

Specification of the Bluetooth System

Wireless connections made easy

Master Table of Contents & Compliance Requirements

Covered Core Package version: 1.2
Current Master TOC issued:
05 November 2003





Revision History

The Revision History is shown in the [“Appendix” on page 53\[vol. 0\]](#).

Contributors

The persons who contributed to this specification are listed in [“Appendix” on page 53\[vol. 0\]](#).

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MASTER TABLE OF CONTENTS

Bluetooth Specification
Including Core v1.2

This table of contents (TOC) covers the entire Bluetooth Specification. In addition, each volume has a TOC and each part of a volume is preceded by a detailed TOC.





MASTER TOC FOR THE BLUETOOTH SPECIFICATION

In the following table:

- The TOC for each Volume starts at the top of a page.
- The Volume No. is written in red and followed by the name of the Volume.

Note: Each Volume is a self contained book which is published and updated separately and is equipped with a TOC of its own. However, this Master TOC is also revised as soon as any of the other Volumes are updated.

- A Volume cover one or more Parts (A, B, etc.), each Part can be viewed independently and has its own TOC.

Red or blue text on the following pages indicates hypertext links that will take you directly to the indicated section, on condition that you have access to a complete specification.





Specification Volume 0
Master Table of Contents & Compliance Requirements

Part A
MASTER TABLE OF CONTENTS

Master TOC for the Bluetooth Specification 7

Part B
BLUETOOTH COMPLIANCE REQUIREMENTS

Contents 43

1 Scope 45

2 Definitions.....47

3 Legal Aspects 49

4 Introduction to the Bluetooth Qualification Program 51



Part C

APPENDIX

Contents	55
1 Revision History.....	57
1.1 [vol 0] Master TOC & Compliance Requirements	57
1.1.1 Bluetooth Compliance Requirements.....	57
1.2 [Vol 1] Architecture & Terminology Overview	57
1.3 [Vol 2 & 3] Core System Package	58
2 Contributors	59
2.1 [vol 0] Master TOC & Compliance Requirements	59
2.1.1 Part B: Bluetooth Compliance Requirements	59
2.2 [vol 1] Architecture & Terminology Overview	59
2.2.1 Part A: Architectural Overview	59
2.2.2 Part B: Acronyms & Abbreviations	60
2.2.3 Part C: Changes from Bluetooth Specification v1.1	60
2.3 [Vol 2] Core System Package, Controller	61
2.3.1 Part A: Radio Specification	61
2.3.2 Part B: Baseband Specification.....	62
2.3.3 Part C: Link Manager Protocol	65
2.3.4 Part D: Error Codes.....	66
2.3.5 Part E: Bluetooth Host Controller Interface Functional Specification	67
2.3.6 Part F: Message Sequence Charts	68
2.3.7 Part G: Sample Data	69
2.3.8 Part H: Security Specification.....	69
2.4 [Vol 3] Core System Package, Host.....	70
2.4.1 Part A: Logical Link Control and Adaptation Protocol Specification	70
2.4.2 Part B: Service Discovery Protocol (SDP)	71
2.4.3 Part C Generic Access Profile.....	72
2.4.4 Part D: Test Support.....	72



Specification Volume 1

Architecture & Terminology Overview

Table of Contents	5
--------------------------------	----------

Part A

ARCHITECTURE

Contents	11
-----------------------	-----------

1	General Description	13
1.1	Overview of Operation	13
1.2	Nomenclature	15
2	Core System Architecture	19
2.1	Core Architectural Blocks	22
2.1.1	Channel manager	22
2.1.2	L2CAP resource manager	22
2.1.3	Device manager	23
2.1.4	Link manager	23
2.1.5	Baseband resource manager	23
2.1.6	Link controller	24
2.1.7	RF	24
3	Data Transport Architecture	25
3.1	Core Traffic Bearers	26
3.1.1	Framed data traffic	27
3.1.2	Unframed data traffic	28
3.1.3	Reliability of traffic bearers	28
3.2	Transport Architecture Entities	30
3.2.1	Bluetooth generic packet structure	30
3.3	Physical Channels	32
3.3.1	Basic piconet channel	33
3.3.2	Adapted piconet channel	34
3.3.3	Inquiry scan channel	35
3.3.4	Page scan channel	36
3.4	Physical Links	37
3.4.1	Links supported by the basic and adapted piconet physical channel	38
3.4.2	Links supported by the scanning physical channels	39



3.5	Logical Links and Logical Transports.....	39
3.5.1	Casting	41
3.5.2	Scheduling and acknowledgement scheme.....	41
3.5.3	Class of data	42
3.5.4	Asynchronous connection-oriented (ACL)	42
3.5.5	Synchronous connection-oriented (SCO)	43
3.5.6	Extended synchronous connection-oriented (eSCO)....	44
3.5.7	Active slave broadcast (ASB).....	44
3.5.8	Parked slave broadcast (PSB)	45
3.5.9	Logical links	46
3.5.10	ACL Control Logical Link (ACL-C)	47
3.5.11	User Asynchronous/Isochronous Logical Link (ACL-U)	47
3.5.12	User Synchronous/Extended Synchronous Logical Links (SCO-S/eSCO-S)	47
3.6	L2CAP Channels	48
4	Communication Topology	49
4.1	Piconet Topology	49
4.2	Operational Procedures and Modes	51
4.2.1	Inquiry (Discovering) Procedure.....	51
4.2.2	Paging (Connecting) Procedure.....	52
4.2.3	Connected mode.....	52
4.2.4	Hold mode.....	53
4.2.5	Sniff mode	53
4.2.6	Parked state	54
4.2.7	Role switch procedure.....	54



Part B

ACRONYMS & ABBREVIATIONS

1 List of Acronyms and Abbreviations.....57

2 Abbreviations of the Specification Names 65

Part C

CHANGES FROM BLUETOOTH SPECIFICATION V 1.1

Contents 69

1 New Features 71

2 Changes in Wording 73

 2.1 IEEE Language Update 73

 2.1.1 Shall 74

 2.1.2 Must.....74

 2.1.3 Will.....74

 2.1.4 Should 74

 2.1.5 May.....75

 2.1.6 Can.....75

 2.2 Nomenclature Changes 75

3 Structure Changes 77

4 Deprecated Specifications 79

 4.1 Deprecated Features 79

 4.2 Deprecated Profiles.....79



Specification Volume 2
Core System Package
[Controller volume]

Table of Contents 5

Part A
RADIO SPECIFICATION

Contents 27

1 Scope 29

2 Frequency Bands and Channel Arrangement 31

3 Transmitter Characteristics 33

 3.1 Modulation Characteristics 34

 3.2 Spurious Emissions 35

 3.2.1 In-band spurious emission 35

 3.3 Radio Frequency Tolerance 36

4 Receiver Characteristics 37

 4.1 Actual Sensitivity Level 37

 4.2 Interference Performance 37

 4.3 Out-of-Band Blocking 38

 4.4 Intermodulation Characteristics 38

 4.5 Maximum Usable Level 39

 4.6 Receiver Signal Strength Indicator 39

 4.7 Reference Signal Definition 39

5 Appendix A 41

6 Appendix B 43

**Part B****BASEBAND SPECIFICATION**

Contents	47
1 General Description	53
1.1 Bluetooth Clock	54
1.2 Bluetooth Device Addressing	55
1.2.1 Reserved addresses	55
1.3 Access Codes	56
2 Physical Channels.....	57
2.1 Physical Channel Definition	58
2.2 Basic Piconet Physical Channel.....	58
2.2.1 Master-slave definition	58
2.2.2 Hopping characteristics	59
2.2.3 Time slots	59
2.2.4 Piconet clocks	60
2.2.5 Transmit/receive timing	60
2.3 Adapted Piconet Physical Channel.....	63
2.3.1 Hopping characteristics	63
2.4 Page Scan Physical Channel.....	64
2.4.1 Clock estimate for paging.....	64
2.4.2 Hopping characteristics	64
2.4.3 Paging procedure timing	65
2.4.4 Page response timing.....	66
2.5 Inquiry Scan Physical Channel	68
2.5.1 Clock for inquiry.....	68
2.5.2 Hopping characteristics	68
2.5.3 Inquiry procedure timing.....	68
2.5.4 Inquiry response timing	68
2.6 Hop Selection.....	70
2.6.1 General selection scheme.....	70
2.6.2 Selection kernel	74
2.6.3 Adapted hop selection kernel	77
2.6.4 Control word	78
3 Physical Links	83
3.1 Link Supervision.....	83



