

Preface

As access to the Internet becomes more widespread, its influence is felt in all areas of society. Consumers shop online; journals publish both paper and electronic versions of their work; courses are taught online and research is easily accessible because of all the information available on the Web. In addition to how the Internet can be used to modify brick and mortar establishments, it has created social and educational dimensions of its own. Virtual communities, social, business and educationally based organizations are brought together exclusively through online technologies. As these virtual communities become more accessible and widely used, academics and practitioners must understand their impact and their role in society in order to fully appreciate the effect these virtual communities are having on all aspects of society. The chapters of this book address the most current research and practice in the field of virtual communities and the technologies that support them. From examining the fundamental definitions of what a virtual community is to exploring the influence they are having on librarians, governmental organizations, universities and individuals, the work contained herein presents a comprehensive look at these communities and the technology and software used to support them. The authors represent a wide variety of perspectives and provide insights from many different cultures and educational and industrial backgrounds.

Chapter 1 entitled, “Knowledge Management Strategies for Virtual Organizations” by Janice Burn and Colin Ash of the Edith Cowan University (Australia) expands upon the concepts of the virtual organizational change model by using the example of information and communication technologies to illustrate three levels of the development mode—virtual work, virtual sourcing and virtual encounters. The chapter explains these modes’ relationship to knowledge management, individually, organizationally, and community-wide through the exploration of information technologies.

Chapter 2 entitled, “The Competence-Based View on the Management of Virtual Web Organizations” by Ulrick Franke of Cranfield University (United Kingdom) discusses a competence-based model of virtual Web management organizations. The chapter presents an overview of a set of common sub-competencies underlying the three virtual Web management’s main competencies

of initiating and maintaining virtual Web platforms and forming dynamic virtual corporations. The model further describes the content of the individual sub-competencies and explains their purpose, their inter-relatedness and their temporal dimensions.

Chapter 3 entitled, “The Virtual Corporation and Trust: Balancing Between Identity and Innovation” by Wendy Jansen, Hans Jäger and Wilchard Steenbakkens of the Royal Netherlands Military Academy (The Netherlands) discusses the unique role of virtual corporations in the knowledge sharing arena. The chapter focuses on the softer aspects of cooperation. The authors indicate that the virtual cooperation must have an identity which is strong enough to inspire trust to achieve innovation through knowledge sharing, but not so strong that it inhibits communal development. The authors discuss ways in which virtual communities can achieve and maintain that identity.

Chapter 4 entitled, “Exploring the Common Ground of Virtual Communities: Working Towards a ‘Workable Definition’” by Vanessa Dirksen and Bas Smit of the Universiteit van Amsterdam (The Netherlands) reports on initial propositions, research questions and approach towards finding a workable definition of virtual communities. Through comparative ethnographic research, the authors define virtual communities in terms of their inherent social activity, the interaction between groups of people and information and communication technologies.

Chapter 5 entitled, “Virtual Transactional and Relational Exchanges: The Enabling Effects of Information Technology” by Andrew Gaudes and Mary Brabston of the University of Manitoba (Canada) evaluates the transactional and relational components of virtual organizing and compares them to the transactional and relational exchange-enabling characteristics of various forms of information technology. The findings presented in the chapter suggest that further examination of the link between organizational performance and outcomes would be particularly beneficial.

Chapter 6 entitled, “Requirements Engineering During Virtual Software Development: Towards Balance” by Jo Hanisch of the University of South Australia proposes a framework indicating that project managers need to encourage a balance between formal methods and social aspects in requirements engineering to suit the virtual team members. The chapter first reviews the concept of virtual teams and virtual software development, and then the requirements of the engineering phase of software development are reviewed. The chapter provides a starting point for debate concerning two opposing forces perceived in the IS literature within requirements engineering and virtual software development.

Chapter 7 entitled, “Virtual Organization as a Chance for Enterprise Development” by Jerzy Kisielnicki of Warsaw University (Poland) attempts to substantiate the theory that enterprise has been developed with the development of

information technology thanks to the possibilities offered by virtual organization. The survey reported on in the chapter shows a connection between virtual organizations with the problems of unemployment, especially among people with a higher education.

