About the Contributors

Susheel Chhabra is Associate Professor of Information Technology at Lal Bahadur Shastri Institute of Management (Delhi, India) and is also acting as a programme coordinator, PGDM (MBA). His areas of research and consultancy include e-government, e-business, computer networks, and software engineering. He has published several research papers on international and national level journals. He has co-authored a textbook on human resource information systems, edited a special issue of International Journal of E-Government Research on strategic e-business model for government, and also co-authored the edited book Integrating E-Business Models for Government Solutions: Citizen-Centric Service Oriented Methodologies and Processes (IGI Global, USA). He is currently engaged in several consultancy and training assignments on social change for human development, e-governance, e-business, and ERP for ISID, NTPC, LBSRC, etc.

Hakikur Rahman (PhD) is the Project Coordinator of the Sustainable Development Networking Programme (SDNP) in Bangladesh, a global initiative of UNDP since December 1999. He also acts as the Secretary of South Asia Foundation Bangladesh Chapter. Before joining SDNP, he worked as the Director, Computer Division at Bangladesh Open University. He has written several books and many articles/papers on computer education for the informal sector and distance education. He is the Founder-Chairperson of Internet Society Bangladesh Chapter, Editor of the Monthly Computer Bichitra, Founder-Principal and Member Secretary of ICMS Computer College, Head Examiner (Computer) of the Bangladesh Technical Education Board, and Executive Director of BAERIN (Bangladesh Advanced Education Research and Information Network) Foundation. He is also involved in activities related to establishment of a IT based distance education university in Bangladesh.

* * *

Manuel Acevedo works since 2003 as an international consultant on ICT and Development (with government, civil society, multilateral agencies and business entities), researcher on development networks, and lecturer on ICT4D in Spanish universities. Recent engagements include working as senior advisor to the Argentinian National Programme for the Information Society Programme, strategic planning for UN Volunteers (UNV), co-production of a guide for ICT mainstreaming for the Spanish Secretariat for International Cooperation and evaluations for UNDP, UNV and civil society organizations. From 1994 to 2003 he worked with UNDP and UNV, where he set up in 2000-2003 the first e-Volunteer unit in an development agency, and was responsible for launching the programme UNITES and the UN Online Volunteer Service. He represented UNV during the first phase of the World Summit

on the Information Society, and acted as co-chair of the Human Capacity Committee of the UN ICT Task Force during that period.

Minwir Al-Shammari is Professor of Management and Director of Graduate Studies at the University of Bahrain, College of Business Administration. He holds a PhD in Business Administration (Industrial Management) from University of Glasgow (UK, 1990) and MS in Industrial Management from Central Missouri State University (USA, 1986). He has been involved for about 20 years in teaching, research, training, and/or consultancy in the areas of operations management, knowledge management, supply chain management, management information systems, business process re-engineering, organization theory, organizational change and development, project management, spreadsheet modeling, management science, and research methodology. He is Editor-in-Chief of Journal of Supply Chain and Customer Relationship Management, IBIMA Publishing. He is the author of the premier reference source Customer Knowledge Management: People, Processes, and Technology, IGI-Global Publishing. He has published more than 30 research papers that have appeared in international refereed journals such as International Journal of Knowledge Management, Logistics Information Management, International Journal of Information Management, European Journal of Operational Research, Expert Systems with Applications, Journal of Computer Information Systems, International Journal of Information Management, International Journal of Information Communication Technologies and Human Development, International Journal of Operations and Production Management, Production and Inventory Management Journal, Business Process Management Journal, International Journal of Commerce and Management, International Journal of Computer Applications in Technology, Cross-Cultural Management, International Journal of Management, Leadership and Organization Development Journal, and Creativity and Innovation Management.

Abdullah Almobarraz was born in Riyadh, Saudi Arabia on 1963. He finished his undergraduate education in 1990 from 1990 King Saud University, Riyadh majoring in Information Science. In 2007, he got his PhD in Information Science from University of North Texas. Currently he is working as the Head of Information Studies Department, College of Computer and Information Sciences at Imam University in Riyadh.

Abiodun O. Bada is Assistant Professor of Information Systems in the Dept. of Engineering Management & Systems Engineering at The George Washington University, Washington DC, USA. Dr. Bada received his PhD in Information Systems from the London School of Economics, University of London, UK. His research interests include the application of resource-based and institutional theories to information systems phenomena and the implementation of IT in developing countries.

Nancy Bertaux is Professor of Economics at Xavier University, Cincinnati, Ohio, USA. She holds a PhD in Economics from The University of Michigan. She has published in a wide variety of scholarly books and journals on economic development, gender and diversity, and economic history issues, with a recent research focus on the role of information technology and entrepreneurship in economic development in Africa and South Asia.

James D. Brodzinski is Dean and Professor of Management in the Graham School of Management at Saint Xavier University in Chicago, Illinois. His PhD is from Ohio University in Human Information Systems. His research examines behavioral, perceptual, and information issues in organizations as well

as occupational safety and health compliance programs. His work has appeared in various scholarly outlets including The Academy of Management Executive, Journal of Health and Human Resources Administration, HR Magazine, and Management Communication Quarterly.

Anirban Chakrabarty is Assistant Professor of Information Technology at Lal Bahadur Shastri Institute of Management, Delhi. He has published in journals and conferences at both National and International levels on data mining, knowledge management, and fraud detection issues. His research interest include Data mining, Object Oriented programming, Multimedia Technologies, Computer networks.

Elaine Crable is Professor of Management Information Systems at Xavier University, Cincinnati, Ohio, USA. She received her PhD from the University of Georgia with an MBA from Xavier University. Her research includes enterprise systems, social networking, pedagogical issues with online teaching and women's issues in developing countries.

