# Table of Contents

Foreword ................................................................................................................... xxxviii

Preface ..................................................................................................................... xlv

Acknowledgment ..................................................................................................... liii

Volume I

Section I
Telecommunications Policy

Chapter I
Static and Dynamic Efficiency in the European Telecommunications Market: The Role of Regulation on the Incentives to Invest and the Ladder of Investment ................................. 1
  Walter Distaso, Imperial College London, UK
  Paolo Lupi, AGCOM, Italy
  Fabio M. Manenti, Università di Padova, Italy

Chapter II
Is Regulation a Roadblock on the Information Highway? ........................................... 15
  James E. Prieger, Pepperdine University, USA
  Daniel Heil, Pepperdine University, USA

Chapter III
Reforms in Spectrum Management Policy ................................................................. 33
  Claudio Feijóo, Universidad Politécnica de Madrid, Spain
  José Luis Gómez-Barroso, Universidad Nacional de Educación a Distancia (UNED), Spain
  Asunción Mochón, Universidad Nacional de Educación a Distancia (UNED), Spain

Chapter IV
Next Generation Access Networks and their Regulatory Implications ...................... 48
  Ricardo Gonçalves, Universidade Católica Portuguesa (Porto), Portugal
  Álvaro Nascimento, Universidade Católica Portuguesa (Porto), Portugal
Chapter V
Carol C. McDonough, University of Massachusetts Lowell, USA

Chapter VI
Shaping Regulation in the Australian Mobile Industry .......................................................... 88
Indrit Troshani, University of Adelaide, Australia
Sally Rao Hill, University of Adelaide, Australia

Section II
Telecommunications Industry

Chapter VII
Analyzing the Disruptive Potential in the Telecommunications Industry .......................... 108
Stefan Hüsig, University of Regensburg, Germany

Chapter VIII
Convergence of the Internet and Telecommunications .................................................. 125
John B. Meisel, Southern Illinois University Edwardsville, USA
Timothy S. Sullivan, Southern Illinois University Edwardsville, USA

Chapter IX
International Internet Interconnection Service in Asia-Pacific Region ........................ 141
Moon-Soo Kim, Hankuk University of Foreign Studies, Korea

Chapter X
A Techno-Economic Analysis of Mobile Virtual Network Operators ............................ 158
Dong Hee Shin, Penn State University, Berks Campus, USA

Chapter XI
Evolving Value Networks and Internationalisation of National Telecommunication Companies from Small and Open Economies ............................................. 173
Riku Laanti, The University of Adelaide Business School, Australia
Fred McDougall, The University of Adelaide, Australia
Georges Baume, The University of Adelaide Business School, Australia

Chapter XII
The Effect of Non-Market Strategies in the Mobile Industry ............................................. 194
Zulima Fernández, Universidad Carlos III de Madrid, Spain
Belén Usero Sánchez, Universidad Carlos III de Madrid, Spain
Chapter XIII
Spatiality and Political Economy of the Global Fiber Optics Industry .............................................. 208
Barney Warf, University of Kansas, USA

Chapter XIV
Digital Convergence and Home Network Services in Korea: Part 1 - Recent Progress and Policy Implications.......................................................................................................................... 222
Hyun-Soo Han, Hanyang University, South Korea
Heesang Lee, Sungkyunkwan University, South Korea
Yeong-Wha Sawng, Electronic and Telecommunications Research Institute, South Korea

Chapter XV
Digital Convergence and Home Network Services in Korea: Part 2 – Business Models and Strategic Alliances .......................................................................................................................... 234
Hyun-Soo Han, Hanyang University, South Korea
Heesang Lee, Sungkyunkwan University, South Korea
Yeong-Wha Sawng, Electronic and Telecommunications Research Institute, South Korea

Section III
Telecommunications Business Management

Chapter XVI
Mixing and Matching Organizational Network Legitimacy Practices to China’s Telecommunication Market .......................................................................................................................... 248
Brian Low, University of Western Sydney, Australia
Wesley J. Johnston, Georgia State University, USA

Chapter XVII
Preliminary Knowledge Management Implementation in the Telco Industry ................................... 265
Chin Wei Chong, Multimedia University, Malaysia
Siong Choy Chong, Putra International College, Malaysia

Chapter XVIII
Activity-Based Costing in the Portuguese Telecommunications Industry .......................................... 281
Maria Major, ISCTE – Business School, Portugal
Trevor Hopper, University of Manchester, UK

Chapter XIX
The Role of Organizational Culture to the Management of Telecommunication Companies:
I. Background and Motivation ................................................................................................................ 295
Antonios D. Kargas, University of Athens, Athens, Greece
Dimitris Varoutas, University of Athens, Athens, Greece
Chapter XX
The Role of Organizational Culture to the Management of Telecommunication Companies:
II. Applications and Case Studies ....................................................................................................... 310
  Antónios D. Kargas, University of Athens, Athens, Greece
  Dimitris Varoutas, University of Athens, Athens, Greece