4	Logical Transports	85
4.1	General	85
4.2	Logical Transport Address (LT_ADDR)	85
4.3	Synchronous Logical Transports	86
4.4	Asynchronous Logical Transport	86
4.5	Transmit/Receive Routines	87
4.5.1	TX Routine	87
4.5.2	RX routine	90
4.5.3	Flow control	91
4.6	Active Slave Broadcast Transport	92
4.7	Parked Slave Broadcast Transport	93
4.7.1	Parked member address (PM_ADDR)	93
4.7.2	Access request address (AR_ADDR)	93
5	Logical Links	95
5.1	Link Control Logical Link (LC)	95
5.2	ACL Control Logical Link (ACL-C)	95
5.3	User Asynchronous/Isochronous Logical Link (ACL-U)	95
5.3.1	Pausing the ACL-U logical link	96
5.4	User Synchronous Data Logical Link (SCO-S)	96
5.5	User Extended Synchronous Data Logical Link (eSCO-S)	96
5.6	Logical Link Priorities	96
6	Packets	97
6.1	General Format	97
6.2	Bit Ordering	97
6.3	Access Code	98
6.3.1	Access code types	98
6.3.2	Preamble	99
6.3.3	Sync word	99
6.3.4	Trailer	102
6.4	Packet Header	103
6.4.1	LT_ADDR	103
6.4.2	TYPE	103
6.4.3	FLOW	104
6.4.4	ARQN	104
6.4.5	SEQN	104
6.4.6	HEC	104



6.5	Packet Types	105
6.5.1	Common packet types.....	106
6.5.2	SCO packets	109
6.5.3	eSCO packets	110
6.5.4	ACL packets	111
6.6	Payload Format.....	112
6.6.1	Synchronous data field	112
6.6.2	Asynchronous data field	113
6.7	Packet Summary.....	116
7	Bitstream Processing	117
7.1	Error Checking	118
7.1.1	HEC generation.....	118
7.1.2	CRC generation.....	119
7.2	Data Whitening.....	121
7.3	Error Correction.....	122
7.4	FEC Code: Rate 1/3.....	122
7.5	FEC Code: Rate 2/3.....	123
7.6	ARQ Scheme	124
7.6.1	Unnumbered ARQ.....	124
7.6.2	Retransmit filtering	127
7.6.3	Flushing payloads	130
7.6.4	Multi-slave considerations	130
7.6.5	Broadcast packets	130
8	Link Controller Operation.....	133
8.1	Overview of States	133
8.2	Standby State	134
8.3	Connection Establishment Substates	134
8.3.1	Page scan substate.....	134
8.3.2	Page substate	136
8.3.3	Page response substates.....	139
8.4	Device Discovery Substates	143
8.4.1	Inquiry scan substate	144
8.4.2	Inquiry substate	145
8.4.3	Inquiry response substate	147
8.5	Connection State.....	148



8.6	Active Mode	149
8.6.1	Polling in the active mode	150
8.6.2	SCO	150
8.6.3	eSCO	151
8.6.4	Broadcast scheme	154
8.6.5	Role switch.....	155
8.6.6	Scatternet.....	157
8.6.7	Hop sequence switching	158
8.6.8	Channel classification and channel map selection	161
8.6.9	Power Management.....	162
8.7	Sniff Mode.....	163
8.7.1	Sniff Transition Mode	164
8.8	Hold Mode	165
8.9	Park State	165
8.9.1	Beacon train	166
8.9.2	Beacon access window	168
8.9.3	Parked slave synchronization	169
8.9.4	Parking	170
8.9.5	Master-initiated unparking.....	171
8.9.6	Slave-initiated unparking.....	171
8.9.7	Broadcast scan window	172
8.9.8	Polling in the park state	172
9	Audio	173
9.1	LOG PCM CODEC	173
9.2	CVSD CODEC	173
9.3	Error Handling.....	176
9.4	General Audio Requirements.....	176
9.4.1	Signal levels	176
9.4.2	CVSD audio quality	176
10	List of Figures	177
11	List of Tables	181
Appendix A:		
General Audio Recommendations		182
Appendix B:		
Timers		185
Appendix C:		
Recommendations for AFH Operation in Park, Hold and Sniff		187

**Part C****LINK MANAGER PROTOCOL**

Contents	191
1 Introduction	195
2 General Rules	197
2.1 Message Transport	197
2.2 Synchronization	197
2.3 Packet Format.....	198
2.4 Transactions.....	199
2.4.1 LMP Response Timeout.....	200
2.5 Error Handling	200
2.5.1 Transaction collision resolution	201
2.6 Procedure Rules	201
2.7 General Response Messages.....	202
2.8 LMP Message Constraints	202
3 Device Features.....	203
3.1 General Description	203
3.2 Feature Definitions	203
3.3 Feature Mask Definition	207
3.4 Link Manager Interoperability policy.....	208
4 Procedure Rules.....	209
4.1 Connection Control	209
4.1.1 Connection establishment.....	209
4.1.2 Detach	210
4.1.3 Power control	211
4.1.4 Adaptive frequency hopping.....	213
4.1.5 Channel classification.....	216
4.1.6 Link supervision.....	218
4.1.7 Channel quality driven data rate change (CQDDR)	219
4.1.8 Quality of service (QoS)	220
4.1.9 Paging scheme parameters	222
4.1.10 Control of multi-slot packets	223
4.2 Security	224
4.2.1 Authentication.....	224
4.2.2 Pairing	226
4.2.3 Change link key.....	229
4.2.4 Change current link key type.....	230
4.2.5 Encryption	232
4.2.6 Request supported encryption key size	236



4.3	Informational Requests	237
4.3.1	Timing accuracy	237
4.3.2	Clock offset	238
4.3.3	LMP version	238
4.3.4	Supported features	239
4.3.5	Name request	241
4.4	Role Switch	242
4.4.1	Slot offset	242
4.4.2	Role switch	243
4.5	Modes of Operation	245
4.5.1	Hold mode	245
4.5.2	Park state	247
4.5.3	Sniff mode	253
4.6	Logical Transports	256
4.6.1	SCO logical transport	256
4.6.2	eSCO logical transport	259
4.7	Test Mode	264
4.7.1	Activation and deactivation of test mode	264
4.7.2	Control of test mode	265
4.7.3	Summary of test mode PDUs	266
5	Summary	269
5.1	PDU Summary	269
5.2	Parameter Definitions	277
5.3	Default Values	284
6	List of Figures	285
7	List of Tables	289



