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Altri autori (Persone)	HolmaHarri <1970-> ToskalaAntti
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Nota di contenuto	LTE for UMTS - OFDMA and SC-FDMA Based Radio Access; Preface; Acknowledgements; List of Abbreviations; 1 Introduction; 1.1 Mobile Voice Subscriber Growth; 1.2 Mobile Data Usage Growth; 1.3 Wireline Technologies Evolution; 1.4 Motivation and Targets for LTE; 1.5 Overview of LTE; 1.6 3GPP Family of Technologies; 1.7 Wireless Spectrum; 1.8 New Spectrum Identified by WRC-07; 1.9 LTE-Advanced; 2 LTE Standardization; 2.1 Introduction; 2.2 Overview of 3GPP Releases and Process; 2.3 LTE Targets; 2.4 LTE Standardization Phases; 2.5 Evolution Beyond Release 8; 2.6 LTE-Advanced for IMT-Advanced 2.7 LTE Specifications and 3GPP StructureReferences; 3 System Architecture Based on 3GPP SAE; 3.1 System Architecture Evolution in 3GPP SAE; 3.2 Basic System Architecture Configuration with only E-UTRAN Access Network; 3.2.1 Overview of Basic System Architecture Configuration; 3.2.2 Logical Elements in Basic System Architecture Configuration; 3.2.3 Self-configuration of S1-MME and X2 Interfaces;

3.2.4 Interfaces and Protocols in Basic System Architecture Configuration; 3.2.5 Roaming in Basic System Architecture Configuration
3.3 System Architecture with E-UTRAN and Legacy 3GPP Access Networks
3.3.1 Overview of 3GPP Inter-working System Architecture Configuration; 3.3.2 Additional and Updated Logical Elements in 3GPP Inter-working System Architecture Configuration; 3.3.3 Interfaces and Protocols in 3GPP Inter-working System Architecture Configuration; 3.3.4 Inter-working with Legacy 3GPP CS Infrastructure; 3.4 System Architecture with E-UTRAN and Non-3GPP Access Networks; 3.4.1 Overview of 3GPP and Non-3GPP Inter-working System Architecture Configuration
3.4.2 Additional and Updated Logical Elements in 3GPP Inter-working System Architecture Configuration
3.4.3 Interfaces and Protocols in Non-3GPP Inter-working System Architecture Configuration; 3.4.4 Roaming in Non-3GPP Inter-working System Architecture Configuration; 3.5 Inter-working with cdma2000 Access Networks; 3.5.1 Architecture for cdma2000 HRPD Interworking; 3.5.2 Additional and Updated Logical Elements for cdma2000® HRPD Inter-working; 3.5.3 Protocols and Interfaces in cdma2000® HRPD Inter-working; 3.5.4 Inter-working with cdma2000® 1xRTT; 3.6 IMS Architecture; 3.6.1 Overview
3.6.2 Session Management and Routing
3.6.3 Databases; 3.6.4 Services Elements; 3.6.5 Inter-working Elements; 3.7 PCC and QoS; 3.7.1 PCC; 3.7.2 QoS; References; 4 Introduction to OFDMA and SC-FDMA and to MIMO in LTE; 4.1 Introduction; 4.2 LTE Multiple Access Background; 4.3 OFDMA Basics; 4.4 SC-FDMA Basics; 4.5 MIMO Basics; 4.6 Summary; References; 5 Physical Layer; 5.1 Introduction; 5.2 Transport Channels and Their Mapping to the Physical Channels; 5.3 Modulation; 5.4 Uplink User Data Transmission; 5.5 Downlink User Data Transmission; 5.6 Uplink Physical Layer Signaling Transmission
5.6.1 Physical Uplink Control Channel (PUCCH)

Sommario/riassunto

From the editors of the highly successful WCDMA for UMTS, this new book gives a complete and up-to-date overview of Long Term Evolution (LTE) in a systematic and clear manner. It starts with an in-depth explanation of the background and standardization process before moving on to examine the system architecture evolution (SAE). The basics of air interface modulation choices are introduced and key subjects such as 3GPP LTE physical layer and protocol solutions are described. Mobility aspects and radio resource management together with radio and end-to-end performance are assessed. The vo
