

**2nd European
Conference on
Information Management
and Evaluation**

**Royal Holloway
University of London, UK
11-12 September 2008**

Edited by
Dan Remenyi, Trinity College Dublin, Ireland

Copyright The Authors, 2008. All Rights Reserved.

No reproduction, copy or transmission may be made without written permission from the individual authors.

Papers have been double-blind peer reviewed before final submission to the conference. Initially, paper abstracts were read and selected by the conference panel for submission as possible papers for the conference.

Many thanks to the reviewers who helped ensure the quality of the full papers.

Further copies of this book and previous year's proceedings can be purchased from <http://academic-conferences.org/2-proceedings.htm>

ISBN: 978-1-906638-13-9 cd

Published by Academic Publishing Limited
Reading
UK
44-118-972-4148
www.academic-publishing.org

ECIME 2008

Contents

Paper Title	Author(s)	Guide Page	Page No.
Preface		iv	iv
Biographies of Conference Chairs, Programme Chair, Keynote Speaker and Mini-track Chairs		ix	ix
Biographies of contributing authors		xi	xi
The Application of Zachman Framework in Architecting a Collaborative Digital Library	<i>Abrizah Abdullah and A.N. Zainab University of Malaya, Kuala Lumpur, Malaysia</i>	1	1-10
Evaluation of use of online resources in an Islamic university education	<i>Ahmad Bakeri Abu Bakar¹ and Mohammad Khaled Isa Al-Shbou² ¹International Islamic University, Kuala Lumpur, Malaysia ²University of Malaya, Kuala Lumpur, Malaysia</i>	2	11-20
Multitasking: The Uncertain Impact of Technology on Knowledge Workers and Managers	<i>Frank Bannister and Dan Remenyi Trinity College, Dublin</i>	3	21-30
The Evaluation of the Impact of Internet-Based Technologies on International Service Delivery	<i>Clara Benevolo and Riccardo Spinelli University of Genoa, Italy</i>	4	31-40
Networks, Technologies and Globalisation Processes in SMEs. The Italian Case	<i>Marco Bettiol¹, Maria Chiarvesio² and Eleonora Di Maria¹ ¹Department of Economics and Management, University of Padova, Italy ²Department of Economics, University of Udine, Italy</i>	5	41-50
Research Methods for IT/IS Systems' Evaluation, a Critical Appraisal	<i>Jytte Brender Aalborg University and Virtual Centre for Health Informatics, Denmark</i>	6	51-58
Evaluating the Problem Solving, Preserving and Causing Effects of a Healthcare Information System in a Hospital Clinic	<i>Hanna Broberg University of Kalmar, Sweden</i>	7	59-66
Contextual Factors Influencing Strategic Information Systems Planning in a Network: Evaluation of Two Inter-Municipality Projects in Finland	<i>Tijs van den Broek¹, Ton Spil¹, Timo Kestilä², Michel Ehrenhard¹ and Hannu Salmela² ¹University of Twente, Enschede, the Netherlands ²Turku School of Economics, Finland</i>	8	67-76
A Case Study of SME Web Application Development via Agile Methods	<i>Peter Clutterbuck, Terry Rowlands and Owen Seamons University of Queensland, Brisbane, Australia</i>	9	77-88

Paper Title	Author(s)	Guide Page	Page No.
Implicit Personal Contracts and Actor-Group Consensus in CRM Implementations – Evidence for Their Role in Influencing Success	<i>Ian Corner¹ and Matthew Hinton²</i> <i>¹Barston Consultancy Ltd, Appleby Magna, UK</i> <i>²Business School, The Open University, Milton Keynes, UK</i>	10	89-98
ICT Adoption by ICT SMEs in the UK West Midlands – the Forgotten ICT Adopters	<i>Pat Costello, Andy Sloane and Caroline Chibelushi</i> <i>University of Wolverhampton, West Midlands, UK</i>	11	99-110
Using an Enterprise Information Management System to Enhance IT Compliance and Information Value	<i>Renata Paola Dameri</i> <i>Department of Business Administration, University of Genova, Italy</i>	12	111-122
Can ICT Enhance Value-Driven Health Care?	<i>Martin D’Cruz</i> <i>Turku School of Economics, Finland, and Indiana University, Indiana, USA</i>	13	123-130
The Comprehensive Challenges to the Contemporary Knowledge Worker	<i>Carel De Beer</i> <i>University of Pretoria, Pretoria, South Africa</i>	14	131-138
National Survey of SMEs’ Use of IT in Four Sectors	<i>Romano Dyerson, G. Harindranath, David Barnes</i> <i>Royal Holloway University of London, UK</i>	15	139-148
Analyzing the Topics Discussed in CEO Blogs: A Content Analysis Approach	<i>Jose Esteves and Víctor Bohórquez</i> <i>IE Business School, Madrid, Spain</i>	16	149-158
Evaluate IT Where Effects Occur and get Directives for Managerial Action	<i>Birgitta Fagerström Kareld</i> <i>School of Mathematics and Systems Engineering, Växjö University, Sweden</i>	174	159-168
An Investigation of the Effective Management of Communication for Successful Distributed Software Development Teams	<i>Stephanie Finn and Robert Benyon</i> <i>Rhodes University, Grahamstown, South Africa</i>	18	169-176
Interpretative IT Evaluation in the Public Sector: Two Steps Forward and one Backwards	<i>Elisabeth Frisk</i> <i>Department of Applied IT, Gothenburg University</i>	19	177-184
Reward Systems in the Post Digitization era: Possible Benefits and Risks	<i>Pontus Fryk</i> <i>Uppsala University, Sweden</i>	20	185-192
A Framework for Enterprise Resource Planning System Selection by Small and Medium Enterprises	<i>Neetu Ganapathy¹ and Javali Raju²</i> <i>¹SDM Institute for Management Development, Mysore, India</i> <i>²Kuvempu University Post Graduate Center, Davangere, India</i>	21	193-202
Evaluation of e-Government Implementation from a Social Perspective	<i>Kerstin Grundén</i> <i>Department for Economics and IT, University West, Trollhättan, Sweden</i>	22	203-210

Paper Title	Author(s)	Guide Page	Page No.
Bronze, Silver and Gold: Effective Membership Design in Customer Rewards Programs	<i>Anders Hederstierna and Henrik Sällberg School of Management, Blekinge Institute of Technology, Ronneby, Sweden</i>	23	211-208
Mobile Messaging has Significant Impact on Primary Health Care Professionals	<i>Inga Hunter and Richard Whiddett Massey University, Palmerston North, New Zealand</i>	24	219-226
Evaluating Electronic Financial Records Management in the Implementation of e-Government in Malaysia	<i>Nurussobah Hussin, Wan Satirah, and Mohd Nazir Ahmad Universiti Teknologi MARA, Shah Alam, Malaysia</i>	25	227-238
Adoption and Evaluation of Mobile Commerce in Chile	<i>Ranjan Kini Indiana University Northwest, Gary, USA</i>	26	239-252
Where is Information Ethics in Iranian Library and Information Science Publications and Services?	<i>Mortaza Kokabi School of Education and Psychology, Shaheed Chamran Univ., Ahwaz, Iran</i>	27	253-258
Improving Decision Making and Management With an Enterprise Resource Planning System: a Case Study	<i>Juha Kontio and Elina Kontio Turku University of Applied Sciences, Finland</i>	28	259-268
A Framework for Evaluating Compliance of Public Service Development Programs with Government Enterprise Architecture	<i>Katja Liimatainen, Jukka Heikkilä and Ville Seppänen Information Technology Research Institute, University of Jyväskylä, Finland</i>	29	269-276
A Drug Crime Data Mart to Support Publication on Demand	<i>Ronald Meijer¹, Jan van Dijk¹, Erik Leertouwer¹ and Sunil Choenni^{1,2} ¹Ministry of Justice WODC, Den Haag, The Netherlands ²Rotterdam University, Rotterdam, The Netherlands</i>	30	277-286
Evaluation of Management Information Systems from the Service Quality Perspective	<i>Omenogo Veronica Mejabi Univeristy of Ilorin, Nigeria</i>	31	287-294
A User Perspective on Usability of Information Systems	<i>Minna-Maarit Metsälä¹, Heidi Mikkola², Heikki Saastamoinen² ¹National Board of Taxes, Helsinki, Finland ²Jyväskylä University of Applied Sciences, Jyväskylä, Finland</i>	32	295-304
Creating the Theory for Conceptual Framework: Benchmarking ICT Supported Training Using the Online Course Design Maturity Model	<i>Peter Mkhize University of South Africa, Pretoria, South Africa</i>	33	305-314
The Impact of PMBoK® Tools, Techniques and Complementary Factors on Information Systems Project Success	<i>Flora Mpazanje, Irwin Brown and Kosheek Sewchurran University of Cape Town, South Africa</i>	34	315-324

Paper Title	Author(s)	Guide Page	Page No.
Modeling the Return of Information System Investments	<i>Emil Numminen School of Management, Blekinge Institute of Technology, Ronneby, Sweden</i>	35	325-334
A Quality-Based Real-Time Information Management System within a Medical Environment: The Case of Falls Assessment	<i>John O'Donoghue¹, John Herbert¹, David Sammon¹ and Kieran O'Connor² ¹University College Cork, Ireland ²Mercy University Hospital and the South Infirmary Victoria University Hospital, Cork, Ireland</i>	36	335-342
Information Overload in Industrial Enterprises - Results of an Empirical Investigation	<i>Annika Öhgren and Kurt Sandkuhl Jönköping University, Sweden</i>	37	343-350
Project Management Practice for Rural ICT Project Sustainability in Developing Countries	<i>Caroline Pade, Brenda Mallinson and Dave Sewry Rhodes University, Grahamstown, South Africa</i>	38	351-362
Acquiring Information Systems through Organisational Learning	<i>Torsti Rantapuska¹ and Outi Ihanainen² ¹Lahti University of Applied Sciences, Finland ²Odeco Ltd, Helsinki, Finland</i>	39	363-370
Data and Information Quality in Geriatric Medicine: The Patient Data Analysis Information System	<i>David Sammon¹, Kieran O'Connor² and John Leo¹ ¹University College Cork, Ireland ²Mercy University Hospital and the South Infirmary Victoria University Hospital, Cork, Ireland</i>	40	371-382
A Guideline for Virtual Team Managers: The Key to Effective Social Interaction and Communication	<i>Lara Schlenkrich and Christopher Upfold Rhodes University, Grahamstown, South Africa</i>	41	383-392
Windows to the Real World – A Comparison of IS Project Management Student Learning	<i>Elsje Scott¹, Kosheek Sewchurran¹ and Nata van der Merwe² ¹University of Cape Town, Cape Town, South Africa ²Cape Peninsula University of Technology, Cape Town, South Africa</i>	42	393-402
Organisation Personality and the Adoption of ICT: e-Commerce in the UK Construction Industry.	<i>Andy Sloane and Martin Jackson University of Wolverhampton UK</i>	433	403-410
Cross-Cultural Consumer Perspectives in 3G Mobile Services Adoption	<i>Lei Tang ESC Rennes School of Business, Rennes, France</i>	44	411-424
Towards an Agile IT Organisation: A Review of Prior Literature	<i>Tommi Tapanainen, Mikko Hallanoro, Johannes Päiväranta and Hannu Salmela Turku School of Economics, Finland</i>	45	425-432

Paper Title	Author(s)	Guide Page	Page No.
Critical Success Factors for Effective IT Leadership	<i>Natja von Urff Kaufeld, Vimbayi Chari and David Freeme Rhodes University, Grahamstown, South Africa</i>	46	433-442
Information Evaluation Empirical Investigations in Engineering Organizations	<i>Yuyang Zhao¹, L.C.M Tang², M. J. Darlington¹, S. A. Austin², and S.J. Culley¹</i> <i>¹Department of Mechanical Engineering, University of Bath, UK</i> <i>²Department of Civil and Building Engineering, Loughborough University, UK</i>	47	443-450

Preface

The 2nd European Conference on Information Management and Evaluation (ECIME) is hosted this year by Royal Holloway University of London (RHUL). The Conference Chair is David Barnes and the Co-Programme Chairs are Romano Dyerson and G. 'Hari' Harindranath, all from Royal Holloway, University of London.

ECIME aims to bring together individuals researching and working in the broad field of information management, including information technology evaluation. We hope that this year's conference will provide you with plenty of opportunities to share your expertise with colleagues from around the world.

This year's opening keynote address will be delivered by Professor Geoff Walsham, Judge Business School, University of Cambridge on the topic, "*ICTs and Global Working in a Non-Flat World*".

A second keynote address on day two will be delivered by Sir George Cox, author of the Cox Review, on "*The Changing Role and Significance of Innovation*".

To further enhance the conference experience, Professor Dan Remenyi from Trinity College Dublin will run a 'Knowledge 'Café', centred around the key lessons learnt in information management over the past few years and their implications.

ECIME 2008 received an initial submission of 108 abstracts. Of this only 47 papers have been accepted for these Conference Proceedings on the basis of a double blind, peer review process. These papers come from all parts of the world including Australia, Denmark, Finland, France, India, Iran, Ireland, Italy, Malaysia, The Netherlands, New Zealand, Nigeria, South Africa, Spain, Sweden, United Kingdom and the United States of America. So this year's ECIME is a truly international conference!

We wish you a most interesting conference.

