWL-S Ontology to formally represent the Usage Context of public services. Indeed, this context enables to describe the various relationships between services and others entities in service ontology. In this paper, we propose an enhanced SWS framework for eGovernment services by adopting OWL-S framework as follows: first, we adapt OWL-S Upper Ontology to construct our OWLS-Based Public Service Upper Ontology. Then, we enhance Service Ontology with an additional level to enable service reusability. Finally, we extend Service Ontology to support Usage Context of Services by defining a Conceptual Structure of services. To demonstrate the feasibility of our
approach, we provide a contribution which has been established in e-Customs domain, precisely the “Customs Clearance of Goods” service.

**Keywords**: semantic web services, ontology, OWL-S, usage context, eGovernment, e-customs

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**eGovernment and eGovernance: Concepts and Constructs**

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**Abstract**: The Vision 2020 in Malaysia of the Multimedia Super Corridor (MSC) has gone through a period of rapid change towards the rich information of the digital age and has become a major investor of the Information and Communication Technology (ICT). With the use of ICT, the government will eventually improve the service delivery to the people in Malaysia and improve the quality of the development process which enables the government to be more responsive to the needs of the citizens. Due to the rapid use of ICT, the Malaysia government has developed an eGovernment and eGovernance that have come into prominence. In fact both terms are used interchangeably, but both terms are quite different and have different audiences to cater for the different objectives for the Malaysia government to achieve. The main objective of this study is to study the citizens’ perception towards the eGovernment and eGovernance since the awareness of the eGovernment and eGovernance concepts among our citizens is still in question and considered as having low acceptance. It is important that the information is obtained to determine the readiness of users to use the systems. This study also investigates the concepts and constructs of the eGovernance and eGovernment as well as identifying the relationship between them in terms of the service delivery.

**Keywords**: eGovernment, eGovernance, concepts, constructs, service delivery
Evaluating the Adoption and Acceptance of eGovernment in Developing Countries: A Case Study of Jordan

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Abstract: Citizens of developing countries have been observed to have a low level of trust in their eGovernment services, because of the limited user involvement in the entire development lifecycle of the eGovernment portal. Hence, we are looking for means to improve this emerging concern with a special focus on the Jordanian Government Portal (JGP). This paper aims to contribute to the advancement of eGovernment services provided in developing countries. We proposed a conceptual model on eGovernment adoption and acceptance by integrating and augmenting key notions from the Technology Acceptance Model (TAM3), Information System Success Model (ISSM) and other relevant literature in the field of Management Information Systems (MIS). Based on the model, we have designed empirical studies to investigate how citizens perceive the quality of the JGP, which was used as a case study. A questionnaire survey has been conducted to identify important factors influencing the adoption and acceptance of the e-services supported by the JGP. 352 participants with diverse demographic background were involved in the survey. We analyzed the data to study the relationships between the predictor variables (and their associated attributes) - information quality, system quality, eGovernment readiness and demographics – and the criterion variables - adoption, acceptance, user satisfaction, and intention to use. Overall, the results of our study indicate that the level of education, age and ICT skills are the three most significant social demographic variables in influencing the adoption of the eGovernment portal in Jordan.

Keywords: Jordanian government portal, citizen-centric approach, adoption and acceptance, usability, user satisfaction

State of eGovernment Development in Municipalities in Bosnia and Herzegovina

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Abstract: Many governments are finding it challenging to adjust to the different demands and expectations brought on by the new information society. For Bosnia and Herzegovina this is additionally challenging as it is, at the same time, having to rebuild from the setbacks caused by a recent war. This article presents the results of an empirical study of the current state of eGovernment development in municipalities and cities in Bosnia and Herzegovina. The study covers both back-office and front-office indicators. Back-office analysis is conducted using a survey
questionnaire completed by municipal IT managers. It focuses on technological readiness of municipalities for implementing eGovernment. The front-office analysis combines a municipal web site assessment producing a ranking of municipal web sites, with an eMail responsiveness test to fictitious citizen enquiry. The study includes an equal distribution of small, medium and large municipalities in the sample. This research also attempts to identify relationships between municipal e-readiness and development of municipal web sites in terms of eGovernance. Recomendations are given for future development and policy formulation. Results are compared to previous similar studies in Bosnia and Herzegovina.

