#### **APPENDIX B**

#### ABBREVIATED INDEX

This index consists of groupings of related principal term names of terms defined in this glossary. The groupings are arranged by technological families to provide the user the opportunity to browse among related definitions. For brevity, where numerous alphabetically consecutive term names of defined terms begin with the same word, only the first defined term name is included in this index. For example, eight defined terms beginning with the word "*facsimile*" follow the entry for *facsimile* in the body of the glossary. In this mini index, only the first, parent, term is listed because the additional entries are easily found after locating the parent term in the body of the glossary.

#### ADP / AIS / MIS:

automated information system (AIS) automatic data handling (ADH) automatic data processing (ADP) automatic data processing equipment (ADPE) batch processing clearing fetch protection FIP equipment hardware information information system machine-independent management information system (MIS) man-machine system online computer system parallel processing penetration recovery procedure remote access data processing remote batch entry remote batch processing remote job entry (RJE) remote operations service element (ROSE) protocol security filter security kernel standby system administration system analysis system documentation system integration system integrity system management systems design

technical vulnerability trusted computing base (TCB) trusted computer system (TCS) user validation work station

#### Antennas:

acceptance pattern antenna aperiodic antenna aperture aperture illumination aperture-to-medium coupling loss beam beam diameter beam divergence beam steering beamwidth biconical antenna billboard antenna boresight Cassegrain antenna collinear antenna array corner reflector counterpoise departure angle despun antenna diplex operation dipole antenna directional antenna direct ray effective antenna gain contour (of a steerable satellite beam) effective boresight area (of a steerable satellite beam) effective height

effective isotropically radiated power (e.i.r.p.) effective monopole radiated power (e.m.r.p.) (in a given direction) effective radiated power (e.r.p.) (in a given direction) fan-beam antenna far-field radiation pattern far-field region feed Fresnel zone front-to-back ratio ground plane helical antenna heterodyne repeater horn hybrid coupler image antenna intermediate-field region isotropic antenna lobe log-periodic (LP) antenna loop main lobe multicoupler multi-element dipole antenna natural frequency near-field region null omnidirectional antenna orthomode transducer parabolic antenna parasitic element periodic antenna periscope antenna phased array planar array propagation mode

radiation pattern radiation resistance radio beam radio horizon radio horizon range (RHR) radio range reference antenna reflective array antenna rhombic antenna shadow loss side lobe single-polarized antenna skip zone sky wave slewing slot antenna space diversity spillover spot beam test antenna uniform linear array whip antenna Yagi antenna

#### Codes / Coding:

adaptive predictive coding (APC) alphabetic code alphanumeric code analog decoding analog encoding analog-to-digital converter (ADC) balanced code bar code Baudot code BCH code B8ZS binary code binary-coded decimal (BCD) binary-coded decimal (BCD) notation binary element binary notation bipolar signal bit configuration bit pairing B6ZS B3ZS code codec code character

coded character set code-division multiple access (CDMA) comma-free code data network identification code (DNIC) delay encoding dense binary code differential encoding differential Manchester encoding digital alphabet dipulse coding direct-sequence spread spectrum duobinary signal EBCDIC error-correcting code error-detecting code error-detecting system escape character (ESC) filtered symmetric differential phase-shift keying (FSDPSK) gold code Gray code Hagelbarger code Hamming code Huffman coding hypertext linear predictive coding (LPC) line code Manchester code mark microcode modified AMI code motion compensation multiple frequency-shift keying (MFSK) multiprogramming n-ary code non-return-to-zero change-on-ones (NRZ1) non-return-to-zero (NRZ) non-return-to-zero mark (NRZ-M) non-return-to-zero space (NRZ-S) n-unit code paired disparity code parity reconstructed sample redundant code return-to-zero (RZ) run-length encoding scrambler

secure transmission segmented encoding law self-synchronizing code shannon synchronization code time code time-gated direct-sequence spread spectrum transcoding two-out-of-five code uniform encoding unit-distance code variant zero-level decoder

#### **Computer Graphics:**

addressability addressable point computer graphics hard copy joy stick landscape mode pointer portrait mode regeneration stroke

