# Cited References

- [BTSIG99] Bluetooth Special Interest Group, Specification of the Bluetooth System, version 1.0B, volumes 1 and 2, available from <a href="http://www.bluetooth.com">http://www.bluetooth.com</a>, December 1999.
- [ETSI99] European Telecommunications Standards Institute (ETSI) SMG4, ETSI TS 101 369 V7.1.0 (1999-11) Technical Specification: Digital cellular telecommunications system (Phase 2+); Terminal Equipment to Mobile Station (TEMS) multiplexer protocol (GSM 07.10 version 7.1.0 Release 1998), available from <a href="http://www.etsi.org">http://www.etsi.org</a>, 1998.
- [FCC99] Federal Communications Commission, *Code of Federal Regulations part* 15, Title 47, volume 1, available from <a href="http://www.fcc.gov">http://www.fcc.gov</a>, revised October 1, 1999.
- [Graham99] Graham, Steve; Miller, Brent, and Rusnak, Joseph, IBM Corporation, Discovering Devices and Services in Home Networks, <a href="http://www.ibm.com/pvc/tech/networking.shtml">http://www.ibm.com/pvc/tech/networking.shtml</a>, June 1999.
- [Haartsen00] Haartsen, J. C., "The Bluetooth Radio System," *IEEE Personal Communications* (special issue on "Connectivity and Application Enablers for Ubiquitous Computing and Communications"—C. Bisdikian, J. C. Haartsen, P. Kermani, eds.), vol. 7, no. 1, pp. 28–36, February 2000.
- [IAL99] Inventors Assistance League, *Hedy Lamarr*, <a href="http://www.invention.org/culture/female/lamarr.html">http://www.invention.org/culture/female/lamarr.html</a>, 1999.
- [IEEE99] Institute of Electrical and Electronics Engineers, Wireless Standards Package (802.11), available from <a href="http://www.ieee.org">http://www.ieee.org</a>, 1999.
- [IETF92] Partridge, C., Internet Engineering Task Force Network Working Group, Request for Comments: 1363, A Proposed Flow Specification, available from <a href="http://www.ietf.org">http://www.ietf.org</a>, 1992.
- [IETF96] Yergeau, F., Internet Engineering Task Force Network Working Group, Request for Comments: 2044, UTF-8, a transformation format of Unicode and ISO 10646, available from <a href="http://www.ietf.org">http://www.ietf.org</a>, 1996.



- [IMC96a] The Internet Mail Consortium, vCard-The Electronic Business Card Exchange Format, Version 2.1, <a href="http://www.imc.org/pdi/">http://www.imc.org/pdi/</a>, September 1996.
- [IMC96b] The Internet Mail Consortium, vCalendar-The Electronic Calendaring and Scheduling Exchange Format, Version 1.0, <a href="http://www.imc.org/pdi/">http://www.imc.org/pdi/</a>, September 1996.
- [IrDA99a] Infrared Data Association, IrDA Object Exchange Protocol (IrOBEX), Version 1.2, <a href="http://www.irda.org/standards/pubs/IrOBEX12.pdf">http://www.irda.org/standards/pubs/IrOBEX12.pdf</a>, April 1999.
- [IrDA99b] Infrared Data Association, IrMC (Ir Mobile Communications) Specification, Version 1.1, <a href="http://www.irda.org/standards/specifications.asp">http://www.irda.org/standards/specifications.asp</a>, February 1999.
- [ISO96] International Organization for Standardization in ISO/IEC 11578:1996, Information Technology—Open Systems Interconnection—Remote Procedure Call (RPC), available from http://www.iso.ch/, 1996.
- [ITU96] International Telecommunication Union, Recommendation T.4-Standardization of Group 3 facsimile terminals for document transmission, available from <a href="http://www.itu.org">http://www.itu.org</a>, July 1996.
- [ITU98] International Telecommunication Union, Recommendation Q.931—ISDN user-network interface layer 3 specification for basic call control, available from <a href="http://www.itu.org">http://www.itu.org</a>, May 1998.
- [ITU99] International Telecommunication Union, Recommendation V.250-Serial asynchronous automatic dialing and control, available from <a href="http://www.itu.org">http://www.itu.org</a>, May 1999.
- [Mettälä99] Mettälä, Riku, Nokia Mobile Phones, Bluetooth Protocol Architecture, Version 1.0, <a href="http://www.bluetooth.com/developer/download/download.asp?doc=175">http://www.bluetooth.com/developer/download/download.asp?doc=175</a>, August 25, 1999.
- [Miller99] Miller, Brent and Pascoe, Robert, IBM Corporation, Mapping Salutation Architecture APIs to Bluetooth Service Discovery Layer, Version 1.0, <a href="http://www.bluetooth.com/developer/download/download.asp?doc=172">http://www.bluetooth.com/developer/download/download.asp?doc=172</a>, July 1, 1999.
- [Muller99] Muller, Thomas, Nokia Mobile Phones, Bluetooth Security Architecture, Version 1.0, <a href="http://www.bluetooth.com/developer/download/download.asp?doc=174">http://www.bluetooth.com/developer/download/download.asp?doc=174</a>, July 15, 1999.
- [Suvak99] Suvak, David, Extended Systems, Inc., IrDA and Bluetooth: A Complementary Compari-son, <a href="http://www.extendedsystems.com/prodinfo/white/bt%5Fvs%5Fir.html">http://www.extendedsystems.com/prodinfo/white/bt%5Fvs%5Fir.html</a>, 1999.