Zlatko J. Kovačić is an associate professor in the School of Information and Social Sciences at the Open Polytechnic of New Zealand. Dr. Kovačić has a varied academic background and research interests, ranging from core interests relating to IT careers, learning and teaching, to e-commerce, e-learning, time series analysis and multivariate analysis. His current research is focused on financial time series analysis (stock exchanges in former Yugoslavia in particular), social and cultural aspects of e-government and on cognitive processes in distance education using computers and communications technologies. Dr. Kovačić is editor-in-chief of the academically peer refereed journal: Interdisciplinary Journal of Information, Knowledge, and Management (http://ijikm.org), editor of the Journal of Information Technology Education (http://jite.org) and senior associate editor of Informing Science: The International Journal of an Emerging Transdiscipline (http://www.inform.nu). He is member of the Informing Science Institute and International Association for Statistical Education.

Dr. Norbert Kuhn was born in 1957. He studied Computer Science and Mathematics at the Technical University Kaiserslautern (Germany) and graduated in 1986. Thereafter he was a staff member of the Computer Science department of the Technical University Kaiserslautern, from where he also received his PhD in 1991 with a thesis in Computer Algebra. From 1991 to 1995 he was a member of the German Research Centre for Artificial Intelligence (DFKI) and worked on projects in the fields of Multi-Agent systems and Office Automation. In 1995 he was appointed professor at the University of Applied Sciences Trier, (Germany). He is a member of the Institute for Software Systems in Business, Environment, and Administration. His current research areas cover E-Government applications, Document Analysis systems and Human Computer Interfaces.

Dr. Muneesh Kumar is a Professor, at Department of Financial Studies, University of Delhi (India). His responsibilities include teaching banking and information systems related courses to students of Masters in Finance and Control (MFC) programme and supervising research. He has published several articles in international journals and presented papers in several international conferences. He has also authored three books and co-edited three books. He is associated with the several expert committees appointed by Government of India such as expert committee for IT projects of India Post and Market Participation Committee of Pension Fund Regulatory and Development Authority (PFRDA).

Eva Lindgren, PhD, is a member of the Department of Language Studies at Umeå University, where she is a researcher and PhD-student supervisor. Her research interests include early language learning, writing, writing development and revision. She has published internationally in the areas of foreign language development, self-assessment, peer feedback, keystroke logging, revision and fluency. Together with Kirk Sullivan she has edited the book Computer Keystroke Logging and Writing: Methods and Applications. She is the Swedish country manager of the EU funded research project Early Language Learning in Europe (Project n°. 135632-LLP-2007-UK-KA1SCR), which takes a broad perspective on young learners' foreign language learning processes, including variables such as the teacher, language exposure and digital media.

Meeta Mathur is Assistant Professor in the Department of Economics at University of Rajasthan, India. She has specialized in International Economics. Her research areas include insurance, telecommunications and foreign trade. She has contributed to reputed national journals, national seminars and conferences. She has rich experience of teaching and research. Her excellent academic record has motivated many students to pursue their doctorate degree in her guidance. As an economist she is exploring socio-economic dimensions to understand the economic phenomena keeping in view the international perspective. She has been associated with many professional bodies and continue to work rigorously for the growth of the discipline.

Dr. Stefan Naumann was born in 1969 and studied computer science at the Universities of Kaiserslautern and Saarbrücken (Germany). Since 2008 he is a full professor at the University of Applied Sciences Trier, Location Environmental Campus Birkenfeld. He is a member of the Institute for Software Systems in Business, Environment, and Administration. His research interests are sustainable development in conjunction with online communities and the environmental and social impacts of information technology. Especially, he is engaged within the new research field "sustainability informatics". Within this context he investigates questions how non-professional IT users (like citizens) can be supported so that they are able to participate successfully e.g. in E-Government processes.

Adekunle Okunoye is Associate Professor of Management Information Systems at Xavier University, Cincinnati, Ohio, USA. He holds a PhD degree in Computer Science/Information Systems from University of Turku, Finland. Adekunle is a chartered information technology practitioner and member of the British Computer Society. He is also a member of Association for Information Systems. His research focuses on knowledge management, organizational implementation of IT and the resultant changes in organization, and IT & globalization. He has published in various journals, books and conference proceedings.

Bolanle A. Olaniran is a professor and interim Chair in the Department of Communication Studies at Texas Tech University, Lubbock, TX USA. He is internationally known scholar. His research includes Organization communication, Cross-cultural communication, Crisis Communication, and Communication technologies. He has authored several peer reviewed articles in discipline focus and interdisciplinary Journals (i.e., Regional, National, and International) and authored several edited book chapters in each of these areas. He edited book on e-learning. He also serves as consultant to organizations and Universities at local, national, international and government level. His works have gained recognition such as the American Communication Association's "Outstanding Scholarship in Communication field" among others.

Eleonora Pantano, is a Post doc research fellow at University of Calabria (Italy). She holds a PH-D degree in "Psychology of Programming and Artificial Intelligence". Her research interests are related to the applications of advanced technologies to retailing and tourism, with emphasis on the investigation of consumer behaviour in pervasive environments. She has been Assistant teacher of Integrated Marketing Communication, Engineering Faculty, University of Calabria; visiting lecturer at College of Business, University of Illinois (USA); visiting lecturer at Master in Business and Administration (MBA) Marketing Module at the Faculty of Economics & Business, University of Zagreb (HR). Furthermore, she is member of the Editorial Board of numerous international journals, guest editor of the special issue of Journal of Retailing and Consumer Services on Applications of New Technologies to Retailing, 17 (3); and of International Journal of Digital Content Technology and its Applications on Digital Contents Management for Improving Consumers Experience (in press). She was the Highly Commended Award winner of the 2008/2009 Emerald/EMRBI Business Research Award for Young Researchers.

