

APPENDIX A: ABBREVIATIONS and ACRONYMS

[Items shown in **bold** represent term names or abbreviations that are defined in the glossary.]

a	atto (10 ⁻¹⁸)
Å	angstrom
A	ampere
AAR	automatic alternate routing
AARTS	automatic audio remote test set
ABCA	American, British, Canadian, Australian [armies]
ac	alternating current
ACA	automatic circuit assurance
ACC	automatic callback calling
ACD	automatic call distributor
ac-dc	alternating current - direct current
ACK	acknowledge character
ACTS	Advanced Communications Technology Satellite
ACU	automatic calling unit
A-D	analog-to-digital
ADC	analog-to-digital converter
	analog-to-digital conversion
ADCCP	Advanced Data Communication Control Procedures
ADH	automatic data handling
ADP	automatic data processing
ADPCM	adaptive differential pulse-code modulation
ADPE	automatic data processing equipment
ADPSSO	automatic data processing system security officer
ADU	automatic dialing unit
ADX	automatic data exchange
AECS	Aeronautical Emergency Communications System [Plan]
AF	audio frequency
AFC	area frequency coordinator
	automatic frequency control
AFNOR	Association Française Normal
AFRS	Armed Forces Radio Service
AGC	automatic gain control
AGE	aerospace ground equipment
AI	artificial intelligence
AIG	address indicator group
	address indicating group
AIM	amplitude intensity modulation
AIN	advanced intelligent network
AIOD	automatic identified outward dialing
AIS	automated information system
ASIC	application-specific integrated circuits
AJ	anti-jamming
ALC	automatic level control
	automatic load control
ALE	automatic link establishment
ALU	arithmetic and logic unit

A/m	amperes per meter
AM	amplitude modulation
AMA	automatic message accounting
AMC	administrative management complex
AME	amplitude modulation equivalent
	automatic message exchange
AMI	alternate mark inversion [signal]
AM/PM/VSB	amplitude modulation/phase modulation/vestigial sideband
AMPS	automatic message processing system
AMPSSO	automated message processing system security officer
AMSC	American Mobile Satellite Corporation
AMTS	automated maritime telecommunications system
ANI	automatic number identification
ANL	automatic noise limiter
ANMCC	Alternate National Military Command Center
ANS	American National Standard
ANSI	American National Standards Institute
AP	anomalous propagation
APC	adaptive predictive coding
APD, apd, a.p.d.	avalanche photodiode
API	application program interface
APL	average picture level
APK	amplitude phase-shift keying
ARP	address resolution protocol
ARPA	Advanced Research Projects Agency [now DARPA]
ARPANET	Advanced Research Projects Agency Network
ARQ	automatic repeat-request
ARS	automatic route selection
ARSR	air route surveillance radar
ARU	audio response unit
ASC	AUTODIN Switching Center
ASCII	American Standard Code for Information Interchange
ASN.1	abstract syntax notation one
ASP	Aggregated Switch Procurement
	adjunct service point
ASR	automatic send and receive
	airport surveillance radar
AT	access tandem
ATACS	Army Tactical Communications System
ATB	all trunks busy
ATCRBS	air traffic control radar beacon system
ATDM	asynchronous time-division multiplexing
ATE	automatic test equipment
ATM	asynchronous transfer mode
ATV	advanced television
au	astronomical unit
AUI	attachment unit interface
AUTODIN	Automatic Digital Network
AUTOSEVOCOM	Automatic Secure Voice Communications Network
AUTOVON	Automatic Voice Network

AVD	alternate voice/data
AWG	American wire gauge
AWGN	additive white Gaussian noise
AZ	azimuth
b	bit
B	bel
	byte
balun	balanced to unbalanced
basecom	base communications
BASIC	beginners' all-purpose symbolic instruction code
BCC	block check character
BCD	binary coded decimal
	binary-coded decimal notation
	bit-count integrity
BCI	bit
Bd	baud
B8ZS	bipolar with eight-zero substitution
bell	BEL character
BER	bit error ratio
BERT	bit error ratio tester
BETRS	basic exchange telecommunications radio service
BEX	broadband exchange
BIH	International Time Bureau
B-ISDN	broadband ISDN
bi-sync	binary synchronous [communication]
bit	binary digit
BIT	built-in test
BITE	built-in test equipment
BIU	bus interface unit
BNF	Backus Naur form
BOC	Bell Operating Company
BPSK	binary phase-shift keying
bpi	bits per inch
	bytes per inch
b/s	bits per second
b/in	bits per inch
BPSK	binary phase-shift keying
BR	bit rate
BRI	basic rate interface
BSA	basic serving arrangement
BSE	basic service element
BSI	British Standards Institution
B6ZS	bipolar with six-zero substitution
B3ZS	bipolar with three-zero substitution
BTN	billing telephone number
BW	bandwidth
c	centi (10^{-2})
CACS	centralized alarm control system
CAM	computer-aided manufacturing