Chapter XXI
Dynamics of Mobile Service Adoption ............................................................................................... 324
  Hannu Verkasalo, Helsinki University of Technology, Finland

Chapter XXII
When Customer Satisfaction Isn’t Good Enough: The Role of Switching Incentives and
Barriers Affecting Customer Behavior in Korean Mobile Communications Services ....................... 351
  Moon-Koo Kim, Electronics and Telecommunications Research Institute, Korea
  Myeong-Cheol Park, Information and Communications University, Korea
  Jong-Hyun Park, Electronics and Telecommunications Research Institute, Korea

Chapter XXIII
Telecommunication Customer Demand Management ............................................................................. 364
  Jiayin Qi, Beijing University of Posts and Telecommunications, China
  Yajing Si, Beijing Wuzi University, China
  Jing Tan, Beijing University of Posts and Telecommunications, China
  Yangming Zhang, Beijing University of Posts and Telecommunications, China

Chapter XXIV
Telecommunication Customer Detainment Management ...................................................................... 379
  Jiayin Qi, Beijing University of Posts and Telecommunications, China
  Yuanquan Li, Beijing University of Posts and Telecommunications, China
  Chen Li, Beijing University of Posts and Telecommunications, China
  Yingying Zhang, Beijing University of Posts and Telecommunications, China
  Jing Tan, Beijing University of Posts and Telecommunications, China

Chapter XXV
How to Plan for an Upgrading Investment in a Data Network? ........................................................ 400
  Frédéric Morlot, Orange Labs, France
  Salah Eddine Elayoubi, Orange Labs, France

Chapter XXVI
Telecommunication Investments Analysis: A Multi-Criteria Model .................................................. 414
  Georgios N. Angelou, University of Macedonia, Greece
  Anastasios A. Economides, University of Macedonia, Greece

Chapter XXVII
A Business Planning Framework for WiMAX Applications ............................................................... 433
  Rebecca De Coster, Brunel University, UK
Chapter XXVIII
Adoption of VoIP Applications in Public and Private Organizations .................................................. 447
   Nicoletta Corrocher, Bocconi University, Italy and University of Tromso, Norway
   Roberto Fontana, University of Pavia, Italy and Bocconi University, Italy
   Claudia Parlanti, Bocconi University, Italy

Chapter XXIX
Intelligent Networking and Business Process Innovation: A Case Study Analysis of
Home Box Office and Dell Computers .................................................................................................. 461
   Richard A. Gershon, Western Michigan University, USA

Chapter XXX
Can M-Commerce Benefit from Pervasive Computing? ................................................................. 474
   Stan Kurkovsky, Central Connecticut State University, USA

---

Section IV
Telecommunications Technology Management

Chapter XXXI
Basics of Telecommunication Management ..................................................................................... 488
   Katalin Tarnay, University of Pannonia, Hungary

Chapter XXXII
Telecommunication Management Protocols ....................................................................................... 502
   Katalin Tarnay, University of Pannonia, Hungary

Chapter XXXIII
Cellular Network Planning: Evolution from 2G to 4G ................................................................. 515
   Marc St-Hilaire, Carleton University, Canada
   Samuel Pierre, École Polytechnique de Montréal, Canada

Volume II

Chapter XXXIV
IP Address Management: Challenges, Solutions and Future Perspectives ..................................... 526
   Faouzi Kamoun, University of Dubai, UAE

Chapter XXXV
Digital Cable TV Networks: Converging Technologies, Value-Added Services
and Business Strategies ......................................................................................................................... 542
   Ran Wei, University of South Carolina, USA
   Zizhong Zhao, Communication University of China, China
Chapter XXXVI
Diffusion and Oscillation of Telecommunications Services: The Case of Web 2.0 Platforms........ 557
Tobias Kollmann, University of Duisburg-Essen, Campus Essen, Germany
Christoph Stöckmann, University of Duisburg-Essen, Campus Essen, Germany
Carsten Schröer, University of Duisburg-Essen, Campus Essen, Germany

Chapter XXXVII
The Diffusion of WiMax Technology: Hurdles and Opportunities ................................................ 571
Phillip Olla, Madonna University, USA

Chapter XXXVIII
VoIP Quality and Security Issues for Consumers and Small Businesses........................................... 588
David Bell, Pacific Union College, USA
Sunil Hazari, University of West Georgia, USA

Chapter XXXIX
Emerging Security Issues in VANETS for E-Business........................................................... 599
S. S. Manvi, REVA Institute of Technology and Management, India
M. S. Kakkasageri, Basaveshwar Engineering College, India

Chapter XL
Telecommunications Network Planning and Operations Management in an Academic Environment: The Case Study of the Aristotle University of Thessaloniki............................................ 615
Sotirios K. Goudos, Aristotle University of Thessaloniki, Greece
Angeliki Z. Agorogianni, Aristotle University of Thessaloniki, Greece
Zaharias D. Zaharis, Aristotle University of Thessaloniki, Greece

