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| Nota di contenuto       | Designing cdma2000® Systems; Contents; Preface; Acknowledgements; About the Authors; 1. Introduction to Spread Spectrum Systems; 1.1 Multiple Access Techniques; 1.2 The Spread Spectrum Concept; 1.3 Spread Spectrum Techniques; 1.3.1 Frequency-Hopping Spread Spectrum; 1.3.2 Direct-Sequence Spectrum Spreading; 1.4 Processing Gain P(G); 1.4.1 Processing Gain in Frequency-Hopping Systems; 1.4.2 Processing Gain for Direct-Sequence Systems; 1.5 Spreading and De-spreading of the DS-CDMA Signal; Bibliography and References; 2. CDMA Evolution; 2.1 CDMA Standards and Evolution<br>2.1.1 Third Generation Systems Structure2.2 CDMA Timeline; 2.3 Evolution of CDMA Standards; 2.3.1 IS-95; 2.3.2 cdma2000; 2.3.3 cdma2000-1X EVDO Systems; 2.3.4 cdma2000-1X EVDV Systems; Bibliography and References; 3. Codes and Sequences; 3.1 Introduction; 3.2 Maximal Length Sequences; 3.2.1 Correlation Characteristics of Spread Spectrum Systems; 3.2.2 Short PN Sequences (PN-I and PN-Q); 3.2.3 Long Code or PNLC (Long PN Sequence); 3.3 Walsh Sequences; 3.3.1 Walsh Codes in Multiplexing and Spectrum Spreading; 3.3.2 Walsh Codes in IS-95 Systems; 3.3.3 Walsh Codes in |

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3.4 Quasi-Orthogonal FunctionBibliography and References; 4. Forward Link Channels; 4.1 Forward Link Channel Structure in IS-95 CDMA Systems; 4.1.1 Phase, Quadrature and Carrier Modulation; 4.1.2 Forward Pilot Channel; 4.1.3 Synchronisation Channel; 4.1.4 Forward Paging Channels; 4.1.5 Forward Traffic Channels; 4.2 Forward Link Channel Structure in cdma2000 Systems; 4.2.1 Forward Pilot Channels; 4.2.2 Synchronisation Channel; 4.2.3 Forward Paging Channels; 4.2.4 Forward Common Control Channel; 4.2.5 Forward Broadcast Control Channel (BCCh or FBCCh); 4.2.6 Quick Paging Channel 4.2.7 Common Power Control Channel (CPCCh)4.2.8 Common Assignment Channel (CACH); 4.2.9 Forward Fundamental Channel; 4.2.10 Forward Dedicated Control Channel; 4.2.11 Forward Supplemental Channel; 4.2.12 Forward Supplemental Code Channel; Bibliography and References; 5. Reverse Link Channels; 5.1 CDMA IS-95 Reverse Link Channel Structure; 5.1.1 Reverse Traffic Channel (RTCh); 5.1.2 Reverse Access Channel; 5.2 cdma2000 Reverse Link Channel Structures; 5.2.1 Reverse Pilot Channel (RPiCh); 5.2.2 Reverse Access Channel (RACH); 5.2.3 Enhanced Access Channels (EACH) 5.2.4 Reverse Common Control Channels (RCCCh)5.2.5 Reverse Fundamental Channel; 5.2.6 Reverse Dedicated Control Channels (RDCCChs); 5.2.7 Reverse Supplemental Channels (RSCh); 5.2.8 Reverse Supplemental Code Channels (RSCCh); Bibliography and References; 6. Call Processing in CDMA Systems; 6.1 Introduction; 6.2 Call Processing; 6.2.1 Mobile Station Initialisation State; 6.2.2 Mobile Station Idle State; 6.2.3 System Access State; 6.2.4 Mobile Station Control in the Traffic Channel State; 6.3 Messages Exchanged during Call Establishment; 6.3.1 MS Originated Call Scenario 6.3.2 MS Terminated Call Scenario

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### Sommario/riassunto

CDMA is the second most widely deployed technology in the world with more than 100 million subscribers worldwide and is projected to reach 280 million subscribers by 2006.CDMA 2000 1x was deployed in year 2000 and CDMA 2000 1xEVDO is being deployed this year.CDMA 2000 is the natural migration for CDMA IS-95 networks and some of the TDMA networks. CDMA technology is complex to design due to its inherent adaptive characteristic and the introduction of data requires a complete new way of analysing the network from traffic characteristics to performance requirements. The authors bring

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