CAMA	centralized automatic message accounting
CAN	cancel character
CAP	competitive access provider
	customer administration panel
CARS	cable television relay service [station]
CAS	centralized attendant services
CASE	computer-aided software engineering
	computer aided system engineering
	computer-assisted software engineering
CATV	cable TV , cable television
	community antenna television
CBX	computer branch exchange
C ²	command and control
C ³	command, control, and communications
C ³ CM	C ³ countermeasures
C ³ I	command, control, communications and intelligence
CCA	carrier-controlled approach
CCD	charge-coupled device
CCH	connections per circuit hour
CCIF	International Telephone Consultative Committee [<i>a predecessor to the CCITT</i>]
CCIR	International Radio Consultative Committee
CCIS	common-channel interoffice signaling
CCIT	International Telegraph Consultative Committee [<i>a predecessor to the CCITT</i>]
CCITT	International Telegraph and Telephone Consultative Committee [<i>now ITU-T</i>]
CCL	continuous communications link
CCS	hundred call-seconds
CCSA	common control switching arrangement
CCTV	closed-circuit television
CCW	cable cutoff wavelength
cd	candela
CD	collision detection, compact disk
CDF	combined distribution frame
	cumulative distribution function
CDMA	code-division multiple access
CDPSK	coherent differential phase-shift keying
CDR	call detail recording
CD ROM	compact disk read-only memory
CDT	control data terminal
CDU	central display unit
C-E	communications-electronics
CEI	comparably efficient interconnection
CELP	code-excited linear prediction
CEP	circular error probable
CFE	contractor-furnished equipment
cgs	centimeter-gram-second
ChR	channel reliability
CIAS	circuit inventory and analysis system
CIC	content indicator code
CIF	common intermediate format
CIFAX	ciphered facsimile

CINC	commander-in-chief
ciphony	ciphered telephony
CiR	circuit reliability
C/kT	carrier-to-receiver noise density
CLASS	custom local area signaling service
cm	centimeter
CMI	coded mark inversion
CMIP	Common Management Information Protocol
CMIS	common management information service
CMOS	complementary metal oxide substrate
CMRR	common-mode rejection ratio
CNR	carrier-to-noise ratio
	combat-net radio
CNS	complementary network service
C.O.	central office
COAM	customer owned and maintained equipment
coax	coaxial cable
COBOL	common business oriented language
codec	coder-decoder
COG	centralized ordering group
COMINT	communications intelligence
COMJAM	communications jamming
compandor	compressor-expander
COMPUSEC	computer security
COMSAT	Communications Satellite Corporation
COMSEC	communications security
CONEX	connectivity exchange
CONUS	Continental United States
COP	Committee of Principals
COR	Council of Representatives
COT	customer office terminal
CPAS	cellular priority access services
CPE	customer premises equipment
cpj	characters per inch
cpm	counts per minute
cps	characters per second
	cycles per second [<i>deprecated</i>]
CPU	central processing unit
	communications processor unit
CR	channel reliability
	circuit reliability
CRC	cyclic redundancy check
CRITICOM	Critical Intelligence Communications
CROM	control read-only memory
CRT	cathode ray tube
c/s	cycles per second [<i>deprecated</i>]
CSA	Canadian Standards Association
CSC	circuit-switching center
	common signaling channel
CSMA	carrier sense multiple access

CSMA/CA	carrier sense multiple access with collision avoidance
CSMA/CD	carrier sense multiple access with collision detection
CSU	channel service unit
	circuit switching unit
	customer service unit
CTS	clear to send
CTX	Centrex® [service]
	clear to transmit
CVD	chemical vapor deposition
CVSD	continuously variable slope delta [modulation]
cw	carrier wave
	composite wave
	continuous wave
CX	composite signaling
cxr	carrier
D*	specific detectivity
d	deci (10^{-1})
$D(\lambda)$	dispersion coefficient
da	deka (10)
D-A	digital-to-analog
	digital-to-analog converter
D/L	downlink
DACS	digital access and cross-connect system
DAMA	demand assignment multiple access
DARPA	Defense Advanced Research Projects Agency [<i>formerly ARPA</i>]
dB	decibel
dBa	decibels adjusted
dBa(F1A)	noise power measured by a set with F1A-line weighting
dBa(HA1)	noise power measured by a set with HA1-receiver weighting
dBa0	noise power measured at zero transmission level point
dBc	dB relative to carrier power
dBm	dB referred to 1 milliwatt
dBm(psoph)	noise power in dBm measured by a set with psophometric weighting
DBMS	database management system
dBmV	dB referred to 1 millivolt across 75 ohms
dBm0	noise power in dBm referred to or measured at 0TLP
dBm0p	noise power in dBm0 measured by a psophometric or noise measuring set having psophometric weighting
dB	power difference in dB between any point and a reference point
dB	dB above reference noise
dB	noise power in dB measured by a set with C-message weighting
dB	noise power in dB referred to or measured at 0TLP
dB(f₁-f₂)	flat noise power in dB
dB(144-line)	noise power in dB measured by a set with 144-line weighting
dB	dB relative to 1 V (volt) peak-to-peak
dBW	dB referred to 1 W (watt)
dB	dB above reference coupling
dc	direct current
DCA	Defense Communications Agency (<i>now DISA</i>)