Part D

ERROR CODES

Contents	293
1 Overview of Error Codes	295
1.1 Usage Descriptions	295
1.2 HCI Command Errors.....	295
1.3 List of Error Codes	296
2 Error Code Descriptions	299
2.1 Unknown HCI Command (0X01).....	299
2.2 Unknown Connection Identifier (0X02)	299
2.3 Hardware Failure (0X03).....	299
2.4 Page Timeout (0X04)	299
2.5 Authentication Failure (0X05).....	299
2.6 PIN Missing (0X06)	299
2.7 Memory Capacity Exceeded (0X07)	299
2.8 Connection Timeout (0X08)	300
2.9 Connection Limit Exceeded (0X09).....	300
2.10 Synchronous Connection Limit to a Device Exceeded (0X0A)	300
2.11 ACL Connection Already Exists (0X0B)	300
2.12 Command Disallowed (0X0C).....	300
2.13 Connection Rejected due to Limited Resources (0X0D).....	300
2.14 Connection Rejected due to Security Reasons (0X0E)	300
2.15 Connection Rejected due to Unacceptable BD_ADDR (0X0F)	301
2.16 Connection Accept Timeout Exceeded (0X10)	301
2.17 Unsupported Feature or Parameter Value (0X11).....	301
2.18 Invalid HCI Command Parameters (0X12).....	301
2.19 Remote User Terminated Connection (0X13)	301
2.20 Remote Device Terminated Connection due to Low Resources (0X14)	302
2.21 Remote Device Terminated Connection due to Power Off (0X15)	302
2.22 Connection Terminated by Local Host (0X16).....	302
2.23 Repeated Attempts (0X17).....	302
2.24 Pairing not Allowed (0X18).....	302
2.25 Unknown LMP PDU (0X19)	302
2.26 Unsupported Remote Feature (0X1A)	302
2.27 SCO Offset Rejected (0X1B)	302
2.28 SCO Interval Rejected (0X1C).....	303
2.29 SCO Air Mode Rejected (0X1D)	303
2.30 Invalid LMP Parameters (0X1E).....	303
2.31 Unspecified Error (0X1F)	303
2.32 Unsupported LMP Parameter Value (0X20).....	303



2.33	Role Change Not Allowed (0X21)	303
2.34	LMP Response Timeout (0X22).....	303
2.35	LMP Error Transaction Collision (0X23)	304
2.36	LMP PDU Not Allowed (0X24)	304
2.37	Encryption Mode Not Acceptable (0X25).....	304
2.38	Link Key Can Not be Changed (0X26)	304
2.39	Requested Qos Not Supported (0X27)	304
2.40	Instant Passed (0X28)	304
2.41	Pairing with Unit Key Not Supported (0X29).....	304
2.42	Different Transaction Collision (0x2a).....	304
2.43	QoS Unacceptable Parameter (0X2C).....	304
2.44	QoS Rejected (0X2D)	305
2.45	Channel Classification Not Supported (0X2E)	305
2.46	Insufficient Security (0X2F).....	305
2.47	Parameter out of Mandatory Range (0X30).....	305
2.48	Role Switch Pending (0X32).....	305
2.49	Reserved Slot Violation (0X34).....	305
2.50	Role Switch Failed (0X35)	305

**Part E****HOST CONTROLLER INTERFACE FUNCTIONAL SPECIFICATION**

Contents	309
1 Introduction	317
1.1 Lower Layers of the Bluetooth Software Stack	317
2 Overview of Host Controller Transport Layer.....	319
3 Overview of Commands and Events	321
3.1 Generic Events.....	322
3.2 Device Setup.....	322
3.3 Controller Flow Control	323
3.4 Controller Information.....	323
3.5 Controller Configuration	324
3.6 Device Discovery	325
3.7 Connection Setup	327
3.8 Remote Information.....	329
3.9 Synchronous Connections	330
3.10 Connection State.....	331
3.11 Piconet Structure.....	332
3.12 Quality of Service.....	333
3.13 Physical Links	334
3.14 Host Flow Control.....	335
3.15 Link Information	336
3.16 Authentication and Encryption	337
3.17 Testing.....	339
3.18 Alphabetical List of Commands and Events	340
4 HCI Flow Control	345
4.1 Host to Controller Data Flow Control	345
4.2 Controller to Host Data Flow Control	346
4.3 Disconnection Behaviour	347
4.4 Command Flow Control	347
4.5 Command Error Handling	348
5 HCI Data Formats	349
5.1 Introduction	349
5.2 Data and Parameter Formats.....	349
5.3 Connection Handles.....	350
5.4 Exchange of HCI-Specific Information	351
5.4.1 HCI Command Packet.....	351
5.4.2 HCI ACL Data Packets.....	353
5.4.3 HCI Synchronous Data Packets.....	355
5.4.4 HCI Event Packet.....	356



6	HCI Configuration Parameters	357
6.1	Scan Enable	357
6.2	Inquiry Scan Interval	357
6.3	Inquiry Scan Window	358
6.4	Inquiry Scan Type	358
6.5	Inquiry Mode	358
6.6	Page Timeout	359
6.7	Connection Accept Timeout	359
6.8	Page Scan Interval	360
6.9	Page Scan Window	360
6.10	Page Scan Period Mode	360
6.11	Page Scan Type	361
6.12	Voice Setting	361
6.13	PIN Type	362
6.14	Link Key	362
6.15	Authentication Enable	362
6.16	Encryption Mode	363
6.17	Failed Contact Counter	364
6.18	Hold Mode Activity	364
6.19	Link Policy Settings	365
6.20	Flush Timeout	366
6.21	Num Broadcast Retransmissions	366
6.22	Link Supervision Timeout	367
6.23	Synchronous Flow Control Enable	367
6.24	Local Name	368
6.25	Class Of Device	368
6.26	Supported Commands	369
7	HCI Commands and Events	373
7.1	Link Control Commands	373
7.1.1	Inquiry Command	373
7.1.2	Inquiry Cancel Command	375
7.1.3	Periodic Inquiry Mode Command	376
7.1.4	Exit Periodic Inquiry Mode Command	379
7.1.5	Create Connection Command	380
7.1.6	Disconnect Command	383
7.1.7	Create Connection Cancel Command	384
7.1.8	Accept Connection Request Command	386
7.1.9	Reject Connection Request Command	388
7.1.10	Link Key Request Reply Command	389
7.1.11	Link Key Request Negative Reply Command	391
7.1.12	PIN Code Request Reply Command	392



7.1.13	PIN Code Request Negative Reply Command	394
7.1.14	Change Connection Packet Type Command	395
7.1.15	Authentication Requested Command.....	398
7.1.16	Set Connection Encryption Command	399
7.1.17	Change Connection Link Key Command	400
7.1.18	Master Link Key Command.....	401
7.1.19	Remote Name Request Command	402
7.1.20	Remote Name Request Cancel Command.....	404
7.1.21	Read Remote Supported Features Command.....	405
7.1.22	Read Remote Extended Features Command	406
7.1.23	Read Remote Version Information Command.....	407
7.1.24	Read Clock Offset Command.....	408
7.1.25	Read LMP Handle Command	409
7.1.26	Setup Synchronous Connection Command	411
7.1.27	Accept Synchronous Connection Request Command	415
7.1.28	Reject Synchronous Connection Request Command	419
7.2	Link Policy Commands.....	420
7.2.1	Hold Mode Command	420
7.2.2	Sniff Mode Command.....	422
7.2.3	Exit Sniff Mode Command.....	425
7.2.4	Park State Command	426
7.2.5	Exit Park State Command	428
7.2.6	QoS Setup Command	429
7.2.7	Role Discovery Command.....	431
7.2.8	Switch Role Command.....	432
7.2.9	Read Link Policy Settings Command.....	433
7.2.10	Write Link Policy Settings Command	434
7.2.11	Read Default Link Policy Settings Command	436
7.2.12	Write Default Link Policy Settings Command	437
7.2.13	Flow Specification Command	438
7.3	Controller & Baseband Commands.....	440
7.3.1	Set Event Mask Command.....	440
7.3.2	Reset Command	442
7.3.3	Set Event Filter Command	443
7.3.4	Flush Command.....	448
7.3.5	Read PIN Type Command	450
7.3.6	Write PIN Type Command.....	451
7.3.7	Create New Unit Key Command	452



