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Nota di contenuto	<ul> <li>WCDMA - Requirements and Practical Design; Contents; Preface; Acknowledgements; Abbreviations; 1 Introduction; 1.1 Evolution and Revolution of Mobile Telephony; 1.1.1 The Cellular Revolution; 1.1.2 The Growth of Cellular Technology; 1.2 The Third Generation Partnership Project; 1.2.1 3GPP Background; 1.2.2 3GPP</li> <li>Standardization Organization; 1.2.3 3GPP Standard Releases; 1.2.4 3GPP Standards Evolution; 1.3 3GPP Terminology; 1.4 The Journey of a Bit; 1.5 Structure of the Book; 2 RF and Baseband Processing; 2.1 Introduction; 2.2 UMTS Radio Requirements; 2.2.1 Receiver Performance Requirements</li> <li>2.2.2 Transmitter Performance Requirements2.2.3 Frequency Bands and Channel Arrangements; 2.2.4 Radio Architecture Overview; 2.3 Receiver RF Design; 2.3.1 Direct Conversion Receiver; 2.3.2 Direct Conversion and Even-Order Distortion; 2.3.3 Transmit Leakage and IP2; 2.3.4 Receiver Sensitivity; 2.3.5 Adjacent Channel Selectivity; 2.3.6 Blocking and IP3; 2.3.7 Spurious Emissions and LO Leakage; 2.4</li> </ul>

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	Receiver Baseband Design; 2.4.1 Baseband Demodulation Performance; 2.4.2 Pre ADC Signal Conditioning; 2.4.3 Analogue to Digital Conversion; 2.4.4 Receive Pulse Shape Filtering 2.4.5 Automatic Gain Control and Reference Point2.4.6 Additional Receiver Signal Processing Functions; 2.5 Transmitter Baseband Design; 2.5.1 Baseband Modulation; 2.5.2 Pre Digital to Analogue Conversion Signal Processing; 2.5.3 Digital to Analogue Conversion; 2.5.4 Post Conversion Processing; 2.6 Transmitter RF Design; 2.6.1 RF Up Conversion; 2.6.2 Transmitter Direct up Conversion; 2.6.3 Transmitter IF Based up Conversion; 2.6.4 Transmitter Spurious and Noise Emissions; 2.6.5 Transmitter Distortion and ACLR; 2.6.6 Key Isolation Issues; 2.6.7 Transmitter Dower Control and Calibration 2.6.8 The Power Amplifier2.6.9 Power Efficiency Enhancement; 2.7 Future Trends; 3 Physical Layer Chip Rate Processing; 3.1 Introduction; 3.1.1 Code Division Multiple Access; 3.1.2 The WCDMA Air Interface; 3.1.3 Role of Chip Rate Processing; 3.2 Spreading and Scrambling; 3.2.1 Spreading; 3.2.2 Scrambling; 3.3 Physical Channels; 3.3.1 Synchronization and Channel Estimation Channels; 3.3.2 Cell Broadcast Channels; 3.3.3 Dedicated Channel; 3.3.4 Packet and Indicator Channels; 3.3.5 Overview of Physical Channel Timing; 3.4 The Receiver; 3.4.1 Overview; 3.4.2 RAKE Receiver Overview 3.4.3 RAKE Fingers3.4.4 The Combiner; 3.4.5 RAKE Architectures; 3.4.6 RAKE Control; 3.5 Cell Search; 3.5.1 P-SCH Detection; 3.5.2 S-SCH Detection; 3.5.3 Cell ID Detection; 3.5.4 P-CCPCH Transmit Diversity Status Identification; 3.6 Power Control; 3.6.3 Other Power Control Mechanisms; 3.7 Handover; 3.7.1 Introduction; 3.7.2 Soft and Softer Handover; 3.7.3 Hard Handover; 3.7.4 SSDT; 3.8 Transmit Diversity in the Downlink; 3.8.1 Background; 3.8.2 Open Loop Transmit Diversity; 3.8.3 Closed Loop Transmit Diversity 3.9 Physical Layer Procedures
Sommario/riassunto	WCDMA (Wideband Code Division Multiple Access), an ITU standard derived from code division multiple access (CDMA) is officially known as IMT-2000 direct spread. WCDMA is a third generation mobile wireless technology offering much higher data speeds to mobile and portable wireless devices than commonly offered in today's market. WCDMA is a relatively new technology and there is little information in the public domain about specific design issues. The proposed book will discuss UMTS/WCDMA from the perspective of a potential development engineer, who may have experience of GSM but none of WCDMA