DCE	data circuit-terminating equipment
DCL	direct communications link
DCPSK	differentially coherent phase-shift keying
DCS	Defense Communications System
DCTN	Defense Commercial Telecommunications Network
DCWV	direct-current working volts
DDD	direct distance dialing
DDN	Defense Data Network
DDS	digital data service
DEL	delete character
demarc	demarcation point
demux	demultiplex
	demultiplexer
	demultiplexing
dequeue	double-ended queue
DES	Data Encryption Standard
detem	detector/emitter
DFSK	double-frequency shift keying
DIA	Defense Intelligence Agency
DID	direct inward dialing
DIN	Deutsches Institut für Normung
DIP	dual in-line package
DISA	Defense Information Systems Agency <i>{formerly DCA}</i>
DISC	disconnect command
DISN	Defense Information System Network
DISNET	Defense Integrated Secure Network
DLA	Defense Logistic Agency
DLC	digital loop carrier
DLE	data link escape character
DM	delta modulation
DMA	Defense Mapping Agency
	direct memory access
DME	distance measuring equipment
DMS	Defense Message System
DNA	Defense Nuclear Agency
DNIC	data network identification code
DNPA	data numbering plan area
DNS	Domain Name System
DO	design objective
DoC	Department of Commerce
DOD	Department of Defense
	direct outward dialing
DODD	Department of Defense Directive
DODISS	Department of Defense Index of Specifications and Standards
DOD-STD	Department of Defense Standard
DOS	Department of State
DPCM	differential pulse-code modulation
DPSK	differential phase-shift keying
DQDB	distributed-queue dual-bus [network]
DRAM	dynamic random access memory

DRSI	destination station routing indicator
DS	digital signal direct support
DS0	digital signal 0
DS1	digital signal 1
DS1C	digital signal 1C
DS2	digital signal 2
DS3	digital signal 3
DS4	digital signal 4
DSA	dial service assistance
DSB	double sideband [transmission] Defense Science Board
DSB-RC	double-sideband reduced carrier transmission
DSB-SC	double-sideband suppressed-carrier transmission
DSC	digital selective calling
DSCS	Defense Satellite Communications System
DSE	data switching exchange
DSI	digital speech interpolation
DSL	digital subscriber line
DSN	Defense Switched Network
DSR	data signaling rate
DSS	direct station selection
DSSCS	Defense Special Service Communications System
DSTE	data subscriber terminal equipment
DSU	data service unit
DTE	data terminal equipment
DTMF	dual-tone multifrequency [signaling]
DTG	date-time group
DTN	data transmission network
DTS	Diplomatic Telecommunications Service
DTU	data transfer unit data tape unit digital transmission unit direct to user
DVL	direct voice link
DX signaling	direct current signaling duplex signaling
E	exa (10^{18})
E-MAIL, e-mail	electronic mail
EAS	extended area service
EBCDIC	extended binary coded decimal interchange code
E_b/N_0	signal energy per bit per hertz of thermal noise
EBO	embedded base organization
EBS	Emergency Broadcast System
EBX	electronic branch exchange

EC	Earth coverage
	Earth curvature
ECC	electronically controlled coupling
	enhance call completion
ECCM	electronic counter-countermeasures
ECM	electronic countermeasures
EDC	error detection and correction
EDI	electronic data interchange
EDTV	extended-definition television
EHF	extremely high frequency
EIA	Electronic Industries Association
eirp	effective isotropically radiated power
	equivalent isotropically radiated power
EIS	Emergency Information System
el	elevation
ELECTRO-OPTINT	electro-optical intelligence
ELF	extremely low frequency
ELINT	electronics intelligence
	electromagnetic intelligence
ELSEC	electronics security
ELT	emergency locator transmitter
EMC	electromagnetic compatibility
EMCON	emission control
EMD	equilibrium mode distribution
EME	electromagnetic environment
emf	electromotive force
EMI	electromagnetic interference
	electromagnetic interference control
EMP	electromagnetic pulse
EMR	electromagnetic radiation
EMR hazards	electromagnetic radiation hazards
e.m.r.p.	effective monopole radiated power
	equivalent monopole radiated power
EMS	electronic message system
EMSEC	emanations security
emu	electromagnetic unit
EMV	electromagnetic vulnerability
EMW	electromagnetic warfare
	electromagnetic wave
ENQ	enquiry character
EO	end office
E.O.	Executive Order
EOD	end of data
EOF	end of file
EOL	end of line
EOM	end of message
EOP	end of program
	end output
EOS	end-of-selection character

EOT	end-of-transmission character
EOW	end of tape
EPROM	engineering orderwire
EPSCS	erasable programmable read-only memory
ERL	enhanced private switched communications system
ERLINK	echo return loss
ERP, e.r.p.	emergency response link
ES	effective radiated power
	end system
	expert system
ESC	escape character
	enhanced satellite capability
ESF	extended superframe
ESM	electronic warfare support measures
ESP	enhanced service provider
ESS	electronic switching system
ETB	end-of-transmission-block character
ETX	end-of-text character
EW	electronic warfare
EXCSA	Exchange Carriers Standards Association
f	femto (10^{-15})
<i>f</i>	frequency
FAA	Federal Aviation Administration
FAQ file	Frequently Asked Questions file
FAX	facsimile
FC	functional component
FCC	Federal Communications Commission
FCS	frame check sequence
FDDI	fiber distributed data interface
FDDI-2	fiber distributed data interface-2
FDHM	full duration at half maximum
FDM	frequency-division multiplexing
FDMA	frequency-division multiple access
FDX	full duplex
FEC	forward error correction
FECC	Federal Emergency Communications Coordinators
FED-STD	Federal Standard
FEMA	Federal Emergency Management Agency
FEP	front-end processor
FET	field effect transistor
FIFO	first-in first-out
FIP	Federal Information Processing
FIPS	Federal Information Processing Standards
FIR	finite impulse response
FIRMR	Federal Information Resources Management Regulations
FISINT	foreign instrumentation signals intelligence
FLTSATCOM	Fleet Satellite Communications
flops	floating-point operations per second
FM	frequency modulation