**Keywords**: eGovernment, Bosnia and Herzegovina, municipalities, cities, e-readiness

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**Conceptual Model Based on a Citizen-Centric Approach to eGovernment Initiatives in Regional Governments in Developing Countries**

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**Abstract**: Information and communications technology (ICT) can be considered as a vital enabler towards the evolution of any society. With the majority of countries across the globe having embraced new technologies and having connections to the internet and the World Wide Web. This technology facilitates stakeholders to use e-services seamlessly through eGovernment development system. However, this development has associated with various challenges that influence on surmount on eGovernment implementation. This paper introduces a proposed multi-stage model for initiating eGovernment in regional governments in developing countries. Furthermore, identify the various challenges that influence eGovernment implementation, such as security, privacy, citizen's knowledge and trust.

**Keywords**: eGovernment in the regional government; eGovernment model; security; privacy; citizen's knowledge, and trust
Non Academic Papers
Report on the Progress of e-Administration in the Catalan Local Entities

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Abstract: In a context of change and adaptation to the new technologies, and as a result of the coming into force of various regulatory laws of the electronic administration in Catalonia, we of the Catalonia Open Administration Consortium (hereafter AOC Consortium) believed it important to have an idea of the state of play of different aspects related to the electronic administration in the Catalan local entities. On the one hand, to be able to understand the degree of the compliance of each entity to the demands of the current legislation, and on the other hand, to obtain clues about which ambits were experiencing the most difficulties in this adaptation, and consequently, for the AOC Consortium to try to provide solutions which, in as much as is possible, facilitated the necessary transformation of the public services. With the aim of carrying out this analysis, we defined a table of twenty indicators on e-Administration services, based on the information offered by the town halls on their websites (front-office), such as if they have an ‘e-office’ (secure electronic office), if they offer electronic procedures, online cartographic information, etcetera, plus other data related to interoperability services and to internal management (back-office) processes. Based on these indicators, field work was carried out to review the web sites of all the local authorities of Catalonia, which is complemented by information provided by the entities themselves, related to the internal procedures. Finally, the resulting data are published in a report on the AOC Consortium website, available both to the public administrations and to citizens and companies interested in following the advance of e-Administration in our territory. The report provides us with a very real and specific view of the point in which the development of e-Administration finds itself in Catalonia. In contrast to other studies carried out on sample–based surveys, this report sets out a more exhaustive methodology which covers all of the local entities and allows us to know both the advances made and the items lacking in the administrations related to the adopting of the new technologies in their daily activity.

Keywords: e-Administration; indicators; field work; e-services; interactive map
Domain Name Dispute Solution: The Uniform Rapid Suspension (URS) System
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Abstract: Dispute settlement in domain names, both for generic top level domain names (gTLDs) (but also for country code top level domain names (ccTLDs)) must be swift and definitive, i.e. with executory force. While there is access to national courts, arbitration or other forms of dispute settlement are needed in view of the time taken in national courts. Suspension of domain names is an integral part of the dispute settlement process, and occurs prior or parallel to transfer of the domain name as a result of a dispute settlement. The proposal for the establishment of a mandatory Uniform Rapid Suspension (URS) system was made in consideration of the introduction of yet new gTLDs as an addition to the Uniform Dispute Resolution System (UDRP), primarily through the work of an Implementation Recommendations Team (IRT) and through further consultations stimulated by the International Corporation for Assigned Names and Numbers (ICANN) and the Generic Names Supporting Organization (GNSO), the ICANN supporting organization concerned with domain name system policy. The article, written for e-lawyers and using legal style for this reason, reviews the May 2010 as well as the November 2010 draft, and the past and presently sustained criticism on the URS system proposal as against the goal of swift, enforceable dispute settlement for gTLDs.

