

# ACRONYMS AND ABBREVIATIONS

<b><math>\pi/4</math>-DQPSK</b>	$\pi/4$ differential quadrature phase shift keying
<b>1G</b>	First generation cellular
<b>2G</b>	Second generation cellular
<b>3G</b>	Third generation cellular
<b>AAL</b>	ATM adaptation layer
<b>ACF</b>	Association control function
<b>ACH</b>	Access feedback channel
<b>ACI</b>	Adjacent channel interference
<b>ACTS</b>	Advanced communications technologies and services
<b>ADPCM</b>	Adaptive differential pulse code modulation
<b>AGCH</b>	Access grant channel
<b>ALI</b>	Automatic location information
<b>AM</b>	Amplitude modulation
<b>AMPS</b>	Advanced mobile phone system
<b>ANSI</b>	American National Standards Institute
<b>AOA</b>	Angle of arrival
<b>AP</b>	Access point
<b>ARIB</b>	Association of Radio Industries and Businesses
<b>ARN</b>	Authentication random number
<b>ARP</b>	Address resolution protocol
<b>ARQ</b>	Automatic repeat request
<b>ASCH</b>	Association control channel
<b>ASK</b>	Amplitude shift keying
<b>ASN</b>	Authentication sequence number
<b>ATM</b>	Asynchronous transfer mode
<b>AuC</b>	Authentication center
<b>AWGN</b>	Additive white Gaussian noise
<b>BCCH</b>	Broadcast control channel
<b>BCH</b>	Broadcast channel
<b>BER</b>	Bit error rate
<b>BG</b>	Border gateway
<b>BLER</b>	Block error rate

**BRAN** Broadband radio access networks  
**BS** Base station  
**BSA** Basic service area  
**BSC** Base station controller  
**BSIC** Base station identity code  
**BSS** Basic service set  
**BSS** Base station subsystem  
**BSSGP** BSS gateway protocol  
**BTMA** Busy tone multiple access  
**BTS** Base transceiver subsystem  
**CCA** Clear channel assignment  
**CCH** Control channel  
**CCI** Co-channel interference  
**CCITT** International Telegraph and Telephone Consultative Committee  
**CCK** Complementary code keying  
**CDMA** Code division multiple access  
**CDPD** Cellular digital packet data  
**CELP** Code excited linear prediction  
**CEPT** Committee of European Post and Telecommunications  
**CFP** Contention free period  
**CLI** Calling line identification  
**CLNP** Connectionless network protocol  
**CN** Correspondent node  
**COA** Care of address  
**COFDM** Coded orthogonal frequency division multiplexing  
**CONS** Connection oriented  
**COST** Co-operative for scientific and technical research  
**CPC** Centralized power control  
**CSMA/CA** Carrier sense multiple access with collision avoidance  
**CSMA/CD** Carrier sense multiple access with collision detection  
**CT** Cordless telephony  
**CW** Contention window  
**DAB** Digital audio broadcast  
**DBPSK** Differential binary phase shift keying  
**DCA** Dynamic channel allocation  
**DCC** DLC connection control  
**DCF** Distributed coordination function  
**DDCA** Distributed dynamic channel assignment  
**DDP** Dominant direct path  
**DECT** Digital enhanced cordless telephone  
**DES** Data encryption standard  
**DFE** Decision feedback equalizer  
**DFIR** Diffused IR

**DFS** Dynamic frequency selection  
**DGPS** Differential GPS  
**DIFS** DCF inter-frame spacing  
**DL** Discrete logarithm  
**DLC** Data link control  
**DLL** Data link layer  
**DLOS** Direct line of sight  
**DPC** Distributed power control  
**DQPSK** Differential quadrature phase shift keying  
**DSL** Digital subscriber line  
**DSMA** Digital sense multiple access  
**DSS** Digital signature standard  
**DSSS** Direct sequence spread spectrum  
**DVCC** Digital verification color code  
**EDGE** Enhanced data rates for global evolution  
**EFR** Enhanced full rate  
**EIR** Equipment identity register  
**EOTD** Enhanced observed time difference  
**ESS** Extended service set  
**ETACS** Enhanced total access communications system  
**ETSI** European Telecommunications Standards Institute  
**EU** European Union  
**FA** Foreign agent  
**FACCH** Fast associated control channel  
**FCA** Fixed channel allocation  
**FCC** Federal communications commission  
**FCH** Frequency correction channel  
**FCS** Frame correction sequence  
**FDD** Frequency division duplexing  
**FDMA** Frequency division multiple access  
**FER** Frame error rate  
**F-ES** Fixed end system  
**FFT** Fast Fourier transform  
**FHSS** Frequency hopping spread spectrum  
**FM** Frequency modulation  
**FSK** Frequency shift keying  
**FT** Fixed terminal  
**FTP** File transfer protocol  
**GBS** Geolocation base station  
**GFSK** Gaussian frequency shift keying  
**GGSN** Gateway GPRS support node  
**GIS** Geographic information system  
**GMSC** Gateway MSC