FO	fiber optics
FOC	final operational capability
	full operational capability
FOT	frequency of optimum traffic
	frequency of optimum transmission
FPIS	forward propagation ionospheric scatter
ft/min	feet per minute
fps	foot-pound-second
FPS	frames per second
	focus projection and scanning
FRP	Federal Response Plan
FSDPSK	filtered symmetric differential phase-shift keying
FSK	frequency-shift keying
FSS	fully separate subsidiary
FSTS	Federal Secure Telephone Service <i>{no longer in operation}</i>
FT	fiber optic T-carrier
FTAM	file transfer, access, and management
FTF	Federal Telecommunications Fund
ft/s	feet per second
FTS	Federal Telecommunications System
FTS2000	Federal Telecommunications System 2000
FTSC	Federal Telecommunications Standards Committee
FTP	file transfer protocol
FWHM	full width at half maximum
FX	fixed service
	foreign exchange service
FYDP	Five Year Defense Plan
<i>g</i>	profile parameter
G	giga (10 ⁹)
GBH	group busy hour
GCT	Greenwich Civil Time
GDF	group distribution frame
GETS	Government Emergency Telecommunications Service
GFE	Government-furnished equipment
GGCL	government-to-government communications link
GHz	gigahertz
GII	Global Information Infrastructure
GMT	Greenwich Mean Time
GOS	grade of service
GOSIP	Government Open Systems Interconnection Profile
GSA	General Services Administration
GSTN	general switched telephone network
G/T	antenna gain-to-noise-temperature
GTP	Government Telecommunications Program
GTS	Government Telecommunications System
GUI	graphical user interface

h	hecto (10 ²) hour Planck's constant
HCS	hard clad silica [fiber]
HDLC	high-level data link control
HDTV	high-definition television
HDX	half-duplex [operation]
HE₁₁ mode	the fundamental hybrid mode [of an optical fiber]
HEMP	high-altitude electromagnetic pulse
HERF	hazards of electromagnetic radiation to fuel
HERO	hazards of electromagnetic radiation to ordnance
HERP	hazards of electromagnetic radiation to personnel
HF	high frequency
HFDF	high-frequency distribution frame
HLL	high-level language
HPC	high probability of completion
HV	high voltage
Hz	hertz
IA	International Alphabet [<i>CCITT</i>]
I&C	installation and checkout
IC	integrated circuit
ICI	incoming call identification
ICNI	Integrated Communications, Navigation, and Identification
ICW	interrupted continuous wave
IDDD	International Direct Distance Dialing
IDF	intermediate distribution frame
IDN	integrated digital network
IDTV	improved-definition television
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IES	Industry Executive Subcommittee
IF	intermediate frequency
I/F	interface
IFF	identification, friend or foe
IFRB	International Frequency Registration Board (<i>now</i> Radio Regulations Board)
IFS	ionospheric forward scatter
IIR	infinite impulse response
IITF	Information Infrastructure Task Force
ILD	injection laser diode
ILS	instrument landing system
IM	intensity modulation intermodulation
IMA	individual mobilization augmentee
I&M	installation and maintenance
IMD	intermodulation distortion
IMP	interface message processor
IN	intelligent network
IN/1, IN/1+, IN/2	intelligent network concepts
INFOSEC	information systems security

INS	inertial navigation system
INTELSAT	International Telecommunications Satellite Consortium
INWATS	Inward Wide-Area Telephone Service
I/O	input/output [device]
IOC	integrated optical circuit initial operational capability
	input-output controller
IP	Internet protocol intelligent peripheral
IPA	intermediate power amplifier
IPC	information processing center
IPM	impulses per minute interference prediction model internal polarization modulation interruptions per minute
in/s	inches per second
ips	interruptions per second
IPX	Internet Packet Exchange
IQF	intrinsic quality factor
IR	infrared
IRAC	Interdepartment Radio Advisory Committee
IRC	international record carrier Interagency Radio Committee
ISB	independent-sideband [transmission]
ISDN	Integrated Services Digital Network
ISM	industrial, scientific, and medical [applications]
ISO	International Organization for Standardization
ITA	International Telegraph Alphabet
ITA-5	International Telegraph Alphabet Number 5
ITC	International Teletraffic Congress
ITS	Institute for Telecommunication Sciences
ITSO	International Telecommunications Satellite Organization
ITU	International Telecommunication Union
IVDT	integrated voice data terminal
IXC	interexchange carrier
JANAP	Joint Army-Navy-Air Force Publication(s)
JCS	Joint Chiefs of Staff
JPL	Jet Propulsion Laboratory
JSC	Joint Steering Committee [<i>now JTSSG</i>] Joint Spectrum Center
JTC ³ A	Joint Tactical Command, Control and Communications Agency
JTIDS	Joint Tactical Information Distribution System
JTRB	Joint Telecommunications Resources Board
JTSSG	Joint Telecommunications Standards Steering Group [<i>formerly JSC</i>]
JWID	Joint Warrior Interoperability Demonstration