Keywords: domain names, dispute settlement, Internet, enforcement of decisions

Electronic Notifications: An Instrument for Achieving Efficiency
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Abstract: In an environment of economic crisis such as we are currently experiencing it is especially relevant, when the use of the technology allows it, to offer good electronic public services but moreover that these electronic public services allow the administrations to be more efficient. Among the services of electronic government, e-notification is one of the ambits that allows administrations using this service to reduce the cost of notifying citizens or companies about the procedures and resolutions that the regulations oblige them to do. We should bear in mind that the cost of a notification sent via the traditional paper-based service of the Spanish public postal service Correos could be at least 3.5 euros and that by making use of the service that the AOC Consortium offers at no charge to all the
Catalan public administrations (the Generalitat and the local entities) the notifications can be carried out without any cost at all. This service, called eNOTUM, has been in operation since 2009. Complete access to the information on the service may be found here: eNOTUM. eNOTUM, was used to send more than 42,000 electronic notifications during 2011.

**Keywords:** eNOTUM; electronic notifications; efficiency; savings, eGovernment; application

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### The Catalan Electronic Administration Model

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**Abstract:** For 10 years now Catalonia has promoted a strategy of electronic administration called the “Administració Oberta de Catalunya” (AOC, Catalonia Open Administration) to achieve a public administration closer to the public, more transparent, efficient, agile and safe, guaranteeing that all citizens enjoy the basic electronic administration services, regardless of the resources of the administration they deal with. The AOC project has been built on the following bases to resolve administrative, institutional and political complexity: A strategic pact of political and institutional consensus The creation of common organisations to promote the electronic administration Specific collaborative agreements The AOC catalogue of services can be classified as follows: Interadministrative collaboration Common services (reusability) Identity and electronic signature Security Data protection Proximity The technological model is the following: Creation of Hubs, or nodes of interconnection to facilitate telematic interadministrative relations Common e-A services developed in a private "cloud" that promotes the reusability of technological solutions and good practices The AOC project is an initiative to transform the administrations' way of working, which can meet a lot of resistance. Therefore, it includes a management plan for changes in the following ambits: Regulation of the normative framework Economic aid 'Key in hand' services Road maps, guides and good practices Visualisation of the benefits for citizens and public workers Zero cost for the administrations Personalisation of services, depending on different needs After 10 years we have achieved a high level of implantation of the electronic administration in Catalonia, as the attached indicators show. The AOC Consortium has a budget of 11.5 Million euros for 2012. In 2011 we estimate that we have generated 47 million euros in savings for citizens and administrations. Therefore the AOC project is an initiative that has a return on investment of four times its cost. The Catalan electronic administration model (AOC) is a case that we consider to be both successful and capable of extrapolation anywhere.

**Keywords:** eGovern; eAdministration; best practice; strategy; interoperability; local governments
Overcoming Citizen Access Barriers to Emergent eGovernment Services by Empowering the Library Systems of Romania and Ukraine

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Abstract: Technology, and specifically eGovernment services, is often heralded as a landmark of modernization efforts in Eastern European countries such as Romania and Ukraine. Investment in this area is driven by many factors, including foreign monetary subsidies, further assimilation into the Euro-zone, and the lure of breaking free from residual post-Soviet bureaucracy. Despite the continued growth and evolution of eGovernment interventions in the region, public access is a weak-link between individual citizens and such services. Although a wide variety of eGovernment services are being offered in Romania and Ukraine, limited efforts are made to ensure that citizens are given fair and cost-effective means by which to access them. This paper presents a variety of case studies from the work of the International Research & Exchange Board (IREX) Global Libraries projects, implemented with funding provided by the Bill & Melinda Gates Foundation, that demonstrate the powerful and necessary linkage public access computing provides to eGovernment services.