7.3.8	Read Stored Link Key Command.....	453
7.3.9	Write Stored Link Key Command	454
7.3.10	Delete Stored Link Key Command.....	456
7.3.11	Write Local Name Command	457
7.3.12	Read Local Name Command.....	458
7.3.13	Read Connection Accept Timeout Command.....	459
7.3.14	Write Connection Accept Timeout Command	460
7.3.15	Read Page Timeout Command.....	461
7.3.16	Write Page Timeout Command	462
7.3.17	Read Scan Enable Command.....	463
7.3.18	Write Scan Enable Command.....	464
7.3.19	Read Page Scan Activity Command	465
7.3.20	Write Page Scan Activity Command	467
7.3.21	Read Inquiry Scan Activity Command.....	468
7.3.22	Write Inquiry Scan Activity Command	469
7.3.23	Read Authentication Enable Command	470
7.3.24	Write Authentication Enable Command	471
7.3.25	Read Encryption Mode Command.....	472
7.3.26	Write Encryption Mode Command	473
7.3.27	Read Class of Device Command	474
7.3.28	Write Class of Device Command	475
7.3.29	Read Voice Setting Command	476
7.3.30	Write Voice Setting Command	477
7.3.31	Read Automatic Flush Timeout Command	478
7.3.32	Write Automatic Flush Timeout Command.....	479
7.3.33	Read Num Broadcast Retransmissions Command.....	480
7.3.34	Write Num Broadcast Retransmissions Command.....	481
7.3.35	Read Hold Mode Activity Command	482
7.3.36	Write Hold Mode Activity Command	483
7.3.37	Read Transmit Power Level Command	484
7.3.38	Read Synchronous Flow Control Enable Command...	486
7.3.39	Write Synchronous Flow Control Enable Command...	487
7.3.40	Set Controller To Host Flow Control Command	488
7.3.41	Host Buffer Size Command.....	489
7.3.42	Host Number Of Completed Packets Command	491
7.3.43	Read Link Supervision Timeout Command.....	493
7.3.44	Write Link Supervision Timeout Command	494
7.3.45	Read Number Of Supported IAC Command.....	496



7.3.46	Read Current IAC LAP Command	497
7.3.47	Write Current IAC LAP Command.....	498
7.3.48	Read Page Scan Period Mode Command	500
7.3.49	Write Page Scan Period Mode Command	501
7.3.50	Set AFH Host Channel Classification Command	502
7.3.51	Read Inquiry Scan Type Command	503
7.3.52	Write Inquiry Scan Type Command	504
7.3.53	Read Inquiry Mode Command	505
7.3.54	Write Inquiry Mode Command	506
7.3.55	Read Page Scan Type Command	507
7.3.56	Write Page Scan Type Command	508
7.3.57	Read AFH Channel Assessment Mode Command	509
7.3.58	Write AFH Channel Assessment Mode Command	510
7.4	Informational Parameters.....	512
7.4.1	Read Local Version Information Command.....	512
7.4.2	Read Local Supported Commands Command.....	514
7.4.3	Read Local Supported Features Command.....	515
7.4.4	Read Local Extended Features Command	516
7.4.5	Read Buffer Size Command.....	518
7.4.6	Read BD_ADDR Command	520
7.5	Status Parameters.....	521
7.5.1	Read Failed Contact Counter Command	521
7.5.2	Reset Failed Contact Counter Command	523
7.5.3	Read Link Quality Command	524
7.5.4	Read RSSI Command.....	525
7.5.5	Read AFH Channel Map Command	527
7.5.6	Read Clock Command	529
7.6	Testing Commands	531
7.6.1	Read Loopback Mode Command	531
7.6.2	Write Loopback Mode Command.....	532
7.6.3	Enable Device Under Test Mode Command	535
7.7	Events	537
7.7.1	Inquiry Complete Event.....	537
7.7.2	Inquiry Result Event	538
7.7.3	Connection Complete Event.....	540
7.7.4	Connection Request Event.....	541
7.7.5	Disconnection Complete Event	543
7.7.6	Authentication Complete Event.....	544



7.7.7	Remote Name Request Complete Event.....	545
7.7.8	Encryption Change Event	546
7.7.9	Change Connection Link Key Complete Event.....	547
7.7.10	Master Link Key Complete Event.....	548
7.7.11	Read Remote Supported Features Complete Event...	549
7.7.12	Read Remote Version Information Complete Event ...	550
7.7.13	QoS Setup Complete Event.....	551
7.7.14	Command Complete Event.....	553
7.7.15	Command Status Event	554
7.7.16	Hardware Error Event	555
7.7.17	Flush Occurred Event	555
7.7.18	Role Change Event.....	556
7.7.19	Number Of Completed Packets Event.....	557
7.7.20	Mode Change Event	558
7.7.21	Return Link Keys Event.....	560
7.7.22	PIN Code Request Event.....	561
7.7.23	Link Key Request Event.....	562
7.7.24	Link Key Notification Event	563
7.7.25	Loopback Command Event.....	564
7.7.26	Data Buffer Overflow Event.....	564
7.7.27	Max Slots Change Event.....	565
7.7.28	Read Clock Offset Complete Event	566
7.7.29	Connection Packet Type Changed Event	567
7.7.30	QoS Violation Event.....	569
7.7.31	Page Scan Repetition Mode Change Event.....	570
7.7.32	Flow Specification Complete Event.....	571
7.7.33	Inquiry Result with RSSI Event	573
7.7.34	Read Remote Extended Features Complete Event....	575
7.7.35	Synchronous Connection Complete Event	576
7.7.36	Synchronous Connection Changed event.....	578
8	List of Figures	581
9	List of Tables	583
Appendix A:		
	Deprecated Commands, Events and Configuration Parameters	585



Part F

MESSAGE SEQUENCE CHARTS

Contents	595
1 Introduction	599
1.1 Notation	599
1.2 Flow of Control	600
1.3 Example MSC	600
2 Services Without Connection Request	601
2.1 Remote Name Request	601
2.2 One-time Inquiry	602
2.3 Periodic Inquiry	604
3 ACL Connection Establishment and Detachment	607
3.1 Connection Setup	608
4 Optional Activities After ACL Connection Establishment	615
4.1 Authentication Requested	615
4.2 Set Connection Encryption	616
4.3 Change Connection Link Key	617
4.4 Master Link Key	618
4.5 Read Remote Supported Features	620
4.6 Read Remote Extended Features	620
4.7 Read Clock Offset	621
4.8 Read Remote Version Information	621
4.9 QOS Setup	622
4.10 Switch Role	622
5 Synchronous Connection Establishment and Detachment	625
5.1 Synchronous Connection Setup	625
6 Sniff, Hold and Park	631
6.1 Sniff Mode	631
6.2 Hold Mode	632
6.3 Park State	634
7 Buffer Management, Flow Control	637
8 Loopback Mode	639
8.1 Local Loopback Mode	639
8.2 Remote Loopback Mode	641
9 List of Figures	643