k	kilo (10 ³)
K	Boltzmann's constant
	coefficient of absorption
	kelvin
KDC	key distribution center
KDR	keyboard data recorder
KDT	keyboard display terminal
kg	kilogram
kg•m•s	kilogram-meter-second
kHz	kilohertz
km	kilometer
kΩ, k	kilohm
KSR	keyboard send/receive device
kT	noise power density
KTS	key telephone system
KTU	key telephone unit
λ	wavelength
λ_{co}	cutoff wavelength
LAN	local area network
LANTFLT	Atlantic Fleet
LAP-B	Data Link Layer protocol [CCITT Recommendation X.25 (1989)]
LAP-D	link access procedure D
laser	light amplification by stimulated emission of radiation
LASINT	laser intelligence
LATA	local access and transport area
LBO	line buildout
LC	limited capability
LCD	liquid crystal display
LD	long distance
LDM	limited distance modem
LEC	local exchange carrier
LED	light-emitting diode
LF	low frequency
LFB	look-ahead-for-busy [information]
LIFO	last-in first-out
LLC	logical link control [sublayer]
l/m	lines per minute
LMF	language media format
LMR	land mobile radio
LNA	launch numerical aperture
LOF	lowest operating frequency
loran	long-range aid to navigation system
	long-range radio navigation
	long-range radio aid to navigation system
LOS	line of sight, loss of signal

LP	linearly polarized [mode] linear programming linking protection log-periodic [antenna] log-periodic [array]
LPA	linear power amplifier
LPC	linear predictive coding
LPD	low probability of detection
LPI	low probability of interception
lpi	lines per inch
lpm	lines per minute
LP ₀₁	the fundamental mode [of an optical fiber]
LQA	link quality analysis
LRC	longitudinal redundancy check
LSB	lower sideband, least significant bit
LSI	large scale integrated [circuit] large scale integration line status indication
LTC	line traffic coordinator
LUF	lowest usable high frequency
LULT	line-unit-line termination
LUNT	line-unit-network termination
LV	low voltage
m	meter
	milli (10 ⁻³)
M	mega (10 ⁶)
MAC	medium access control [sublayer]
MACOM	major command
MAN	metropolitan area network
MAP	manufacturers' automation protocol
maser	microwave amplification by the stimulated emission of radiation
M[λ]	material dispersion coefficient
MAU	medium access unit
MCC	maintenance control circuit
MCEB	Military Communications-Electronics Board
MCM	multicarrier modulation
MCS	Master Control System
MCW	modulated continuous wave
MCXO	microcomputer compensated crystal oscillator
MDF	main distribution frame
MDT	mean downtime
MEECN	Minimum Essential Emergency Communications Network
MERCAST	merchant-ship broadcast system
MF	medium frequency multifrequency [signaling]
MFD	mode field diameter
MFJ	Modification of Final Judgment
MFSK	multiple frequency-shift keying
MHF	medium high frequency

MHS	message handling service
	message handling system
MHz	megahertz
mi	mile
MIC	medium interface connector
	microphone
	microwave integrated circuit
	minimum ignition current
	monolithic integrated circuit
	mutual interface chart
	military network
MILNET	Military Standard
MIL-STD	minute
min	medium interface point
MIP	million instructions per second
MIPS, mips	management information system
MIS	meter-kilogram-second
MKS	multilevel precedence and preemption
MLPP	millimeter wave
MMW	modulator-demodulator
modem	modified alternate mark inversion code
modified AMI code	mole
mol	millisecond (10^{-3} second)
ms	most significant bit
MSB	minimum-shift keying
MSK	mean time between failures
MTBF	mean time between maintenance
MTBM	mean time between outages
MTBO	mean time between preventive maintenance
MTBPM	modulation transfer function
MTF	mobile telephone switching office
MTSO	mean time to service restoral
MTSR	mean time to repair
MTTR	micro (10^{-6})
μ	microsecond
μ s	maximum usable frequency
MUF	multiplexer/demultiplexer
muldem	multiplex
MUX	multiplexer
	multiplexing
MUXing	microwave
mw	message waiting indicator
MWI	maximum working voltage
MWV	
n	nano (10^{-9})
	refractive index
N_0	sea level refractivity
	spectral noise density
NA	numerical aperture
NACSEM	National Communications Security Emanation Memorandum