Keywords: eGovernment, Library, Access, Ukraine, Romania

Plan ANIBAL: Applying European Strategy to the Balearic Islands

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Abstract: European Digital Agenda states that embedding ICT into government services provision offers a cost-effective route to better service for every citizen and business and participatory open and transparent government as it can reduce costs and save time for all actors. It can also help to mitigate the risks of climate change. As well, the communication “Towards interoperability for European public services” highlights the importance of improving the conditions for interoperability in European public administrations and promoting a culture of collaboration in order to achieve better public services with fewer resources. A key point due to the current economical situation. The Anibal Plan embraces both principles to reach a more efficient and effective administration. Main Plan basis are open source technologies, know-how and ICT platforms re-use, interoperability, decrease of heterogeneity and a support and specialized service. It also addresses coordination issues among administrations and the scarcity of resources available to implement eGovernment across local entities and regional government of the Balearic Islands. Thus, the plan converts presumed difficulties (lack of resources, technical agreement, etc.) into opportunities to implant digital administration within the
Balearic islands administrations. This multi-administrative initiative is deeply coordinated among regional institutions and according to national and European policies. Allowing to optimize the resources invested, during the project by reusing know-how and technology platforms and, in the long term, the coordination framework will result in savings due to ITC economies of scale for the administrations. The interoperability among administrations, another key point for effective and efficient delivery of public services. The paper presents the framework commonly agreed by Balearic islands administrations in order to coordinate efforts and handle with organizational, legal and technological aspects, as well as the services implemented for citizens and enterprises. It also contains the setting up process of an enabling environment for knowledge management and collaboration among disperse public administrations.

**Keywords**: re-usability, interoperability, eGovernment services, interoperability, knowledge management
Work In Progress Papers
Interoperability of eGovernment: Research on EU Policy and Practice

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Abstract: Interoperability is crucial for achieving efficient and effective delivery of cross-border and cross-sectoral public services. It directly contributes to the achievement of goals of the Digital Agenda for Europe in particular and the Europe 2020 Strategy in general. In this context, main issues, knowledge units, and legal base of interoperability must be clearly understandable for all who are involved in defining, designing, and implementing Europe-wide public services. While most European countries have developed excellent legislative frameworks and have set up the appropriate institutions for their implementation, the knowledge of the specialized regulations and the necessary skills among the actors involved remain inadequate. The market research performed shows that as the topic of eGovernment and its regulations are quite new, no streamlined system for learning of the target groups (staff of local, regional, and national public administrations, national institutions and agencies, managers of eGovernment projects, developers of public services, policy makers, etc.) in the area of interoperability exists in the countries of the EU. The recently started LLP Leonardo da Vinci project “ELGI-eLearning for eGovernment” addresses this issue and aims at development of an e-learning course for delivering knowledge concerning interoperability. The paper presents work in progress related to the second work package of the mentioned project. Its objective is to study publicly available documents constituting EU policy and reflecting EU practice in the area of interoperability with further use of results in development of the e-learning course. The paper provides summarization of main findings obtained so far and pays attention to the problems impeding development of public services, definition of interoperability, its scope, and beneficiaries, as well as the main most important recently accepted documents and available information sources which can be used for understanding the legal base and the current state in achieving interoperability of public services.

Keywords: interoperability, eGovernment, public service

A Proposal for Turkish/German Cross-Language Q&A System

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Abstract: Over the last decade, many approaches have been introduced about Q&A (Question & Answer) Systems. The problem with many of these works is that they mainly implement English as the underlying language. With the tremendous growth of computer usage in daily life and implementation of e-government systems, the need for cross-language Q&A Systems, increased enormously, especially for
immigration countries such as Germany. Beside of Turkey and Turkish speaking countries, the biggest Turkish population in Europe is living in Germany. Over the last decade, the communication between the administration and this minority has not always been easy. The main approach of the German administration is enforcing this minority to gain the same language skills like the native speakers (which is not a feasible solution as past experiences showed). This paper introduces an online concept for cross-language Q&A System which accepts both Turkish and German as the underlying languages to guide the community members to the appropriate person inside the e-government systems.