Part G

SAMPLE DATA

Contents	647
1 Encryption Sample Data.....	649
1.1 Generating Kc' from Kc,.....	649
1.2 First Set of Sample Data.....	652
1.3 Second Set of Sample Data.....	660
1.4 Third Set of Samples	668
1.5 Fourth Set of Samples	676
2 Frequency Hopping Sample Data.....	685
2.1 First set.....	686
2.2 Second set.....	692
2.3 Third set.....	698
3 Access Code Sample Data	705
4 HEC and Packet Header Sample Data.....	709
5 CRC Sample Data.....	711
6 Complete Sample Packets	713
6.1 Example of DH1 Packet.....	713
6.2 Example of DM1 Packet	714
7 Whitening Sequence Sample Data	715
8 FEC Sample Data	719
9 Encryption Key Sample Data	721
9.1 Four Tests of E1	721
9.2 Four Tests of E21.....	726
9.3 Three Tests of E22.....	728
9.4 Tests of E22 With Pin Augmenting.....	730
9.5 Four Tests of E3.....	740



Part H

SECURITY SPECIFICATION

Contents	747
1 Security Overview	749
2 Random Number Generation	751
3 Key Management.....	753
3.1 Key Types	753
3.2 Key Generation and Initialization	755
3.2.1 Generation of initialization key, ...	756
3.2.2 Authentication.....	756
3.2.3 Generation of a unit key	756
3.2.4 Generation of a combination key.....	757
3.2.5 Generating the encryption key	758
3.2.6 Point-to-multipoint configuration.....	759
3.2.7 Modifying the link keys	760
3.2.8 Generating a master key	760
4 Encryption.....	763
4.1 Encryption Key Size Negotiation.....	764
4.2 Encryption of Broadcast Messages.....	764
4.3 Encryption Concept.....	765
4.4 Encryption Algorithm	766
4.4.1 The operation of the cipher	768
4.5 LFSR Initialization	769
4.6 Key Stream Sequence	772
5 Authentication	773
5.1 Repeated Attempts	775
6 The Authentication And Key-Generating Functions.....	777
6.1 The Authentication Function E1	777
6.2 The Functions Ar and A'r.....	779
6.2.1 The round computations.....	779
6.2.2 The substitution boxes “e” and “l”	779
6.2.3 Key scheduling.....	780
6.3 E2-Key Generation Function for Authentication.....	781
6.4 E3-Key Generation Function for Encryption.....	783
7 List of Figures.....	785
8 List of Tables	787



Specification Volume 3
Core System Package
[Host volume]

Table of Contents 5

Part A

LOGICAL LINK CONTROL AND ADAPTATION PROTOCOL SPECIFICATION

Contents 17

1	Introduction	21
1.1	L2CAP Features	21
1.2	Assumptions	25
1.3	Scope.....	25
1.4	Terminology	26
2	General Operation.....	29
2.1	Channel Identifiers.....	29
2.2	Operation Between Devices	29
2.3	Operation Between Layers	31
2.4	Modes of Operation	31
3	Data Packet Format.....	33
3.1	Connection-oriented Channel in Basic L2CAP Mode	33
3.2	Connectionless Data Channel in Basic L2CAP Mode	34
3.3	Connection-oriented Channel in Retransmission/Flow Control Modes	35
3.3.1	L2CAP header fields	35
3.3.2	Control field (2 octets).....	36
3.3.3	L2CAP SDU length field (2 octets).....	38
3.3.4	Information payload field (0 to 65531 octets)	38
3.3.5	Frame check sequence (2 octets).....	39
3.3.6	Invalid frame detection	40
4	Signalling Packet Formats	41
4.1	Command Reject (code 0x01)	43
4.2	Connection Request (code 0x02)	44
4.3	Connection Response (code 0x03)	46
4.4	Configuration Request (code 0x04)	47
4.5	Configuration Response (code 0x05)	50
4.6	Disconnection Request (code 0x06).....	52
4.7	Disconnection Response (code 0x07)	53
4.8	Echo Request (code 0x08)	53
4.9	Echo Response (code 0x09)	54



4.10	Information Request (code 0x0A)	54
4.11	Information Response (code 0x0B).....	55
4.12	Extended Feature Mask	56
5	Configuration Parameter Options.....	57
5.1	Maximum Transmission Unit (MTU).....	57
5.2	Flush Timeout Option	59
5.3	Quality of Service (QoS) Option.....	60
5.4	Retransmission and Flow Control Option.....	64
6	State Machine	67
6.1	General rules for the state machine:	67
6.1.1	CLOSED state	68
6.1.2	WAIT_CONNECT_RSP state	69
6.1.3	WAIT_CONNECT state	69
6.1.4	CONFIG state.....	70
6.1.5	OPEN state	73
6.1.6	WAIT_DISCONNECT state	73
6.2	Timers events.....	74
6.2.1	RTX	74
6.2.2	ERTX.....	75
7	General Procedures	79
7.1	Configuration Process.....	79
7.1.1	Request path	80
7.1.2	Response path	80
7.2	Fragmentation and Recombination	81
7.2.1	Fragmentation of L2CAP PDUs	81
7.2.2	Recombination of L2CAP PDUs.....	82
7.3	Encapsulation of SDUs	83
7.3.1	Segmentation of L2CAP SDUs	83
7.3.2	Reassembly of L2CAP SDUs.....	84
7.3.3	Segmentation and fragmentation	84
7.4	Delivery of Erroneous L2CAP SDUs.....	85
7.5	Operation with Flushing	85
7.6	Connectionless Data Channel.....	86



8	Procedures for Flow Control and Retransmission	87
8.1	Information Retrieval.....	87
8.2	Function of PDU Types for Flow Control and Retransmission...	87
8.2.1	Information frame (I-frame)	87
8.2.2	Supervisory Frame (S-frame).....	87
8.3	Variables and Sequence Numbers	89
8.3.1	Sending peer.....	89
8.3.2	Receiving peer	91
8.4	Retransmission Mode	93
8.4.1	Transmitting frames	93
8.4.2	Receiving I-frames	95
8.4.3	I-frames pulled by the SDU reassembly function	95
8.4.4	Sending and receiving acknowledgements.....	96
8.4.5	Receiving REJ frames.....	97
8.4.6	Waiting acknowledgements	97
8.4.7	Exception conditions	97
8.5	Flow Control Mode.....	99
8.5.1	Transmitting I-frames	99
8.5.2	Receiving I-frames	100
8.5.3	I-frames pulled by the SDU reassembly function	100
8.5.4	Sending and receiving acknowledgements.....	100
8.5.5	Waiting acknowledgements	101
8.5.6	Exception conditions	101
9	List of Figures	103
10	List of Tables	105
Appendix A:		
	Configuration MSCs	107

**Part B****SERVICE DISCOVERY PROTOCOL (SDP)**

Contents	113
1 Introduction	115
1.1 General Description	115
1.2 Motivation.....	115
1.3 Requirements.....	115
1.4 Non-requirements and Deferred Requirements	116
1.5 Conventions	116
1.5.1 Bit And Byte Ordering Conventions.....	116
2 Overview	117
2.1 SDP Client-Server Interaction	117
2.2 Service Record.....	118
2.3 Service Attribute.....	120
2.4 Attribute ID	120
2.5 Attribute Value.....	121
2.6 Service Class	121
2.6.1 A Printer Service Class Example	122
2.7 Searching for Services	123
2.7.1 UUID.....	123
2.7.2 Service Search Patterns.....	124
2.8 Browsing for Services	124
2.8.1 Example Service Browsing Hierarchy	125
3 Data Representation.....	127
3.1 Data Element	127
3.2 Data Element Type Descriptor	127
3.3 Data Element Size Descriptor	128
3.4 Data Element Examples.....	129
4 Protocol Description	131
4.1 Transfer Byte Order	131
4.2 Protocol Data Unit Format.....	131
4.3 Partial Responses and Continuation State.....	133
4.4 Error Handling	133
4.4.1 SDP_ErrorResponse PDU	134
4.5 ServiceSearch Transaction	135
4.5.1 SDP_ServiceSearchRequest PDU.....	135
4.5.2 SDP_ServiceSearchResponse PDU.....	136
4.6 ServiceAttribute Transaction	138
4.6.1 SDP_ServiceAttributeRequest PDU.....	138
4.6.2 SDP_ServiceAttributeResponse PDU.....	140