Romano Dyerson and G. 'Hari' Harindranath
Co-Conference Chairs
September 2008

Conference Executive:

[Dr Frank Bannister](#) Trinity College, Dublin,
[Dr David Barnes](#), Royal Holloway, University of London, UK,
[Professor Egon Berghout](#), Groningen University, Netherlands,
[Dr Ann Brown](#), City University Business School, London,
[Marguerite Cronk](#), Harding University, USA,
[Dr Enrique Dans](#), Instituto de Empresa, Madrid, Spain,
[Dr Romano Dyerson](#), Royal Holloway, University of London, UK,
[Dr G Harindranath](#), Royal Holloway, University of London, UK
[Dr Matthew Hinton](#), Open University, UK
[Professor Matti Linna](#), University of Vaasa, Finland,
[Professor Harri Oinas-Kukkonen](#), University of Oulu, Finland,
[Professor Birger Rapp](#), University of Linköping, Sweden,
[Dr Dan Remenyi](#), Trinity College, Dublin,
[Professor Reima Suomi](#), Turku School of Economics and Business Administration, Finland,
[Dr Claudine Toffolon](#), Université du Littoral, Calais, France,

Conference Committee:

The conference programme committee consists of key people in the information systems community. The following people have confirmed their participation:

Maria, Alaranta (Turku Helsinki University of Technology TKK, Finland); Baptiste Alcalde (FOKUS Fraunhofer, Berlin, Germany); Hussein Al-Yaseen (Amman University, Jordan); Yalaho Anicet (University of Jyväskylä, Finland); Nurmi Antti (Helsinki School of Economics, Finland); Joan Ballantine (Queen's University Belfast, Northern Ireland, UK); Frank Bannister (Trinity College Dublin, Ireland); David Barnes (Royal Holloway, University of London, UK); Peter Bednar (Department of ISCA, Portsmouth University, UK); Egon Berghout (University of Groningen, Netherlands); Olav Bertelsen (University of Aarhus, Denmark); Milena Bobeva (Bournemouth University, Poole, UK); Ashley Braganza (Cranfield School of Management, UK); Carole Brooke (Lincoln Business School, University of Lincoln, UK); Ann Brown (CASS Business School, London, UK); Deborah Bunker (University of New South Wales, Australia); Carlos Caldeira (University of Evora, Portugal); Sven Carlsson (School of Economics and Management, Lund University, Sweden); Ewart Carson (City University, London, UK); Fergal Carton (University College Cork, Ireland); Walter Castelnovo (Università dell'Insubria, Como, Italy); Anna Cavallo (University of Rome, Sapienza, Italy); Yolande Chan (School of Business, Queens University, Kingston, Canada); Arijit Chatterjee (Dept. of Computer Engineering, VIT, Pune, India); Sunil Choenni (University of Twente and Ministry of Justice, Netherlands); Peter Clutterbuck (University of Queensland, Australia); Baggay Cox (Imperial College, London, UK); Marguerite Cronk (Harding University, Texas, USA); Renata Dameri (University of Genoa, Italy); Enrique Dans (Instituto de Empresa, Madrid, Spain); Paul Davies (University of Glamorgan, UK); Guillermo de Haro (Instituto de Empresa, Madrid, Spain); Francois Deltour (GET-ENST-Bretagne Engineering School, France); Dirk Deschoolmeester (Ghent University, Belgium); Eduardo Diniz (Escola de Administracao de Empresas de Sao Paulo, Fundacao Getulio Vargas, Brazil); Neil Doherty (Loughborough University Business School, UK); Romano Dyerson (Royal Holloway University, London, UK); Alea Fairchild (Vesalius College/Vrije Univ Brussels, Belgium); Ulrich Frank (University Duisburg-Essen, Germany); Karsten Gareis (Empirica Gesellschaft für Kommunikations- und Technologieforschung mbH, Bonn, Germany); Kevin Grant (Glasgow Caledonian University, UK); Ken Grant (Ryerson University, Toronto, Canada); Ginevra Gravili (Facolta Di Economia, Lecce, Italy); Paul Griffiths (The Birchman Group, Santiago, Chile); Kerstin Grundén (Trollhattan University, Sweden); Petri Hallikainen (Helsinki School of Economics, Finland); Hari Harindranath (Royal Holloway, University of London, UK); Elad Harison (University of Groningen, Netherlands); Ciara Heavin (University College Cork, Ireland); Jonas Hedman (Copenhagen Business School, Denmark); Matthew Hinton (Open University Business School, UK); Sherif Kamel (The American University in Cairo, Egypt); Ranjan Kini (Indiana University Northwest, Gary, USA); Juha Kontio (Turku University of Applied Sciences, Finland); Jussi Koskinen (University of Jyväskylä, Finland); Zuzana Kucerova (Institut National des Telecommunications, Evry, France); Roberta Lamb (University of Hawaii, Manoa, Hawaii); Przemysław Lech (University of Gdańsk, Poland); Matti Linna (University of Vaasa, Finland); Gus Liston (Irish Management Institute, Dublin, Ireland); Sam Lubbe (University of South Africa); Kirchner Lutz (University of Duisburg-Essen, Germany); John Lynch (Cavendish College, London, UK); Paolo Magrassi (Polytechnique of Milan, Italy); Steve Martin (University of East London, UK); John McAvoy (University College Cork, Ireland); Annette Mills (University of Canterbury, Christchurch, New Zealand); Maria Mitre (Universidad de Oviedo, Spain); Karen Neville (University

College Cork, Ireland); Harri Oinas-Kukkonen (University of Oulu, Finland); Tiago Oliveira (Universidade Nova de Lisboa, Portugal); Jean-Marie Orset (French national institute of telecommunications, France); Roslina Othman (International Islamic University Malaysia, Kuala Lumpur, Malaysia); Sevgi Özkan (Middle East Technical University, Ankara, Turkey); Thanos Papadopoulos (The University of Warwick, UK); Shaun Pather (Cape Peninsula University of Technology, South Africa); Elias Pimenidis (University of East London, UK); Zijad Pita (RMIT University, Melbourne, Australia); Mirja Pulkkinen (University of Jyväskylä, Finland); Nayem Rahman (Intel Corporation, Aloha, USA); Pedro Raposo (Universidade Nova Lisboa, Portugal); Birger Rapp (University of Linköping, Sweden); Hugo Rehesaar (NSW, Sydney, Australia); Dimitris Rigas (University of Bradford, UK); Narcyz Roztocki (State University of New York at New Paltz, USA); Heikki Saastamoinen (University of Jyväskylä, Finland); Hannu Salmela (Turku School of Economics and Business Administration, Finland); David Sammon (University College Cork, Ireland); Elsje Scott (University of Cape Town, Rondebosch, South Africa); Wesley Shu (National Central University, Tao-Yuan, Taiwan); A.J. Gilbert Silvius (Utrecht University of Professional Education, Netherlands); Mohini Singh (RMIT University, Melbourne, Australia); Seppo Sirkemaa (Turku School of Economics and Business Administration, Finland); Gregory Skulmoski (Zayed University, Abu Dhabi, United Arab Emirates); Riccardo Spinelli (Università Di Genova, Italy); Katarina Stanoevska (University of St Gallen, Switzerland); Jong Sung Sunwoo (Seoul Information Technology University, South Korea); Reima Suomi (Turku School of Economics and Business Administration, Finland); Jarmo Tähkäpää (Turku School of Economics and Business Administration, Finland); Claudine Toffolon (University of Lemans, France); Jan Vanthienen (K.U.Leuven, Belgium); Minhong Wang (The University of Hong Kong); Leslie Willcocks (London School of Economics, UK); Morris Williams (University of the West of England, Bristol, UK); Les Worrall (Wolverhampton Business School, UK); Lili Yang (Loughborough University, UK); Tuan Yu (University of Kent, Canterbury, UK); Xiaohui Zhao (Faculty of ICT, Swinburne University of Technology, Australia).

Biographies of Conference Chairs, Programme Chair and Keynote Speaker

Conference Chair



David Barnes is Senior Lecturer in Operations and Strategic Management at the School of Management, Royal Holloway, University of London. He has held lecturing posts with the Open University and Thames Valley University, and was a visiting Research Fellow at the University of Cambridge. He holds a BSc (Eng) from Imperial College London, a MBA from the Open University and a PhD from Staffordshire University. Prior to academia he worked in the process plant and building products industries, in engineering and line management positions. His research interests include the strategic management of operations; the impact of the Internet-based ICTs of e-business on operations management; performance management; and the management of SMEs. He has published articles in, amongst others, the *International Journal of Operations and Production Management*, *Journal of Manufacturing Technology Management*, *Knowledge and Process Management*, *Electronic Markets*, *Journal of Electronic Commerce in Organizations*, *International Journal of Electronic Healthcare*, *European Journal of Management* and the *International Journal of Small Business and Enterprise Development*

Programme Chairs

Romano Dyerson is currently a senior lecturer in strategy at the School of Management, Royal Holloway University of London and a former research fellow at the Centre for Business Strategy at London Business School. Trained as an economist, his research interests focus on the interplay of strategic and organisational change under conditions of technological innovation. He is particularly interested in managerial strategy and implementation. He has published widely in a number of journals including the *Journal of Management Studies* and *Organization Studies* and is a member of the Strategic Management Society and British Academy of Management.



Dr G. Harindranath is a Senior Lecturer in Information Systems and Director of the Distance Learning MBA in International Management at Royal Holloway, University of London. Hari holds a doctorate from the London School of Economics, and his research interests include information and communications technology use in SMEs, information infrastructure policy and e-government initiatives in transition economies, and ICT and economic development. Hari is an Associate

Editor of the *Journal of Global Information Management*, and serves on the editorial board of the *International Journal of Knowledge Management*. He has published in a range of international journals including *Decision Support Systems*, *European Journal of Information Systems*, *Human Relations*, *The Information Society*, and *Information Technology for Development*. Hari regularly serves on the programme committees of a range of major conferences in information systems. He has undertaken consultancy work for the United National Industrial Development Organisation and the Commonwealth Secretariat

Keynote Speakers

Geoff Walsham is a Professor of Management Studies (Information Systems) at Judge Business School, University of Cambridge. In addition to Cambridge, he has held academic posts at the University of Lancaster in the UK where he was Professor of Information Management, the University of Nairobi in Kenya, and Mindanao State University in the Philippines. His teaching and research is focused on the question: are we making a better world with information and communication technologies? He was one of the early pioneers of interpretive approaches to research on information systems. He is currently a Senior Editor of MIS Quarterly. His publications include 'Interpreting Information Systems in Organizations' (Wiley 1993), and 'Making a World of Difference: IT in a Global Context' (Wiley, 2001).



Sir George Cox is the past Chairman of the Design Council and the author of the Cox Review (on creativity in business) for the UK government. The 'Cox Review' produced a number of far-reaching recommendations, and attracted considerable international interest; since its publication, Sir George has spoken on its outcome in several countries around the world and addressed the World Economic Forum in Davos. Prior to his role with the Design Council, he was Director General of the Institute of Directors: the body that serves and represents the interests of some 55,000 UK business leaders. This followed a long career in IT, both as a senior corporate executive and as a highly successful entrepreneur, co-founding the consultancy and research group, Butler Cox. Sir George is currently a Board Member of NYSE-Euronext (the group comprising the New York Stock Exchange, the Paris, Amsterdam, Bruxelles and Lisbon Stock Exchanges, and the London Financial Futures and Options Exchange). He is also a Director of Shorts, the aerospace company, chairs the Board of Warwick Business School, serves on the Council of Warwick University, is President of the Royal College of Speech and Language Therapists. He is an Honorary Fellow of Queen Mary, University of London, has been awarded Honorary Doctorates from the Universities of Middlesex, Northumbria, De Montfort and Huddersfield, and has been a Visiting Professor at Royal Holloway. He is a Companion of the Royal Aeronautical Society and an Honorary Fellow of the Institute of Engineering Designers. Sir George was knighted for services to business in 2006.

Biographies of contributing authors (in alphabetical order)

Abrizah Abdullah is an Associate Professor at the Faculty of Computer Science and Information Technology University of Malaya Kuala Lumpur. She has authored many refereed journal articles and conference papers focusing on digital libraries for education and technologies in libraries. Being a former teacher librarian and a librarian, her major interest lies in developing library programmes that contribute to student learning. Her doctoral research completed in 2007 models Zachman Framework for Enterprise Architecture to elicit the requirements of stakeholders and design a collaborative digital library.

Ahmad Bakeri Abu Bakar graduated with a B. Sc degree from the University of Malaya, Malaysia, (1969), a Post Graduate Diploma in Librarianship from the University of New South Wales, Sydney, Australia (1970) and a Ph. D degree in Library and Information Studies from University of Wisconsin-Madison, USA (1988). Has served the National Library of Malaysia in various positions for 24 years. Joined the International Islamic University Malaysia as a lecturer for the past 16 years. Appointed as the Head, Department of Library and Information Science and later as the Deputy Dean in the Faculty of Information and Communication Technology during the last 12 years. Currently holding the post of a Professor at the Department of Library and Information Science. Has written a good number of articles in local and international refereed journals and has been active in presenting papers at international conferences and symposia globally. Areas of specialization are in library development, digital libraries and bibliometrics.

Frank Bannister is a senior lecturer in Information Systems and Head of the Department of Statistics and the Information Systems Laboratory at Trinity College, Dublin. His research interests include e-government, e-democracy, IT value/evaluation and questions of privacy and trust in on-line environments. He is editor of the Electronic Journal of e-Government, a fellow of Trinity College, a fellow of the Irish Computer Society and a Chartered Engineer.

Robert Benyon is a lecturer and PhD candidate in the Department of Information Systems at Rhodes University. His Masters thesis “An Investigation of a Framework for the Implementation of Service Management in the Information and Communication Technology Sector” and that of Rob Johnston, “A Model for the Development of Service Agreements in the Information and Communication Technology Sector” formed the basis for an itSMF book: Service Agreements – A Management Guide. His PhD thesis “An Investigation of Service Management Implementation in the Information and Communication Technology Sector” explores the difficulties associated with translating a Service Management strategy into action. This research focuses specifically on the problems associated with implementing strategies and the solutions to these problems.

Marco Bettiol was born 16th October 1974 in Treviso, Italy. He has a Ph.D in Business Sciences from the University of Udine. He is a researcher at the University of Padua from 2006 at the Faculty of Political Sciences –Department of Economical Sciences. He is a researcher of TeDIS Center (Technologies for Distributed Intelligence Systems) of Venice International University. In 2002 he was Visiting Scholar at SIMS (School of Information Management and Systems) of University of California, Berkeley. His research is focused on activities on two main areas: ICT and Creativity and Design. He analyzed the models of adoption of ICT by small and medium firms (SMEs) in Italy. Within ICT industry he focused on open source software and services. He also conducted research on the role of

Creativity and design for the competitiveness of Italian SMEs and Industrial districts. In particular he analyzed the elements that drive creativity within Italian industrial districts.