**Keywords:** eGovernment, information retrieval systems, question & answer, public service management

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**Wellbeing in Community Participation**

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**Abstract:** UK Government calls for more effective ways of communicating and engaging with the community to devolve power and enable local improvements in the concept of the 'Big Society'. Devolved power is often gained through local community associations. Associations are being tasked to manage community assets calling for a new breed of skilled community participants. They are under tremendous pressure and this additional stress may have a detrimental impact on individuals' wellbeing. Associations often struggle to attract capable community participants as they compete with the well-known giants of the voluntary sector. They need to develop their use of ICT to compete, attract and sustain community participants. When the public think about community participation there are a series of local social interactions that take place, culminating in a tipping point, when they decide to participate. This process is complex with varying sources of information linking into decision making. Coupled with the needs of community associations necessitates careful management to ensure the wellbeing of both. Prior evidence of complex networks with active communicating social agents show emergent properties. Exploitation of these local social interactions and emergent properties for enhanced community participation should have a powerful influence. The aim of this research is to develop a frame of reference for effective community participation through ICT, applying both complexity and design perspectives to recognize the role of local interactions and enhance wellbeing in community participation. This has repeatedly been highlighted as an area of need and yet still no real answer has been found. The contribution to knowledge acquired is the development of a sustainable, effective, efficient and time saving framework with online communication mediation for community participation. The community sector can exploit this research for their benefit even offering well-fitting roles for career development of young people and unemployed.

**Keywords:** wellbeing, community participation, ICT (information and communication technologies), complexity and design
Possible Impact of the Prevailing Document Paradigm in Public Agencies on Integration Issues

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Abstract: Public administrations are mainly document-centric organisations – the processing of written documents is an integral part of their bureaucratic role. This exploratory paper looks at the consequences of the phenomenon that the advent of eGovernment has not changed. The work is based on experiences and observations from several typical eGovernment projects, run in the Luxembourgish public sector. Having met their overall objectives, these projects have nevertheless faced specific integration and acceptance challenges. The paper briefly describes the transaction and process-oriented paradigms of information management. It then focuses on the specific issues that result from combining the approaches in an extremely interconnected, cross-border setting. Based on these observations and reflections, we finally define research questions that we regard as being important for further work.

Keywords: document-centric approaches, document management, transaction-oriented eGovernment, transformational eGovernment

Improving Employee Performance Using Web-Based Application for Public Services

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Abstract: One of the vital problems of public services is the deficiency of well-educated and highly motivated employees. The attitudes and performance of public servants have a crucial importance on the satisfaction of the customer relationships, where in this context customers are the citizens. Thus, well-trained and highly motivated employees are indispensable elements of governmental services as a priority. Therefore, controlling public servants’ professional improvements, performances and their vocational capacities are the key factors to provide high quality services. Consequently, a good training and tracking system for employees can provide useful data about current level of employee performance to the state, and the data produced by the system can be used to promote employees. Current online training systems do not monitor their members continuously but only evaluate them for that specific instance which in return does not help much in improving employee performance. In this paper, we propose an eLearning system to improve performance of public servants. The system combines exterior website and interior management systems to provide complete and effective information and service.