# INDEX

A	1 CS group management, 195-97	protocol stack, 7, 59-75
Access code, 92-95	TCS protocol development,	RF communications solution,
defined, 92	192-94	20-27
inquiry operation, 94	usage, 199-200	baseband modes, 22-25
normal piconet operation, 93	Automatic synchronizer usage model,	communications topology,
page operation, 93	41-42	25-27
Access rights request, 196 Active mode, 23	AUX1, 100	energy-conserving features, 22-25
Active slaves, 21	B	master and slave roles,
Adaptive transmission power, 24-25	Bandwidth-conscious	20-22
Address input, 90	communications, 116-18	specification, 3
Ad hoc networking, 44	quality of service (QoS) for ACL	usage models, 29-45
Adopters, 7	links, 117-18	ad hoc networking, 44
Air interface, 3, 92	SCO links, 117	automatic synchronizer,
Air interface working group, 7	Baseband, Bluetooth radio, key	41-42
A-law, 198	functions of, 83-108	cordless computer, 30-32
A-law compression technique, 71, 198	Baseband BB_PDU types, 96-100	headsets, 32-33
AM_ADDR, 97-98, 101, 103, 106	Baseband layer, 64	hidden computing, 44-45
Antheil, George, 19	transport protocol group, 64	instant postcard, 43-44
Application group, 61, 72-75	Baseband link types, 100-108	interactive conference (file
	inquiry state, 101-5	transfer), 35-36
and Bluetooth profiles, 73-75	page state, 106-8	Internet bridge, 37-40
Application profiles, 204	Baseband modes, 22-25	profiles, 29
Associate members, SIG, 280	Baseband packet data unit (BB_PDU),	speaking laptop, 40-41
Asynchronous connectionless (ACL)	90-91	three-in-one phone, 34-35
packets, 97-98, 113	Base station, 85	use of term, 3
packet format, 100	BB_PDU, 90-91, 92, 95, 98, 106, 125	Bluetooth adaptation software, 74
AT Command Telephony Control,	BD_ADDR, 88, 90, 94-95, 101, 103,	Bluetooth Assigned Numbers, 51
190	106	Bluetooth audio:
Audio, 71-72, 192	Beaconing scheme, 24	development, 197-98
Audio and telephony control, 189-200	Blatand, Harald (King Harald of	evolution of, 198
Bluetooth audio, 197-99	Denmark), 9	Bluetooth baseband, key functions of,
development, 197-98	Bluetooth:	83-84
evolution of, 198	defined, 3	Bluetooth Brand Book, The, 3
connectionless TCS, 191, 197		Bluetooth clock, 84, 87, 88-89
operation, 190-200	history, 9	Bluetooth device address, 21fn, 87, 88
TCS-BIN, 189-91	logo, 9 name, origin of, 9	Bluetooth devices, 84, 86
TCS call control 194-95	name, origin or, o	