Jytte Brender's scientific focus is on the theoretical and practical aspects of Quality Management and Technology Assessment, the topic of her European Doctorate & PhD in Medical Informatics (1997). Presently, she is associate research professor at Aalborg University. Her research and interest range from constructive assessment (dynamic, self-reflective, purpose-driven and corrective evaluation), to holistic analysis of information flow, covering the breadth of organisational change and including the theoretical aspects of the quality of semantic aspects of medical knowledge.

Victor Bohorquez is a PhD student at IE Business School, Madrid, Spain. He received his MBA from this institution in 2005. His research interests focus on the implementation and use of enterprise systems, impact of information systems on organizations, blogs and blogosphere, e-Government, e-Democracy and other efforts to use information technologies in the public administration

Hanna Broberg is a master in Informatics/Computer Science from the Mid Sweden University (studies made at the University College of Kalmar) in 2002. She started her PhD studies in Information Systems Development at the University of Linköping, in 2005. Presented a licentiate thesis in 2006.

Carel de Beer is currently Extraordinary Professor in the Department of Information Science, University of Pretoria, South Africa. He graduated in Agriculture and Philosophy at the Universities of Pretoria and University of Paris X. Nanterre, France respectively. He taught Philosophy, Communications and Information Science at various universities, undertook research in all these fields and was involved in consultancy work in the fields of knowledge generation, invention and dissemination. To date he has published 6 books (as author), five books (as editor) and 81 scientific articles. He is currently engaged in research of the philosophy of information, technics and technology, and of knowledge invention, dissemination and utilization.

Birgitta Fagerström Kareld is a Senior lecturer and researcher in Informatics at School of Mathematics and Systems Engineering, Växjö University, Sweden. Birgitta gained her PhD in Computer and Systems Science 2003. Her research focus is on IT: evaluation, knowledge application, efficiency, utilization and IT-management. She is a member of the Swedish network "IT-evaluation in Health Care" and in the Swedish Evaluation Society. Birgitta is also a part of the research board in Computer Science at Växjö University.

David Freeme lectures Emerging Technologies, Accounting Information Systems, e-Business and IS Management for the Information Systems Department of Rhodes University in South Africa. Prior to academia he worked as the IS Director/Manager for several companies. His research interests include IS Management, eLearning and eBusiness Strategy.

Pontus Fryk is a Licentiate of Economics. The licentiate thesis examines how information technology (IT) affects productivity in health care. His current doctoral studies are based on theories related to organization, organizational change, management, and IT. Health care is consistently an important empirical source. Fryk's major interest is how the modern economy, together with digitization, affects organizations' conditions when striving for success.

Elisabeth Frisk is a PhD student at the Department of Applied IT, Gothenburg University. Her research interests include IT Evaluation, Benefit Management and Strategic IT Management. During 2005 and 2007 she was partly involved in a research project financed by the Swedish Rescue Services Agency (SRSA). The goal of the research project was to develop a new IT evaluation approach for the Fire Rescue Services in Sweden. She also has courses at the IT University in Gothenburg, concerning Evaluating IT Investments from a Management Perspective. Since 2008 her research is financed by MIT Research School in Sweden. She has previously worked as a business controller, a financial controller, a chartered accountant and a financial manager.

Neetu Ganapathy is an Assistant Professor in Business Communication and Information Technology at the SDM Institute for Management Development (SDM IMD), Mysore, India. Prior to joining SDM IMD, she worked as an Educator in the IT industry. She has also worked as a Consultant on projects in IT for Softgate Technologies, San Jose, California. Neetu has done her M.Sc in Computer Science from the University of Mysore and has also earned a Masters Diploma in Business Administration from Symbiosis Institute of Management Studies, Pune, India. Her research interests include Information Management Systems and their usage, Knowledge Management and E-learning. She has presented papers in both National and International conferences. Currently, she is pursuing her doctoral degree in Management, the topic of her study being Enterprise Resource Planning (ERP) system Implementation in Small and Medium Enterprises (SMEs).

Kerstin Grundén is senior lecturer in informatics at the West University of Sweden. She has also a background as a sociologist. She has made several evaluation studies of implementation of CSCW systems in health care organisations and the social insurance board of Sweden. She has also made several studies of web-based internal education within the national county administration. She has also made recent research studies within the field of eGovernment, with focus on social aspects of implementation.

Mikko Hallanoro (M.Sc.) is a project researcher for Information Systems Science at the Turku School of Economics. He holds a master's degree in economics and business administration from the Turku School of Economics with an emphasis on Information and Technology Management. His research interests comprise IT agility and Information Security.

Inga Hunter is a medical graduate of Trinity College, Dublin, works both as a senior lecturer for Massey University, New Zealand and part time in clinical medical practice, and has published extensively in health informatics, including patient-controlled access to EMRs, decision support in primary care and primary care informatics. Dr Hunter is/has been a member of several health information system reference groups and associations at local, regional and national levels.

Martin Jackson BSc(hons) MBA Phd. Martin has worked in the construction industry for 23 years, Lectured in Information Technology for 9 years, and is formally educated to doctorate level. During this time he has successfully assisted the introduction of electronic data interchange (EDI) into hundreds of organisations both large and small. He is currently a Senior lecturer at the University of Wolverhampton, and activity involved in industry as Head of IT developments and E-Commerce for the largest buying consortium for independent builders' merchants in the UK with a turnover of £0.5 billion (2007).

Ranjan Kini is a Professor of Information Systems at the School of Business, Indiana University Northwest, Gary, IN, USA. He is an active member of several professional organizations. Kini has published over fifty papers in refereed journals and conference proceedings. His current research interests are in Electronic and Mobile Commerce, Ethics in IT, and IT in Healthcare. He is a Senior Editor of ISM Journal.

Juha Kontio is Director of Education in the School of Telecommunication and e-Business at Turku University of Applied Sciences. His special field is data management and databases. His current research interests are in IS/IT education and in organizational issues of IS.

Katja Liimatainen is a project manager at the University of Jyväskylä. She works in the Finnish Enterprise Architecture Research (FEAR) project at the Information Technology Research Institute. She holds a M.Sc. in Economics (major Information Systems). Currently she is doing her Ph.D. Her research interests include e-government, government enterprise architecture and science studies of Information Systems.

Ronald Meijer (1960) graduated in science of public administration in 1986. Until 1991 he worked in universities, doing policy research (Amsterdam, Leiden). From 1992 on he is engaged in research at the Research and Documentation Centre (WODC) of the Ministry of Justice of the Netherlands. His interest is focused on (quantitative) information management, in the domain of criminal justice and civil- and administrative law.

Ome Mejabi works with the University of Ilorin, Nigeria, where she has just joined the faculty of the department of Information and Communication Science after many years as head of the university's MIS Unit. With a multi-disciplinary background and PhD in Management Science (2007), she has focused her attention on improved service quality within the context of IS/IT deployment. She is an alumna of Aston University (1982-1984) amongst others.

Emil Numminen is a Ph. D. student at the School of Management at Blekinge Institute of Technology. He is also enrolled to the Swedish Research School of Management and IT. He's Ph. D. project concerns valuation issues of information system investments.

John O'Donoghue is a researcher/lecturer in Business Information Systems at University College Cork. He received his B.Sc. in Computer Science (2001) and Research M.Sc. in Real-Time Systems and Simulation (2004) from the Department of Mathematics and Computing, Cork Institute of Technology. He received his PhD from the Department of Computer Science, University College Cork (2008). Main research areas include: Pervasive Data Management, Quality of Data, Health Informatics and Medical and Business based Information Systems.

Annika Öhgren, born 1979 in Jönköping is a PhD student in information engineering at School of Engineering, Jönköping. She got her bachelor degree at School of Engineering, Jönköping in 2001, and is since January 2004 enrolled at Linköping Technical University. Annika Öhgren does research within the area of information logistics. An example in this area is information overload, which nowadays is a common problem for people and organisations. Annika does research on how ontologies can be used to solve this overflow problem, and also tries to identify other problems among the enterprises and organisations in the region, and how these problems can be solved by the use of ontologies

Caroline Pade is a PhD research candidate in the Department of Information Systems at Rhodes University. Her current research is on the development and implementation of an evaluation framework for rural ICT projects in developing countries. Prior to her PhD, she completed her Masters at Rhodes University, where she investigated ICT project management techniques for sustainable ICT projects in rural development. She also acts as a baseline study collaborator between the Dwesa Living Lab project and the Ndlovu Living Lab project of the CSIR Meraka Institute. Her research interests include ICT for development, project management, requirements elicitation, and project evaluation.

Torsti Rantapuska, PhD., works as a principal lecturer in computing, in Lahti University of Applied Sciences. During his 20 years of teaching career, he has been responsible of the teaching for multiple bachelor level IT programs. The primary interest of research is knowledge management. His dissertation in 2002 discussed the motivation structure of end-user application developers in organizational learning.

Dan Remenyi is the Academic Advisor for ACI. Dan holds various academic positions, including Visiting Professor in Information Systems Management at the School of Systems and Data Studies at Trinity College, Dublin, Associate member of Faculty at Henley Management College in the UK and Visiting Professor at the Cape and Peninsular University of Technology in South Africa. He is responsible for overseeing the quality and academic integrity of the Conferences.

Henrik Sällberg Tech. Licentiate from Linköping University. PhD-student in Industrial Management at Blekinge Institute of Technology and associated to the Swedish Research School "Management and IT". PhD-project in the field of valuation of customer rewards programs. Also teaches courses in strategy, e-commerce and investment valuation.

David Sammon is a researcher/lecturer in Business Information Systems at University College Cork, Ireland. David holds a PhD from the National University of Ireland (Cork). His current research interests focus on sense-making, decision-making, organisational experiences with Enterprise-Wide Systems implementation, and medical information management & informatics. He has presented his research at major international conferences in Europe and in the United States and has published in international journals including: Information Systems Journal, DATABASE, Journal of Decision Systems, and Journal of Enterprise Information Management.

Heikki Saastamoinen, born in 1968, is a vice rector of Jyväskylä University of Applied Sciences, Finland, and former full professor of information system management and the dean of Faculty of Information technology of University of Jyväskylä. His career includes long full-time periods on high industrial managerial positions. Also his academic career has been mostly filled with administrative issues while exception handling and information systems management have remained his major research interest over the years regardless of his position.

Wan Satirah WMS is a Senior Lecturer in Faculty of Information Management, Universiti Teknologi MARA, Malaysia. She graduated from International Islamic University Malaysia with a double degree in Law and Syariah, and was called to the BAR in 2002. After completing her Master degree in Information Management in Universiti Teknologi MARA, she has opted to become a full time academician specializing in Legal Records Management. She has been exposed to various kinds of papers during the setting of the Malaysian e-governmental projects.

Elsje Scott is a Senior Lecturer at the Department of Information Systems, University of Cape Town. Her main research interest is systems development group projects which include knowledge areas like project management, with the emphasis on developing project practitioners, people management and software engineering. The research is underpinned by theories and models for cognition, learning and change. Specific focus areas are software testing, object-oriented programming concepts, assessment strategies and software standards.

Ton Spil is assistant Professor at the Department of Information Systems & Change Management of the University of Twente, the Netherlands. He received a MSc degree in Computer Science and a PhD in Information Systems Science from the University of Twente. He has been researching inter-organizational cooperation on IS planning, E-health strategies and health care IS for many years

Lei Tang is originally Chinese, PHD in management science from an accredited French public institution – Institut National des Télécommunications. Currently, she works as assistant professor in marketing & strategy department of ESC Rennes School of Business in France. Her research interests are focused on mobile business from an international comparative perspective – consumer behaviour from its technological, intercultural, anthropological, and sociological aspect – that is mostly business-based. Main topics are 3G adoption, mobile advertising, mobile payment, MVNO, etc. She has undertaken consultancy work for many French companies.

Tommi Tapanainen (M.Sc.) is project manager in the Information Systems Science department of the Turku School of Economics. He graduated from the University of Turku with Master's degree in Information Systems Science in 2004 and has worked in a consulting company before the current position. In 2006-2007, he took an 8-month language course in Japan.

Chris Upfold is currently a lecturer in the Department of Information Systems at Rhodes University, South Africa. His areas of interest and research are Information Security in SME's, Radio Frequency Identification (RFID), Project Management and Corporate Communications. A fairly newcomer to academia, he has a background in systems integration and Computer Aided Design (CAD).

Tijs van den Broek is graduate student in Information Technology & Management at the Department of Information Systems & Change Management of the University of Twente, the Netherlands. In addition, he received a MSc degree in Cognitive Psychology from the same university, focusing on how management experts solve ill-defined problems. His current research interest is inter-organizational cooperation on IS planning.

Yuyang Zhao is Research Officer within the IdMRC, University of Bath. He started his research career in 2001 in the University of Manchester, UK and focused on the engineering information retrieval, information flow analysis and modeling, knowledge representation, document control, and specially the validation process for industry. He is now working on developing measures of information value and approaches to the support of decision-making on information retention.