Daniel Pimienta was born in Morocco, Applied Mathematics in Nice and hold a PhD in Computer Sciences. After creating a Software House specialized in APL, he joined IBM France (La Gaude Laboratory) and worked 12 years as Telecommunication System Architect and Planner. In 1988, he joined Union Latina, in Santo Domingo, as Scientific Advisor and Head of the REDALC project for creation of LA&C network. En 1993, he launched the Foundation Networks & Development (FUNREDES) and focused ICT4D. He is an active civil society actor in Information Society themes, especially the social impact of ICT, virtual communities and linguistic diversity. Member of several ICT4D related global groups such as Francophone virtual university, 3EL, GCNP, EUROLATIS, WINDS-LA, REDISTIC, APC, MAAYA, WSIS-AWARD, UN-GAID or Digital Solidarity Fund, he was given, in 2008, the Namur Award (IFIP WG9.2) for his comprehensive actions in the perspective of a positive social impact of ICT.

Balaji Rajendran received his BSc and MSc degrees in Computer Science from Madurai Kamaraj University, in 1998 and 2000 respectively. He is currently pursuing his PhD in Computer Science. He has worked as a lecturer in reputed institutions before moving to C-DAC (Centre for Development of Advanced Computing), formerly known as NCST, as a Scientist in 2001. Since then he has been working with C-DAC, executing various Research and Development Projects, funded by National and International agencies. He has research publications in International and National Conferences, and has also edited the proceedings of an International Conference. He has also received the PMP certification from PMI, USA, in 2005. His research interests are in the domain of Internet and Web Engineering with focus on Intelligent Systems, Security, and systems for Social Development.

Sonal G. Rawat is Assistant Professor of Information Technology at Lal Bahadur Shastri Institute of Management, Delhi. Her areas of interest are data analysis and algorithm, data structure, C++, Computer Graphics.

Stefan Richter was born in 1976 and studied computer science at the University of Applied Sciences in Birkenfeld. After his diploma thesis about an email client for blind people he worked for the SilverCreations AG which develops reading machines and workplaces for visually impaired people. He made significant contributions to the development of the "LiveReader" and the digital workplace camera named "Sceye" for document management and imaging. Since 2005 he is a member of the Institute for Software Systems in Business, Environment, and Administration and he works there in different

research projects. His main research interests are accessibility for the visually impaired and blind people and document management. Now he investigates in the fields of ontology-based knowledge management and of E-Government research combining his experiences to make governmental forms accessible.

Dr. Mamta Sareen is an Associate Professor in Department of Computer Science, Kirori Mal College, University of Delhi, India. She has done her doctoral research in 'Trust and Technology in B2B e-commerce'. In addition, she is also pursuing research in areas like e-commerce, Internet banking, etc. She is teaching various courses on information technology like software engineering, management Information systems, Data Base Management Systems, etc. to various undergraduate and post graduate courses (B.Sc, MCA, MBA) of University of Delhi and I.P University, India.

M. P. Satija, is a Professor and Head of the Department of Library and Information Science, Guru Nanak Dev University, Amritsar, India. Having done his PhD on Ranganathan studies, he has been instrumental in interpreting and propagating Ranganathan's works and ideas to the new generation. As an author of more than a dozen books, 150 papers and 200 book reviews and many conference papers published in India and abroad. He has visited Germany, France, Finland, England, Nepal, the Netherlands, Belgium and Sri Lanka in connection with professional work. In 2005 he was invited for a year by the University of Kelaniya, Sri Lanka to serve as a Visiting Professor. There he was instrumental in instituting library and information science doctoral programme in the Department of Library of Information Science which is the first ever research degree programme in the country. Since April 2007 he is a member Advisory Board of the UDC Consortium, the Hague.

Michael Schmidt was born in 1975 and studied computer sciences at the University of Applied Science Birkenfeld and the University of Saarbrücken. After he finished his master thesis he joined the research group of Prof. Gollmer. In the research group he worked on a mathematical model of the e.coli bacteria. In 2007 he switched to the research group of Prof. Kuhn at the Institute for Software Systems in Business, Environment, and Administration. His main research interests are accessibility for the visually impaired and blind people and document management. He investigates in the field of E-Government research combining his experiences to make governmental forms accessible.

Sangeeta Sharma is a Professor of Public Administration in the Department of Public Administration at the University of Rajasthan, India. She has authored many books. Her articles have appeared in the Internationally reputed publications. Her research interests include exploring man-machine interface, development of conceptual constructs especially in the field of digital governance and ethics building. She is member of International Program Committees. Many students are pursuing Doctorate degree in her guidance. Her works on ethics and e-governance have been internationally acknowledged. She is also member of Editorial Board and has contributed in providing qualitative writings. The articulation of ideas as lucid narrations is highly appreciated.

Anders Steinvall is Senior Lecturer in English at Umeå University. His particular research interests lie in the field of cognitive linguistics and its application to lexical semantics, discourse analysis and second language learning.

Kirk P H Sullivan obtained his PhD from the University of Southampton, England and his EdD from the University of Bristol, England. He is currently Professor of Linguistics and member of the Department of Language Studies, Umeå University, Sweden. Prior to moving to Sweden he worked at Otago University, New Zealand. Together with Eva Lindgren he has edited the book Computer Keystroke Logging and Writing: Methods and Applications. Kirk's research interests lie at the intersection of linguistics and education.

Assunta Tavernise is a PhD in Psychology of Programming and Artificial Intelligence and collaborates with the Laboratory of Psychology at University of Calabria. Her research interests concern various scientific topics from an interdisciplinary point of view and comprise the following areas: - Educational Technology, - Virtual Worlds/Games, - Human Computer Interaction, - Edutainment, - Virtual Agents, - ICT for Cultural Heritage. At the moment, she is working on the constructivist approach to educational virtual worlds as learning environments, carrying on laboratories with students from grammar school to University. Moreover, she is carrying out studies on non verbal communication of virtual agents for the realization of didactic tutors, guides, and virtual shopper assistants. She has worked in national and international projects, among which "Virtual Museum Net of Magna Graecia" (ROP 2000–06, www. virtualmg.net) and "Connecting European Culture through New Technology - NETConnect" (Culture 2000 European Programme, http://www.netconnect-project.eu/and http://netconnect-project.eu/index. aspx).