		0 101
connected state, 86	member parties, 5	Connection establishment and link
defined, 78	new applications working	detachment, 121
inquiry scan state, 86	groups, 284-85	Connectionless (CL) L2CAP_PDU
inquiry state, 86	car profile working group,	type, 129-30
operational states for, 86	284	format of, 129
page scan state, 87	local positioning working	Connectionless TCS, 191, 197
page state, 86-87	group, 285	Connection-oriented (CO)
standby state, 86	richer audio/video (AV)	L2CAP_PDU type, 130-31
Bluetooth discovery protocol (BDP)	working group, 284-85	format of, 130
section, MAC-2, 123	new working groups/profiles,	Connectivity modes, 213-14
Bluetooth link controller, 83	280-82	connectability modes, 214
Bluetooth mobile phones, 288-89	original charter, expiration of,	discoverability modes, 214-15
Bluetooth network model, 25	280	pairing modes, 215
Bluetooth Piconet Minder, 174	progression of, 7-8	Continuation state, 173
Bluetooth products, 85-87	radio 2.0 working group, 281-82	Continuous variable slope delta
Bluetooth products, 285-90	technology and SIG origins, 5-6	(CVSD) modulation, 71, 198
computers and mobile phones, 288-89	working groups, 7-8	Control path, 65-66
legacy product enablers, 287-88	Bluetooth technology, 3-5	Cordless computer, 30-32
silicon and developers kits,	future of, 277-90	Cordless telephony profile, 225-31
286-87	and innovation, 292-93	development of, 226-27
Bluetooth profiles, 203-8	Bluetooth transport protocols, design point of, 78	and device roles, 227-28
generic profiles, 206, 209-22		usage, 230-31
serial port profiles, 207	Bluetooth was site viv 285 202	Core specification, studying, 55
telephony profiles, 207, 223-37	Bluetooth web site, xiv, 285, 292	Cyclic redundancy check (CRC), 99, 100
version 1.0 profiles, 203-7	Bridge, use of term, 37 Briefcase trick, 45	100
Bluetooth Protocol Architecture, 54		D
Bluetooth protocol stack, SDAP	D C	Data access points, 38
requirements on, 221	Cables, replacing, 30	Data axis points, 38
Bluetooth radio, 79-82	Cahners In-Stat Group, 10	Data-class HCI_PDUs, 142, 146
key operational parameters of,	Call control, 190-92	Data HCI_PDU, 146-47
82	Car profile working group, 284	Data Link Connection Identifier
key operations in, 80-81	C bit, 136	(DLCI), 160
transceiver, 80	Channel access code (CAC), 93	Dedicated bonding, 216
Bluetooth radio module design, xiv	Channel-hopping sequence, 90	Dedicated IACs (DIACs), 94
Bluetooth radios, 80	channel identifier (CID), assignment	Dedicated inquiry access codes
Bluetooth Service Discovery Protocol	types, 128	(DIACs), 221
(SDP), 66, 68, 74, 155, 164-76	Client, 227	Device access code (DAC), 93
Bluetooth Special Interest Group	CL Info, 197	Device authentication, 112-13
(SIG), 3, 5-8, 72-73, 176	Clock input, 90	Device pairing, 63
associate members, 280	Clock and timer information, 119-20	Device sharing, 31-32
core group, xiv	Code of Federal Regulations part 15,	Dial-up networking, 37-38
creating additional profiles, 285	79	Dial-up networking profile (DUNP),
creation of, xiv	Command-class HCI_PDUs, 142, 144	261-65
defined, 5	Command_Complete_Event, 147	compared to LAN access profile
extensions and enhancements	Command HCI_PDUs, 144, 148	(LAP), 271-73
working groups, 282-84	Command_Status_Event, 147	defined, 261-62
extended service discovery	Common services, 74	development of, 262
profiles (ESDP), 283-84	Communication, forms of, 15	operation of, 262-64
HID (human interface de-	Compliance working group, 7	security in, 264
vices) working group, 283	COM ports, 157	usage, 264-65
personal area networking	Compression techniques, PCM audio,	Digital camera cables, 30
(PAN), 282-83	71	Direct sequence spread spectrum
printing working group,	Configuration distribution, 195	Direct sequence spread spectrum,
283	Connectability modes, 214	18fn, 80 Discoverability modes 214-15
still image working group,	Connected state, 86, 95-108	Discoverability modes, 214-15 Dongles, 287
283	baseband BB_PDU types,	DUNP, See Dial-up networking profile
formation of, 9-10	96-100	(DUNP)
legal agreements among	baseband link types, 100-108	(20111)



