

1. Record Nr.	UNINA9911018802603321
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Titolo	WiMedia UWB : technology of choice for wireless USB and Bluetooth / / Ghobad Heidari
Pubbl/distr/stampa	Chichester, West Sussex, United Kingdom ; ; Hoboken, NJ, : Wiley, 2008
ISBN	9786613203502 9781283203500 1283203502 9780470715598 0470715596 9780470715604 047071560X
Descrizione fisica	1 online resource (309 p.)
Disciplina	004.6/4
Soggetti	Multimedia communications Wireless communication systems USB (Computer bus) Bluetooth technology Ultra-wideband devices
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 and index.
Nota di contenuto	-- List of Figures xiii -- List of Tables xix -- About the Authors xxi -- Preface xxiii -- 1 Introduction 1 -- 1.1 What is UWB? 3 -- 1.2 Why UWB? 7 -- 1.2.1 Higher Channel Capacity and Power Efficiency 7 -- 1.2.2 Little Interference to and from Narrowband Systems 9 -- 1.2.3 Unmet WPAN Demand 10 -- 1.2.4 High-precision Ranging 11 -- 1.3 UWB Market 11 -- 1.3.1 Clutter of Cables 11 -- 1.3.2 Networking Shortcomings 12 -- 1.3.3 UWB Fills a Gap 13 -- 1.3.4 W-USB 16 -- 1.3.5 High Rate Bluetooth 17 -- 1.3.6 IP over UWB 18 -- 1.3.7 What to Expect 19 -- 1.4 UWB Standardization 20 -- 1.4.1 IEEE 20 -- 1.4.2 WiMedia versus UWB Forum 21 -- 1.4.3 Ecma International 22 -- 1.5 UWB Applications 23 -- 1.6 Summary Features 33 -- 1.7 Terminology 36 -- References 42 -- 2 Worldwide Regulations 43 -- 2.1 United