Keywords: government, eLearning, public service management, web-based
Abstracts Only
Evaluation of eGovernment Implementation Among Malaysian Local Authorities

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Abstract: The Malaysian Government has been implementing eGovernment initiatives since 1997. This initiative by the government is in reality a product of the efforts under the Multimedia Super Corridor (MSC). It was designed to improve information flow and processes within the government, improve the speed and quality of policy development, and improve coordination and enforcement. This would enable the government to be more responsive to the needs of its citizens. One way that the government can demonstrate physically to meet public demands for greater transparency and accountability is to offer online services and products through the EGovernment websites or portals. The author has studied the Malaysian eGovernment websites at Federal and State government levels which tend to vary from one another considerably in terms of their technological design as well as their contents. This study was presented at the 4th International Conference on eGovernment at Melbourne, Australia in 2008. However, up to now there is not any empirical study being conducted that concentrates on the extent of implementation of eGovernm ent by local authorities in Malaysia. The local authorities that are more technologically advanced have started to offer various digital facilities to the public. According to Deputy General, Manpower Planning Unit there are 142 local authorities currently operating in Malaysia. For the purpose of measuring the generic aptitude of the local authorities to employ eGovernment, the Web Presence Measurement Model employed by the United Nations for the Global EGovernment Survey 2003, will be used to evaluate the websites. The Web Presence Measurement Model is a useful tool in identifying the presence or absence of certain indicators which are related to the measures of sophistication or maturity of the websites. This paper is intended to study the implementation of the eGovernment among the local authorities in Malaysia which are under the jurisdiction of the local governments by using the Web Presence Measurement Model. The local authorities are considered as the government lowest tier and as such should have high responsibility in the provision of personal services to the public. Being managers of urban environment they are expected to interact with their clients more closely than those of the other state government Agencies. It is expected that the evaluation of the local authorities websites will provide a clear indication as to the extent of eGovernment implementation among local authorities in Malaysia. The results of this study would be useful for the Manpower Planning Unit of the Prime Minister’s Department as they are responsible to oversee the full implementation of the eGovernment initiatives by all levels of Government in Malaysia.

Keywords: eGovernment, Malaysia, local authorities, evaluation
Role of the Media in Influencing the Legitimacy of a State's Tax Policy

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Abstract: Having just completed a research masters to the National University of Ireland, Galway on the rationale for introducing transfer pricing into Ireland, I am interested in broadening the scope of my research in a related area – i.e. the role played by different actors in addressing the legitimacy of a State’s tax system and policies. The theoretical approach addressed in my master’s thesis primarily drew on insights from new institutional theory, which assisted in the development of a theoretical framework of the context and the processes associated with creating and adopting transfer pricing policies. The framework drew on the work of Dillard et al.(2004) and Mulligan(2008) in developing the framework. During my research, I was exposed to the deliberations of an array of other theoretical streams which could have equal application to the field of research proposed. These theories include Agenda Setting theory – Carroll, C.E.(2004) ; Corporate Social Responsibility Theory – Gray, et al.(1995); Legitimacy Theory - Deegan et al.(2002), Dowling and Pfeffer(1975), Johnson(2004), Lindblom(1994); Endogeneity of Law Theory - Edelman and Suchman(1997); Law and Society Theory- Suchman and Edelman(1991); Lobby Theory- Roberts and Bobek(2004); Political Economy Theory - Armstrong(1998), Benson(1975), Wamsley and Zald(1973) and Zald(1970); and finally Power and Politics Theory - Covaleski and Dirsmit (1988), Covaleski et al.(1996), Covaleski et al.(2007) and Perrow(1985). Each theory interpenetrates and overlaps each other. An interesting area emerging from my research masters was the legitimacy of a State’s tax system and the part played by different actors in the State’s organizational field. Organizational theorists view legitimacy as “…. a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions”(Suchman,1995:p.574). His conceptualization includes both the evaluative and the cognitive dimensions and it also acknowledges the collective role of the social audience in legitimation processes (Mulligan, 2008). DiMaggio and Powell(1991) define an organizational field as being composed of the organizations that produce the same good or service, supply the resources they require, consume their products and also of the regulative agencies and various occupational associations that govern them (p.65). It includes within its “purview” parties who are meaningfully involved in some “collective enterprise” (Scott, 2008:p.208). DiMaggio and Powell emphasize that the conception is not confined to competing firms or networks and note the significance within their definition of including the “totality of relevant actors” (p.65). In so doing, the concept comprehends the importance of both connectedness and structural equivalence (Mulligan,2008). In this context the role of the corporate sector, professional advisors, tax authorities/ Government agencies and the media plays in establishing, maintaining and defending ( and indeed attacking) the legitimacy of the State’s tax system may be worthy of research. For example, Neu et al.(1998) note that society has become increasingly interested in magazines, newspapers and other publications. By making use of these useful tools to reaffirm
an organisation’s value and beliefs a State can in turn reaffirm its legitimacy. The media plays a pivotal role “in shaping the public agenda” (Deegan et al., 2002:p.314). In terms of causality, blanket media coverage can lead to increased community concern for a particular issue (p.314). As suggested by Baum and Powell (1995) the media are an institutionally abundant barometer of society wide legitimacy. Potential research questions to be considered would include what are the agenda setting effects of the media on images and opinions about the legitimacy of a State’s tax policies. What forces influence the legitimacy of a State? How do these forces manifest? Has the traditional media being replaced by social media and what impact will this have?

