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Nota di contenuto	Table of Contents; Title; Copyright; Preface; List of Acronyms; 1: General Characteristics; 1.1. Network architecture; 1.2. Bearer types; 1.3. Radio interface; 1.4. Network procedures; 2: NAS Protocol; 2.1. Attachment; 2.2. Session establishment; 3: RRC Protocol; 3.1. System information; 3.2. Connection control; 3.3. Measurements; 3.4. Broadcast control; 4: Data Link Layer; 4.1. PDCP protocol; 4.2. RLC protocol; 4.3. MAC protocol; 5: Physical Layer; 5.1. Frequency plan; 5.2. Multiplexing structure; 5.3. Transmission chain; 6: Downlink Physical Signals; 6.1. PSS physical signal 6.2. SSS physical signal 6.3. Cell-Specific RS physical signal; 6.4. MBSFN RS physical signal; 6.5. UE-Specific RS physical signal; 6.6. PRS physical signal; 6.7. CSI RS physical signal; 7: Downlink Physical Channels; 7.1. PBCH physical channel; 7.2. PCFICH physical channel; 7.3. PHICH physical channel; 7.4. PDCCH physical channel; 7.5. PDSCH physical channel; 7.6. PMCH physical channel; 8: Uplink Physical Signals; 8.1. DM-RS physical channel; 8.2. SRS physical signal; 9: Uplink Physical Channels; 9.1. PRACH physical channel; 9.2. PUCCH physical channel; 9.3. PUSCH physical channel 10: Radio Interface Procedures 10.1. Access control; 10.2. Data transfer; Bibliography; Index; Other Titles from ISTE; End User License Agreement

This book presents the technical characteristics of the two radio network interfaces of mobile 4G, LTE and LTE Advanced, based on Release 8, 9 and 10 of the 3GPP specifications. Points covered include a detailed description of various components of the radio interface. RRC signaling messages used to establish the connection, enabling the security, the paging, the establishment and the release of dedicated and default support and the handover. The PDCP ensures the security of the transmission and allows the recovery during handover and the compression of the headers. The RLC protocol defines the transmission modes with or without acknowledgment. The MAC protocol determines the random access, the data transfer, the timing advance, the scheduling and the discontinuous reception. The physical layer includes a description of the methods of multiplexing (time, frequency and space) and the various signals and physical channels.