Chapter 8 entitled, “The Development of Trust in Virtual Communities” by Catherine Ridings of Lehigh University and David Gefen of Drexel University (USA) applies an existing scale to measure trust in the context of virtual communities on the Internet and explores factors that build trust in these communities. The results of the study reported in the chapter show that trust is composed of two dimensions: trusting in others’ abilities and trust in others’ kindness/integrity. The authors also found that trust affects communities participants’ desire to provide information on line.

Chapter 9 entitled, “Opportunities for Service-Learning Partnerships in the Information Systems Curriculum” by Jonathan Lazar and Doris Lidtke of Towson University (USA) presents the issues involved in implementing a service-learning paradigm in an information systems curriculum. The chapter presents examples of successful service-learning courses and discusses new possibilities for implementing service learning within courses or as courses.

Chapter 10 entitled, “Information Security for Libraries” by Gregory Newby of the University of North Carolina at Chapel Hill (USA) presents a pragmatic approach to addressing the information security needs of libraries. The author discusses who must be involved in the information security process, namely that active measures must be taken by administrative staff to minimize the risk of damage, theft, subversion or sabotage. The chapter discusses necessary security personnel, privacy policies, public access workstations, and securing the libraries Internet connection.

Chapter 11 entitled, “Faculty of Information Studies Knowledge Repository (FISKR)” by M. Asim Qayyum, Gerry Oxford, Sungin Lee, Laryssa Tyson and Chun Wei Choo presents a prototype of a knowledge repository that is designed to be an electronic repository of online pedagogical resources and is designed and implemented as a Web-based software system. The repository described stores resources or pointers to resources of many different kinds including electronic and printed material, courses, slide presentations, videos and other relevant resources. The repository allows these resources to be retrieved in different forms such as taxonomies or reading lists and allows viewers to view them in a Web browser as simple Web pages.

Chapter 12 entitled, “From Lackey to Leader: The Evolution of the Librarian in the Age of the Internet” by Jennifer Croud, Michael Manning and Janine Schmidt of the University of Queensland (Australia) discusses the evolution of librarians in the age of the Internet, specifically discussing the role of librarians and

the University of Queensland Library. The authors discuss the varying roles of librarians as teachers, research partners, and Web page designers.

Chapter 13 entitled, “Library Web Site Assessment” by Ray White of South East Metropolitan College of TAFE and S.P. Maj of Edith Cowan University (Australia) presents a tool used to assess Web pages based on a model used in the e-commerce sector. The chapter discusses the use of this tool to analyze the Web pages of libraries in the Australian Vocational Education and Training sector. The results discussed in the chapter clearly show the strengths and weaknesses of various Web pages. Finally, the authors discuss the problems that arise because of a lack of standard methods and guidelines for authoring Web pages.

Chapter 14 entitled, “The World Wide Web and Law Enforcement” by Richard Halapin of Indiana University of Pennsylvania (USA) looks at how civic and public organizations have not kept up with the rate of growth of Web pages. The chapter describes the roadblocks that have hindered public access to governmental information. The author discusses what needs to be done to make information available to the public, namely governmental organizations must turn data into information and governments need to be willing to release the data they have and legislative barriers must still be overcome.

Chapter 15 entitled, “Citizen Access and Use of Government Data: Understanding the Barriers” by Richard Heeks of the University of Manchester (United Kingdom) analyses the barriers that need to be understood and addressed if citizen access to government data is to become more of a reality. The chapter discusses the availability of data in the current system and looks at current mechanisms of access. Finally, the chapter looks at ways of increasing both use by citizens and access or availability by the owners of the information.

Chapter 16 entitled, “The Practice of Information Resource Management (IRM) in Australian Government Organizations” by Richard Potger and Graham Pervan of Curtin University of Technology (Australia) reports the results of a study undertaken to determine why the diverse interpretation of what information management really is has kept it from being widely accepted in Australian governmental organizations. The survey of information systems and information technology executives in national and state public organizations revealed that information resources management is not widely undertaken in the Australian public sectors, some mixed success and failures have been achieved and many lack in these organizations lack an awareness of what IRM is and how to implement it.

