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	Overview of Digital Communication and Transmission; 4.1 Introduction; 4.2 Baseband Systems; 4.3 Messages, Characters, and Symbols; 4.4 Sampling Process; 4.5 Voice Communication; 4.6 Pulse Amplitude Modulation (PAM); 4.7 Pulse Code Modulation; 4.8 Shannon Limit; 4.9 Modulation; 4.10 Performance Parameters of Coding and Modulation Scheme; 4.11 Power Limited and Bandwidth-Limited Channel; 4.12 Nyquist Bandwidth; 4.13 OSI Model; 4.14 Data Communication Services; 4.15 Multiplexing; 4.16 Transmission Media 4.17 Transmission Impairments4.18 Summary; Problems; References; Chapter 5. Fundamentals of Cellular Communications; 5.1 Introduction; 5.2 Cellular Systems; 5.3 Hexagonal Cell Geometry; 5.4 Cochannel Interference Ratio; 5.5 Cellular System Design in Worst-Case Scenario with an Omnidirectional Antenna; 5.6 Cochannel Interference Reduction; 5.7 Directional Antenna; 5.6 Cochannel Interference Reduction; 5.7 Directional Antennas in Seven-Cell Reuse Pattern; 5.8 Cell Splitting; 5.9 Adjacent Channel Interference (ACI); 5.10 Segmentation; 5.11 Summary; Problems; References; Chapter 6. Multiple Access Techniques; 6.1 Introduction 6.2 Narrowband Channelized Systems6.3 Spectral Efficiency; 6.4 Wideband Systems; 6.5 Comparisons of FDMA, TDMA, and DS-CDMA; 6.6 Capacity of a DS-CDMA System; 6.7 Comparison of DS-CDMA, 5.6 Capacity of a DS-CDMA System; 6.9 Orthogonal Frequency Division Multiplexing (OFDM); 6.10 Multicarrier DS-CDMA (MC-DS-CDMA); 6.11 Random Access Methods; 6.12 Idle Signal Casting Multiple Access; 6.13 Packet Reservation Multiple Access; 6.14 Error Control Schemes for Link Layer; 6.15 Summary; Problems; References Chapter 7. Architecture of a Wireless Wide-Area Network (WWAN)
Sommario/riassunto	This book provides comprehensive coverage of mobile data networking and mobile communications under a single cover for diverse audiences including managers, practicing engineers, and students who need to understand this industry. In the last two decades, many books have been written on the subject of wireless communications and networking. However, mobile data networking and mobile communications were not fully addressed in a unified fashion. This book fills that gap in the literature and is written to provide essentials of wireless communications and wireless networking, including Wireless Pe