Chapter XLI
Planning of Wireless Community Networks............................................................................... 634
Károly Farkas, University of West Hungary, Hungary
Csaba A. Szabó, Budapest University of Technology & Economics, Hungary
Zoltán Horváth, Budapest University of Technology & Economics, Hungary

Chapter XLII
Human Factors for Business Mobile Systems ............................................................................... 653
David Golightly, University of Nottingham, UK
Section V
Telecommunications Technology and Applications

Chapter XLIII
Towards QoS-Inferred Internet
Mohamed Boucadair, France Telecom-Orange Labs, France
Pierre Levis, France Telecom-Orange Labs, France
Pierrick Morand, France Telecom-Orange Labs, France

Chapter XLIV
The Playout Control Management: An Issue for the IP Telephony Service Providers
Mirko Luca Lobina, Università di Cagliari, Italy
Luigi Atzori, Università di Cagliari, Italy
Fabrizio Boi, Università di Cagliari, Italy

Chapter XLV
Open APIs and Protocols for Services and Applications in Telecoms
Nikolaos D. Tselikas, University of Peloponnese, Greece
Georgia M. Kapitsaki, National Technical University of Athens, Greece
Dimitrios G. Makris, University of Peloponnese, Greece
Iakovos S. Venieris, National Technical University of Athens, Greece

Chapter XLVI
On the Management Performance of Networked Environments Using Web Services Technologies
Lisandro Zambenedetti Granville, Federal University of Rio Grande do Sul – Porto Alegre, Brazil
Ricardo Neisse, Federal University of Rio Grande do Sul – Porto Alegre, Brazil
Ricardo Lemos Vianna, Federal University of Rio Grande do Sul – Porto Alegre, Brazil
Tiago Fioreze, Federal University of Rio Grande do Sul – Porto Alegre, Brazil

Chapter XLVII
Automated Fault Management in Wireless Networks
Raquel Barco, University of Málaga, Spain
Pedro Lázaro, University of Málaga, Spain

Chapter XLVIII
Modeling Intrusion Detection with Self Similar Traffic in Enterprise Networks
Cajetan M. Akujuobi, Prairie View A & M University, USA
Nana K. Ampah, Prairie View A & M University, USA
Chapter XLIX
High-Speed Multimedia Networks: Critical Issues and Trends ........................................................... 775
   Dimitris Kanellopoulos, University of Patras, Greece

Chapter L
Emerging Telecommunications Technologies: Cognitive Radio .......................................................... 788
   J. Joaquín Escudero-Garzás, University Carlos III de Madrid, Spain
   Ana García-Armada, University Carlos III de Madrid, Spain

Chapter LI
Game Theory for PHY Layer and MAC Sublayer in Wireless Telecommunications ......................... 804
   J. Joaquín Escudero-Garzás, University Carlos III de Madrid, Spain
   Ana García-Armada, University Carlos III de Madrid, Spain

Chapter LII
Agent Based Product Negotiation Models in Mobile Commerce ...................................................... 820
   S. S. Manvi, REVA Institute of Technology and Management, India
   L. B. Bhajantri, Basaveshwar Engineering College, India

Chapter LIII
Role of Telecommunications in Precision Agriculture ................................................................. 836
   James M. McKinion, USDA-ARS, USA

Section VI
Telecommunications Network Design

Chapter LIV
Network Planning and Dimensioning for Broadband Access to the Internet Regarding Quality of Service Demands ................................................................. 852
   Franz Hartleb, T-Systems, Germany
   Gerhard Haßlinger, T-Systems, Germany
   Sebastian Kempken, University of Duisburg-Essen, Germany

Chapter LV
Overlay Networks: New Techniques for Global Service and Network Provisioning ....................... 867
   Gerhard Haßlinger, T-Systems, Germany

Chapter LVI
Optimising P2P Networks by Adaptive Overlay Construction .................................................... 882
   James Salter, University of Surrey, UK
   Nick Antonopoulos, University of Surrey, UK
Chapter LVII
Designing a New Service Overlay on a Carrier Network Using the Efficient Frontier................. 895
Susan J. Chinburg, Rogers State University, USA
George Scheets, Oklahoma State University, USA

Chapter LVIII
Combining Small and Large Scale Roaming Parameters to Optimize the Design of PCS .......... 909
Mohamed Zaki, Azhar University, Egypt
Salah Ramadan, Azhar University, Egypt

Chapter LIX
Secure Resource Optimization in Distributed Service Computing................................................. 927
Kaiqi Xiong, Texas A&M University, USA
Harry Perros, North Carolina State University, USA

Chapter LX
Trends, Optimization and Management of Optical Networks......................................................... 941
Jadranka Skorin-Kapov, Stony Brook University, USA
Darko Skorin-Kapov, Adelphi University, USA

Compilation of References ............................................................................................................. 957