The Application of Zachman Framework in Architecting a Collaborative Digital Library

Abrizah Abdullah and A.N. Zainab

University of Malaya, Kuala Lumpur, Malaysia

Abstract: This paper illustrates the possibility of using an Enterprise Architecture as an instrument for requirements analysis and evaluation in digital library development. The collaborative digital library has been conceived to support secondary school students information needs in conducting school-based projects. The researchers examine the needs of digital library stakeholders and how a collaborative digital library might be designed to meet these needs. Zachman Framework for Enterprise Architecture was used as the approach to investigate the user requirements and define the digital library organisation, resources, processes, technology and information flows. In applying Zachman Framework and to holistically control the study, the case study approach and multiple data collection techniques were adopted. Information obtained from these data gathering techniques helps to populate the requirements of the top three layers (18 cells) in Zachman Framework to ascertain the design details of the digital library's scope, business and system model. The framework abstracts the characteristics and features of the digital library based on six dimensions, Motivation, Data, People, Process, Place and Time, and explains their structures and processes from the perspectives of the planner, owner and designer of the digital library. This paper provides the detailed mapping between the first three layers of the Zachman cells and the dimensions utilized in formulating the requirements and design of the collaborative digital library. It consists of the various elements that a digital library should provide for as delineated in several frameworks being conceptualized and described in digital library research since 1995 for the design, development, and evaluation of digital libraries. Instead of listing the elements as requirements, the researchers embed the requirement process and development in an architectural framework, thus presenting it more systematically taking into account the six digital library dimensions mentioned earlier

Keywords: Collaborative digital libraries; Digital library for education; Zachman Framework for Enterprise Architecture; User requirement elicitation

Evaluation of use of online resources in an Islamic university education

Ahmad Bakeri Abu Bakar¹ and Mohammad Khaled Isa Al-Shboul²

¹International Islamic University, Kuala Lumpur, Malaysia

²University of Malaya, Kuala Lumpur, Malaysia

Abstract: The study examines the use and perceived importance of online resources, including Internet, amongst the academics in an Islamic university environment. It was conducted at the main library, Dar Al Hikmah of the International Islamic University Malaysia among the faculty members of two faculties, namely the Faculty of Islamic Revealed Knowledge and Human Sciences and Faculty of Information and Communication Technology. It is pertinent to note that samples drawn for this study were chosen on the basis of their diverse backgrounds and expertise reflecting the dimension of religiosity, humanistic and technology. As religiosity is found to have a significant negative relation with Internet use while technology competencies have a positive relation with Internet use it is expected that these trends are manifested in the findings of the study.

About 270 questionnaires were distributed to the academic staff from the Kulliyah of Islamic Revealed Knowledge (IRK) and Human Sciences (HS) and the Kulliyah of Information and Communication Technology (KICT). There were 136 responses received from the academic staff members.

The results showed that religiosity, humanistic and technology competencies are not correlated with use of online resources. And, the most popular location for accessing the online resources was from the offices of faculty members and OPAC and online databases were the most regularly used resources as compared to other resource types. The common problem facing academics was the slow speed which they encountered while navigating the Internet during their working hours and therefore, searching for an electronic resource became time consuming.

Keywords: Online resources, user studies, internet, Malaysia, university libraries

Multitasking: The Uncertain Impact of Technology on Knowledge Workers and Managers

Frank Bannister and Dan Remenyi
Trinity College, Dublin

Abstract: While the productivity paradox has now been officially pronounced dead, the argument and evidence for this assertion is at a macro economic level. What has been less closely examined is the micro economic impact of recent developments in ICT on the productivity of office and knowledge workers. There is an assumption, readily seen in many advertisements for mobile technology, that multi-tasking, WiFi connected laptops, Blackberrys, smart phones and so on are good for business and make people more effective and productive. This may be true some of the time and there is some (albeit limited) research which supports claims that these technologies increase productivity. However there are also emerging concerns that, in certain environments, these technologies may actually reduce productivity in both the short and the long term. This paper examines this problem and research to date and proposes a framework for further investigation of this phenomenon.

Keywords: multitasking, productivity, office workers, evaluation

The Evaluation of the Impact of Internet-Based Technologies on International Service Delivery

Clara Benevolo and Riccardo Spinelli
University of Genoa, Italy

Abstract: In service management studies, internationalisation plays a crucial role due to the increasing importance of international service trade in global economy; trade statistics show that the volume of services traded to foreign markets is constantly increasing and represents a more and more relevant share of the international trade flows. Nevertheless, services, as opposed to goods, present specific features, which strongly influence and limit both the possibility for service firms to internationalise and the entry modes to foreign markets they can adopt. In this context, the use of ICT represents a critical innovation, which may give a decisive contribution to the internationalisation of service firms.

In this paper an analysis is proposed of how firms can use Internet-based technologies to deliver their services on-line to foreign markets or to support an off-line international service delivery. The approach we adopt combines service management theories, studies on international service tradability and on the use of ICT in firms. In doing so, we will be looking at “what” is being traded and “how” from an original perspective. Indeed, many authors tend to focus on the international trade of services without differentiating what is relevant for service trade from what refers to service delivery. On the contrary, in our view the delivery of the service – not its sale – is the main object of the internationalisation, and therefore we specifically investigate the alternative ways of delivery a firm can choose to supply its services to foreign markets. This leads to a specific focus on that part of the production and delivery system where the service becomes available to the recipient and is actually consumed.

We propose a classification of service delivery modes based on two strategic dimensions – the characteristics of the service delivery system and the extent of the interaction between producer and consumer in service delivery – which can be represented by a two-by-two matrix.

We first use that matrix to identify internationalisation forms of traditional service firms, according to the characteristics both of the services they offer and the delivery systems they implement. Secondly, we evaluate how Internet-based technologies change this framework, making it possible for firms to perform previously infeasible internationalisation processes or to adopt new entry modes to foreign markets.

Keywords: Service management, international service delivery, Internet-based technologies, ICT

Networks, Technologies and Globalisation Processes in SMEs. The Italian Case

Marco Bettiol¹, Maria Chiarvesio² and Eleonora Di Maria¹

¹Department of Economics and Management, University of Padova, Italy

²Department of Economics, University of Udine, Italy

Abstract: Network technologies supported large corporations in improving the integration of operations, flexibility as well as the management of information flows at distance. Especially before the blown up of the new economy “bubble” much of the scientific literature pointed out the potential benefits of ICT use also for small and medium firms (SMEs) in order to keep the pace of the globalisation and gather new business opportunities. Our eight-year-research on Italian SMEs of industrial districts highlighted a specific SMEs’ model of adoption of new technologies. Industrial Districts are a specific trait of the Italian industrial system; they are networks of SMEs operating within the same territory and basing their competitiveness on flexibility and product customisation. Recent trends in internationalisation processes increased the attention for network technologies in industrial districts: while multinationals in Italy and worldwide demonstrated relevant attention for ICT, essential in order to manage value chains at a global level, Italian district firms show a different model of adoption: they invested in new technologies *selectively* and *incrementally*. *Selectively* in the sense that firms cherry pick the technological solutions more suitable to their business models and do not buy ICT *per se*. *Incrementally* in the sense that firms adopted ICT piece by piece without important investments upfront but distributing the effort over several years. Nevertheless, the low level of ICT investments in SMEs and the selection of technology solutions (web vs. ERP for example) are not always symptomatic of a poor strategic vision. Instead, the relation between ICT, organisation and business strategy is more complex for SMEs. The paper presents and discusses the strategic use of digital technologies in a sample of more than 400 SMEs belonging to the most important Italian industrial districts operating in fashion, mechanics and home-furniture industries. The model of adoption of network technologies is discussed with regard to the overall business model (and its evolutions) of SMEs in order to evaluate its coherence or its weaknesses. Data discussed refer to a survey conducted in 2006, but they are compared with surveys of previous years; some comparisons with SMEs not belonging to industrial districts will be also presented.

Keywords: SMEs, industrial districts, internationalisation, network technologies

Research Methods for IT/IS Systems' Evaluation, a Critical Appraisal

Jytte Brender

Aalborg University and Virtual Centre for Health Informatics, Denmark

Abstract: *Background:* A major review of bias in the evaluation of IT-based solutions provided a basis for analysing pitfalls that are inherent and result in a biased outcome for action-case research concerning constructive evaluation (also called formative evaluation); constructive evaluation is the act of providing the basis for decision-making at some specific decision-making context. *Objective:* To provide an overview and discuss some of the methodological dangers in action-case research in order to identify task conditions under which undesirable behaviours could arise, and to characterise the impact and identify potential ways to avoid such dangers. *Method:* The basis is an existing literature review on bias (i.e. pitfalls and perils that lead to bias). The method applied here has been to use this review as the starting point and to extend its description in order to analyse the meaning and implication of relevant biases within the particular perspective of action-case research in evaluation of IT systems. *Results:* Several types of bias have been identified, such as:

Tacit knowledge and Post-rationalisation: Tacit knowledge is the basic cause of post-rationalisation, at which external pressure to provide answers may lead to skewed answers. Intension to treat: This bias is inherent in a decision-making process dealing with situations deviating from the prescribed mode of action, e.g. users inventing shortcuts while assessing a system. Insight bias: There is always a risk of bias when dealing with non-blinded events. The observer is biased by the understanding already achieved. Prior insight enables the observer to compensate for potential problems with the clarity or construct validity of the descriptions/method, and/or to overlook important observations of a type that are not prior known or anticipated. Circular inference: Circular inference arises when a researcher develops a method, a framework or a technique dedicated to a specific (population of) case(s) and applies it to the very same case(s) for verification purposes. Hypothesis fixation characterises the situation where an evaluator (or a developer) persists on pursuing/applying a specific hypothesis, for instance a method (evaluation or development method/methodology) or a tool/system, and gradually refines it in successive studies without really achieving a success, but hoping for this in the next application. Local minima: In large development or implementation projects there may be a succession of decision-making points. A problem may arise when the basis for decision-making at a given situation points at a solution that constitutes a local minimum – that is, appears optimal within the specific context, but may not be in a larger perspective. *Conclusion:* A number of bias were discussed that may influence the validity, reliability, and/or generalisability of action-case research. They are of particular concern to action-case research in constructive evaluation during systems development or implementation projects. While aiming at identifying conditions under which undesirable behaviours could arise, the impact and potential ways to avoid such dangers are described; the intention being that awareness of sources of bias is of value to researchers/evaluators engaged within systems development or implementation.

Keywords: Action case research, constructive evaluation; methodology; review

Evaluating the Problem Solving, Preserving and Causing Effects of a Healthcare Information System in a Hospital Clinic

Hanna Broberg
University of Kalmar, Sweden

Abstract: An Information System can be seen as a part of an organisation and its implementation as an organisational change. The causal capacity between people, organisation and IS can be described in three different perspectives of agency – technical determinism, social determinism and the emergent perspective. The IS perspective has impacts on the strategy and method for developing and evaluating the IS. It has been advocated that an IS can solve problems within an organisation, but will also always have some unpredicted and unplanned effects. These arguments are in favour of an emergent perspective and call for a further development of the information system after the implementation. Post implementation evaluation of Information Systems in organisations then become an important part of development-in-use. The paper presents some results from an evaluation case study of a Health Information System at a hospital clinic. This evaluation study was performed with a method that was a combination of Actability Design and Evaluation and Expansive Visibilisation. The results of the evaluation study of the Healthcare Information System at the hospital clinic was that it had solved some of the problems that the organisation had, but it had also only preserved some problems and caused some new problems. The results indicate that the HIS had both planned results but also unpredicted effects in the organisation. There was a need to further develop both the functionality of the information system and the working routines of the organisation. The evaluation results indicate the importance of adopting an emergent agency perspective and conducting post implementation evaluations and further development-in-use of Information Systems.

Keywords: Post implementation evaluation, agency, information system, healthcare

Contextual Factors Influencing Strategic Information Systems Planning in a Network: Evaluation of Two Inter-Municipality Projects in Finland

Tijs van den Broek¹, Ton Spil¹, Timo Kestilä², Michel Ehrenhard¹ and Hannu Salmela²

¹University of Twente, Enschede, the Netherlands

²Turku School of Economics, Finland

Abstract: Strategic Information Systems Planning (SISP) is mostly studied within organizations. Recently, preliminary attempts are made to study SISP on network level. As network studies up to now focus on the planning process and its outcome, we choose to study contextual factors that give input to the process and outcome of networked SISP.

We aim to explore how different contexts may lead to different SISP approaches among networks. By analyzing the transcriptions of our audio taped interviews we derive factors that influence SISP in a network. SISP literature has been systematically reviewed to derive SISP factors on the organizational level. These factors were then combined with seminal work in the field of network literature. From these literatures we derive four major contextual factors of networked SISP: 1) the external environment, 2) the (inter)-organizational context, 3) the nature of the planned inter-organizational systems (IOS) and 4) resources committed to the SISP process.

Two cases were conducted in Helsinki's metropolitan area to empirically explore factors found in the literature. The first case regarded the planning of an online identification and payment system that supports the public services of municipalities. The formulation of an IT strategy for Helsinki's metropolitan area served as a second case study. Key stakeholders of both networks were interviewed to evaluate the context, process and the effectiveness. These cases illustrate the importance of the context of planning and explain how governmental context influences the way SISP is executed in networks. Pressure from national policy for merging municipalities, increasing importance of IOS in the light of E-government and pre-existing inter-organizational structures are major factors that came forward in the cases.

Both researchers and practitioners in the field of inter-agency collaboration should take contextual factors, such as the complexity or the nature of the IOS, in account.

Keywords: Strategic information systems planning, networks, inter-organizational systems, inter-municipality cooperation, e-government

A Case Study of SME Web Application Development via Agile Methods

Peter Clutterbuck, Terry Rowlands and Owen Seamons
University of Queensland, Brisbane, Australia

Abstract: The development of Web applications is an important focus of the modern information enabled organization – whether the Web application development is in-house, outsourced, or purchased as ‘*commercial-off-the-shelf*’ (COTS) software. Traditionally Web application development has been delivered via the dominant waterfall system. The waterfall system relies upon well-defined governance structures, linear phases, gating, and extensive reporting and sign-off documentation. An increasing number of development stakeholders criticise the waterfall system for web application development. The criticisms include a disproportionate focus on governance and process at the direct expense of flexibility and, most importantly, reduced productivity. One consequence of these criticisms is the increasing adoption of Web application development via agile-system methods. This agile-system approach centres upon smaller design teams, fewer development phases, and shorter development time tables.