NACSIM	National Communications Security Information Memorandum
NAK	negative-acknowledge character
NASA	National Aeronautics and Space Administration
NATA	North American Telecommunications Association
NATO	North Atlantic Treaty Organization
NAVSTAR-GPS	Navigational Satellite Timing and Ranging—Global Positioning System
NBFM	narrowband frequency modulation
NBH	network busy hour
NBRVF	narrowband radio voice frequency
NBS	National Bureau of Standards [<i>now NIST</i>]
NBSV	narrowband secure voice
NCA	National Command Authorities
NCC	National Coordinating Center for Telecommunications
NCS	National Communications System
	net control station
NCSC	National Communications Security Committee
NDCS	network data control system
NDER	National Defense Executive Reserve
NEACP	National Emergency Airborne Command Post
NEC	National Electric Code®
NEP	noise equivalent power
NES	noise equivalent signal
NF	noise figure
NFS	Network File System
NIC	network interface card
NICS	NATO Integrated Communications System
NID	network interface device
	network inward dialing
	network information database
NII	National Information Infrastructure
NIOD	network inward/outward dialing
NIST	National Institute of Standards and Technology [<i>formerly NBS</i>]
NIU	network interface unit
NLP	National Level Program
nm	nanometer
NMCS	National Military Command System
nmi	nautical mile
NOD	network outward dialing
Np	neper
NPA	numbering plan area
NPR	noise power ratio
NRI	net radio interface
NRM	network resource manager
NRRC	Nuclear Risk Reduction Center
NRZ	non-return-to-zero
NRZI	non-return-to-zero inverted
NRZ-M	non-return-to-zero mark
NRZ-S	non-return-to-zero space
NRZ1	non-return-to-zero, change on ones
NRZ-1	non-return-to-zero mark

ns	nanosecond
NSA	National Security Agency
NSC	National Security Council
NS/EP telecommunications	National Security or Emergency Preparedness telecommunications
NSTAC	National Security Telecommunications Advisory Committee
NTCN	National Telecommunications Coordinating Network
NTDS	Naval Tactical Data System
NTMS	National Telecommunications Management Structure
NT1	Network termination 1
NT2	Network termination 2
NTI	network terminating interface
NTIA	National Telecommunications and Information Administration
NTN	network terminal number
NTSC	National Television Standards Committee
	National Television Standards Committee [standard]
NUL	null character
NVIS	near vertical incidence skywave
Ω	ohm
O&M	operations and maintenance
OC	operations center
OCC	other common carrier
OCR	optical character reader
	optical character recognition
OCU	orderwire control unit
OCVCXO	oven controlled-voltage controlled crystal oscillator
OCXO	oven controlled crystal oscillator
OD	optical density
	outside diameter
OFC	optical fiber, conductive
OFCP	optical fiber, conductive, plenum
OFCR	optical fiber, conductive, riser
OFN	optical fiber, nonconductive
OFNP	optical fiber, nonconductive, plenum
OFNR	optical fiber, nonconductive, riser
OMB	Office of Management and Budget
ONA	open network architecture
opm	operations per minute
OPMODEL	operations model
OPSEC	operations security
OPX	off-premises extension
OR	off-route service
	off-route aeronautical mobile service
OSHA	Occupational Safety and Health Administration
OSI	open switching interval
	Open Systems Interconnection
OSI-RM	Open Systems Interconnection—Reference Model
OSRI	originating stations routing indicator
OSSN	originating stations serial number
OTAM	over-the-air management of automated HF network nodes

OTAR	over-the-air rekeying
OTDR	optical time domain reflectometer
	optical time domain reflectometry
OW	orderwire [circuit]
p	pico (10^{-12})
P	peta (10^{15})
PABX	private automatic branch exchange
PAD	packet assembler/disassembler
PAL	phase alternation by line
PAL-M	phase alternation by line—modified
PAM	pulse-amplitude modulation
PAMA	pulse-address multiple access
p/a r	peak-to-average ratio
PAR	performance analysis and review
PARAMP	parametric amplifier
par meter	peak-to-average ratio meter
PAX	private automatic exchange
PBER	pseudo-bit-error-ratio
PBX	private branch exchange
PC	carrier power (of a radio transmitter)
	personal computer
PCB	power circuit breaker
	printed circuit board
PCM	pulse-code modulation
	plug compatible module
	process control module
PCS	Personal Communications Services
	personal communications system
	plastic-clad silica [fiber]
PCSR	parallel channels signaling rate
PD	photodetector
PDM	pulse delta modulation
	pulse-duration modulation
PDN	public data network
PDS	protected distribution system
	power distribution system
	program data source
PDT	programmable data terminal
PDU	protocol data unit
PE	phase-encoded [recording]
PEP	peak envelope power (of a radio transmitter)
pF	picofarad
PF	power factor
PFM	pulse-frequency modulation
PI	protection interval
PIC	plastic insulated cable
ping	packet Internet groper
PIV	peak inverse voltage
PLA	programmable logic array