Chapter 17 entitled, “Business Process Reengineering is not just for Businesses but is also for Governments: Lessons Learned from Singapore’s Reengineering Experience” by K. Pelly Periasamy of Nanyang Technological University (Singapore) draws on the experience of Singapore and suggests strategies for Reengineering practice in the public sector of developing countries and

other nations. The author suggests by implementing and adhering goals of business process reengineering developing nations may be able to progress.

Chapter 18 entitled, “Intelligent Transport Systems (ITS) for Electronic Commerce—A Preliminary Discussion in the Australian Context” by Girija Krishnaswamy of Edith Cowan University (Australia) analyzes the significance of ITS as an enabler to achieve effective electronic commerce by supporting logistics and improving supply chain management. The chapter discusses how information and communication technologies are the unifying elements in ITS and electronic commerce.

Chapter 19 entitled, “Digitization as Adaptation: The Evolution of the Superfund Document Management System” by Steven Wyman and Verne McFarland of the United States Environmental Protection Agency describes how the paper-imaging systems, known as the Superfund Document Management System (SDMS) used by the U.S. Environmental Protection Agency, came to be and achieved institutional acceptance. The chapter discusses how the interactions of two life cycles—records and system development—affected the fitness of the system to its environment.

Chapter 20 entitled, “The Implementation of Electronic Network Systems in Japanese Firms” by Toshio Mitsufuji of Siebold University of Nagasaki (Japan) investigates the implementation process of electronic network systems large Japanese firms. The results reported in the chapter are based on questionnaires sent to large Japanese firms (employing more than 1000 people). Based on these results and interviews, the authors discuss the innovativeness of the firms in the introduction of the electronic network systems and examine why the electronic network systems have come into wide use among these firms.

Chapter 21 entitled, “Outline of a Design Tool for Analysis and Visual Quality Control of Urban Environments” by Predrag Sidjanin of DKS and Waltraud Gerhardt of DBS (The Netherlands) describes a designing tool and its object database system. The design tool discussed improves design practice and analysis within existing and planned urban environments. The chapter also presents a conceptual model of the tool using elements of urban environments and the relationships between the environments and their dependencies.

Chapter 22 entitled, “Nurturing Trust and Reactive Training: Essential Elements in ICT Diffusion Projects” by David Tucker and Pascale de Berranger of Manchester Metropolitan University (United Kingdom) identifies important factors which contribute to successful diffusion projects. The chapter identifies the low adoption rates of information and communications technologies (ICT). By using empirical data collected from a successful diffusion process in the United Kingdom, the chapter reveals the importance of nurturing a trusting relationship with potential

ICT adopters and goes on to show that the provision of reactive training during the diffusion process is vital.

Chapter 23 entitled, “EMS Records and Information Management of Environmental Aspects and Their Associated Impacts with Metadata” by Hans-Knud Arndt, Mario Christ and Oliver Gunther of Humboldt University (Germany) describes an EcoExplorer software package consisting of three closely cooperating programs for the management of XML-based environmental metadata. The chapter focuses on the environmental management information system element in environmental management system documentation and on the information management aspect of these information systems.

Chapter 24 entitled, “The Virtual Web-Based Supply Chain” by Ashok Chandrashekar of IBM Corporation and Philip Schary of Oregon State University (USA) discusses the concept as a juncture of three forces: the virtual organization, Web-based communication and the application service provided. Web-based communication provides access and networks with new institutions and the application service provider makes rapid change flexible and connections feasible. The authors discuss these technologies in a strategic framework of structure, process and organization as a basis for projecting future outcomes.

The Internet has changed society in many ways and is constantly modifying the way organizations organize, present and store information. Virtual communities exist as practically independent entities and have far reaching effects. Leading experts in the fields of virtual communities, librarians, software developers, project managers and business reengineering experts share their experience with a diverse background of applications and environments all brought together by the use of the Internet as a mode of improving their organizations. The authors of this book represent a vast array of countries and organizations, and, from their vast experiences, they outline the road to successful use and application of the Internet and associated technologies in many different scenarios as well as sharing practical tips on how to avoid some of the pitfalls that may lie ahead. This book provides practical guidelines for researchers and practitioners alike. It will prove useful to all who want to better understand the Internet and its implications and apply their understanding to successfully utilizing all the available resources. Teachers, practitioners, researchers and students alike will find the research of this book an excellent resource.