This case study examines the implementation of the agile-system approach as used by a Small-to-Medium Enterprise (SME) software developer. The case study data collection involves interviews and observations across three different SME sources: project managers, Web application programmers, and customers. The case study analysis synthesises the experiences of these managers, programmers and customers to produce an overall assessment of the usefulness of Web application delivery via agile-system methods. The major conclusions from the case study are that a ‘*default*’ agile-system approach may be tailored or fine-tuned to fit an individual developer’s software process. This tailoring is based upon the developer’s assessment of best practice from the overall agile-system methodology. This tailoring, however, delivers a software development process that exhibits efficiencies and risks. The efficiencies include a more fulfilling role for each development team member, greater richness and continuity in design, a simple management system that delivers key information on a timely basis to all stake-holders, and increased business and technical quality within the delivered application. The risks pivot upon experience levels, skills levels, and the quality of interaction within – and between - both the development team and customer organization.

Keywords: Project management, Information systems management, Methodology, Agile-system

Implicit Personal Contracts and Actor-Group Consensus in CRM Implementations – Evidence for Their Role in Influencing Success

Ian Corner¹ and Matthew Hinton²

¹Barston Consultancy Ltd, Appleby Magna, UK

²Business School, The Open University, Milton Keynes, UK

Abstract: Customer Relationship Management (CRM) systems have been seen to offer significant advantages to organisations seeking a more professional approach to the acquisition and retention of customers. The majority of early implementations have been reported as failures. There is substantial evidence to suggest that the high failure rate reflects excessive reliance on technology alone to improve performance and that insufficient attention has been paid to organisational and behaviour-related issues. This paper considers evidence from two longitudinal case studies in medium-sized companies that operate in the business-to-business sector. The first investigates the operational risks to CRM implementations and subsequently a three-dimensional model is developed to illustrate how the cognitive schemas and values of the actors in the implementation process may influence the emergence of risks to the implementation and subsequent business performance. The second case study is based on video recordings from the implementation process to study the behaviours of the actors and validate the model. Evidence emerges that although project management and resource allocation was poor the implementation was, nonetheless, considered successful. The paradox of success despite functional inadequacy is explored further to reveal evidence of shared motivation to make the project successful and flexibility in the relationships between the main groups of actors. Analysis of the data reveals implicit contracts between the main groups of actors within the consensus of a will to succeed. These behaviours are described as ‘actor-set consensus’ and ‘flexible contracting’, which are combined as constructs with the three-dimensional model of cognitive schemas and presented as a systems implementation meso-theory. The theory is seen to sit between generalised multiple factor theories of systems implementation and micro-level single factor research and to offer constructs that mediate between the two polarised approaches. The work is seen to have practical application through the provision of insights for the development of management tools for encouraging actor-set consensus and flexible contracting. Elements of flexible contracting are explored with this objective in mind.

Keywords: CRM; implementation; personal contracts; consensus

ICT Adoption by ICT SMEs in the UK West Midlands – the Forgotten ICT Adopters

**Pat Costello, Andy Sloane and Caroline Chibelushi
University of Wolverhampton, West Midlands, UK**

Abstract: The West Midlands (WM) ICT industry is one of ten target sectors identified by the regional development agency, Advantage West Midlands (AWM), for clustering development. AWM is investing resources to fund projects that will meet the needs of industry in encouraging development of clustering activity and the growth of the ICT Cluster, including helping companies to adopt new technologies. During 2007 research was conducted and reported which involved over 200 ICT SMEs in the West Midlands (WM) UK which indicated that common misconceptions are as endemic in ICT companies as in any other sector. This research is unique as it focuses on one sector only and it is the sector that is often assumed not to need intervention to support ICT adoption. Many National Government projects focus on adoption at a level intended for other sectors. This leads to a dichotomy as Government intervention can assume a certain level of skills and knowledge in ICT companies, whilst ICT companies often do not recognise their need in this area.

This research shows that in order to overcome the challenges of ICT adoption, in this and other sectors, it is necessary to start by empowering the ICT industry with a sustainable means of adopting new technologies. This will enable the SMEs in the ICT industry to support SMEs in other sectors and other organisations that use ICT but for whom ICT is not their core business. However, in order to achieve this, it is necessary to identify the factors which hinder the smooth adoption of new technologies in the ICT industry.

This paper concentrates on the issues relating to the knowledge and level of education of the owner/manager. Whilst the owner-manager has a major influence on ICT adoption in other industry sectors; in the ICT industry, where ICT adoption and diversification are necessary at an alarming speed, the implications of this influence are not only on the SME itself but are far wider-reaching. Consequently, this research has identified specific educational concerns and suggests possible solutions to overcoming them which can afford ICT SMEs with a sustainable means to adopt new technologies that are not only necessary for their competitive advantage but that of other sectors too.

Keywords: SME, adoption, education, owner- manager, ICT

Using an Enterprise Information Management System to Enhance IT Compliance and Information Value

Renata Paola Dameri

Department of Business Administration, University of Genova, Italy

Abstract: During the latest years, IT governance has become more and more important, for several reasons:

- the increasing pervasivity of IT in business organization, management and administration requires a veritable governance activity, to strategically orient decision making about IT investments and management;
- the role of information systems in administrative data processing requires a special focus on information security and process control;
- the need to keep down IT budget forces to balance IT capital expenditure and operational expenditure and to increase IT systems productivity and information value.

More of the attention on IT Governance is captured by compliance, owing to the recent financial scandals and the severe rules regarding information systems audit and control. Companies need to comply with these rules, but it requires important investments, considered not strategic but only necessary (Remenyi et. Al. 2000). However, companies should analyse the compliance requirements and to implement an IT governance system, not only to comply with legal rules, but also to improve the strategic alignment between IT and business and to optimise value creation by IT compliance investments (Ventrakaman and Henderson 1996, Van Grembergen 2003).

Therefore, IT governance should have a complex set of goals, such as:

- to standardize and unify processes;
- to align information delivery with business needs;
- to control IT initiatives cost;
- to comply with external requirements.

These goals are often opposed and difficult to pursue, because:

- they regard cross functional enterprise systems;
- they are strictly linked;
- they concern large databases and applications, very difficult to control.

To optimise IT compliance it is useful to define a roadmap to IT compliance, orienting these activity to value creation, by realising scale, scope and experience economies in IT compliance activities. The accomplishment of this roadmap is the automation of IT compliance processes, using Governance, Risk and Compliance (GRC) standard solutions or developing in house systems, such as Enterprise Information Management (EIM) systems, to automatically manage processes, data and information security, access control, system performance and to data usability. In this paper, IT compliance topic is introduced, to define how to orient IT compliance to value creation; GRC systems and EIM systems are described, with their different cost and benefits for companies. Aim of the paper is to define how to develop compliance automated systems, to save money and enhance information integration and value. Observations and conclusions derive from practical experience of the author, participating to a project of EIM implementation in a major Italian company.

Keywords: IT governance, IT management, IT compliance, knowledge management

Can ICT Enhance Value-Driven Health Care?

Martin D’Cruz

Turku School of Economics, Finland, and Indiana University, Indiana, USA

Abstract: The current U.S. Health Care system is fragmented with multiple stakeholders (Government, Health Plans, Employers, Providers, Physicians and Consumers) vying for limited dollars. Broad-scale adoption of Information and Communication Technology (ICT) is lagging despite considerable evidence of its potentially positive impact on quality of care and patient safety. Value-Driven Health Care focuses on four cornerstones:

Embracing ICT

Measuring and publishing quality data

Measuring and publishing price transparency

Promoting quality and efficiency in health care.

U.S. health care ICT employs standardized methods that define indicators for measuring health care quality and combines it with pricing information. Having this synthesis readily available in an understandable format empowers consumers. Creating positive incentives that will motivate consumers to make better decisions about their health care will be an integral component. Theoretically, informed consumers are better able to seek the best available care at a competitive price. When enough consumers do this, the entire health care system is stimulated to provide better quality and efficiency as the standard. High quality, efficient health care promotes savings in terms of both individual lives and clinical resources on an ongoing basis. Each stakeholder may have its own internal structure for gathering and sharing information, but currently nothing ties those isolated entities into an interoperable national system. It is a national system that will be necessary to make information easily shared and compared. Although promoting ICT alone is not going to cure all that ails healthcare, it is an important step toward transformation of the U.S. health care system. Quality measurement should be based on indicators that are developed through consensus-based processes involving all stakeholders. This process has already begun. Value-driven health care will have significant impact on improving quality and accessibility of health care while controlling the price of health spending using ICT. The paper outlines a collaborative framework where stakeholders play a pivotal role in delivering Value-Driven Health Care by leveraging ICT.

Keywords: Information and communications technology (ICT), value-driven health care, price transparency, interoperable, quality measurement

The Comprehensive Challenges to the Contemporary Knowledge Worker

Carel De Beer

University of Pretoria, Pretoria, South Africa

Abstract: The figure of the knowledge worker is a central figure in the contemporary world of information and knowledge societies and information and knowledge management activities. This world poses enormously complex challenges to everybody involved in knowledge and information contexts. Knowledge workers, in order to cope with the demands they are confronted with, need to develop an understanding of this world as well as of the nature of the contributions they may be able to make in order for them to be able to participate actively and inventively.

Knowledge and information culture should be developed; insightful views about the distinction between knowledge and information should be articulated; the need for knowledge and information should be made explicit in a convincing way; the interdisciplinary nature of contemporary conceptions of knowledge should be embraced; a clear view on the image of the human person (as creator, disseminator and user of know/info) should be articulated and not simply taken for granted.

The complexity of the demands, the multiple ways in which knowledge should be received and handled, as well as the image of the human person in terms of which such figure should be articulated, call for a clear definition/description of who the figure/person knowledge worker should be understood to be or to become or should be like.

Keywords: Knowledge worker, troubadour of knowledge, human focus, knowledge culture, inventiveness, noetic capacity

National Survey of SMEs' Use of IT in Four Sectors

Romano Dyerson, G. Harindranath, David Barnes
Royal Holloway University of London, UK

Abstract: This paper examines the adoption and use of information and communication technology (ICT) in small and medium sized enterprises (SMEs) across four sectors in the UK. In the paper we report on a survey that explores the factors facilitating or hampering the successful adoption and use of ICT by SMEs. We find that SMEs are generally satisfied with their investments in ICT but that they are concerned about the cost of such investments and are uncertain about the business benefits. Much of the investment in ICT is directed at meeting bottom line issues of cost and productivity but little use is made of potential strategic applications. A particular case in point is the diffusion of ecommerce in which firms report increased consumer interest but there is little evidence in the survey to suggest that interest is being actively managed by SMEs. One concern that emerges from the survey is the SMEs' perceived dependency upon consultants. SMEs appear to be encountering knowledge/competency gaps related to ICT. They may be too small to be able to employ a dedicated ICT expert and lack the experience to have confidence in its reliability of consultancy advice. They often have limited experience in selecting, implementing and evaluating suggested ICT solutions. To help correct this gap in the provision of services, the government has tried to provide support with mixed success. Certainly, the UK government has had a strong interest in helping and supporting the SME sector. However, State sponsored solutions to meet this competency gap appear to be failing with little awareness or take up of such solutions by the SMEs that we surveyed. Something that remains unclear is whether this failure by SMEs to avail themselves of advice and guidance made available by the State reflects the quality of solutions offered or a more basic lack of awareness by SMEs.

Keywords: SMEs, ICT, Technology adoption, ecommerce

Analyzing the Topics Discussed in CEO Blogs: A Content Analysis Approach

Jose Esteves and Víctor Bohórquez
IE Business School, Madrid, Spain

Abstract: More than 100,000 new blogs are created each day. The Internet search engine, Technorati, now indexes more the 120 million blogs. Transparent, highly visible, and easy to use, blogs are also an increasingly popular communication tool for executives and organizations of all shapes and sizes. A survey of CEOs by the communications company, Burson-Marsteller, found that the majority think blogs are useful for internal communications and nearly half say they are effective for external audiences (Sharma 2005).

Despite the proliferation of articles, white papers, books and blogs promoting blogging as the 'next big thing', there is a lack of research studies investigating blogs as a business tool. Moreover, very little academic attention has been paid to the content of corporate blogs and to the discussed topics in them. Therefore, the main goal of this content analysis study is to analyze the topics and issues that CEOs discuss in their blogs as a special case of corporate blogging. This research study analyzes 82 U.S. CEO Blogs from different industries. Based on the analysis of these U.S. CEO blogs, we have identified three main stages in corporate blogging usage: Technology, Prescriptive and Customer-Relationship. The findings suggest an important shift from a technology focus to a customer-relationship focus. Thus, it seems that more and more blogs are being used as communication channels among the different business stakeholders.

Keywords: CEO; blogs; content analysis; semantic network

Evaluate IT Where Effects Occur and get Directives for Managerial Action

Birgitta Fagerström Kareld

**School of Mathematics and Systems Engineering, Växjö University,
Sweden**

Abstract: Concepts for evaluation of information technology (IT)/information system (IS) investments are often designed to investigate one single application. The concept presented in this article has an opposite approach. The focus of interest is on individuals and their daily operations. Individually experienced benefit from a current set of computer based systems are investigated and analyzed. The aim of the study is to describe and gain understanding about IT-systems contribution to promote individual performance and also to gain knowledge useful for managerial action.

An evaluation model for assessment and analysis of use and benefits of IT was developed and used in three case studies. The investigation detects individually experienced benefit or the opposite from IT use. The model has one basic assumption concerning knowledge and managerial action. It is assumed that successful implementation of concepts from IT-literature has a potential to improve contribution from IT. Individually experienced benefit from IT use, factors for contribution, where therefore mapped to literature on information systems.

Previous research indicates that positive factors for IT usage are linked to personal efficiency and factors that promote personal work tasks. The case studies resulted in 33 factors for IT-benefit. The factors were analyzed and related to research on IT-evaluation, mapped to literature on information systems and also discussed as directives for managerial action.

Two important conclusions from the study: 1) Successful implementation of concepts from IT-literature will result in increased benefit from IT 2) Software maintenance should be organized to focus on users' work tasks and support from a current set of IT-systems – not to improve single applications.