PLL	phase-locked loop
PLN	private line network
PL/I	programming language 1
PLR	pulse link repeater
PLS	physical signaling sublayer
pm	phase modulation
PM	mean power
	polarization-maintaining [optical fiber]
	preventive maintenance
	pulse modulation
PMB	pilot-make-busy [circuit]
PMO	program management office
POI	point of interface
POP	point of presence
POSIX	portable operating system interface for computer environments
POTS	plain old telephone service
PP	polarization-preserving [optical fiber]
P-P	peak-to-peak [value]
P/P	point-to-point
PPM	pulse-position modulation
pps	pulses per second
PR	pulse rate
PRF	pulse-repetition frequency
PRI	primary rate interface
PRM	pulse-rate modulation
PROM	programmable read-only memory
PRR	pulse repetition rate
PRSL	primary area switch locator
PS	permanent signal
psi	pounds [force] per square inch
PSK	phase-shift keying
PSN	public switched network
p-static	precipitation static
PSTN	public switched telephone network
PTF	patch and test facility
PTM	pulse-time modulation
PTT	postal, telephone, and telegraph
	push-to-talk [operation]
PTTC	paper tape transmission code
PTTI	precise time and time interval
PU	power unit
PUC	public utility commission
	public utilities commission
PVC	permanent virtual circuit
	polyvinyl chloride [insulation]
	picowatt
pW	pulse-width modulation [deprecated]
PWM	picowatt, psophometrically weighted
pWp	picowatts, relative to a 0TLP
pWp0	
pX	peak envelope power [in dB]

PX	peak envelope power private exchange peak envelope power [<i>in watts</i>]
pY	mean power [<i>in dB</i>]
PY	mean power [<i>in watts</i>]
pZ	carrier power [<i>in dB</i>]
PZ	carrier power [<i>in watts</i>]
QA	quality assurance
QAM	quadrature amplitude modulation
QC	quality control
QCIF	quarter common intermediate format
QMR	qualitative material requirement
QOS	quality of service
QPSK	quadrature phase-shift keying
QRC	quick reaction capability
QSTAG	Quadripartite Standardization Agreement
R	route service
racon	radar beacon
rad	radian radiation absorbed dose
radar	radio detection and ranging
RADHAZ	electromagnetic radiation hazards
RADINT	radar intelligence
RAM	random access memory reliability, availability, and maintainability
R&D	research and development
RATT	radio teletypewriter system
RBOC	Regional Bell Operating Company
RbXO	rubidium-crystal oscillator
RC	reflection coefficient resource controller
RCC	radio common carrier
RCVR	receiver
RDF	radio-direction finding
REA	Rural Electrification Administration
REN	ringer equivalency number
RGB	red-green-blue
rf	radio frequency range finder
RFI	radio frequency interference
RFP	request for proposal
RFQ	request for quotation
RH	relative humidity
RHR	radio horizon range
RI	routing indicator
RISC	reduced instruction set chip
RJ	registered jack
RJE	remote job entry

rms	root-mean-square [deviation]
RO	read only
	receive only
ROA	recognized operating agency
ROC	required operational capability
ROM	read-only memory
ROSE	remote operations service element protocol
rpm	revolutions per minute
RPM	rate per minute
RPOA	recognized private operating agency
rps	revolutions per second
RQ	repeat-request
RR	repetition rate
RSL	received signal level
rss	root-sum-square
R/T	real time
RTA	remote trunk arrangement
RTS	request to send
RTTY	radio teletypewriter
RTU	remote terminal unit
RTX	request to transmit
RVA	reactive volt-ampere
RVWG	Reliability and Vulnerability Working Group
RWI	radio and wire integration
RX	receive
	receiver
RZ	return-to-zero
s	second
SCC	specialized common carrier
SCE	service creation environment
SCF	service control facility
SCP	service control point
SCPC	single channel per carrier
SCR	semiconductor-controlled rectifier
	silicon-controlled rectifier
SCSR	single channel signaling rate
SDLC	synchronous data link control
SDM	space-division multiplexing [deprecated]
SDN	software-defined network
SECAM	système électronique couleur avec memoire
SECDEF	Secretary of Defense
SECORD	secure voice cord board
SECTEL	secure telephone
SETAMS	systems engineering, technical assistance, and management services
SEVAS	Secure Voice Access System
S-F	store-and-forward
SF	single-frequency [signaling]
SGDF	supergroup distribution frame
S/H	sample and hold

SHA	sidereal hour angle
SHARES	Shared Resources (SHARES) HF Radio Program
SHF	super high frequency
SI	International System of Units
SID	sudden ionospheric disturbance
SIGINT	signals intelligence
SINAD	signal-plus-noise-plus-distortion to noise-plus-distortion ratio
S(λ)	chromatic dispersion slope
SLD	superluminescent diode [<i>see</i> superluminescent LED]
SLI	service logic interpreter
SLP	service logic program
SMDR	station message-detail recording
SMSA	standard metropolitan statistical area
SNR	signal-to-noise ratio
SOH	start-of-heading character
SOM	start of message
sonar	sound navigation and ranging
SONET	synchronous optical network
SOP	standard operating procedure
SOR	start of record
SOW	statement of work
(S+N)/N	signal-plus-noise-to-noise ratio
sr	steradian
S/R	send and receive
SSB	single-sideband [transmission]
SSB-SC	single-sideband suppressed carrier [transmission]
SSN	station serial number
SSP	service switching point
SSUPS	solid-state uninterruptible power system
STALO	stabilized local oscillator
STANAG	Standardization Agreement [<i>NATO</i>]
STD	subscriber trunk dialing
STFS	standard time and frequency signal [service]
	standard time and frequency service
STL	standard telegraph level
	studio-to-transmitter link
STP	standard temperature and pressure
	signal transfer point
STU	secure telephone unit
STX	start-of-text character
SUB	substitute character
SWR	standing wave ratio
SX	simplex signaling
SXS	step-by-step switching system
SYN	synchronous idle character
SYSGEN	system generation
T	tera (10^{12})
TADIL	tactical data information link
TADIL-A	tactical data information link-A