**GMSK** Gaussian minimum shift keying  
**GPRS** General packet radio service  
**GPS** Global positioning system  
**GR** GPRS register  
**GSM** Global system of mobile communications  
**GTP** GPRS tunnel protocol  
**GUI** Graphical user interface  
**HA** Home agent  
**HAN** Home area network  
**HCA** Hybrid channel assignment  
**HDM** Handoff direction message  
**HDR** High data rate  
**HFC** Hybrid fiber coax  
**HIPERLAN** High performance radio LAN  
**HLR** Home location register  
**HMAC** Hashed message authentication code  
**HPN** Home phone networking  
**HPNA** Home phone network alliance  
**HSCSD** High speed circuit switched data  
**IAPP** Inter-access point protocol  
**ICMP** Internet control message protocol  
**IEEE** Institute of Electrical and Electronics Engineers  
**IETF** Internet Engineering Task Force  
**IFS** Inter frame spacing  
**IMEI** International mobile equipment identity  
**IMT-2000** International mobile telecommunications beyond 2000  
**IP** Internet protocol  
**IR** Infrared  
**IrDA** Infrared data association  
**ISDN** Integrated services digital network  
**ISI** Inter symbol interference  
**ISM** Industrial, scientific, and medical  
**ISP** Internet service provider  
**ITS** Intelligent transportation system  
**ITU** International Telecommunication Union  
**ITU-R** Radio sector of ITU  
**ITU-T** Telecom sector of ITU  
**IV** Initial vector  
**JDC** Japanese digital cellular  
**JTACS** Japanese total access communications system  
**JTC** Joint technical committee  
**L1, L2, etc.** Layer-1, Layer-2, etc.  
**LA** Location area

**LAN** Local area network  
**LANE** LAN emulation  
**LAPD** Link access protocol-D  
**LBT** Listen before talk  
**LCCH** Link control channel  
**LCH** Long transport channel  
**LEO** Low earth orbiting (for satellites)  
**LFSR** Linear feedback shift register  
**LLC** Logical link control  
**LMDS** Local multipoint distribution service  
**LOS** Line of sight  
**LPC** Linear predictive coding  
**LR** Location register  
**LTE** Linear transversal equalizer  
**MAC** Medium access control  
**MAHO** Mobile assisted handoff  
**MAP** Mobile application part  
**MCHO** Mobile controlled handoff  
**MCM** Multi carrier modulation  
**MDBS** Mobile data base station  
**MD-IS** Mobile data intermediate system  
**MDLP** Mobile data link protocol  
**ME** Mobile equipment  
**M-ES** Mobile end system  
**MLSE** Maximum likelihood sequence estimator  
**MME** MNRP management entity  
**MN** Mobile node  
**MNLP** Mobile network location protocol  
**MNRP** Mobile network registration protocol  
**MOS** Mean opinion score  
**MPDU** MAC PDU  
**MSC** Mobile switching center  
**MSK** Minimum shift keying  
**NCHO** Network controlled handoff  
**NDDP** Non-dominant direct path  
**NIC** Network interface card  
**NID** Network ID  
**NIST** National Institutes of Standards and Technology  
**NLOS** Non-line of sight  
**NMT** Nordic Mobile Telephony  
**NNI** Network network interface  
**NPMA** Non-preemptive multiple access  
**NSS** Network subsystem