Neelanarayanan Venkataraman received his BSc degree in Physics from Madurai Kamaraj University, India, in 1993, his MSc degree in Computer Science from Madurai Kamaraj University, India, in 1995 and currently pursuing PhD in Computer Science at IT University of Copenhagen, Denmark. After receiving his Masters degree, he had taught Computer Science subjects in various colleges affliated to Madurai Kamaraj University and also in Madurai Kamaraj University. In 2001, he moved to Centre for Advanced Computing (C-DAC), formerly known as National Centre for Software Technology (NCST), where he was a Scientist. In 2007 he joined IT University of Copenhagen with Danish Government Scholarship for his PhD. He is a Life Member of ISTE, CSTM certified by STQC, ISMS LA certified by IRCA, and PMP certified by PMI, USA.

Huahui Zhao obtained her doctoral degree in Applied Linguistics at the University of Bristol, United Kingdom. She is currently working as a postdoctoral researcher in online peer collaboration in the Department of Language Studies, Umeå University, Sweden. Her main research interests lie in computer-enhanced learning and teaching, classroom-based language assessment, collaborative learning, and education research methodology.

Index

Symbols

2-D networks 13, 21 B2B e-exchanges 63, 69, 70 3-D enabling network 16 B2B transactions 69 3D imagery 229–238 Bagchi 160 Bangladesh 125, 136, 142, 143, 153, A Bauer 156, 159, 160, 162, 170 BDIX 90 academic activities 271, 275, 277 Behindertengleichstellungsgesetz 107, 122 acceptance of innovations 271 Bergen Communiqué 189, 202 accessibility 41, 104, 107, 108, 121, 123, Bharat Sanchar Nigam Limited (BSNL) 263 124 Bhutan's E-post project 25 actor-network theory 172 BIENE Award 109, 110 AECID 10 Biskupin 229-238 African Virtual University 92 BITV-Test 109, 122 Aggressive Goal-Orientation 60 Bologna Declaration 189, 202 alternatives 108 Braille 111 Amartya Sen 4 Bridges.org 156, 157, 158, 168 analysis 1, 5, 8, 11, 15, 16, 17, 21 bureaucratic control 268 Analytical 51 business interactions 288, 289 anime 217 business process reengineering 80 Apache Web server 26 business relations 281, 282, 283, 284, 288, application packages 247 289, 290, 291, 292 appropriate technology 175, 180 business relationships 282, 286, 287, 291 Apriori algorithm 300, 301 business venture 287 artificial cognitive systems 77 buyer-side 64 artificial intelligence (AI) 220 ASCII 43 \mathbf{C} Assistive Technology 124 association rule 299, 300, 301, 302, 303, **CAD 247** 304, 305, 306, 307, 309, 310 Calabrian cultural heritage of the ancient asynchronous interaction 82 Magna Graecia period 225–238 Audiocharta Compact system 111 Calabrian heritage 225–238, 233–238 augmentation of memories 77 Camtasia 194 Austria 106, 113, 122 Centre for Development of Telematics (Cavatar 229-238 DOT) 263

B

Cerveny 156, 160, 161, 167, 168	corporate culture 50, 51, 52, 58, 59, 61
China 135, 136, 142, 148, 149, 153,	correlation and regression analysis 154, 163
cities 126, 127, 131, 135, 136, 140	Council on public access to environmental
citizen-centric 126, 129	information 106
citizen-initiated legislation 145	counties 127, 131
civic education 127	Crenshaw 156, 159, 160, 170
CKM 50, 51, 52, 53, 55, 56, 57, 58, 59,	CTG 128, 129, 140, 141, 148
60, 61	Cultural ability (capacity) to capitalize on ICT
Closed Circuit Television 110	development and applications 186
collaborative learning 75, 77, 78, 79, 80,	cultural access 180
81, 82, 83, 84, 85, 86, 87, 88, 89,	cultural appropriateness 215, 220
90, 91, 92, 93, 94, 95, 97, 98, 100,	cultural appropriation 174
101	cultural aspects 173
collectivistic cultures 213	cultural aspects of globalization 173
commercialization 264	cultural expectations 198
commission on information and communica-	cultural heritage 225, 228, 232, 233, 234,
tions technology (CICT) 133	236, 237
communication platforms 80	cultural heritage educational contents 226
communication technologies 76	cultural heritage virtual environments 226
community 75, 76, 77, 78, 79, 80, 81, 82,	cultural values 51, 53, 54, 59, 60
83, 84, 85, 86, 88, 89, 90, 94, 95,	cultural variables
100, 101, 102	162, 163, 164, 165, 166, 167
community development 23, 24, 25, 31	culture of knowledge sharing 174
community orientation 249	cultures 154, 161, 163, 165, 169
community services 27	customer-centric 49, 50, 51, 52, 53, 54,
commustructure 35	55, 56, 58, 59, 60, 61
competence 299, 303	customer knowledge management (CKM) 50
computer assisted collaborative learning 75	customized pattern of education 76
computer assisted conaborative learning 75	cyber centers 89, 90
	· · · · ·
211, 218, 219, 220, 221, 224	Cyber Korea 21 131, 132
computer keystroke logging	D
188, 194, 203, 205	
computer literacy 247	Daltonism 107
computer-mediated communication (CMC)	database mining 301, 310
211, 212, 214, 215, 216, 218, 221,	data mining 299, 301, 302, 309, 310
223, 224	data sources 299, 300, 301, 302, 304, 305,
computer networks 262	306, 307, 308, 310
computer-supported cooperative work (CSCW)	DCC 50
65	Deal and Kennedy 51
computing resources 301	Dechant 160, 170
computing technologies 242	democratic decision-making 9
CONGDE 14, 20	demographics 126
Constructivism 237	demonstrability 272, 273, 274, 276
constructivist 213	
contents and applications 34	department of telecommunications (DoT)
convenience 303, 304	261, 263, 270
2011, 211101100 303, 301	Desktop PCs 108