4.7	ServiceSearchAttribute Transaction	141
4.7.1	SDP_ServiceSearchAttributeRequest PDU	141
4.7.2	SDP_ServiceSearchAttributeResponse PDU	143
5	Service Attribute Definitions.....	145
5.1	Universal Attribute Definitions.....	145
5.1.1	ServiceRecordHandle Attribute.....	145
5.1.2	ServiceClassIDList Attribute.....	146
5.1.3	ServiceRecordState Attribute	146
5.1.4	ServiceID Attribute	146
5.1.5	ProtocolDescriptorList Attribute.....	147
5.1.6	BrowseGroupList Attribute	148
5.1.7	LanguageBaseAttributeIDList Attribute	148
5.1.8	ServiceInfoTimeToLive Attribute	149
5.1.9	ServiceAvailability Attribute.....	150
5.1.10	BluetoothProfileDescriptorList Attribute	150
5.1.11	DocumentationURL Attribute	151
5.1.12	ClientExecutableURL Attribute.....	151
5.1.13	IconURL Attribute.....	152
5.1.14	ServiceName Attribute	152
5.1.15	ServiceDescription Attribute.....	153
5.1.16	ProviderName Attribute.....	153
5.1.17	Reserved Universal Attribute IDs	153
5.2	ServiceDiscoveryServer Service Class Attribute Definitions ...	154
5.2.1	ServiceRecordHandle Attribute.....	154
5.2.2	ServiceClassIDList Attribute.....	154
5.2.3	VersionNumberList Attribute	154
5.2.4	ServiceDatabaseState Attribute	155
5.2.5	Reserved Attribute IDs	155
5.3	BrowseGroupDescriptor Service Class Attribute Definitions ...	155
5.3.1	ServiceClassIDList Attribute.....	155
5.3.2	GroupID Attribute	156
5.3.3	Reserved Attribute IDs	156
Appendix A:		
Background Information		157
Appendix B:		
Example SDP Transactions		158



Part C

GENERIC ACCESS PROFILE

Contents	173
Foreword	177
1 Introduction	179
1.1 Scope	179
1.2 Symbols and conventions	179
1.2.1 Requirement status symbols	179
1.2.2 Signaling diagram conventions	180
1.2.3 Notation for timers and counters	180
2 Profile overview	181
2.1 Profile stack	181
2.2 Configurations and roles	181
2.3 User requirements and scenarios	182
2.4 Profile fundamentals	183
2.5 Conformance	183
3 User interface aspects	185
3.1 The user interface level	185
3.2 Representation of Bluetooth parameters	185
3.2.1 Bluetooth device address (BD_ADDR)	185
3.2.2 Bluetooth device name (the user-friendly name)	185
3.2.3 Bluetooth passkey (Bluetooth PIN)	186
3.2.4 Class of Device	187
3.3 Pairing	188
4 Modes	189
4.1 Discoverability modes	189
4.1.1 Non-discoverable mode	190
4.1.2 Limited discoverable mode	190
4.1.3 General discoverable mode	191
4.2 Connectability modes	193
4.2.1 Non-connectable mode	193
4.2.2 Connectable mode	193
4.3 Pairing modes	195
4.3.1 Non-pairable mode	195
4.3.2 Pairable mode	195



5	Security aspects.....	197
5.1	Authentication	197
5.1.1	Purpose	197
5.1.2	Term on UI level	197
5.1.3	Procedure	198
5.1.4	Conditions	198
5.2	Security modes	198
5.2.1	Security mode 1 (non-secure).....	200
5.2.2	Security mode 2 (service level enforced security).....	200
5.2.3	Security modes 3 (link level enforced security).....	200
6	Idle mode procedures.....	201
6.1	General inquiry	201
6.1.1	Purpose	201
6.1.2	Term on UI level	201
6.1.3	Description	202
6.1.4	Conditions	202
6.2	Limited inquiry.....	202
6.2.1	Purpose	202
6.2.2	Term on UI level	203
6.2.3	Description	203
6.2.4	Conditions	203
6.3	Name discovery	204
6.3.1	Purpose	204
6.3.2	Term on UI level	204
6.3.3	Description	204
6.3.4	Conditions	205
6.4	Device discovery.....	205
6.4.1	Purpose	205
6.4.2	Term on UI level	205
6.4.3	Description	206
6.4.4	Conditions	206
6.5	Bonding.....	206
6.5.1	Purpose	206
6.5.2	Term on UI level	206
6.5.3	Description	207
6.5.4	Conditions	208



7	Establishment procedures	209
7.1	Link establishment	209
7.1.1	Purpose	209
7.1.2	Term on UI level	209
7.1.3	Description	210
7.1.4	Conditions	211
7.2	Channel establishment.....	212
7.2.1	Purpose	212
7.2.2	Term on UI level	212
7.2.3	Description	212
7.2.4	Conditions	213
7.3	Connection establishment.....	214
7.3.1	Purpose	214
7.3.2	Term on UI level	214
7.3.3	Description	214
7.3.4	Conditions	215
7.4	Establishment of additional connection.....	215
8	Definitions.....	217
8.1	General definitions	217
8.2	Connection-related definitions.....	217
8.3	Device-related definitions.....	218
8.4	Procedure-related definitions	219
8.5	Security-related definitions.....	219
9	Appendix A (Normative):	
	Timers and constants	221
10	Appendix B (Informative):	
	Information flows of related procedures.....	223
11	References	227



Part D
TEST SUPPORT

Contents 231

1 Test Methodology.....233

1.1 Test Scenarios 233

1.1.1 Test setup.....233

1.1.2 Transmitter Test 234

1.1.3 LoopBack test 239

1.1.4 Pause test 242

1.2 References 242

2 Test Control Interface (TCI) 243

2.1 Introduction 243

2.1.1 Terms used 243

2.1.2 Usage of the interface 243

2.2 TCI Configurations 244

2.2.1 Bluetooth RF requirements 244

2.2.2 Bluetooth protocol requirements 245

2.2.3 Bluetooth profile requirements 246

2.3 TCI Configuration and Usage 247

2.3.1 Transport layers 247

2.3.2 Baseband and link manager qualification 248

2.3.3 HCI qualification 250

BLUETOOTH COMPLIANCE REQUIREMENTS



*This document specifies the
requirements for Bluetooth
compliance.*





CONTENTS

1	Scope	45
2	Definitions.....	47
3	Legal Aspects	49
4	Introduction to the Bluetooth Qualification Program	51



1 SCOPE

The Bluetooth Promoters and the Bluetooth Adopters have signed the applicable Bluetooth Agreements. These agreements grant Bluetooth Promoters and Bluetooth Adopters a Bluetooth license for "products which comply with the Specification".

This document specifies the requirements which must be met by a Bluetooth Promoter or Bluetooth Adopter to demonstrate that a particular product does "comply with the Specification", thereby qualifying that particular product to be subject to the rights extended by the applicable Bluetooth Agreement.

The Bluetooth Qualification Program is the process by which a Bluetooth Promoter or a Bluetooth Adopter demonstrates that a particular product meets the requirements specified herein. This document provides an introduction to the Bluetooth Qualification Program. The Bluetooth Qualification Program is defined in the Bluetooth Qualification Program Reference Document (PRD) available on the Bluetooth Web site.