Keywords: IT-evaluation, work tasks, managerial action, IS/IT-literature, personal efficiency

An Investigation of the Effective Management of Communication for Successful Distributed Software Development Teams

Stephanie Finn and Robert Benyon
Rhodes University, Grahamstown, South Africa

Abstract: This paper presents a Communication Framework to assist dispersed software development teams in successfully managing their communication. As the development of software projects are increasingly undertaken by teams in a dispersed environment, it has become necessary to establish a Communication Framework which can support these teams in the management of their communication.

The Communication Framework comprises of three Developmental stages namely; Initial, Development and Closure and a collaboration of communication tools are presented to be used during the various developmental stages. This framework assists dispersed software development teams in successfully managing their communication process.

Keywords: Distributed teams, software development and communication

Interpretative IT Evaluation in the Public Sector: Two Steps Forward and one Backwards

Elisabeth Frisk

Department of Applied IT, Gothenburg University

Abstract: One reason behind the failure in achieving value in IT investments has been poor IT evaluation. Within the research field IT evaluation, it has been claimed for a long time that the Economic evaluation approach is not sufficient when evaluating the value of IT investments. Instead the Interpretative IT evaluation approach has been put forward, but with limited success in practice. This paper will give an increased understanding for how the Interpretative IT evaluation approach could make a difference for the Fire Rescue Services (FRS) in Sweden when evaluating their IT investments. This is an interpretative case study based on interviews in three organizations. The findings and implications for management in practice and IT evaluation research will be further discussed in the paper.

Keywords: IT evaluation, IT investment, management, Interpretative IT evaluation approach

Reward Systems in the Post Digitization era: Possible Benefits and Risks

Pontus Fryk
Uppsala University, Sweden

Abstract: The last decades have been characterized by extremely intense digitization – in the shape of investments in administrative and embedded IT together with advanced Internet solutions – as regards companies and organizations worldwide. Today, however, most establishments are already highly digitized, which affects the conditions for work and organizations' forms and functions.

Thus, based on an empirical investigation of the health care sector, this paper addresses the notion of the post digitization era through specifically examining IT-based reward systems. This, of course, is not a novel phenomenon, but new ways of using the reward system concept – together with IT and original ideas – in order to increase efficiency, effectiveness, and productivity are considered. This, in turn, might have great implications concerning core strategies and the organization of work. In order to fulfill the paper's purpose of identifying possible benefits and risks associated with digital reward systems, especially in health care, a case study built on semi-structured interviews was performed.

The findings of this study indicate that there are several possible fields of innovative application – including both developments of existing solutions and potential future utilizations – concerning digital reward systems in health care. Moreover, in order for reward system implementations to be successful, organizations have to define, measure, value and evaluate input, output and performance appropriately, and the process of doing so is also affected by the present stage of digitization. This too is contemplated throughout the paper. Finally, important associated matters such as risk-reward trade-offs and quantity versus quality are discussed.

The results presented in this paper are based on a limited material. Still, they are valuable and original because of the empirical foundation derived from an important industry/sector. Furthermore, they illustrate modern implications of reward systems in highly digitized contexts, and put forth novel views on possible fields of application of IT-based reward systems, and associated potential benefits and risks.

Keywords: Reward systems, post digitization, information technology, health care

A Framework for Enterprise Resource Planning System Selection by Small and Medium Enterprises

Neetu Ganapathy¹ and Javali Raju²

¹SDM Institute for Management Development, Mysore, India

²Kuvempu University Post Graduate Center, Davangere, India

Abstract: An Enterprise Resource Planning (ERP) system acquisition and implementation is a strategic decision that can significantly affect future competitiveness and performance of a company. This increases the criticality of this decision. Though several SMEs have taken the ERP implementation decision, they don't use a formal procedure for selecting an ERP system. The awareness amongst SMEs for ERP is very low and very few know how they can benefit from an ERP system.

Many SMEs believe that ERP systems are meant only for large enterprises on account of the cost and the complexity involved in the implementation. There are others who consider ERP to be a magic wand that will solve all their problems. While some SMEs decide to acquire a particular ERP solely because their competitor has done so, others approach the selection as they would any other software. Thus, most ERP decisions are taken without proper consideration and without aligning ERP with business goals. This oft times results in a system that meets but part of a company's requirements. In this paper, the authors have proposed a framework to help SMEs select an ERP system with care.

The framework is based on the insights gained from a study carried out at 6 SMEs who have acquired an ERP system and have implemented or are currently implementing it. In-depth interviews were conducted with IT personnel, CEOs and others at these SMEs to understand the procedure adopted in selecting an ERP system. This was aided by an extensive review of literature. Thus, this paper presents the current selection procedure used by the six SMEs and proposes a systematic approach to ERP acquisition that SMEs can adopt to ensure that the ERP system selected offers a better fit to their requirements.

Keywords: ERP (enterprise resource planning) software, SMEs (small and medium enterprises), information system selection, acquisition framework

Evaluation of e-Government Implementation from a Social Perspective

Kerstin Grundén

Department for Economics and IT, University West, Trollhättan, Sweden

Abstract: An interview study focussing on experiences of the on-going implementation of e-Government for the County Administration of Sweden is presented and discussed. The study was made during 2007 in the region of West Gotaland. Eighteen interviews were made with different personnel groups in the traffic and legal departments. The interviews especially focussed on experience of the implementation and social consequences of work situations, work processes and customer services. A new electronic system for dealing with official matters has been implemented at the legal authority. They have also implemented e-services for security guards and foundations. Implementation of e-services for drivers' licence applications was in progress at the traffic authority. According to the results some social consequences are benefits, such as fast, efficient treatment of e-services, facilitating the handling process from both a citizen's and an employee's perspective. But other aspects are barriers, such as risks for a more stressful job, and more impersonal, slow routines for manual applications from citizens and an increased schism among different user groups. Therefore, it is important to integrate knowledge about social aspects into implementation processes, in order to get more overall positive consequences for work situations, work processes and services to the client.

Keywords: e-Government, implementation, social, digital divide, evaluation, e-services, consequences

Bronze, Silver and Gold: Effective Membership Design in Customer Rewards Programs

Anders Hederstierna and Henrik Sällberg

School of Management, Blekinge Institute of Technology, Ronneby, Sweden

Abstract: Many companies use rewards programs to create so called “loyal” customers. Information Technology (IT) has made it possible to design such incentive programs with in principle endless variations at a low cost. It means that the company can, with the use of IT, offer non-linear incentives that create “loyal” customers more effectively than linear ones. Internet has also reduced the cost for the customer to search and compare products and services like air flights, hotels etc. In such a competitive context, the company can use the programs to gain an advantage with a differentiated offer to the customer and to create lock-in effects still at a low IT cost. Field observations show surprisingly that programs look very much alike and do not present as much variation as could be expected. Of special interest in this paper is the fact that companies typically offer three, or less, membership levels to increase the incentive for the customer to spend money at the company. These three levels come in different versions like, for example, “Bronze”, “Silver” and “Gold” or with similar labels. The reward to the customer is generally associated and accelerated with membership level. In this paper, we analyze the consequences of using membership levels as a way to create both competitive differentiation and effective customer incentives. We suggest a model for understanding how the consumer decides on spending at a company that offers a reward program with different membership levels. The decision setting for the customer is described as a risky contract with a risky time-state-contingent claim. The contract is risky since the terms and conditions for membership can be altered by the company, without any legal penalties. The claim is risky since it is uncertain to the customer whether the state required for the membership will be achieved. We show with the help of this model that the present use of a small number of membership levels could be questioned as the most effective incentive mechanism.

Keywords: Customer rewards program, customer loyalty, membership levels, incentives, differentiation, time-state-contingent claims

Mobile Messaging has Significant Impact on Primary Health Care Professionals

Inga Hunter and Richard Whiddett

Massey University, Palmerston North, New Zealand

Abstract: This paper will discuss information management issues that arise with the increasing use of mobile messaging in primary health care. The use of mobile phones and mobile messaging has increased dramatically over the recent years particularly amongst adolescents, indigenous peoples and lower income groups in the developed world, with many now having mobile phones instead of landline telephones. These same groups tend to have the highest health needs, especially in the management of chronic disease conditions such as diabetes mellitus, asthma, obesity and smoking. Therefore mobile messaging has the potential to provide alternative access to health care and improved health outcomes.

Mobile messaging, in the form of Short Message Service (SMS) text messaging, is now increasingly being adopted by health care organisations as a means of communicating with patients. It has been used for a diverse range of activities in health – for example: appointment reminders, giving results, health promotion, alert messaging, medication reminders, treatment success (or lack) feedback, reducing time to (specialised) treatment. These uses have now been extended with Multimedia Messaging Service (MMS) with, for example, the transmission of pictures of injuries or skin conditions to other health care professionals. There is also an increasing demand from patients to be able to use mobile messaging to communicate with health care professionals and health care organisations.

Health care professionals working in small primary care organisations will gain many benefits from using mobile messaging. However, the use of mobile messaging will result in changes to work flow and working conditions for health professionals and significant technical, medico-legal, and financial issues need to be resolved. Most primary health care organisations are small organisations and tend to lag behind large organisations in developing policies to deal with the management and use of technology, such as mobile messaging, within the organisation.

The unique characteristics of the healthcare environment mean that a number of complex issues relating to the management and use of mobile technologies need to be addressed, such as: When does 'a duty of care' commence/end? What to do with geographical and international boundaries? What is the health professional's availability to receive text messages - on-call 24/7? Who has received the mobile message and has it been understood? What are the workload and financial implications for SMS consultations? Is patient consent required? How to prevent breaches in patient privacy and the release of confidential patient information to unintended parties?

The paper reviews current experience and practices and argues for the need to develop organisational policies and procedures for mobile messaging by all small health care organisations.

Keywords: Information management, primary health care, SME, privacy, telemedicine

Evaluating Electronic Financial Records Management in the Implementation of e-Government in Malaysia

Nurussobah Hussin, Wan Satirah, and Mohd Nazir Ahmad
Universiti Teknologi MARA, Shah Alam, Malaysia

Abstract: With the introduction of Electronic Government (EG) Flagship Applications in 1996, Malaysian Government agencies create many records in electronic format. The Accountant General Department has developed the electronic financial records system for the use of federal and state public agencies in Malaysia. This study focused on the management of electronic financial records system for federal agencies. This study aims to identify whether the accountability, authenticity and integrity of electronic financial records is considered by the public sector. Two instruments namely questionnaires and guided interview were used in the process of data collection. A qualitative semi structured interviews were held with key players involved in managing financial records in the finance and IT Department in Accountant General Department and National Audit Department. The result of the study revealed that the organizations do not have enough skilled staff to meet organization's records management requirement. The implication of the study is that, to manage the electronic financial records effectively and efficiently, it is important to maintain the integrity of electronic financial records: that is, the records must be complete, accurate, verifiable and secure from unauthorized person. The findings intended to be of use to both the accounting and information professions especially by those who are designing new electronic records systems and those who need to improve existing systems.

Keywords: Records management, paper-based records, electronic records, public sector, e-SPKB, policy

Adoption and Evaluation of Mobile Commerce in Chile

Ranjan Kini

Indiana University Northwest, Gary, USA

Abstract: Chile is recognized as the most wired or the most e-Ready country in South America and in the top quartile globally. Chile has the highest penetration of cell phones in South America, yet it has been slow in adopting mobile commerce. In this exploratory research, the both electronic and mobile commerce adoption in Chile are studied. The survey questions are developed based on the prior studies on mobile commerce adoption. The results show that the group studied uses electronic commerce extensively but is not comfortable using mobile commerce, and complain than mobile access speed and price needs improvement.

Keywords: Mobile commerce, m commerce adoption, mobile commerce in Chile, electronic commerce in Chile

Where is Information Ethics in Iranian Library and Information Science Publications and Services?

Mortaza Kokabi

Shaheed Chamran University, Ahwaz, Iran

Abstract: There seems to be very few signs of the politeness peculiar to Iranians, when considering information ethics in Iranian library and information science scene. An expressed dissatisfaction appears to exist with library services among users studied in some dissertations on user satisfaction in library and information science in Iran. In spite of this fact that might be at least partly related to misbehavior of librarians, the words "ethics", "moral issues", and "morality" are not found in almost all of the publications related to library and information science in Iran, even in the most formal ones. These publications and documents as well as the current attempts to develop the topic in Iran, including both publications and activities, will be studied in this paper. The social, economic, and ethical aspects of the issue including the misunderstanding of the concepts of who serves and who must be served, who pays the tax and who must obtain service due to tax paying, the overall dissatisfaction of librarians concerning their social status as well as salaries and wages, the low costs, if any, of library and information services in Iran, will also be considered to show why this negligence has occurred in the profession.

There are some efforts to be made however, to improve the situation. Library and information science educators firstly must do their best to show the significance of ethics in the profession. Their efforts must comprise the formal and informal teaching of information ethics to their students. Inclusion of courses of ethics in formal syllabi is among formal attempts. The demonstration of this ethics in LIS educator's behavior is an informal one. Publication of papers on information ethics is another duty of LIS educators. Setting up workshops on information ethics is a necessary step to be taken. Professional associations such as Iranian Library and Information Science Association (ILISA) can play an important role on the scene. The provision of an information code of ethics is a major responsibility of this association and is highly recommended.

Keywords: Information ethics, Iran, user satisfaction, Iranian libraries

Improving Decision Making and Management With an Enterprise Resource Planning System: a Case Study

Juha Kontio and Elina Kontio

Turku University of Applied Sciences, Finland

Abstract: Enterprise resource planning systems can be used to manage and integrate all the business functions within an organization. An ERP system can provide important data across all business functions in real time and enable organizations to benefit in decision making and in management. ERP systems are typically applied in industries such as manufacturing, but have been recently introduced to new areas like education and healthcare.

This paper presents a descriptive case study from the Turku University of Applied Sciences about the implications of an ERP system to the decision making and management. We describe how the ERP system changed our decision making and management process and added a strategic view to our management. We use innovation process model to describe the implementation process of the ERP system. In addition, IS Success model is utilized.