#### **Computer Hardware:**

communications processor unit (CPU) comparator compatibility computer computer architecture computer system CPU digital computer direct connect file server general purpose computer hardware host computer hybrid computer input-output channel inverter mainframe microcomputer micro-mainframe link microprocessor monitor

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mouse multiprocessor operating system parallel computer parallel port POSIX process computer system process control processing unit process interface system processor register security filter security kernel serial computer serial port special purpose computer standby stored-program computer touch-sensitive trusted computing base (TCB) trusted computer system (TCS) warm restart work station

# Computer Programming / Languages / Software:

abstract syntax notation one (ASN.1) Ada® application program interface (API) assemble assembler assembly language assembly time binding branch bug call CASE CASE technology C-language COBOL compartmentation compatibility compile compiler computer language computer-oriented language computer program

computer word core dump cross assembler diagnostic program firmware global graphical user interface (GUI) graphic character high-level language (HLL) HTML hypermedia hypertext icon identifier (ID) illegal character instruction intermediate language intermediate-level language interpret job kernel label LAN application (software) language language processor link load loop machine-independent machine instruction machine language microinstruction microprogram monitor multitasking network control program (NCP) network operating system operand operating system overlay path pointer procedure-oriented language program program architecture programmable programmable read-only memory (PROM) programmer programming language prompt

reserved word resident restart retrieval service routine run screen security filter security kernel **SGML** shell software source language source program statement structured programming subroutine supervisory program switch symbolic language syntax system software target language time-sharing trace program translator trusted computing base (TCB) trusted computer system (TCS) underflow  $\mathbf{UNIX}^{\mathrm{TM}}$ utility program virus wildcard character word processing

# Control / Control Characters / Command / Error Correction / Handshaking:

acknowledge character (ACK) ARQ backward channel backward signal backward supervision BCH code block check block parity call control character call control signal cancel character (CAN)

carrier sense multiple access (CSMA) channel bits character character check character interval check bit check character check digit checksum clear confirmation signal command command frame command menu command protocol data unit common-channel signaling connection-in-progress signal control character control communications control operation convolutional code cyclic redundancy check (CRC) data link escape character (DLE) data transfer request signal DCE clear signal DCE waiting signal delimiter disabling tone end-of-medium character end-of-selection character end-of-text character (ETX) end-of-transmission-block character (ETB) end-of-transmission character (EOT) enquiry character (ENQ) error control error-correcting code error-correcting system error-detecting code error-detecting system flag forward error correction (FEC) Hagelbarger code Hamming code handshaking idle character longitudinal redundancy check (LRC) negative-acknowledge character (NAK)

nontransparent mode overhead information password pilot process computer system process control process control equipment process control system ready-for-data signal redundancy redundancy check residual error ratio respond opportunity response Shannon's law source quench start signal substitute (SUB) character summation check synchronous idle character (SYN) transverse parity check undetected error ratio who-are-you (WRU) character

# Distortion / Dispersion / Diffraction:

amplitude distortion amplitude-vs.-frequency distortion bias distortion characteristic distortion cyclic distortion degree of isochronous distortion degree of start-stop distortion delay distortion diffraction dispersion dispersion-limited operation distortion distortion-limited operation end distortion feeder echo noise fortuitous distortion harmonic distortion intermodulation distortion intramodal distortion isochronous distortion knife-edge effect margin multimode distortion nonlinear distortion

phase-frequency distortion quantizing distortion signal droop single-harmonic distortion start-stop distortion total harmonic distortion (THD)

#### **Encryption / Decryption:**

bulk encryption cipher cipher system cipher text ciphony civision codress message compromise COMSEC equipment cover cryptanalysis CRYPTO Data Encryption Standard (DES) decipher decode decrypt descrambler encipher encode encoding law encrypt end-to-end encryption garble group key key distribution center (KDC) key management key stream link encryption multiplex link encryption net control station (NCS) null OTAR plain text protected distribution system (PDS) protection interval (PI) pseudorandom number generator public key cryptography RED / BLACK concept **RED** signal rekeving remote rekeying

security management spoofing superencryption synchronous crypto-operation transmission security key (TSK) trunk encryption device (TED) type 1 product type 2 product type 3 algorithm type 4 algorithm unique key variant vocoder

