

1. Record Nr.	UNINA9911092139203321
Autore	Dahlman Erik
Titolo	4G LTE/LTE-advanced for mobile broadband / / Erik Dahlman, Stefan Parkvall, and Johan Skold
Pubbl/distr/stampa	Oxford [U.K.] ; ; Burlington, Mass., : Academic Press, an imprint of Elsevier, 2011
ISBN	9786613171245 9781283171243 1283171244 9780123854902 0123854903
Edizione	[1st edition]
Descrizione fisica	1 online resource (456 p.)
Altri autori (Persone)	ParkvallStefan SkoldJohan
Disciplina	384.5 621.38456
Soggetti	Long-Term Evolution (Telecommunications) Broadband communication systems Mobile communication systems
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	Front Cover; 4G LTE/LTE-Advanced for Mobile Broadband; Copyright Page; Contents; Preface; Acknowledgements; Abbreviations and Acronyms; CHAPTER 1 Background of LTE; 1.1 Introduction; 1.2 Evolution of Mobile Systems Before LTE; 1.3 ITU Activities; 1.4 Drivers for LTE; 1.5 Standardization of LTE; CHAPTER 2 High Data Rates in Mobile Communication; 2.1 High Data Rates: Fundamental Constraints; 2.2 Higher Data Rates Within a Limited Bandwidth: Higher-Order Modulation; 2.3 Wider Bandwidth Including Multi-Carrier Transmission; CHAPTER 3 OFDM Transmission; 3.1 Basic Principles of OFDM 3.2 OFDM Demodulation3.3 OFDM Implementation Using IFFT/FFT Processing; 3.4 Cyclic-Prefix Insertion; 3.5 Frequency-Domain Model of OFDM Transmission; 3.6 Channel Estimation and Reference Symbols; 3.7 Frequency Diversity with OFDM: Importance of Channel Coding; 3.8 Selection of Basic OFDM Parameters; 3.9 Variations in Instantaneous

Transmission Power; 3.10 OFDM as a User-Multiplexing and Multiple-Access Scheme; 3.11 Multi-Cell Broadcast/Multicast Transmission and OFDM; CHAPTER 4 Wider-Band ""Single-Carrier"" Transmission; 4.1 Equalization Against Radio-Channel Frequency Selectivity
 4.2 Uplink FDMA with Flexible Bandwidth Assignment 4.3 DFT-Spread OFDM; CHAPTER 5 Multi-Antenna Techniques; 5.1 Multi-Antenna Configurations; 5.2 Benefits of Multi-Antenna Techniques; 5.3 Multiple Receive Antennas; 5.4 Multiple Transmit Antennas; 5.5 Spatial Multiplexing; CHAPTER 6 Scheduling, Link Adaptation, and Hybrid ARQ; 6.1 Link Adaptation: Power and Rate Control; 6.2 Channel-Dependent Scheduling; 6.3 Advanced Retransmission Schemes; 6.4 Hybrid ARQ with Soft Combining; CHAPTER 7 LTE Radio Access: An Overview; 7.1 Basic Principles; 7.2 LTE Release 9; 7.3 LTE Release 10 and IMT-Advanced
 7.4 Terminal Capabilities CHAPTER 8 Radio-Interface Architecture; 8.1 Overall System Architecture; 8.2 Radio Protocol Architecture; 8.3 Control-Plane Protocols; CHAPTER 9 Physical Transmission Resources; 9.1 Overall Time-Frequency Structure; 9.2 Normal Subframes and MBSFN Subframes; 9.3 Carrier Aggregation; 9.4 Frequency-Domain Location of LTE Carriers; 9.5 Duplex Schemes; CHAPTER 10 Downlink Physical-Layer Processing; 10.1 Transport-Channel Processing; 10.2 Downlink Reference Signals; 10.3 Multi-Antenna Transmission; 10.4 Downlink L1/L2 Control Signaling
 CHAPTER 11 Uplink Physical-Layer Processing 11.1 Transport-Channel Processing; 11.2 Uplink Reference Signals; 11.3 Uplink Multi-Antenna Transmission; 11.4 Uplink L1/L2 Control Signaling; 11.5 Uplink Timing Alignment; CHAPTER 12 Retransmission Protocols; 12.1 Hybrid ARQ with Soft Combining; 12.2 Radio-Link Control; CHAPTER 13 Power Control, Scheduling, and Interference Handling; 13.1 Uplink Power Control; 13.2 Scheduling and Rate Adaptation; 13.3 Inter-Cell Interference Coordination; 13.4 Heterogeneous Network Deployments; CHAPTER 14 Access Procedures; 14.1 Acquisition and Cell Search
 14.2 System Information

Sommario/riassunto

LTE (Long Term Evolution) is the 3GPP's (3rd Generation Partnership Project) new standard and accompanying technologies that mobile network operators such as ATT, Verizon and TeliaSonera are adopting for their networks. To move to higher-speed networks that can cater to customer demand for mobile broadband multimedia applications, the 3GPP has developed the latest LTE-Advanced (LTE Release 10) standard, which will be fixed in December 2010. This book focuses on LTE and LTE-Advanced, and provides engineers with real insight and understanding into the why and how of the standard and