Our experiences show that the ERP system has strengthened our decision making. The ERP system connected our strategic management with our operational management. The ERP system made our balanced scorecards alive and provided information for decision making. The emphasized role of our ERP system set also pressures at our data production. The data collected and processed from the source information systems must be reliable and correct.

The ERP offers us a common place to keep our strategic and operational plans. The ERP also gives us an easy way to connect our personnel with the management process. Furthermore, a rewarding aspect that promotes the usage of the ERP is added into the new management process. In the future, the strategic and operational management are connected even stronger with improved follow-up tools and project portfolio management tool.

Keywords: Decision making, strategic management, case study, ERP, innovation process, IS success

A Framework for Evaluating Compliance of Public Service Development Programs with Government Enterprise Architecture

Katja Liimatainen, Jukka Heikkilä and Ville Seppänen
Information Technology Research Institute, University of Jyväskylä, Finland

Abstract: In the context of public government, enterprise architecture means a way for systematic description and planning of cross-sectional services. This is done by aligning existing resources with information and communication technology investments to ensure national and international interoperability. Governing interoperability across organisational domains requires that public agencies take into consideration other parts of the public sector and engage to courses of action that are commonly agreed upon. As many of the intra- and inter-sector information and communication technology initiatives seem to still end in trouble, the panacea considered is government enterprise architecture (GEA). GEA work is in the agenda of many governments. However, the successful implementation of such programs has been problematic.

In this paper, we describe the nature of public sector transformation with GEA. Based on the findings from the first round of the Finnish Interoperability Programme developing the GEA and our follow up research, we identify areas for improvement. After that we analyse the governance model for GEA compatible program initiatives. We propose a tentative framework for evaluating public service development programs' compliance with GEA. The framework is based on practical requirements that have emerged during the ongoing development of GEA in Finland. Framework describes how a program initiative needs to be handled in the GEA approach. The framework is guiding the procedure of implementing a program with quality assurance and monitoring measures. We also include an additional stage of business modelling, because of the observed problems of government agencies not being capable to look outside their box and innovate. The framework helps in evaluating the costs, benefits and beneficiaries of the expected outcomes of the program; the beneficiaries being as well government, citizens or private businesses, or any combination of these. The results of this study are of interest for both practitioners and academics in the field of enterprise architecture.

Keywords: Government enterprise architecture, electronic government, public service, development Project

A User Perspective on Usability of Information Systems

Minna-Maarit Metsälä¹, Heidi Mikkola², Heikki Saastamoinen²

¹National Board of Taxes, Helsinki, Finland

²Jyväskylä University of Applied Sciences, Jyväskylä, Finland

Abstract: Organizations and information systems have been impacting each other over time. Organizations have become more and more complex concerning operating in an increasingly global environment. The development and evolution of information systems has established a utilization of very extensive and integrated systems which cover essentially all major organizational functions. These changes in organizations and systems set high demands on individual employees as users of such systems. In order to ensure the success of an organization, the information systems operated by its users should be acceptable both functionally and socially.

The aim of this study is to present a holistic model on usability of information systems. We have used Jacob Nielsen's definition of information systems' usability as a starting point. In his model, Nielsen focuses on usability issues such as price and compatibility as well as factors of practical acceptability, e.g. learnability and memorability, only recognizing hard functionality and social acceptability as important factors without addressing them in detail. Our aim has been to develop a model that appropriately addresses also these issues excluded in Nielsen's model. Furthermore, we have pursued to develop the model to a tool that can be used in practice. Rather than trying to understand how a system supports its users concerning its functions, we have chosen to focus on the events in which a system does not do so. That is done by combining Nielsen's model with the theory of information systems' exceptions. To understand the issue of social acceptability, there exist a large number of papers and theories addressing individual user's reactions to computing. We carried out an extensive review of the literature, combined the theories and findings, and formed a set of issues most related to how a user is likely to react to any system. Understanding these user-characteristics with a system is a crucial step when interpreting acceptability analysis results.

For our model to be functionally acceptable, a tool has been developed that can be used to perform comparable analysis of different systems in different organizations. This tool is a simple questionnaire to be filled out by individual users. This model has been tested in two pulp factories within same business group using the same system but with different user-experiences. This small scale study revealed interesting factors concerning the culture and practices of individual locations that have led to different subjective, usability results. Finally, this paper briefly discusses the theories our enhanced model is based on, presents an overview of the model, and concludes with a summary of the results of the initial study.

Keywords: usability, social acceptability, enterprise resource planning, functional acceptability, end-user computing

A Drug Crime Data Mart to Support Publication on Demand

Ronald Meijer¹, Jan van Dijk¹, Erik Leertouwer¹ and Sunil Choenni^{1,2}

¹Ministry of Justice WODC, Den Haag, The Netherlands

²Rotterdam University, Rotterdam, The Netherlands

Abstract: Each year, several information products concerning registered drug related crime in the Netherlands are produced by the Research and Documentation Centre (WODC) of the Dutch Ministry of Justice, as a contribution to the National Drug Monitor (NDM). The main goal of the NDM is to collect data and report about drug use.

Many of the NDM products are based on a more or less common set of data. These data are extracted from national databases of the Police, Public Prosecutor and the Dutch Offenders Index. Because these databases are not structured in the same way, it is necessary to integrate the data and to make the data consistent. Furthermore, work processes needed to deliver the NDM products were previously organised more or less on an ad hoc basis and different databases were queried independently. As a consequence, several kinds of activities were unnecessarily repeated. To improve this, a connection is made to the so called Criminal Data Warehouse, which is offender oriented. On top of the Criminal Data Warehouse, the Drug Crime Data Mart is constructed. A data mart is defined as a collection of programs and data from a data warehouse aimed at a specific information need. In a data mart the choices about data and transformations are implemented. By means of our data mart, we integrate existing projects and streamline existing ad hoc programs. The data mart is suitable for analysis and reporting purposes.

Finally, we extend the Drug Crime Data Mart with a module dedicated to Publication On Demand (POD). This is an interface supporting the automated publication of tables and graphs in research reports.

By successfully realising the Drug Crime Data Mart, we enable a substantial gain in efficiency. Furthermore, we find that the extension of the data mart with POD can be highly effective for more or less standardised research reports.

Keywords: Data mart, data warehouse, publication on demand, automation

The Impact of PMBoK® Tools, Techniques and Complementary Factors on Information Systems Project Success

**Flora Mpazanje, Irwin Brown and Kosheek Sewchurran
University of Cape Town, South Africa**

Abstract: Research into critical success factors for information systems (IS) projects has been widely conducted. The role of PMBoK® (Project Management Body of Knowledge) tools and techniques in IS project success has been less often researched. The aim of this study was to investigate the impact that use of PMBoK® tools and techniques has on IS project success. The study also revealed factors that complement use of tools and techniques in yielding IS project success. The study was conducted in three African cities in three different countries: Lilongwe in Malawi, Nairobi in Kenya and Cape Town in South Africa. Semi-structured interviews were conducted with 19 project managers. All interviews were transcribed and analysed using thematic analysis followed by grounded theory data analysis techniques. These latter techniques included open coding, axial coding and selective coding. Applying these techniques resulted in the development of a theoretical framework. The framework showed that appropriate usage of PMBoK® tools and techniques complemented by factors such as effective communication, management support, user/stakeholder involvement, the quality of the project team and the project mandate influenced IS project success. The project manager's knowledge, training and experience with the PMBoK® tools and techniques were key to influencing the appropriate use of these tools and techniques, and their integration with the complementary success factors.

Keywords: IS project success, critical success factors, PMBoK®, project management

Creating the Theory for Conceptual Framework: Benchmarking ICT Supported Training Using the Online Course Design Maturity Model

Peter Mkhize

University of South Africa, Pretoria, South Africa

Abstract: According to Govender and Bisschoff (2007) the workplace has become a dynamic, tumultuous and technologically advance arena. Progressive organisation constantly seek to improve the quality of their products and services to ensure customer satisfaction by employing quality improvement tools (e.g. benchmarking) available in the market (Cottam, Ensor & Band, 2001) Benchmarking allows an organisation to investigate and adapt the best practice in the industry so it can sustain competitive advantage or catch-up with the best in the industry (Wilson & Town, 2006). This paper will evaluate and analyse the impact of benchmarking ICT supported e-Government against the Online Course Design Maturity Model (OCDMM) formulating a conceptual framework for investigating the steps of improvement in a learning organisation. OCDMM is a series of steps; each step is a plateau in which one or more processes have been transformed from lower level to new level of capability. Eventually will formulate a logical conclusion for the effect of OCDMM as a stepping stone to ensure a solid benchmark foundation.

Keywords: e-Government, m-Learning, computer based training, learning management system, benchmarking, distributed learning system, Online course design maturity model

Modeling the Return of Information System Investments

Emil Numminen

School of Management, Blekinge Institute of Technology, Ronneby,
Sweden

Abstract: The task of *a priori* valuation of information system investments has attracted a lot of research for a long time. One of the main themes of this research has been which types of consequences information system investments result in and how these consequences can be incorporated in the *a priori* valuation of that investment. Much of this research has stated the problem as how to incorporate intangible consequences in the valuation since intangible costs and benefits are assumed to represent a large part of the consequences from an information system investment. These consequences are therefore highly relevant in the appraisal of information system investments. This paper is concerned with the question of how intangible consequences can be incorporated in the *a priori* valuation of information system investments. To answer this question, the paper presents a theoretical model for the valuation of information system investments based upon a continuous time discounted cash flow model. The general model argued for in this paper is that usage results in consequences which must be into cash flows to be incorporated in a discounted cash flow model. Usage is chosen as the underlying value creating function since it is the basic underlying function that creates all consequences specific to the information system investment. Some of these consequences can be measured and valued and thus expressed in cash flows and do therefore not cause any valuation problems. Intangible consequences on the other hand cannot be measured or valued when they occur. If these consequences never affect the cash flow they do not pose a valuation problem. It is more likely however that they will affect the cash flow but at a later time. This paper develops a stochastic cash flow model to incorporate the uncertainty and characteristics of when the intangible consequences affect the cash flow by using a Brownian motion in the valuation model. The expectations of the future cash flows are transformed into risk-neutral expectations so a risk-free rate of return can be used as a discount factor.

Keywords: Information system investment valuation, information system usage, consequences, goal function of the firm, discounted cash flow model, stochastic process

A Quality-Based Real-Time Information Management System within a Medical Environment: The Case of Falls Assessment

John O'Donoghue¹, John Herbert¹, David Sammon¹ and Kieran O'Connor²

¹University College Cork, Ireland

²Mercy University Hospital and the South Infirmary Victoria University Hospital, Cork, Ireland

Abstract: A number of our daily decisions are based on information which may have originated from multiple sources e.g. patient sensors, data warehouses, etc. If a data source contains inaccurate or faulty information then the resulting actions are likely to be erroneous resulting in loss of revenue or endangering a patient's life. From this basis it is essential that data quality measures are employed at all levels from the lowest (e.g. sensor) to the highest (e.g. dashboards or other data delivery services). In this paper we evaluate the three layers of the Data Management System (DMS) generic architecture (data collection, correlation and presentation), and specifically illustrate the ability of the DMS to deliver services and high quality patient centric information to geriatric physicians in the area of falls assessment. This paper reports on the first stage of a larger ongoing research project where the DMS architecture is being extended for use in falls assessment.

Keywords: Information quality, medical, sensors, DMS architecture, falls assessment, evaluation

Information Overload in Industrial Enterprises - Results of an Empirical Investigation

Annika Öhgren and Kurt Sandkuhl
Jönköping University, Sweden

Abstract: The work presented is part of the research field information logistics, which investigates and develops concepts and technologies for improving information flow in organisations. The intention of this paper is to contribute to an understanding of information management problems in enterprises, and also improvement potentials of current information systems. The paper presents results of a study focusing on information overload in industrial enterprises, an area that previously has attracted little academic attention. Two areas are investigated: is information overload perceived as a problem in enterprises, and which application areas of enterprise information management should be prioritised for improvement activities? The survey was sent to 436 enterprises in the South of Sweden, most of them small and medium-sized enterprises, and received 164 valid responses. The sample used for the paper includes industrial enterprises from manufacturing, construction, and electronics industries, which accounts for approximately 80% of the responses.

When analysing the data from the study, the paper follows the opinion of various scholars in the field that the complexity of an application case is an essential parameter to take into account when deciding on improvement potential. The more complex the application scenario is, the more likely is the usefulness of IT solutions for improving information flow. Research on complexity of projects proposes to define complexity as “consisting of many varied interrelated parts”, to distinguish between organisational and technological complexity, and to operationalise this in terms of “differentiation and interdependence”.

One result of the study is a clear indication that information overload is perceived as a problem in industrial enterprises, which surfaces in problems such as finding the right information needed for a work task, and in the time needed to structure and store information. Furthermore, the results indicate two application areas that offer improvement potential: information management with focus on search and retrieval, and management of product information.

Keywords: Information overload, industrial enterprises, information logistics, survey

Project Management Practice for Rural ICT Project Sustainability in Developing Countries

**Caroline Pade, Brenda Mallinson and Dave Sewry
Rhodes University, Grahamstown, South Africa**

Abstract: Poverty alleviation by means of rural development has become a priority among developing countries. In turn, rural development may be significantly enhanced and supported by Information and Communication Technologies (ICTs), the use of which is highlighted by the emerging importance of information and knowledge as key strategic resources for social and economic development. An analysis of rural case studies where ICTs have been introduced, suggests that there are a number of barriers and constraints that are faced when taking advantage of these technologies. These include access to infrastructure, limited formal education, insufficient training and capacity building, financial and political constraints, and social and cultural challenges. These challenges threaten the success and sustainability of rural ICT projects. Sustainability is key to the effectiveness of a rural ICT project; therefore it is important to understand the concept and categories associated with ICT project sustainability in rural areas. The categories of sustainability which include social and cultural, institutional, economic, political, and technological, reveal critical success factors that need to be considered in the implementation and management of rural ICT projects.