#### **Facsimile:**

analog facsimile equipment aperture distortion aspect ratio black facsimile transmission black recording black signal center frequency confirmation to receive continuous tone copy contouring cooperation factor density diametral index of cooperation digital facsimile equipment direction of scanning direct recording drum factor drum speed electrochemical recording electrolytic recording electronic line scanning elemental area facsimile (FAX) flood projection frame graphics halftone characteristic hard copy horizontal resolution index of cooperation Kendall effect landscape mode line-to-line correlation maximum keying frequency maximum modulating frequency multipath multiple-spot scanning noisy black noisy white nominal linewidth object pel phasing photosensitive recording picture black picture frequency picture white portrait mode record communication recording spot record medium reproduction speed run-length encoding scanning scanning direction scanning line signal contrast simple scanning skew solid-state scanning spot projection spot size spot speed stagger start-record signal stop-record signal stroke speed synchronizing synchronizing pilot tailing total line length transmission time transverse redundancy check (TRC) underlap white facsimile transmission white signal X-dimension of recorded spot X-dimension of scanning spot Y-dimension of recorded spot Y-dimension of scanning spot

# Fiber Optics: abrasive

acceptance angle acceptance cone

aligned bundle all-silica fiber angle of deviation angle of incidence aramid yarn armor axial propagation constant bandwidth•distance product bound mode braid break out breakout cable buffer bundle cable cable cutoff wavelength ( $\lambda_{cc}$ ) cladding cladding diameter cladding mode cladding mode stripper cleave concentricity error core core area core diameter coupled modes coupling efficiency critical angle cutback technique cutoff mode cutoff wavelength deeply depressed cladding fiber dielectric waveguide differential quantum efficiency dispersion dispersion-shifted fiber dispersion-unshifted fiber dopant doubly clad fiber duplex cable effective mode volume electrical length end finish equilibrium length equilibrium mode distribution (EMD) equilibrium mode simulator evanescent field evanescent mode extrinsic joint loss fiber amplifier

fiber optic cable fiber optic link fiber optics (FO) first window flooding compound fundamental mode fusion splice gap loss gap-loss attenuator gel glass graded-index fiber graded-index profile group delay group index group velocity guided ray hockey puck homogeneous cladding hybrid cable hybrid mode hydroxyl ion absorption inclusion index dip index-matching material insertion loss intensity modulation (IM) intramodal distortion intrinsic joint loss ioint lateral offset loss launch angle launching fiber launch numerical aperture (LNA) lay length leaky mode leaky ray long wavelength macrobend macrobend loss mandrel wrapping material dispersion coefficient  $[M(\lambda)]$ material scattering mechanical splice meridional ray microbend minimum bend radius minimum-dispersion window minimum-loss window modal distribution

modal loss modal noise mode mode coupling mode field diameter (MFD) mode partition noise mode scrambler mode volume multifiber cable multifiber joint multimode distortion multimode optical fiber near-field region near-field scanning nonlinear scattering numerical aperture loss numerical aperture (NA) OFC OFN OFNP OFNR open waveguide optical connector optical fiber optical isolator optical junction ovality overfill parabolic profile phase term pigtail plastic-clad silica (PCS) fiber polarization-maintaining (PM) optical fiber power-law index profile precision-sleeve splicing primary coating profile parameter (g)quadruply clad fiber radiation angle radiation-hardened fiber radiation mode radiation pattern reference surface reflection loss refracted ray refractive index contrast refractive index  $(n, \eta)$ refractive index profile ribbon cable rip cord

scattering center second window short wavelength silica single-mode optical fiber skew ray slab-dielectric waveguide soliton SONET spectral loss curve splice loss splice organizer star coupler step-index fiber step-index profile strength member substitution method surface wave tap tapered fiber T-coupler terminus thin-film optical waveguide third window tolerance field transmitter central wavelength range  $(\lambda_{\text{tmax}} \text{ - } \lambda_{\text{tmin}})$ transverse electric and magnetic (TEM) mode transverse electric (TE) mode transverse magnetic (TM) mode traveling wave vertex angle waveguide weakly guiding fiber window zero-dispersion slope zero-dispersion wavelength zip-cord