developing countries 239, 240, 241, 242,	education 75, 76, 77, 78, 79, 80, 81, 82,
243, 244, 245, 248, 249, 250, 251,	85, 86, 87, 88, 89, 90, 91, 92, 93,
252, 253, 255	94, 95, 96, 98, 99, 101, 102
development project 5, 6, 7, 10, 11, 15, 17	educational technology 237
	education provision 248, 252
De Wit and Meyer 50	*
different rationalities 175	edutainment 226, 233, 234, 237
digital access index (DAI) 143, 144, 149, 257,	e-education 258
268	e-exchanges 63, 64, 69, 70, 71
digital balance 264	e-exclusion 176
digital certificates 287, 289	effectiveness + efficiency 5
digital divide 33, 34, 38, 40, 176, 183,	e-form 114
185, 264, 267	e-governance 125, 126, 127, 128, 129,
digital economy 63	130, 132, 135, 136, 140, 141, 144,
digitalized museum 226	145, 146
digital literacy 36, 37, 42, 43	e-government information 173, 174
digital natives 183	e-government platforms 105
digital opportunity task force 33	e-government process 124
digital planet 137, 138, 139, 150	e-government readiness 171, 186
digital signatures 289	e-health 80
digital world 33, 34, 37, 43	e-inclusion 186
Directive of the European Parliament 106	e-Korea Vision 2006 132
dissatisfaction 55, 56	elderly people 105
distributed mining 300	e-learning 212, 213, 214, 219, 223
district development committee (DDC) 135	electronic business 282
districts 128, 131	electronic business environment 282
	electronic channels 79
Document Repository 124	electronic commerce
dot-matrix 119, 120	
DSL connection 278	281, 282, 283, 294, 297
E	electronic democracy 155
L	electronic government 79, 98, 105, 106,
e-banking 258	107, 108, 110, 112, 121, 122, 125,
ECKO 26, 27, 28, 29, 30	126, 127, 128, 129, 130, 131, 132,
e-commerce 63, 64, 65, 66, 67, 68, 69,	135, 136, 139, 140, 141, 142, 143,
70, 71, 73, 74, 258	144, 145, 146, 147, 148, 150, 152,
economic benefits 126	154, 155, 156, 157, 158, 159, 160,
economic coordination 242	162, 163, 164, 165, 166, 167, 168,
economic development 63, 64, 71, 126,	169, 170, 171, 176, 184, 185, 186
128, 136, 145, 153, 166, 239, 240,	electronic resources 278
245, 254, 258, 259	electronic signatures 287
economic globalization 41	electronic transactions 282, 289
economic growth 64, 86, 88, 132, 136,	embedded user interfaces 109
138, 143, 240, 252, 258, 259, 260,	Employment Equality Directive of the Euro-
263, 266, 269	pean Council 107
Economic Management and Technical Assis-	empowering communities through knowledge
tance Program (EMTAP) 136	22, 26, 27
unce Hogiani (Livita) 130	empowerment 57, 61
	*

English as a Second Language (ESL) 190, 191, 202, 203, 204 english proficiency 277, 279 entrepreneurship 80 environmental health 126 environmental management 257 e-readiness 156, 157, 158, 159, 163, 168 E-readiness stakeholders 186 e-taxation 258 ethics 46, 47 ethnic homogeneity 157 e-transformations of societies 186 e- travel 258 European Union 105, 108, 122, 189, 203 Excel 247 Executive Order #265 133	global IT map 135 globalization 154, 156, 160, 167, 169, 213, 219, 220 global markets 64, 71 global mobile personal communications (GMPCS) 265 global-oriented mindsets 173 global positioning system (GPS) 227, 236, 237 global system for mobile communications (GSM) 263 Global Teenager Project 92 going forward and backwards 214 Good Governance concept 155 government Information Systems Plan 133
Face3DEditor 231–238 Face3DRecorder 231–238 Facebook 10 face-to-face (FtF) 216, 222, 223 face-to-face interactions 282, 288 Fanfiction.net 217 Few Poverty Strategy Reduction Papers 3 foreign search engines 277 forms 107, 112, 113, 115, 117, 118, 124 Free/Libre/Open Source 22 free/open source software 10, 17, 21, 22, 24,	government-to-government 93 Grameen Cyber Society project 25 grammar-translation method 189 graphical avatar 218 graphical user interfaces 231–238 grass roots communities 80, 89 Gravina's collaborative system 91 groupware 5, 13 growth of agriculture 257 GTZ 10 GUIDO 113, 114, 115, 117, 118, 122 H
rree/open source software 10, 17, 21, 22, 24, 26, 29, 30, 32 French Institute of Pondicherry 26 Front Page 247 G G8 33 Gartner Group 140 GDP 159, 163, 164, 166, 167 generational acceleration 183 generic document structure 114, 116, 124 geographical information systems 106 German DIN CERTCO 110 Germany 104, 105, 106, 109, 110, 123, 124 Glauberg 229–238 global challenges 258, 261 global competition 268 global economy 257	Hart 156, 160, 161, 167, 168 higher education 271 high frequency rules 300 high individualism 60 high power tolerance 60 Hofstede 154, 156, 158, 159, 160, 161, 162, 163, 164, 168, 169, 170, 212, 213, 222 Hofstede model 160, 162 Hofstede's cultural model 160 housing and building control 126 human capital 240 human computer interfaces 105 human development 1, 2, 3, 4, 18, 20, 21, 239, 240, 242, 244, 245, 251, 252, 257, 258, 265, 269 human dynamics 257, 259, 264, 266, 269

