Autore	UNISA996200194403316 Sanchez Javier
Titolo Pubbl/distr/stampa	UMTS [[electronic resource] /] / Javier Sanchez, Mamadou Thioune Newport Brach, CA, : ISTE Ltd., c2007
ISBN	1-280-84784-0 9786610847846 0-470-61227-4 0-470-39492-7 1-84704-621-5
Descrizione fisica	1 online resource (438 p.)
Collana	ISTE ; ; v.122
Altri autori (Persone)	ThiouneMamadou
Disciplina	621.3845 621.3845/6 621.38456
Soggetti	Universal Mobile Telecommunications System
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 (p. [395]-397) and index.
Nota di contenuto	UMTS; Table of Contents; Preface; Chapter 1. Evolution of Cellular Mobile Systems; 1.1. Multiple-access techniques used in mobile telephony; 1.1.1. Frequency division duplex (FDD) and time division duplex (TDD); 1.1.2. Frequency division multiple access (FDMA); 1.1.3. Time division multiple access (TDMA); 1.1.4. Code division multiple access (CDMA); 1.1.5. Space division multiple access (SDMA); 1.1.6. Orthogonal frequency division multiplexing (OFDM); 1.2. Evolution from 1G to 2.5G; 1.2.1. From 1G to 2G; 1.2.2. Enhancements to 2G radio technologies: 2.5G; 1.3. 3G systems in IMT-2000 framework 1.3.1. IMT-2000 radio interfaces1.3.2. Core network approaches in 3G systems; 1.4. Standardization process in 3G systems; 1.5. Worldwide spectrum allocation for IMT-2000 systems; 1.5.1. WARC-92; 1.5.2. WARC-2000; Chapter 2. Network Evolution from GSM to UMTS; 2.1. Introduction; 2.2. UMTS definition and history; 2.3. Overall description of a UMTS network architecture; 2.4. Network architecture evolution from GSM to UMTS; 2.4.1. GSM network architecture of Phases 1 and 2; 2.4.2. GSM network architecture of Phase 2+; 2.4.3. Architecture of UMTS networks: evolutionary revolution of GSM

1.

	 2.5. Bearer services offered by UMTS networks2.6. UMTS protocol architecture based on "stratum" concept; 2.6.1. Access stratum; 2.6.2. Non-access stratum; Chapter 3. Services in UMTS; 3.1. Introduction; 3.2. UMTS mobile terminals; 3.2.1. UE functional description; 3.2.2. UE maximum output power; 3.2.3. Dual-mode GSM/UMTS terminals; 3.2.4. UE radio access capability; 3.3. Services offered by UMTS networks; 3.3.1. Standard UMTS telecommunication services; 3.3.2. UMTS bearer services; 3.3.3. Teleservices; 3.3.4. Supplementary services; 3.3.5. Operator specific services: service capabilities 3.3.6. The virtual home environment3.4. Traffic classes of UMTS bearer services; 3.4.1. Conversational services; 3.4.2. Streaming services; 3.4.3. Interactive services; 3.4.4. Background services; 3.5. Service continuity across GSM and UMTS networks; Chapter 4. UMTS Core Network; 4.1. Introduction; 4.2. UMTS core network architecture; 4.2.1. Main features of UMTS core network based on Release 99; 4.2.2. Circuit-switched and packet-switched domains; 4.3.1. Network elements and protocols of the CS and PS domains; 4.3.1. Network elements of the CS domain 4.3.2. Protocol architecture in the CS domain4.3.3. Network elements of the PS domain; 4.3.4. Protocol architecture in the PS domain; 4.3.5. Integrated UMTS core network; 4.4. Network elements not included in UMTS reference architecture; 4.5. Interoperability between UMTS and GSM core networks; Chapter 5. Spread Spectrum and WCDMA; 5.1. Introduction; 5.2. Spread spectrum; 5.3. Direct sequence CDMA; 5.4. Multiple access based on spread spectrum; 5.5. Maximum capacity of CDMA 5.5.1. Effect of background noise and interference
Sommario/riassunto	During the first decade of this new millennium, it is estimated that more than €100 billion will be invested in the third generation (3G) Universal Mobile Telecommunications System (UMTS) in Europe. This fact represents an amazing challenge from both a technical and commercial perspective. Written by experts in the field, this book gives a detailed description of the elements in the UMTS network architecture: the User Equipment (UE), the UMTS Radio Access Network (UTRAN) and the core network. The completely new protocols based on the needs of the new Wideband Code Division Multiple Access (WCD