**NTT** Nippon Telephone and Telegraph  
**OFDM** Orthogonal frequency division multiplexing  
**OLoS** Obstructed line of sight  
**OSI** Open system interconnection  
**PACCH** Packet associated control channel  
**PACS** Personal access communications system  
**PAGCH** Packet AGCH  
**PAM** Pulse amplitude modulation  
**PBCCH** Packet BCCH  
**PBX** Private branch exchange  
**PCF** Point coordination function  
**PCH** Paging channel  
**PCS** Personal communications services  
**PDCH** Packet data channel  
**PDF** Probability density function  
**PDM** Pulse duration modulation  
**PDN** Public data network  
**PDP** Packet data protocol  
**PDU** Protocol data unit  
**PHP** Personal handy phone  
**PHS** Personal handyphone system  
**PHY** Physical layer  
**PIFS** PCF inter-frame spacing  
**PIN** Personal identification number  
**PLCP** Physical layer convergence protocol  
**PLS** Personal locator services  
**PLW** Packet length width  
**PMD** Physical medium dependent  
**PNCH** Packet notification channel  
**POTS** Plain old telephone service  
**PPM** Pulse position modulation  
**PPP** Point-to-point protocol  
**PPRCH** Packet paging response channel  
**PRACH** Packet RACH  
**PRMA** Packet reservation multiple access  
**PSAP** Public safety answering point  
**PSF** Packet signaling field  
**PSK** Phase shift keying  
**PSPDN** Packet switched public data networks  
**PSTN** Public switched telephone network  
**PTCH** Packet traffic channel  
**PTM-G** Point-to-multipoint group  
**PTM-M** Point-to-multipoint multicast

**PTP** Point-to-point  
**PWM** Pulse width modulation  
**QAM** Quadrature amplitude modulation  
**QoS** Quality of service  
**QPSK** Quadrature phase shift keying  
**RA** Routing area  
**RACE** Research in advanced communications in Europe  
**RACH** Random access channel  
**RAI** RA identity  
**R-ALOHA** Reservation ALOHA  
**RFC** Request for comments  
**RFCH** Radio frequency channel  
**RLC** Radio link control  
**RPE** Regular pulse excitation  
**RRC** Radio resource control  
**RRM** Radio resource management  
**RS1** Rate set 1  
**RSS** Received signal strength  
**RSVP** Reservation protocol  
**RTS/CTS** Request to send/clear to send  
**RTT** Radio transmission technology  
**RTT** Round trip time  
**SACCH** Slow associated control channel  
**SAS** Sectorized antenna system  
**SAS** Situation awareness system  
**SCH** Synchronization channel  
**SCH** Short transport channel  
**SDCCH** Stand alone dedicated control channel  
**SDMA** Space division multiple access  
**SDP** Service discovery protocol  
**SER** Symbol error rate  
**SFD** Start of frame delimiter  
**SGSN** Serving GPRS support node  
**SHA** Secure hash algorithm  
**SID** System ID  
**SIFS** Short inter-frame spacing  
**SIM** Subscriber identity module  
**SIR** Signal to interference ratio  
**SMS** Short messaging service  
**SMSC** SMS center  
**SNDCP** Subnetwork dependent convergence protocol  
**SNR** Signal to noise ratio  
**SS-7** Signaling system-7

**STP** Shielded twisted pair  
**SUO** Small unit operations  
**TACS** Total access communications system  
**TASI** Time assignment speech interpolation  
**TCH** Traffic channel  
**TCP/IP** Transmission control protocol/Internet protocol  
**TDD** Time division duplex  
**TDL** Tapped delay line  
**TDMA** Time division multiple access  
**TDOA** Time difference of arrival  
**TEI** Temporary equipment identifier  
**TETRA** Terrestrial trunked radio  
**TIA** Telecommunications Industry Association  
**TIM** Traffic indication map  
**TLLI** Temporary logical link identity  
**TMSI** Temporary mobile subscriber identity  
**TOA** Time of arrival  
**TP** Twisted pair  
**TTFF** Time to first fix  
**TX** Transmitter/transmission  
**UDP** User datagram protocol  
**UDP** Undetected direct path  
**UMTS** Universal mobile telecommunications system  
**UNI** User network interface  
**U-NII** Unlicensed national information infrastructure  
**USF** Uplink status flag  
**UTP** Unshielded twisted pair  
**VAD** Voice activity detection  
**VC** Virtual circuit  
**VLR** Visitor location register  
**VoIP** Voice over IP  
**VSELP** Vector sum excitation linear prediction  
**WAN** Wide area network  
**WATM** Wireless ATM  
**WCAN** Wireless campus area network  
**WCDMA** Wideband CDMA  
**WLAN** Wireless local area network  
**WLL** Wireless local loop  
**WML** Wireless markup language  
**WPAN** Wireless personal area network  
**WTA** Wireless telephony application  
**WTLS** Wireless transport layer security  
**XML** Extensible markup language