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Nota di contenuto	List of Figures -- List of Tables -- Preface -- 1. Introduction -- 1.1 Overview of UWB -- 1.2 Advantages of UWB -- 1.3 UWB Applications -- 1.4 UWB Transmission Schemes -- 1.5 Challenges for UWB -- 2. Channel Characteristics -- 2.1 Large-Scale Models -- 2.1.1 Path Loss Models -- 2.1.2 Shadowing -- 2.2 Small-Scale Models -- 2.2.1 Tap- delay line fading model -- 2.2.2 I - K model -- 2.2.3 Saleh-Valenzuela (S-V) model -- 2.2.4 Standard UWB Channel Model -- 3. UWB: Single Band Approaches -- 3.1 Overview of Single Band Approaches -- 3.2 Modulation Techniques -- 3.2.1 Pulse Amplitude Modulation (PAM) -- 3.2.2 On-Off Keying (OOK) -- 3.2.3 Phase Shift Keying (PSK) -- 3.2.4 Pulse Position Modulation (PPM) -- 3.3 Multiple Access Techniques -- 3.3.1 Time-Hopping UWB -- 3.3.2 Direct Sequence UWB -- 3.4 Demodulation Techniques -- 3.4.1 Received Signal Model -- 3.4.2 Correlation Receiver -- 3.4.3 Rake Receiver -- 3.5 MIMO Single Band UWB -- 3.5.1 MIMO Space-Time Coded Systems -- 3.5.2 Space-Time Coded UWB Systems -- 3.6 Performance Analysis -- 3.6.1 TH-BPPM -- 3.6.2 TH-BPSK -- 3.6.3 DS-BPSK -- 3.7 Simulation Results -- 3.8 Chapter Summary -- 4. UWB: Multiband OFDM Approach -- 4.1

Overview of Multiband OFDM Approach -- 4.1.1 Fundamental Concepts -- 4.1.2 Signal Model -- 4.2 IEEE 802.15.3a WPAN Standard Proposal -- 4.2.1 OFDM Parameters -- 4.2.2 Rate-Dependent Parameters -- 4.2.3 Operating Band Frequencies -- 4.2.4 Channelization -- 4.3 Physical Layer Design -- 4.3.1 Scrambler and De-scrambler -- 4.3.2 Convolutional Encoder and Viterbi Decoder -- 4.3.3 Bit Interleaver and De-interleaver -- 4.3.4 Constellation Mapper -- 4.3.5 OFDM Modulation -- 4.4 MAC Layer Design -- 4.4.1 Network Topology -- 4.4.2 Frame Architecture -- 4.4.3 Network Operations -- 4.5 Chapter Summary -- 5. MIMO Multiband OFDM -- 5.1 MIMO-OFDM Communications -- 5.2 MIMO Multiband OFDM System Model -- 5.2.1 Transmitter Description -- 5.2.2 Channel Model -- 5.2.3 Receiver Processing -- 5.3 Performance Analysis -- 5.3.1 Independent Fading. 5.3.2 Correlated Fading -- 5.4 Simulation Results -- 5.5 Chapter Summary -- 6. Performance Characterization -- 6.1 System Model -- 6.2 Performance Analysis -- 6.2.1 Average PEP Analysis -- 6.2.2 Approximate PEP Formulation -- 6.2.3 Outage Probability -- 6.3 Analysis for MIMO Multiband OFDM Systems -- 6.3.1 MIMO Multiband OFDM System Model -- 6.3.2 Pairwise Error Probability -- 6.3.3 Example: Repetition STF Coding based on Alamouti's Structure -- 6.4 Simulation Results -- 6.5 Chapter Summary -- 7. Performance under Practical Considerations -- 7.1 System Model -- 7.2 Average Signal-to-Noise Ratio -- 7.2.1 Expressions of Fading Term, ICI, and ISI -- 7.2.2 Variances of Fading Term, ICI, and ISI -- 7.2.3 Average Signal-to-Noise Ratio and Performance Degradation -- 7.3 Average Bit Error Rate -- 7.3.1 Overall Spreading Gain of 1 -- 7.3.2 Overall Spreading Gain of 2 -- 7.3.3 Overall Spreading Gain of 4 -- 7.4 Performance Bound -- 7.5 Numerical and Simulation Results -- 7.5.1 Numerical Results -- 7.5.2 Simulation and Numerical Results -- 7.6 Chapter Summary -- Appendix: Derivations of A1, A2, B1, and B2 -- 8. Differential Multiband OFDM -- 8.1 Differential Modulation -- 8.1.1 Single-Antenna Systems -- 8.1.2 MIMO Systems -- 8.2 Differential Scheme for Multiband OFDM Systems -- 8.2.1 System Model -- 8.2.2 Differential Encoding and Transmit Signal Structure -- 8.2.3 Multiband Differential Decoding -- 8.3 Pairwise Error Probability -- 8.4 Simulation Results -- 8.5 Chapter Summary -- 9. Power Controlled Channel Allocation -- 9.1 System Model -- 9.2 Power Controlled Channel Allocation Scheme -- 9.2.1 Generalized SNR for Different Transmission Modes -- 9.2.2 PER and Rate Constraint -- 9.2.3 Problem Formulation -- 9.2.4 Subband Assignment and Power Allocation Algorithm -- 9.2.5 Joint Rate Assignment and Resource Allocation Algorithm -- 9.3 Simulation Results -- 9.3.1 Subband Assignment and Power Allocation -- 9.3.2 Joint Rate Assignment and Resource Allocation -- 9.4 Chapter Summary -- 10. Cooperative UWB Multiband OFDM -- 10.1 Cooperative Communications -- 10.2 System Model -- 10.2.1 Non-Cooperative UWB -- 10.2.2 Cooperative UWB -- 10.3 SER Analysis for Cooperative UWB -- 10.3.1 Cooperative UWB -- 10.3.2 Comparison of Cooperative and Non-Cooperative UWB -- 10.4 Optimum Power Allocation for Cooperative UWB -- 10.4.1 Power Minimization using Cooperative Communications -- 10.4.2 Coverage Enhancement using Cooperative Communications -- 10.5 Improved Cooperative UWB -- 10.6 Simulation Results -- 10.7 Chapter Summary -- References -- Index.

Sommario/riassunto

The only book that provides full coverage of UWB multiband OFDM technology Ultra-wideband (UWB) has emerged as a technology that offers great promise to satisfy the growing demand for low-cost, high-speed digital networks. The enormous bandwidth available, the potential for high data rates, and the promise for small size and low

processing power with reduced implementation cost all present a unique opportunity for UWB to become a widely adopted radio solution for future wireless home networking technology. Ultra-Wideband Communications Systems is the first book to provide comprehensive coverage of the fundamental and advanced issues related to UWB technology, with a particular focus on multiband orthogonal frequency division multiplexing (multiband OFDM). The multiband OFDM approach was a leading method in the IEEE 802.15.3 standard and has recently been standardized by ECMA International. The book also explores several major advanced state-of-the-art technologies to enhance the performance of the standardized multiband OFDM approach. Additional coverage includes: * Characteristics of UWB channels * An overview of UWB single-band and multiband OFDM approaches * MIMO multiband OFDM * Performance characterization * Performance under practical considerations * Differential multiband OFDM * Power-controlled channel allocation * Cooperative UWB multiband OFDM Complete with pointers for future research opportunities to enhance the performance of UWB multiband OFDM technology over current and future wireless networks, this is an indispensable resource for graduate students, engineers, and academic and industrial researchers involved with UWB.