**Keywords**: media, legitimacy, tax policy

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**Development of a Smarter City; ‘Urban Space Value Chain’ in Barcelona**

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**Abstract**: The notion of the city as a complex entity certainly goes back several years (Jacobs, 1961). Recent work by McNulty (2011) builds on this by describing the city in terms of "stocks" or resources, flows (including the movements of information, money, and goods), and feedback loops. In the 21st century, cities have assumed a very central role in management of infrastructure and this is a result of changes in three main areas -- politics, economics and technology. Cities now have more freedom and also more power to act and make decisions. Levels of vertical integration now exist between different levels of government or collaboration and cooperation across boundaries. And with enhanced technological abilities, basically, cities can define policy and measure many more things than they could measure before. Cities can use technology to enable their core systems and maximize their use of limited resources. Smarter cities use the possibilities of new technologies, such as data collection and modeling, to create new insights and help decision making for the city. The phrase ‘Smart Cities’ may have its origins in the Smart Growth (Bollier, 1998) movement of the late 1990s, which encouraged innovative policies for urban planning. The phrase has since been utilised by a number of technology suppliers (Cisco, 2005; IBM, 2009; Siemens, 2004) for the application of complex information systems to integrate the operation of urban infrastructure and services such as buildings, transportation, electrical and water distribution, and public safety (Harrison and Abbott Donnelly, 2011). Cities are experimenting with new approaches to the planning, design, finance, construction, governance, and operation of urban infrastructure and services. Some of these approaches are related to emerging roles of information technology, and involve value chain creation and data integration and interoperability. This paper will discuss the different approaches of several cities to be ‘smarter’, and specifically focus on 30 years of efforts in Barcelona which have led to their “Urban Space Value Chain”, based on developments in the political, economic and technological areas.

**Keywords**: technology infrastructure, cities, design, interoperability
Open Government in Europe: the Latest Fashion?
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Abstract: Last September 20, eight governments gathered in New York to launch the Open Government Partnership, a new multilateral initiative to promote open government, that is, governments that search for transparency, collaboration and participation. Two out of the eight founding countries was from Europe (the United Kingdom and Norway) and 18 more are in the process of developing their commitments on open government. Compared to other regions, participation of European countries is very high. Once more, it seems that the region is eager to embrace new concepts and terms, as it has done in the past. But, what should be expected from these well-intentioned declarations? The proposed paper will address this broad question. In order to do so, the paper will be structured as follows: First, the idea of open government will be developed. The differences between this new term and the “traditional” e-government one will particularly be stressed. Second, initiatives from Europe will be explored. In this respect, this section will explore the level of development of open government in the region by means of comparing the different countries. Among other, the following issues will be analyzed: the meaning of open government, the existence of an open government strategy, the type of open government initiatives, and the (expected) results. Finally, some conclusions will be drawn in terms of how serious European countries are regarding open government.