D E	General knowlege, suggested reading	Hold mode, 22-23
Energy-conserving features, 22-25	plan, 54-55	HomeRF(TM), 17, 282
EnumerateRemDev primitive, 221	Generic access profiles (GAP), 206,	Hopping, 18
Ericsson, 5-6, 8	209-22	Host controller and baseband
Ethernet networks, 15-16	connectivity, 213	HCI_PDUs, 151-52
European Telecommunications	connectivity modes, 213-14	Host controller interface (HCI), 51,
Standards Institute (ETSI), 68	connectability modes, 214	57, 65, 140-53
Event-class HCI_PDUs, 142, 145	discoverability modes,	command-class HCI_PDUs,
Event HCI_PDUs, 145, 148	214-15	142, 144
Extended service discovery profiles (ESDP), 283-84	pairing modes, 215 defined, 209	data-class HCI_PDUs, 142, 146
Extended Systems, 254	development, 211-13	event-class HCI_PDUs, 142, 145
Extensions and enhancements	dictionary, 213	HCI_PDU packet classes, 142-47
working groups, 282-84	idle mode procedures, 216-17	HCI_PDUs, 142, 147-53
extended service discovery	personalization, 213	link control HCI_PDUs,
profiles (ESDP), 283-84	relationships, 210-11	148-50
HID (human interface devices)	security modes, 215-16	link policy HCI_PDUs,
working group, 283	Generic inquiry access code (GIAC),	150-51
personal area networking	92, 221	testing, 153
(PAN), 282-83	Generic object exchange profile, 207	HCI portion of specification,
printing working group, 283	Generic object exchange profile	141
still image working group, 283	(GOEP), 243-45	host controller and baseband
	development of, 243-44	HCI_PDUs, 151-52
D F	operation of, 244-45	informational parameters
Fast intermember access, 195-96	relationships, 240	HCI_PDUs, 152-53
FAX profile (FaxP), 273-76	Group 3 fax, 274	protocol stack with, 141-42
development of, 273-75	"Group of Bluetooth transport	status parameters HCI_PDUs,
operation of, 275-76	protocols", use of term, 62	153
SDP service record, 276	Group management, 195-97	Host controller interface (HCI) layer,
usage, 276	functions, 191	transport protocol group, 65-66
Federal Communications	b H	Host transport, 65
Commission (FCC), 79	Handware "alog ins" 997	Human interface devices (HID), 283
FHS packet, 102-3	Hardware "plug-ins", 287 HCI, <i>See</i> Host controller interface	D
File transfer, 35-36	(HCI)	Idle mode procedures, 216-17
File transfer profile (FP), 250-53	HCI_Create_Connection command	Informational parameters
development of, 250-51	HCI_PDU, 149-50	HCI_PDUs, 152-53
operation of, 251-52	HCI_Hold_Mode command	Information exchange, 120
usage, 253 Forward error-correcting (FEC) code,	HCI_PDU, 151	Infrared Data Association (IrDA),
96	HCI_Inquiry command HCI_PDU,	19-20, 57, 74, 177
Frequency hopping, 18	148	compared to Bluetooth wireless
Frequency-hopping sequences, 85,	HCI layer, transport protocol group,	communications, 20
89-92, 95	65-66	See also IrDA interoperability middleware protocols
inquiry operation, 91-92	HCI_PDU packet classes, 142-47	Infrared mobile communications
normal piconet operation, 90-92	HCI_PDUs, 142, 147-53	/r 1 (C) 60)
page operation, 91	command HCI_PDU, 144	(IrMC), 69 Infrared object exchange (IrOBEX/
phase of, 90	data HCI_PDU, 146-47	OBEX), 69
Frequency hopping spread spectrum	event HCI_PDU, 145	Infrared wireless communications,
(FHSS), 18-19, 80	link control HCI_PDUs, 148-50	
Frequency-selection module (FSM),	link policy HCI_PDUs, 150-51	- a I-torcom profile (IIII)
89	testing, 153	
Fundamental processes, 87-89	HCI_Write_Page_Scan_Activity	Inquiry-hopping sequence, 92 Inquiry-hopping sequence, 92
	command PDU, 152	T-quiry Result_Byest
<b>b G</b>	Headset profile, 234-37	
GAP, See Generic access profiles	development of, 234-35	Inquiry scan state, oo
(GAP)	Headsets, 32-33, 289	Inquiry state, 86 Inquiry state, baseband link types,
Gartner Group DataQuest, 10	Hewlett-Packard, 283	Inquiry state, our
General bonding, 216	Hidden computing, 44-45 HID working group, 283	100-108
General discoverable mode, 214		



# DOCKET

# Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## **Real-Time Litigation Alerts**



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## **Advanced Docket Research**



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

### **Analytics At Your Fingertips**



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

#### API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

#### **LAW FIRMS**

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

#### **FINANCIAL INSTITUTIONS**

Litigation and bankruptcy checks for companies and debtors.

### **E-DISCOVERY AND LEGAL VENDORS**

Sync your system to PACER to automate legal marketing.