The project management discipline acknowledges the importance of understanding the project's environment, particularly environmental factors associated with rural communities. The complexity of the environment requires that a project be undertaken in phases comprising the project life cycle. Project management practice for rural ICT project sustainability can be examined, adapting the traditional project life cycle to a rural ICT project. This paper proposes a Rural ICT Project Life Cycle (RICT-PLC) that is sensitive to the critical success factors (CSFs) of sustainability. The CSFs contribute to the project management practices that should be incorporated into the life cycle phases of a rural ICT project. The RICT-PLC model developed sets sustainability guidelines for ICT project management in rural areas and identifies the people, environments, technologies, systems, and requirements for ICTs to support rural development activities.

Keywords: Project management, rural development, information and communication technology, sustainability

Acquiring Information Systems through Organisational Learning

Torsti Rantapuska¹ and Outi Ihanainen²

¹Lahti University of Applied Sciences, Finland

²Odeco Ltd, Helsinki, Finland

Abstract: Acquiring ICT applications is becoming a routine in organisations today. However, making an ICT investment decision is a complex task, especially for SMEs which do not have the time and knowledge needed to do the task properly. The existing models supposed to help in the ICT acquisition process are mostly designed for IT professionals and they are too heavy and technical to be used in SMEs. The decision makers in SMEs are obligated to rely on the software vendor's ability to solve the problem with the systems provided.

Adopting an information system is actually not an issue of technology alone, but more a change in business processes and peoples' organisational tasks. The change is driven by technology, but the people are in balance with that change. The ICT investment is a unique, firm-specific endeavour in which the knowledge has to be invented "de novo" based on the existing resources available inside the firm. The successfulness of an ICT investment relies totally on how motivated and capable the users are to learn and develop their knowledge resources needed for the change.

In this paper, we develop a model for SMEs for the acquisition of Commercial Off-The-Shelf (COTS) software products. A leading idea of the model is that the ICT investment is basically a change initiative and therefore it should also be taken as a process of organisational learning. The model is designed bearing three objectives in mind: 1) business orientation, 2) agility, and 3) practicality. The model can be applied to ICT investments in SMEs which have a professional team leader with basic business and IT knowledge.

The model is supposed to guide decision makers in SMEs to take the learning related aspects into account. We apply the organisational learning theory to the area of acquisition of COTS software products. We present how the acquisition process could be conducted as a social joint-endeavour in which various stakeholders such as users, managers, IT-specialists can, in pursuance of adopting a new information system, also learn to act in a new way. The usual processes of information system acquisition, such as problem identification, requirement specification, product candidate selection, product evaluation, product implementation, and dissemination are re-interpreted in terms of four knowledge conversion processes: socialisation, externalisation, combination and internalisation.

Keywords: ICT investment, decision making, organizational learning, ICT adoption, SME

Data and Information Quality in Geriatric Medicine: The Patient Data Analysis Information System

David Sammon¹, Kieran O'Connor² and John Leo¹

¹University College Cork, Ireland

²Mercy University Hospital and the South Infirmity Victoria University Hospital, Cork, Ireland

Abstract: This paper reports on the development and initial end-user evaluation (after ten months in-use) of a Patient Data Analysis Information System (PDA-IS) for Geriatric Medicine. The development and evaluation is the first phase of a larger ongoing research project. The PDA-IS contains a set of high integrity patient data records (a local practice-based repository of clinical patient data) available for the Consultant Physician in Geriatric Medicine. The evaluation of the system identifies the wide range of benefits that were realised and indeed can be expected from the deployment and extension of such a flexible solution in the Irish healthcare sector.

Keywords: Geriatric medicine, patient-centric data, data integrity, relational data model, n-tier architecture, evaluation

A Guideline for Virtual Team Managers: The Key to Effective Social Interaction and Communication

**Lara Schlenkrich and Christopher Upfold
Rhodes University, Grahamstown, South Africa**

Abstract: Globalisation has had an enormous impact on the manner in which teams operate. Traditional teams have been forced to adapt to their constantly changing environment in order to compete effectively with other business.

A vast number of IT professionals work in teams, which are characterised by distribution and diversity. It is the presence of virtual characteristics that may result in numerous social problems which can negatively impact team communication and productivity, demanding more effective team management. There is much potential for conflict in virtual teams as members work across cultural, geographical and time-bound environments. This conflict leads to ineffective communication and as soon as team members stop communicating effectively, barriers begin to form between them, which, leads to a decrease in productivity and interaction. Conflict resolution, and the extent to which it undermines performance, depends heavily on the conflict resolution approach.

This qualitative research is conducted by means of a literature review only, in which several managerial models available to virtual team managers are critically analysed and combined into a proposed theoretical model of general managerial guidelines for virtual team managers. Both current and proposed models discussed within this paper should be viewed within the limitations of this research i.e., the proposed model remains untested and should be viewed as a hypothesis for future research.

This research distinguishes virtual teams from traditional teams by defining characteristics that are common to virtual teams. These characteristics are: physical dispersion, crossing time boundaries, dependence on communication technologies, crossing functional boundaries, diversity, unstable team structure, non-routine as well as interrelated tasks. The research argues that teams are neither entirely traditional (local) nor entirely Global but may be placed on a continuum of virtuality according to the virtual characteristics the team possesses.

The theoretical model proposed by this research: Proposed Managerial Strategies, is intended to help IT managers overcome conflict and consequent social problems within virtual teams, which may otherwise lead to ineffective communication. The model provides managers with guidelines and strategies which may be implemented to enable effective social interaction and prevent future problems.

Keywords: Virtual teams, globalisation, communication, distributed teams

Windows to the Real World – A Comparison of IS Project Management Student Learning

Elsje Scott¹, Kosheek Sewchurran¹ and Nata van der Merwe²

¹University of Cape Town, Cape Town, South Africa

²Cape Peninsula University of Technology, Cape Town, South Africa

Abstract: The business environment for which IS graduates must be prepared, has evolved since the 1980s from being process driven, through being task-based, to what is currently referred to as a project driven environment. This new way of organising so as to mitigate challenges is also referred to in the research literature as a project-driven society. As a result, project management training is moving away from the dissemination of best practice to a pedagogy that imbues learners with concepts that enable them to learn and cope in complex environments. This approach is also referred to as reflective learning, reflexive learning, or lifelong learning.

The authors believe that in the post-millennium project driven era, students need to be equipped with the ability to learn in complex environments, instead of continuing to apply previously learned best-practices in instrumental, functional ways. In addition to a sound body of knowledge, graduates also require passion, creativity, and good communication and learning skills to become successful IS professionals. This study discusses and compares the approaches followed at two South African universities that prepare students to occupy various positions in the continuum of IS project roles.

The study presents the curriculum designs, teaching methods and management processes used in the delivery of team projects at the two universities, and reflects on the teaching experiences in each. The reflection critically reviews how the programmes stimulate transcendence of the students from the basic level of Novice, through Advanced Beginner, towards Competent Performer, based on the Stages of Adult Learning competency framework proposed by Cicmil (2006). Similarities and differences in the experiences of the two universities are identified and discussed.

The motivation for the comparison presented in this study is based on a mutual desire to share knowledge and experiences. This provides an opportunity to enrich the learning experience of students at both institutions, providing them with windows to the real world.

Keywords: Information systems project, project management, reflexive learning, lifelong learning, project practitioner education

Organisation Personality and the Adoption of ICT: e-Commerce in the UK Construction Industry.

Andy Sloane and Martin Jackson
University of Wolverhampton UK

Abstract: This paper outlines the application of a model of business that has been developed from an amalgam of sources covering a wide range of research literature concerned with the relationship between electronic communication and the business. This model outlines what is termed an "organisational personality" profile and allows the analysis of the business with respect to its ability to perform in four distinct quadrants: management, processes, organisational culture and human resources. It is then applied to the adoption of ICT in the business and the supply chain using a case study of the UK construction industry. The results are analysed to show which elements of the model are important for success. The model shows that to be successful in the adoption of ICT a business must have threshold scores in each of these quadrants that show its profile or "organisational personality" (OP). It is this OP that is the most interesting point of the research. It has been found that certain OPs are more likely to succeed in this adoption than others and that the likelihood of success can be shown by the movement of the business in the four quadrants: thus the model can provide a rough prediction of the future success in various activities - such as adoption of ICT but can also be extended to other activities because of the widespread nature of the model developed. It is also planned to apply the model to different problems in the same domain in the near future so that further insights can be gained from the model and its application.

Keywords:-Commerce, ICT adoption, construction industry, business modelling

Cross-Cultural Consumer Perspectives in 3G Mobile Services Adoption

Lei Tang

ESC Rennes School of Business, Rennes, France

Abstract: In this study, we will show that cultural factors are used to explore the different findings; it can influence the initial variables directly without mediation. We also apply an extension model to the Technology Acceptance Model – the COMPASS Acceptance Model which is very suitable for testing mobile services adoption, and may be used to define the weighing factors of mobile services' life cycles in different culture contexts. Data collected from France (Paris) and China (Beijing) was tested against the research model; the results strongly support the proposed model in predicting consumer behaviours when using 3G mobile services. Several implications will help 3G players to determine efficient marketing strategies and access the potential adoption of new mobile services.

Keywords: Technology acceptance model, COMPASS Acceptance Model, cross-cultural research, mobile business, 3G business, technology management

Towards an Agile IT Organisation: A Review of Prior Literature

Tommi Tapanainen, Mikko Hallanoro, Johannes Päivärinta and Hannu Salmela

Turku School of Economics, Finland

Abstract: An abundance of research exists on strategic agility, agile manufacturing systems, and agile software development. However, since the beginning of the 1990s, agility has also been considered as a significant objective for IT organisations. As the penetration of information systems in business operations increases, the ability to sense changes and respond accordingly to changing business requirements is becoming both more difficult and more important. Moreover, IT organisations increasingly need to understand changes affecting the business in order to justify IT investments and current structures. Building agility to IT organisations is not, however, easy.

This article reports results from a systematic literature review that collected and classified agility oriented research published in highly ranked IS journals. The review was performed by a four-person team in accordance with the method suggested by Webster and Watson, and focused on the incidence of agility and similar terms in article titles, abstracts, and full text, as well as the articles' relevance with respect to a commonly used definition of agility. This resulted in a set of 24 articles addressing agility in the context of IT organisations.

A characteristic feature in prior studies is that most studies focus on one specific area of the IT organisation. Frameworks that comprise a broader view of prerequisites for agility are almost non-existent. The review suggests a five-point classification of the fields addressed by the reviewed literature, that is, IT organisation structures, IT workforce, IS development processes, IT management and leadership, and IT infrastructure. More importantly, it provides an overall view of variables that have been used in explaining agility in the IT organisation context. Hence, for researchers, the paper provides a first attempt to build a broader theoretical foundation for explaining IT organisation agility. Information systems managers can use the results to identify measures that they can take in order to improve the agility of their own organisations.

Keywords: Agility, information systems development, IT infrastructure, IS organisation

Critical Success Factors for Effective IT Leadership

**Natja von Urff Kaufeld, Vimbayi Chari and David Freeme
Rhodes University, Grahamstown, South Africa**

Abstract: The growth of the Information Technology (IT) industry has placed unique challenges on IT professionals. In addition to this, the explosive growth of IT has created many expectations in numerous organisations for IT to be the one-stop solution and miracle 'saviour' to any business problem. This has increased the pressure on IT professionals and executives to deliver on often unrealistic expectations and promises. A proposition is put forward by McKeen and Smith (2003:295) who state that despite the increasing importance of IT products and systems within organisations, there is still a great lack of representation or understanding of IT within the executive and boards of most organisations. The lack of support for IT in organisations, coupled with the complexity and pressure of the environment surrounding IT, has led to an increasing outcry for strong and effective leadership within IT. Many researchers, including Tae-In Fom (2003:3291) have found that the only way for the IT industry to counter the negative factors faced by IT professionals is to develop strong leadership within the professionals. In order for IT professionals to succeed in developing systems that create value and that correctly identify and address the business needs of the firms that they work for, they require knowledge and experience of effective leadership skills.

This research explores the definitions and Critical Success Factors (CSFs) that influence the effectiveness of general leadership and IT leadership in particular. The research further analyses the impact that effective IT has on the IT department and on organisational success, and a relationship between them was found. The research also investigates what competencies are required of IT professionals in order for them to be effective IT leaders. Finally, these Critical Success Factors were integrated into a framework that can be used to develop effective IT leaders.

The research is conducted using a qualitative approach through the review of various existing literature covering the topics of leadership and IT leadership. A comparison and analysis of current models culminated in the proposal of two new unique models displaying the CSFs of effective IT leadership within the operational, tactical and strategic levels of the business.

The proposed models suggest that a leader needs to shift his/her skills and focus within each of the business levels, from the teams' skills, to individual skills and ambition or drive of the firm respectively.

Keywords: Critical success factors, effectiveness, leadership, model, CIO

Information Evaluation Empirical Investigations in Engineering Organizations

Yuyang Zhao¹, L.C.M Tang², M. J Darlington¹, S.A Austin², and S.J Culley¹

¹Department of Mechanical Engineering, University of Bath, UK

²Department of Civil and Building Engineering, Loughborough University, UK

Abstract: The management of information in engineering organizations is facing a particular challenge due to the ever-increasing volume of information. It has been recognized that an effective methodology is required to evaluate information in order to avoid information overload and to retain the right information for reuse. By whatever approaches, information evaluation judgments are made in the engineering organizations in order to support the businesses decisions. Investigating those practical methodologies would benefit the overall information evaluation research. This paper addresses this practical information evaluation issue firstly by briefly reviewing the idea of information evaluation in related research work on the evaluation of information in various areas. Then a series of industrial empirical investigation activities based on interviews in engineering organizations are introduced. The evaluation approaches in those organizations are analyzed and compared according to the nature of some of the organizations. Finally the current practices are summarized and the outlooks of best practices are proposed.

Keywords: Information, information evaluation, empirical investigation