Keywords: open government, open government partnership, Europe, open government strategies

Challenges and the Opportunities for Developing eGovernment in Romania
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Abstract: The paper identifies and explores the skills and competencies required by eGovernment initiatives in the Romanian public sectors, in order to explain the low rate of structural funds absorption and the reduced level of e-services implementation. For this purpose, the changing trend of skill requirements during recent years is analyzed; and different skills and competencies among different community and roles of civil servants are classified. The research is conducted as a literature review in which selected literature and government documents are used to compile a checklist of necessary eGovernment skills and competencies, in order to try to assess the way in which these all are met in Romania, and how do they affect the low rate of e-government structural funds absorption. The literature review is
outlined in four stages: problem formulation; literature search; data evaluation and collection; data analysis and interpretation. “eGovernment skills/competencies” and identification of the “eGovernment civil servants communities”, “different skill sets” are the conceptual theories in this study. These concepts are defined and clarified first before the data collection. The research questions in this paper are: “What skills and competencies are needed for civil servants in the context of eGovernment in the research literature? What is the changing trend of skill requirement during last 10 years? What skills and competencies are linked to different communities of civil servants? In which way does the lack of skills and competencies affect the level of structural funds absorption for eGovernment development in Romania?” The literature review reveals the fact that the skills and competencies need by civil servants in the context of eGovernment are IT skills, IM skills, IS skills, and modern management skills; the main changes in skills requirement of eGovernment are related to IS and updated management skills in the last 10 years. The research work also found that effective eGovernment implementation requires changes to skills and competencies of civil servants in the Romanian public sector. Modern working conditions often require further mixes of generalized and more advanced skills and competencies. This study will identify and explore the skills and competencies required by eGovernment initiatives in the Romanian public sector, and it will analyze the skill requirement changing trend during last 10 years; it will also classify these skills and competencies among different community and roles of civil servants in Romania, compared to the level of structural funds absorption. The main findings of this paper try to explain in which way the lack of skills and competencies of the eGovernment civil servants determines the low rate of structural funds absorption in Romania, in the field of eGovernment implementation and development. Finally, the paper proposes some necessary measures to fix the weakness of the Romanian public sectors, which have important implications for eGovernment practitioners. By providing practitioners with some insight into the eGovernment skill requirement, the findings can serve as a standard curriculum for training and educating public sector employees relevant with eGovernment, in order to facilitate the government to put its effort and money in the right direction.

Keywords: eGovernment, eServices, Romanian public sector, structural funds

Building Democracy Through Social Media? Occupying the Expanding Political Arena

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Abstract: This paper is an introduction to an ongoing project designed to examine the ways in which the internet and associated technologies are brought into play in democratic decision-making within protest organisations and their support base via social media as part of their participatory discourse with governments and organisations of power. Much has been made of the use of such technologies, particularly of social network platforms such as Facebook and Twitter, to engender change, amplify messages of protest and lead to change both in terms of within the protest organisation and also in the responses of governments. How equipped are
governments to listen and react to these new organized interests? The work examines case study research from 2 ‘Occupy’ camps in the Netherlands. It is based upon structured and semi structured interviews carried out in November 2011 which seek to address issues such as whether social media are being used as the major communication tool or as a part of a wider repertoire of communication encouraging greater co-present protest participation. What patterns of usage can be established in terms of demographic differences such as age, gender, income levels etc. Previous research by the second author suggests that the use of social media by protest organisations may render organisational boundaries more porous. Nonetheless, decision-making appears to remain a largely inflexible organisational domain. An extension of democratic decision-making may be possible if such organisations embrace social media platforms to broaden their support base whilst also delegating more responsibilities to them. Such delegation as well as deconstructuration may pose new challenges to governments in as far as they are faced with increasingly complex and dynamic webs of pressures and challenges in cross-cutting and longer-lasting cycles of protest.

**Keywords:** decision-making, social media, protest, democratization, participation