

1. Record Nr.	UNINA9910784148903321
Autore	Kularatna Nihal
Titolo	Essentials of Modern Telecommunications Systems
Pubbl/distr/stampa	Norwood : , : Artech House, , 2004 [Piscataway, New Jersey] : , : IEEE Xplore, , [2004]
ISBN	1-58053-884-3
Descrizione fisica	1 online resource (393 p.)
Collana	Artech House telecommunications library
Altri autori (Persone)	DiasDileeka
Disciplina	621.382
Soggetti	Telecommunication systems Telecommunication
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Bookmarks; Contents; Foreword; Preface; Acknowledgments; 1 -- The Communication Channel and the Communication Network 1; 1.1 Development of Telecommunications 1; 1.2 Introduction to Telecommunications 4; 1.3 Signals in Communications 5; 1.4 Characteristics of the Communications Channel 10; 1.5 The Communications Network 22; 1.6 The Future 24; 1.7 Enabling Technologies 27; 2 -- Digital Telephony 29; 2.1 From Analog to Digital 29; 2.2 Advantages of Digital Techniques 31; 2.3 Disadvantages of Digital Techniques 34; 2.4 PCM Techniques and Standards 35; 2.5 Low Bit-Rate Voice Coding 44. 2.6 Voice over the Internet 56 2.7 Devices for Digital Telephony 73; 3 -- Switching and Signaling Systems 99; 3.1 Evolution of Switching Systems 99; 3.2 Essentials of Switching, Signaling, and Control 100; 3.3 Principles of Switching 101; 3.4 Circuit Switching and Packet Switching 105; 3.5 Signaling Systems 107; 3.6 Digital Exchanges 112; 3.7 Private Branch Exchanges and Key Phone Systems 119; 3.8 Merging Data and Voice 121; 3.9 Packet Switching Systems 121; 3.10 Switch Fabric Interfaces and ICs 137; 3.11 Optics and the Future 139; 4 -- Cellular Systems 143; 4.1 Introduction 143. 4.2 Advantages and Constraints of Wireless Access 144 4.3 Basic Components of Wireless Access 144; 4.4 Cellular Systems as an Access Technology 145; 4.5 Cellular System Operation 151; 4.6 The Cellular Radio Environment 155; 4.7 Frequency Assignment and Multiple Access

Schemes for Cellular Systems 163; 4.8 Capacity of Cellular Systems 168; 4.9 First Generation Cellular Systems and Standards 169; 4.10 Second Generation Digital Cellular Systems 172; 4.11 Third Generation Mobile Systems 182; 4.12 Mobile Device Hardware, Architecture, and Implementation 188; 4.13 Technological Trends 192.
5 -- Fixed Wireless Access 197.1 Introduction 197; 5.2 Access Technologies 198; 5.3 WLL Technologies Primarily for Voice Provision 200; 5.4 Broadband Fixed Wireless Access Systems 207; 5.5 Enabling Technologies 217; 5.6 The Future 220; 6 -- Digital Subscriber Loop 223; 6.1 Introduction 223; 6.2 Signal Impairments and the Channel Length 223; 6.3 DSL Techniques 229; 6.4 Different Versions of DSL 239; 6.5 Spectral Considerations in DSL 247; 6.6 Operation of DSL 250; 6.7 DSL Chip Sets 254; 6.8 The ISO Seven-Layer Model, ATM, and DSL Systems 264; 6.9 End-to-End ADSL Systems 264; 6.10 Standards 265.
7 -- Transmission Techniques 271.1 Introduction 271; 7.2 Transmission Line Behavior 271; 7.3 Decibel Measurements 273; 7.4 Basic TDM Techniques and Digital Transmission Systems 274; 7.5 Plesiochronous Higher-Order Digital Multiplexing or PDH 279; 7.6 Synchronous Digital Multiplexing 281; 7.7 Optical Networks 287; 7.8 The Future 290; 8 -- Telecommunication Systems Testing 293; 8.1 Introduction 293; 8.2 Measurement Areas 293; 8.3 Measurement of Power Levels in Telecommunications Circuits 294; 8.4 High-Frequency Power Measurements 296.

Sommario/riassunto

In today's competitive and fast-changing telecom industry, most professionals find themselves in the difficult situation of having to sacrifice keeping on top of the latest technology because they are striving to meet another round of high-pressure deadlines. Essentials of Modern Telecommunications Systems offers you a solution to this problem, helping you quickly coming up to speed with the latest advances in your field. By cutting out arcane mathematics and management-speak jargon, it focuses on the essentials you need for rapidly understanding and mastering the latest implementation and dev.