States	44
2.2 Japan	47
2.3 Korea	50
2.4 Europe	51
2.5 China	56
2.6 Summary	56
References	59
3 Physical Layer	61
3.1 Feature Summary	64
3.1.1 Packet Radio	64
3.1.2 MB-OFDM	65
3.1.3 Error Correction and Variable Data Rate	65
3.2 WiMedia OFDM	65
3.2.1 Frequency-selective Fading	66
3.2.2 Mathematical Framework	71
3.2.3 Extensions to OFDM	73
3.2.3.1 The Zero Postfix and Further ISI Reduction	73
3.2.3.2 Zero, Pilot, and Guard Subcarriers	77
3.2.4 Spreading	80
3.2.5 Modulation	82
3.2.6 Tone Nulling	86
3.2.7 Summary	87
3.3 PMD	87
3.3.1 WiMedia Band Plan	88
3.3.2 Frequency Hopping	88
3.3.3 Common Clock Reference	91
3.3.4 Transmit Power Control	92
3.4 Scrambling, Interleaving, and Error Correction	92
3.4.1 Scrambling	93
3.4.2 Convolutional Coding	94
3.4.3 Header Protection: Header Check Sequence and Reed / Solomon Coding	97
3.4.4 Interleaving	98
3.4.5 Summary	102
3.5 Packet Structure	103
3.5.1 Standard and Burst Modes	104
3.5.2 PLCP Preamble	107
3.5.3 PLCP Header	110
3.5.4 Modulated PSDU	116
3.6 Performance Requirements	118
3.6.1 S/N Measurements and Terminology	118
3.6.2 Transmitter Error Specifications	122
3.6.2.1 Transmit Spectral Mask	122
3.6.2.2 Transmitter Constellation Error	125
3.6.3 Receiver Performance Specifications	128
3.6.4 Signal Quality Measurements	130
3.6.5 Channels and Channel Modeling	130
3.7 Ranging	131
3.8 PHY Services and Interfaces	134
3.8.1 Management Services	136
3.8.2 Transmit and Receive Services	136
3.8.3 CCA Service	139
References	139
4 Medium Access Control Sublayer	141
4.1 Feature Summary	143
4.1.1 Peer-to-peer	143
4.1.2 Ad Hoc	144
4.1.3 Two-hop Networking	144
4.1.4 Prioritized Contention Access (PCA)	144
4.1.5 Distributed Reservation Protocol (DRP)	145
4.1.6 Mobility	146
4.1.7 Beaconing	146
4.1.8 Band Groups and Time-Frequency Channels (TFC)	147
4.1.9 Acknowledgment Policies	148
4.1.10 Reservation Policies	149
4.1.11 Security	150
4.1.12 Hibernation	151
4.1.13 Fragmentation, Aggregation	152
4.1.14 Ranging	152
4.2 Superframes and Timeslots	152
4.3 Device Address	155
4.4 Frame Formats	156
4.4.1 Beacon Frames	159
4.4.1.1 BPOIE	164
4.4.1.2 DRP IE	165
4.4.1.3 ASIE	169
4.4.2 Control Frames	170
4.4.3 Command Frames	173
4.4.4 Data Frames	173
4.4.5 Aggregated Data Frames	174
4.5 Frame Processing	175
4.5.1 Frame Reception and Transmission	175
4.5.2 Acknowledgments and Retransmissions	177
4.5.3 Frame Transaction and Inter-frame Spacing	178
4.5.4 Fragmentation and Aggregation	179
4.5.5 Channel Selection	181
4.6 Synchronization	182
4.6.1 Sources of Timing Error	182
4.6.2 BPST Alignment	183
4.6.3 Guard Time	185
4.7 Power Conservation	186
4.7.1 Power Modes	187
4.7.2 Power States	188
4.8 Beacon Protocol	189
4.8.1 BP	189
4.8.2 Beacon Loss or Collision	192
4.8.3 Beacon Contraction	193
4.8.4 Alien Beacons	194
4.8.5 BP Merging	195
4.9 DRP	198
4.10 PCA	203
4.11 MAC Policies	210
4.11.1 Reservation Size Limitations	211
4.11.2 Reservation Compaction	215
4.11.3 PCA Reservation Rules	224
4.12 Security	224
4.13 Ranging	228
References	232
5 Protocol Adaptation Layer	233
5.1 CW-USB	235
5.1.1 USB versus CW-USB	236
5.1.2 Frame Formats	242
5.1.3 Transaction Groups	244
5.1.4 Device Beaconing	246
5.1.5 Data Flow and Connection Process	247
5.1.6 Dual Role Device	248
5.1.7 Association Model	249
5.1.8 Implementation and Interface Issues	251
References	255
Appendix A Acronyms	257
Appendix B WiMedia Alliance Membership	263
Index	269

UWB (ultra-wideband) has been investigated for many decades but only recently has it become commercially viable. With the advent of WiMedia UWB technology and its associated standard specifications, the stage is set for the next generation of WPAN applications to take root. WiMedia UWB focuses on the ECMA-368 standard. Both PHY layer and MAC sublayers specified in this standard are explained in great detail. The book offers not only the facts about the requirements of the standard, but also the motivation and logic behind them. To give a comprehensive perspective of the UWB technology to the reader, other interrelated topics are also examined in this book. These include the history of UWB and its recent standardization attempts; UWB applications and advantages; UWB spectrum allocation and regulations around the world; UWB platform clients: Certified Wireless USB (CW-USB), Bluetooth, and WLP (WiMedia Link layer Protocol, which enables Internet Protocol over UWB); as well as some important implementation issues and considerations. As the first application of WiMedia UWB, CW-USB is given a special and more comprehensive treatment. This book is ideal for any engineer or engineering managers who are expecting to either develop a solution based on UWB or to integrate it with other devices. It will also be of interest to researchers who require an overview or an interpretation of the technology. . One of the first books to describe the WiMedia standards (PHY and MAC) in detail . A comprehensive approach to de-obfuscating the entire WiMedia UWB technology, from the PHY through the MAC, the MAC clients, the applications, and the regulations . Includes a description of the CW-USB standard and its relation to WiMedia MAC . Provides an up-to-date view of the UWB spectrum allocations and associated regulations around the world . Derived from hands-on experiences in WiMedia UWB standards and system development efforts.