human-focused information societies 33 human-to-computer interactions 65	information asymmetry 257 information-based economy 61 information literacy
human-to-human interactions 65	33, 34, 36, 37, 40, 42, 43, 44
hybrid 10	information services 27
I	information sharing 282 information Society (IS) 171, 176, 177, 179,
ICT 1 2 2 4 5 6 11 14 17 19 10	181, 183, 185, 186, 187
ICT 1, 2, 3, 4, 5, 6, 11, 14, 17, 18, 19,	information systems 271
20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, , 33, 36, 37, 38, 39,	information systems Internet 271
40, 41, 42, 43, 44, 45, 48, 53, 57,	information technology 154, 155, 156, 160,
59, 78, 79, 91, 92, 98, 99, 100, 125,	167, 168, 169, 170, 271, 280
126, 127, 128, 129, 130, 135, 138,	Information Technology and Electronic Com-
139, 148, 150, 152, 153	merce Council 133
ICT4D 33, 34, 35, 36, 37, 38, 40, 44	information technology (IT) 105, 106, 107,
ICT4D 1.0 2, 3	239, 240, 241, 242, 243, 244, 245,
ICT4D 2.0 2, 18, 19	246, 247, 248, 249, 250, 251, 252,
ICT infrastructure	253, 254, 255
136, 146, 159, 180, 183, 257	information technology (IT) education 239,
ICT infrastructure initiatives 257	240, 241, 243, 244, 245, 246, 247,
ICT linked telecommunications 257, 258, 266	248, 249, 250, 251, 252, 253, 256
ICT production 177, 178	infostructure 35
ICTs assimilation 172	infrastructure 33, 35, 38, 40, 41, 78, 79
ICTs development 177	Institute for Communication and Development
ICT treatment 173	92
IDV 159, 164, 165, 166, 167	integrated help functions 106
iEARN 92	integrated services digital network (ISDN) 265
IFP 26	Intel 386 processor-based systems 247 interactive information and content 76
IICD 92	interconnection 79
IM 218	International Education Resources Network 92
Imam Muhammad Bin Saud University (IMSU) 271, 272, 273, 278, 279	International Telecommunication Union (ITU) 25
immigrants 105, 107	Internet 63, 72, 73, 76, 78, 79, 81, 82, 87,
India 175, 177, 178, 180	89, 90, 91, 95, 97, 100, 101, 102
Indian telecommunications 258, 265	Internet access 278, 279
indigenous technology 83, 95, 175	Internet adoption 271, 272, 273, 274, 275,
individualism-collectivism 213 individualize feedback 201	276, 277, 278, 279
	Internet adoption rate 271, 274
inflection morphology 215 infoculture 36	Internet and specialized software 5
	Internet connection 277, 279
information 80, 96, 97, 98, 99, 100, 103 Information Age 2, 8, 19	Internet resources 279
informational 51	interoperability 126
information and communication technologies	inter-organizational activities 285
(ICT) 1, 2, 154, 157, 160, 170, 257,	inter-organizational business interactions 288
258, 259, 260, 261, 263, 264, 265,	inter-organizational business relations
266, 267, 268, 269	281, 284, 288

inter-organizational business relationships 282, 286, 287, 291 inter-organizational business transactions 64 inter-organizational business venture 287 inter-organizational e-commerce 282 inter-organizational environment 283, 285 inter-organizational information integration 128 inter-organizational integration 128 inter-organizational level 281 inter-organizational relations 283 inter-organizational relationships 282, 283 inter-organizational relationships 282, 283	knowledge networking 5, 10, 90 knowledge sharing 34, 51, 52, 61, 174, 235 knowledge-sharing culture 59, 61 knowledge transfer 238 knowledge workers 50, 55, 57, 58 L lack of perspective 34 language context 212 LDCs 173, 177, 178, 179 learning 75, 76, 77, 79, 81, 82, 83, 84, 88, 95, 96, 97, 98, 99, 100, 101, 102
inter-organizational system 281, 282, 283, 284, 285, 286, 287, 288, 289, 290,	learning algorithm 301
291, 292	legal directives 104
inter-organizational trust 282, 283	life-long learning 188, 189, 190, 193, 195, 199, 201, 202
iPad 227–238, 228–238	linear regression analysis 70
iPhone 227–238	linguistic markedness 215
iPod 227–238	liquidity 64
IS classes 187	local area networks 128
IS developers 244	Lokroi 227–238, 229–238, 230–238
IS projects 244 IT accessible 135	long-term time-orientation 60
IT-based processes 105	low uncertainty avoidance 60
<u>-</u>	
IT education 239 240 241 243 244 245	M
IT education 239, 240, 241, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252,	M
IT education 239, 240, 241, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 256	macro-level variable 173
246, 247, 248, 249, 250, 251, 252,	macro-level variable 173 mainstreaming 3, 4, 5
246, 247, 248, 249, 250, 251, 252, 253, 256	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15, 16, 17, 18, 21, 37, 38, 39, 126, 127,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15, 16, 17, 18, 21, 37, 38, 39, 126, 127, 128, 130, 139, 141, 142, 145, 146,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15, 16, 17, 18, 21, 37, 38, 39, 126, 127, 128, 130, 139, 141, 142, 145, 146, 148, 152
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15, 16, 17, 18, 21, 37, 38, 39, 126, 127, 128, 130, 139, 141, 142, 145, 146, 148, 152 managerial 51 market information 257 masculinity 213
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15, 16, 17, 18, 21, 37, 38, 39, 126, 127, 128, 130, 139, 141, 142, 145, 146, 148, 152 managerial 51 market information 257 masculinity 213 media and educational institutions 172 mendonca 191
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135 knowledge-based society 135, 182	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135 knowledge-based society 135, 182 knowledge delivery 76, 77	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135 knowledge-based society 135, 182 knowledge delivery 76, 77 knowledge development 75, 83, 86, 88, 94	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15, 16, 17, 18, 21, 37, 38, 39, 126, 127, 128, 130, 139, 141, 142, 145, 146, 148, 152 managerial 51 market information 257 masculinity 213 media and educational institutions 172 mendonca 191 mental models 173, 181 meta learning 301 methodological nationalism 17 methodologies 80, 85, 87, 99 metropolitan area networks 128
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135 knowledge-based society 135, 182 knowledge delivery 76, 77 knowledge flow 26	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135 knowledge-based society 135, 182 knowledge delivery 76, 77 knowledge development 75, 83, 86, 88, 94 Knowledge-intensive customer-centric enter-	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,
246, 247, 248, 249, 250, 251, 252, 253, 256 IT education initiatives 239, 240 IT-enabled workforce 133 IT parks 135 IT plan 135 IT policy 135 IT skills 245, 247, 248, 250 IT training 239, 240, 245, 250, 252 I-vision 229–238 K knowledge-as-a-process view 234 knowledge-based industries 135 knowledge-based society 135, 182 knowledge delivery 76, 77 knowledge flow 26	macro-level variable 173 mainstreaming 3, 4, 5 Maitland 156, 159, 160, 162, 170 management 1, 4, 5, 8, 9, 12, 13, 14, 15,