TADIL-B	tactical data information link-B
TADS	teletypewriter automatic dispatch system
TADSS	Tactical Automatic Digital Switching System
TAI	International Atomic Time
TASI	time-assignment speech interpolation
TAT	trans-Atlantic telecommunication (cable)
TC	toll center
TCB	trusted computing base
TCC	telecommunications center
TCCF	Tactical Communications Control Facility
TCF	technical control facility
TCP	transmission control protocol
TCS	trusted computer system
TCU	teletypewriter control unit
TCVXO	temperature compensated-voltage controlled crystal oscillator
TCXO	temperature controlled crystal oscillator
TD	time delay
	transmitter distributor
TDD	Telecommunications Device for the Deaf
TDM	time-division multiplexing
TDMA	time-division multiple access
TE	transverse electric [mode]
TED	trunk encryption device
TEK	traffic encryption key
TEM	transverse electric and magnetic [mode]
TEMPEST	compromising emanations
TEMS	telecommunications management system
TGM	trunk group multiplexer
THD	total harmonic distortion
THF	tremendously high frequency
THz	terahertz
TIA	Telecommunications Industry Association
TIE	time interval error
TIFF	tag image file format
TIP	terminal interface processor
T _k	response timer
TLP	transmission level point
TM	transverse magnetic [mode]
TP	toll point
TRANSEC	transmission security
TRC	transverse redundancy check
TRF	tuned radio frequency
TRI-TAC	tri-services tactical [equipment]
TSK	transmission security key
TSP	Telecommunications Service Priority [system]
TSPS	traffic service position system
TSR	telecommunications service request
	terminate and stay resident
TTL	transistor-transistor logic
TTTN	tandem tie trunk network

TTY	teletypewriter
TTY/TDD	Telecommunications Device for the Deaf
TV	television
TW	traveling wave
TWT	traveling wave tube
TWTA	traveling wave tube amplifier
TWX®	teletypewriter exchange service
TX	transmit transmitter
UDP	User Datagram Protocol
UHF	ultra high frequency
ULF	ultra low frequency
U/L	uplink
UPS	uninterruptible power supply
UPT	Universal Personal Telecommunications service
USB	upper sideband
USDA	U.S. Department of Agriculture
USFJ	U.S. Forces, Japan
USFK	U.S. Forces, Korea
USNO	U.S. Naval observatory
USTA	U.S. Telephone Association
UT	Universal Time
UTC	Coordinated Universal Time
uv	ultraviolet
V	volt normalized frequency
VA	value-added [<i>network service</i>] volt-ampere
VAN	value-added network
VAR	value added reseller
VARISTAR	variable resistor
vars	volt-amperes reactive
VC	virtual circuit
VCO	voltage-controlled oscillator
VCXO	voltage-controlled crystal oscillator
V/D	voice/data
Vdc	volts direct current
VDU	video display unit visual display unit
VF	voice frequency
VFCT	voice frequency carrier telegraph
VFCTG	voice frequency carrier telegraph
VDFD	voice frequency distribution frame
VFO	variable-frequency oscillator
VFTG	voice-frequency telegraph
VHF	very high frequency
VLf	very low frequency
V/m	volts per meter

VNL	via net loss
VNLF	via net loss factor
vocoder	voice-coder
vodas	voice-operated device anti-sing
vogad	voice-operated gain-adjusting device
volcas	voice-operated loss control and echo/signaling suppression
vox	voice-operated relay circuit
VRC	voice operated transmit
VSAT	vertical redundancy check
VSB	very small aperture terminal
VSM	vestigial sideband [transmission]
VSWR	vestigial sideband modulation
VT	voltage standing wave ratio
VTU	virtual terminal
vu	video teleconferencing unit
	volume unit
WADS	wide area data service
WAIS	Wide Area Information Servers
WAN	wide area network
WARC	World Administrative Radio Conference
WATS	Wide Area Telecommunications Service
	Wide Area Telephone Service
WAWS	Washington Area Wideband System
WDM	wavelength-division multiplexing
WHSR	White House Situation Room
WIN	WWMCCS Intercomputer Network
WITS	Washington Integrated Telecommunications System
WORM	write once, read many times
wpm	words per minute
wps	words per second
WRU	who-are-you [character]
wv	working voltage
WVDC	working voltage direct current
WWDSA	worldwide digital system architecture
WWMCCS	Worldwide Military Command and Control System
WWW	World Wide Web
XMIT	transmit
XMSN	transmission
XMTD	transmitted
XMTR	transmitter
XO	crystal oscillator
XOFF	transmitter off
XON	transmitter on
XT	crosstalk
XTAL	crystal
Z	Zulu time
ZD	zero defects
Z ₀	characteristic impedance
0TLP	zero transmission level point

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