Regulatory requirements and governmental type approval requirements are outside the scope of this document.

Requirements on Trademark usage are outside the scope of this document and the Qualification Program. However, successful completion of the Qualification program is a precondition to usage of the Bluetooth Trademark. Details on trademark usage can be found in the applicable Bluetooth agreements and Bluetooth Trademark License Agreement.



2 DEFINITIONS

Bluetooth Agreements - Promoter, Early Adopters or Adopters Agreement, whichever is applicable.

Bluetooth License - All the rights, granted in the Promoter, Early Adopters or Adopters Agreements and the Bluetooth Trademark License

Bluetooth Qualification Administrator (BQA) - Responsible for administering the Bluetooth Qualification Program on behalf of the BQRB.

Bluetooth Qualification Body (BQB) - An individual person recognized by the BQRB to be responsible for checking declarations and documents against requirements, verifying the authenticity of product test reports, and listing products on the official Bluetooth Qualified Products List.

Bluetooth Qualification process - The process defined in the Bluetooth Qualification Program Reference Document (PRD) for Bluetooth Qualification.

Bluetooth Qualification program - The implementation of the Bluetooth Qualification process.

Bluetooth Qualification Review Board (BQRB) - Responsible for managing, reviewing and improving the Bluetooth Qualification program. The Bluetooth SIG promoter companies appoint delegates to the BQRB.

Bluetooth Qualification Test Facility (BQTF) - A test facility officially accredited by the BQRB to test Bluetooth products.

Bluetooth System Specification - The adopted version of this document.

Bluetooth Trademark - As defined in the Bluetooth Promoter, Early Adopters Agreement or Adopters Agreement for 1.0 Bluetooth Core Specification, or the Bluetooth Trademark License Agreement, whichever is applicable.

Compliant Portion - Only those specific portions of products (hardware, software or combinations thereof) that: (i) implement and are compliant with the Bluetooth System Specifications, (ii) are qualified pursuant to the Qualification Process, (iii) are within the bounds of the Scope and (iv) meet the requirements set forth in the Compliance Requirements.

Scope - As used in the definition of Compliant Portion, the protocols and data formats needed for Bluetooth interoperability, and the electrical signaling characteristics solely to the extent disclosed with particularity in the Bluetooth System Specifications where the sole purpose of such disclosure is to enable

products to interoperate, interconnect or communicate as defined within the Bluetooth System Specifications. For clarification, the Scope shall not include (i) any enabling technologies that may be necessary to make or use any prod-



uct or portion thereof that complies with the Bluetooth System Specifications, but are not themselves expressly set forth in the Bluetooth System Specifications (e.g., semiconductor manufacturing technology, compiler technology, object oriented technology, basic operating system technology, etc.); or (ii) the implementation of other published specifications developed elsewhere but referred to in the body of the Bluetooth System Specifications; or (iii) any portions of any product and any combinations thereof the purpose or function of which is not required for compliance with the Bluetooth System Specifications; or (iv) Application Programming Interfaces, applications, or user interfaces; including the technology used to generate, display or interact with a user.

3 LEGAL ASPECTS

Bluetooth adopters legal rights and obligations are governed by their applicable Bluetooth Agreements.

The Bluetooth Specification has been created according to our best knowledge, to meet regulatory requirements worldwide. Regulatory certification, as such, is not a part of the Bluetooth Qualification requirements, yet is a requirement in all markets. It is the sole responsibility of each manufacturer to ensure that their products have all necessary regulatory approvals for the markets where they are intended to be sold or used.

A product must complete Bluetooth Qualification as one of the requirements for “complying with the Specification”. Under all applicable Bluetooth Agreements, every product is required to successfully complete the Bluetooth Qualification process. The rights granted under the applicable Bluetooth agreements do not apply to products which have not completed the Qualification process.

Sanctions may be invoked by holders of intellectual property, against any company responsible for producing or trading (a) products containing elements of the Bluetooth Interface, as defined in applicable Bluetooth Agreements, that do not comply with the Specification, (b) which are not Compliant Portions, or (c) products, containing elements of the Bluetooth Interface, that have not completed Bluetooth Qualification.



4 INTRODUCTION TO THE BLUETOOTH QUALIFICATION PROGRAM

The Bluetooth Qualification program is the framework that establishes the qualification rules and procedures. This section introduces the framework. The Bluetooth Qualification Program as well as Qualification requirements are defined in the Bluetooth Qualification Program Reference Document (PRD) available on the Bluetooth web site. Additionally, Guidelines for Bluetooth assigned names and numbers are defined in the PRD.

The Program defines the following entities:

- Bluetooth Qualification Review Board (BQRB)
- Bluetooth Qualification Administrator (BQA)
- Bluetooth Qualification Test Facility (BQTF)
- Bluetooth Qualification Body (BQB)

Figure 4.1 introduces the process by which a Member qualifies a product.

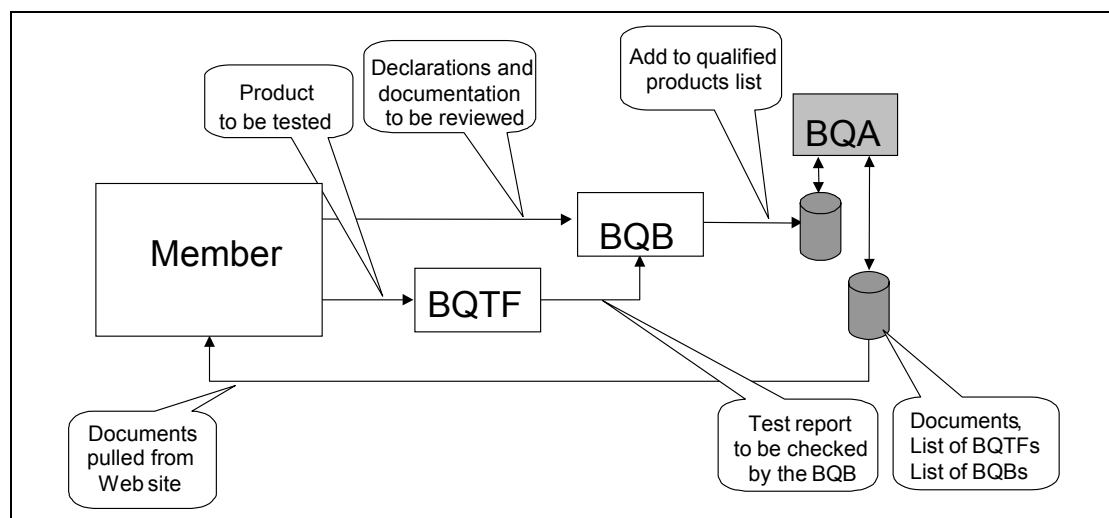


Figure 4.1:

An entity intending to produce and/or market a product, which includes Bluetooth functionality, must first become a Bluetooth Member by executing the applicable Bluetooth Agreements available via the Bluetooth Web site. Next, the Member must demonstrate that each particular product design complies with the Bluetooth System Specifications (including Compliance Requirements). This is accomplished when the particular product is listed as a qualified product after successfully completing the Bluetooth Qualification process. For purposes of the rights granted under the applicable Bluetooth Agreement, the condition of Qualification is met from the date of listing. Under all applicable Bluetooth Agreements, every product is required to successfully complete the Bluetooth Qualification process. The rights granted under the applicable Blue-



tooth agreements do not apply to products which have not completed the Qualification process.