mobile communication 258, 261, 265	open source simple computer for agriculture in
mobile communication services 258, 261	rural areas 26
mobile computing 128	opera browser 112
mobile services 265	optical character recognition software 111
model-based interface design 116	OPUS-based algorithm 301
model of change 179	organizational transformation 59, 61
mono mining 301	organization registry 25
moon 65, 67, 73	OSCAR 26
mother tongue 42	ownership 36, 37, 43, 44
multimedia 214	ownership 30, 37, 13, 11
multinational companies (MNCs) 266	P
multiple regression analysis 274	
multiple regression model 274	packaged web-based solution 27
multi-stakeholder partnership	PageMaker 247
	Pakistan 134, 143, 151, 153
34, 35, 36, 39, 46	Pakistan Telecommunications 134
multitrajectory IS development 187	paper-based forms 105, 117
municipal corporations 127	paradigm shift 34, 36, 39, 40
municipalities 128, 146	parallel data mining 301
MySQL database 26, 27	participatory policy 175
N	patient oriented 303
14	PCs 156, 159
national computerization 143	PDF-documents 106
national culture 154, 156, 160, 162, 163,	Pearls of Africa 8
165, 167, 168, 170	pedagogical 45
Nehruvian model of growth 261	peer-based intervention 188, 190, 195, 196,
Neilsen 65	198, 199, 200, 201
NEPAD e-Schools initiative 92	peer feedback 192
Nepal 135, 143, 153	peer learning 75
NetConnect 228, 229, 233	peer-to-peer 188, 189, 190, 191, 192, 193,
network geometries 7	195, 198, 199, 200, 201, 202
network society 1, 2, 3, 4, 18, 19	peer-to-peer learning 189, 190, 191, 192,
neuropsychology 77	193, 200, 201, 202
NGO 8, 15, 16, 20, 28, 89, 92, 173	peer-to-peer learning training 189
node 8, 12, 14, 16	Pentium- processor-based systems 247
non-repudiation	People with Disabilities Uganda 8
281, 283, 285, 287, 289, 290	perception 54
non-technological determinants 172	peripheries 75, 76, 84, 90, 94
non-technological determinants 1/2	personal communication network (PCN) 265
0	personal digital assistant (PDA) 227
	` , ,
OCR 111, 115, 118, 119	Peterson 156, 160, 161, 167, 168
OECD 3, 10, 20	Philippines 132, 143, 153
online data base 262	physical 51
online peer teview 83	physical infrastructure 258
online security 283	physiological 51
open-ended question 277	PIII 142
open source initiative 22, 23, 32	pilot-and-citizen 147

Pimienta's Law 35, 37	Second Life 226–238
Ping 190	Seelampur-Zaffrabad 26
PIV 142	sell-side 64
planar network morphologies 13	service quality 299, 300, 302, 303, 308,
pluggable user interface 120	309, 311
pluralism 35	service quality of hospital 302
policy-frames 258, 267	SERVQUAL 299, 302, 309
policy framework 257, 260	SERVQUAL method 302
policy initiatives 259, 264	SERVQUAL scale 299, 302, 309
policy shift 257, 258	shared-knowledge 46
political stability 240	Shu 190, 191
portals 140	SilverCreations 111, 112
power distance 213	Singapore 143
PowerPoint 247	skilled workforce 158
pragmatic goals 173	Smith 156, 160, 162, 169
producer-centered 174	social 51
project community 7	social-ability 67, 68, 70
provinces 128, 131, 135, 136	social arrangements 175
<u>*</u>	
psychological 51	social aspects 172 social assessment 174
public key infrastructure 287	
public policy 259, 268	social capital 5, 7, 11, 18, 19
public services 80	social care 126
Puerto Rico 191	social cohesion 78, 79, 258
purposeful learning activity 189	social construction 172, 222
R	social construction of technology 172
N.	social contextual aspects 172
R+D 178	social divide 33, 34
re-engineering 4	social learning 174, 175
regression analysis 271, 274, 275, 276	social networking 125, 126
regression model 70, 74, 274	social paternalism 174
renaissance period 258	social services 145
Republic of Korea 131	social skill development 226
request/pledge management 25	societal context 242
Robinson 155, 156, 159, 160, 168, 170	socio-cultural characteristics 171
rural communities 239, 240, 243, 252, 253	socio-cultural context 172, 175, 176, 177,
rural Nigeria 239, 240	179, 180, 181, 186
rural telecom scenario 259	socio-cultural context of development 180
	socio-cultural setting 177, 179
S	socio-economic 2, 3, 71, 79, 155, 156,
Sahana 25, 32	159, 162, 240, 254, 258, 259, 260,
Salaman and Asch 50	266, 269
SchoolNet Africa 14, 17	socio-economic conditions 71
	socio-economic development 240, 254, 258
SDNF 90 second language (L2) 211 212 213 214	socio-economic-everything 2
second language (L2) 211, 212, 213, 214,	socio-economic factors 156, 159
215, 216, 217, 218, 219, 220, 221,	socio-economic transformations 259, 260
222, 224	

sociological theories 172	Telecentre 23, 24, 26, 30, 32
socio-technical experiments 175	telecom density 257, 264
'son of the soil' factor 249	telecom equipment 261, 263, 268
South West Airlines 53	telecom growth 260, 261, 263, 268
Spanish Confederation of Development NGOs	telecommunication 257, 258, 259, 260,
14	261, 267, 269
spiers 65, 74	telecommunication infrastructure
Sri Lanka 131, 132	156, 157, 159
standard protocol 124	telecommunications industry 258, 259
static information 76	telecom network
strand 156, 160, 162, 169	258, 262, 263, 264, 265, 266
structuration theory 172	Telecom Regulatory Authority of India (TRAI)
sub-districts 128	263, 270
Summit Computers	telecom services
239, 240, 246, 247, 248, 249	257, 258, 261, 262, 263, 264
supply chain 242	tele-density 257, 261, 267, 268
supply chain management (SCM) 26	telephone networks 262
Sustainability 42	text-based dimension 214
sustainable competitive advantage	text-processing programs 106
50, 52, 59, 61	text-to-speech 111, 115
Sustainable Development Networking Pro-	text-to-speech synthesis 105
gramme 89, 90	the American Society for Public Administration
synchronous 211, 213, 214, 215, 216, 217,	157
218, 219, 220, 223, 224	the Individualism/Collectivism dimension 161
synchronous interaction 82	the Masculinity/Femininity dimension 161
•	the network paradigm 8
T	the paradigmatic divide. 33, 34
tangibles factor 304	the power distance dimension 161
techno-economic alternative 265	the sum of all hungers 3
techno-landscape 176	the uncertainty avoidance dimension 161
technological evolution 76	The United Nations Division for Public Eco-
technology 34, 36, 38, 39, 40, 43, 44, 45	nomics and Public Administration 157
technology acceptance model (TAM) 233, 283	the Virtual Theatre 231, 232
technology adoption 271, 280	the Web 55
technology aided environment 282	third generation (3G) 263, 266
technology-aided methods 283	three-tiered multi-stakeholder model of devel-
technology-based approach	opment, deployment and usage 22
225, 226, 228, 234	time constraint 58
technology mediated learning 75	time-sensitive content changes 109
technology-related issues 281, 285, 290, 291	top-to-bottom route 84
technology-related trust 281, 282, 284, 285,	towns 126, 127
286, 287, 290, 291, 292	trademark 23
technology-related trust issues 281, 282, 284,	trading parties 281, 282, 287, 288, 291
285, 286, 287, 290, 291, 292	trading partners 281, 282, 285, 287, 288, 28
technology tools 281, 282, 283, 284, 285,	9, 290, 292, 296, 298
286, 287, 288, 290, 291, 292, 295	transaction identification number (TID) 300
	transitional countries 177, 178, 187

translations classes 199 VOIP-based service 83 trialability 273, 277 VSAT technology 25 trust 63, 64, 67, 70, 71, 72, 73, 74 W trust-based security model 283 trust-related issues 283 W3C 109, 122, 124 tutor 191, 193 web-based instruction 279 typology 5, 11, 17 web-based Internet applications 155 web interface 63, 64, 65, 66, 67, 69, 70, U 71, 283, 284 web portals 258 uncertainty avoidance 213 underdeveloped people 44 web service technology 105 UNDP 1, 10, 17, 19, 20, 89, 102 weighting method 299 UN E-Government Survey 2008 154 weighting model 299, 302, 308 unfreedoms 4 WHO 10 United Nations report 24 wide area networks 128 universal postal union (UPU) 25 Wi-Fi 78, 84, 85, 89, 90 Wi-Fi meshes 128 University of South Pacific (USP) 25 wireless services 261 urban planning 80 wireless technologies 84, 89 user-centric design 243 user front end 117, 118, 124 WITSA 137, 138, 142, 143, 150, 151 working and post-working life 202 \mathbf{V} World Bank 10 World Computer Exchange 89 Vanderheiden 120, 121, 123 World of War Craft 217, 218 variance-inflation factor (VIF) 165 World Social Forum 16 Veiga 160, 166, 170 World Summit for the Information Society 3, video conferencing 262 10, 11, 16, 35, 37, 40, 46, 47, 48 VIF 165, 166 village development committee (VDC) 135 X villages 128 virtual communities of practice 10 Xindong method 299, 304, 306, 307, 308 virtual environments (VE) 217, 218, 219, 28 Xindong model 307 1, 282, 283, 288, 291 Xindong synthesizing model 300 XML 105, 112, 113, 116, 117, 121 virtual heritage 226, 236, 238 virtual navigation systems (VNS) 227, 238, XML structures 105 virtual reconstructions 227-238, 228-238 Y virtual teams 55 Virtual Theatre 225–238, 231–238, 232– Yahoo groups 10 238, 234-238 \mathbf{Z} virtual tour 229, 238 visionary leadership 54

Zhao 188, 190, 192, 194, 200, 205

visual impairments 105, 122, 124