The Member selects a BQB from the list of recognized BQBs found on the Bluetooth web site. The BQB can assist the Member throughout the entire product qualification process. The Member prepares a compliance folder and works with the BQB to develop a product test plan. If the product test plan requires testing services of a BQTF, the Member can select a BQTF that has been accredited to perform the type of testing required. All necessary documentation to demonstrate compliance to the specification is provided to the BQB by the Member.

The BQB reviews the submittals and prepares a qualified product notice. In the event the BQB has a question regarding the conformance or interoperability of a product the BQB may, with the Member's permission, submit information via the BQA to the BQRB for a ruling. In the event the BQRB must be consulted, the Member will be requested to prepare a submission according to BQRB guidelines.

When all current requirements are satisfied, the BQB informs the Member that the product is ready for listing as a Bluetooth qualified product. With the consent of the Member, the BQB posts the product information to the official Qualified Product List.

A fee for product listing shall be paid by the BQB prior to product listing to finance the administration associated with the Qualification program.

Any Member can view the Bluetooth Qualified Product List. Confidential product information will not be published.

Master Table of Contents & Compliance Requirements
Part C

APPENDIX







CONTENTS

1 Revision History 57

1.1 [vol 0] Master TOC & Compliance Requirements 57

1.1.1 Bluetooth Compliance Requirements 57

1.2 [Vol 1] Architecture & Terminology Overview 57

1.3 [Vol 2 & 3] Core System Package 58

2 Contributors.....59

2.1 [vol 0] Master TOC & Compliance Requirements 59

2.1.1 Part B: Bluetooth Compliance Requirements 59

2.2 [vol 1] Architecture & Terminology Overview.....59

2.2.1 Part A: Architectural Overview 59

2.2.2 Part B: Acronyms & Abbreviations 60

2.2.3 Part C: Changes from Bluetooth Specification v1.1 60

2.3 [Vol 2] Core System Package, Controller.....61

2.3.1 Part A: Radio Specification.....61

2.3.2 Part B: Baseband Specification 62

2.3.3 Part C: Link Manager Protocol 65

2.3.4 Part D: Error Codes.....66

2.3.5 Part E: Bluetooth Host Controller Interface Functional Specification 67

2.3.6 Part F: Message Sequence Charts 68

2.3.7 Part G: Sample Data 69

2.3.8 Part H: Security Specification 69

2.4 [Vol 3] Core System Package, Host.....70

2.4.1 Part A: Logical Link Control and Adaptation Protocol Specification 70

2.4.2 Part B: Service Discovery Protocol (SDP).....71

2.4.3 Part C Generic Access Profile 72

2.4.4 Part D: Test Support.....72





1 REVISION HISTORY

Public versions are marked with bold in the tables below.

Beginning with the v1.2 of the Core System Package all Bluetooth specification documents, protocols and profiles, are transferred to a new partitioning comprising 13 volumes instead of the two (Core and Profiles) previously used.

For more detailed information about changes between version published before v1.2, please see the Appendix I “Revision History” in v1.1.

1.1 [VOL 0] MASTER TOC & COMPLIANCE REQUIREMENTS

1.1.1 Bluetooth Compliance Requirements

Rev	Date	Comments
v1.2	Nov 05 2003	This Part was moved from the Core volume. No content changes been made to this document since v1.1

1.2 [VOL 1] ARCHITECTURE & TERMINOLOGY OVERVIEW

Rev	Date	Comments
v1.2	Nov 05 2003	New volume with informational content. This volume will always be updated in parallel with the Core System volumes

1.3 [VOL 2 & 3] CORE SYSTEM PACKAGE

Rev	Date	Comments
v1.2	Nov 05 2003	New features added in v1.2: - Architectural overview - Faster connection - Adaptive frequency hopping - Extended SCO links - Enhanced error detection and flow control - Enhanced synchronization capability - Enhanced flow specification The Core System Package now comprises two volumes and the text has gone through a radical change both in terms of structure and nomenclature. The language is also more precise and is adapted to meet the IEEE standard. The following parts are moved from the Core System Package to other volumes or has been deprecated: RFCOMM [vol 7], Object Exchange (IrDA Interoperability) [vol 8], TCS [vol 9], Interoperability Requirements for Bluetooth as a WAP Bearer [vol 6], HCI USB Transport Layer [vol4], HCI RS232 Transport Layer [vol 4], HCI UART Transport Layer [vol 4], Bluetooth Compliance Requirements [vol 0], Optional Paging Schemes [deprecated]
1.1	Feb 22nd 2001	The specification was updated with Errata items previously published on the website. The Bluetooth Assigned Numbers appendix was lifted out from the specification to allow continuous maintenance on the website.
1.0B	Dec 1st 1999	The specification was updated with Errata items previously published on the website and was revised from a linguistic point of view. The following parts was added: Interoperability Requirements for Bluetooth as a WAP Bearer, Test Control Interface, Sample Data (appendix), Bluetooth Audio (appendix), Baseband Timers (appendix) and Optional Paging Scheme (appendix)
1.0a	July 26th 1999	The first version of the Bluetooth Specification published on the public website. Added part: Bluetooth Compliance Requirements.
1.0 draft	July 5th 1999	The following parts was added: Service Discovery Protocol (SDP), Telephony Control Specification (TCS), Bluetooth Assigned Numbers (appendix) and Message Sequence Charts (appendix)
0.9	April 30th 1999	The following parts was added: IrDA Interoperability, HCI RS232 Transport Layer, HCI UART Transport Layer and Test Mode
0.8	Jan 21st 1999	The following parts was added: Radio Specification, L2CAP, RFCOMM, HCI & HCI USB Transport Layer
0.7	Oct 19th 1998	This first version only included Baseband and Link Manager Protocol

2 CONTRIBUTORS

2.1 [VOL 0] MASTER TOC & COMPLIANCE REQUIREMENTS

The Bluetooth Specification was compiled and edited by Dan Sönnerstam, [Pyramid Communication AB](#).

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2.2.2 Part B: Acronyms & Abbreviations

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2.2.3 Part C: Changes from Bluetooth Specification v1.1

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2.3 [VOL 2] CORE SYSTEM PACKAGE, CONTROLLER

2.3.1 Part A: Radio Specification

Version 1.2

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2.3.2 Part B: Baseband Specification

Version 1.2

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2.3.3 Part C: Link Manager Protocol

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Knud Dyring-Olsen	Digianswer/Motorola
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Previous versions

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2.3.4 Part D: Error Codes

Version 1.2

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This part was earlier included in the LMP and HCI functional Specifications.



2.3.5 Part E: Bluetooth Host Controller Interface Functional Specification

Version 1.2

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Dong Nguyen	Nokia Corporation
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2.3.6 Part F: Message Sequence Charts

Version 1.2

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2.3.7 Part G: Sample Data

Version 1.2

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-------------	--------------

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2.3.8 Part H: Security Specification

Please see Part B ([Section 2.3.2 on page 62](#)). The Security specification was until recently a part of the Baseband specification.



2.4 [VOL 3] CORE SYSTEM PACKAGE, HOST

2.4.1 Part A: Logical Link Control and Adaptation Protocol Specification

Version 1.2

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Doron Holan	Microsoft
Andy Glass	Microsoft
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Jürgen Schnitzler	Nokia
Thomas Müller	Nokia
Rob Davies	Philips
Terry Bourk	Silicon Wave
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2.4.2 Part B: Service Discovery Protocol (SDP)*Version 1.2*

--	--

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2.4.3 Part C Generic Access Profile

Version 1.2

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Previous versions

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Johan Sörensen	Telefonaktiebolaget LM Ericsson

2.4.4 Part D: Test Support

Version 1.2

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Appendix

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Tobias Melin	Telefonaktiebolaget LM Ericsson
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