#### Filters:

bandpass filter bandpass limiter band-stop filter character filter dichroic filter digital filter filter high-pass filter interference filter Kalman filter loop filter low-pass filter mode filter optical filter roofing filter security filter

#### **Frequency:**

aircraft emergency frequency automatic frequency control (AFC) band bandwidth (BW) barrage jamming baseband calling frequency carrier frequency channel offset characteristic frequency cutoff frequency extremely high frequency (EHF) extremely low frequency (ELF) frequency guarded frequency heterodyne high frequency hiss hold-in frequency range image frequency image rejection ratio insertion-loss-vs.-frequency characteristic intermediate frequency (IF) intermodulation product lock-in frequency lock-in range lowest usable high frequency (LUF) low frequency (LF) maximum keying frequency maximum modulating frequency maximum usable frequency (MUF) medium frequency (MF) military common emergency frequency natural frequency nominal bandwidth normalized frequency (V) notch occupied bandwidth precise frequency

preemphasis primary frequency primary frequency standard primary service area priority protected frequency pull-in frequency range pulse repetition rate pump frequency quartz oscillator radio channel radio frequency (rf) radio wave Rayleigh distribution reference frequency secondary frequency standard sideband single-frequency (SF) signaling single-tone interference slewing spectral density spectrum signature spread spectrum spurious emission standard test tone standard time and frequency signal (STFS) service stereophonic sound subcarrier stopband syntonization threshold frequency transition frequency ultra high frequency (UHF) ultra low frequency (ULF) very high frequency (VHF) very low frequency (VLF) virtual carrier frequency voice frequency (VF) wideband

#### Frequency Allocation / Assignment:

allocation (of a frequency band) allotment (of a radio frequency or radio frequency channel) assigned frequency assigned frequency band assignment (of a radio frequency or radio frequency channel) authorized bandwidth authorized frequency C-band frequency assignment frequency assignment authority

#### Gain:

absolute gain antenna gain antenna gain-to-noise-temperature (G / T) automatic gain control (AGC) directive gain diversity gain equal gain combiner fade margin gain gain medium height gain insertion gain loop gain net gain process gain signal processing gain singing margin singing point

#### Interfacing:

cell relay data station data transmission circuit demarcation point (demarc) dial mode DTE clear signal EIA interface framed interface gateway interchange circuit interexchange carrier (IXC) interface interface functionality interface message processor (IMP) interface payload interface standard medium interface point (MIP) net radio interface (NRI) network interface network interface device (NID) network termination 1 (NT1) network termination 2 (NT2) optical interface

point of interface (POI) point of presence (POP) POSIX primary rate interface (PRI) protocol translator R interface router service service access point (SAP) service data unit (SDU) S interface terminal adapter **T**-interface transparent interface T reference point U interface V reference point

#### **Interference:**

adjacent-channel interference anti-interference blanketing co-channel interference common-mode interference common-mode rejection ratio (CMRR) compatibility conducted interference differential mode interference electromagnetic interference (EMI) eye pattern far-end crosstalk FM blanketing harmful interference interaction crosstalk interference interference emission interference filter intersymbol interference jamming margin jamming to signal ratio (J / S) limits of interference optical interface permissible interference phase interference fading precipitation static (p-static) reradiation single-frequency interference single-tone interference sunspot

#### white area

**Internet:** Archie browser directed broadcast address Domain Name System (DNS) Gopher ICMP [The] Internet Internet protocol (IP) Internet protocol (IP) spoofing lvnx Mosaic SLIP TCP TCP / IP TCP / IP Suite Terminal Access Controller (TAC) User Datagram Protocol (UDP) web browser World Wide Web (WWW)

# **ISDN:**

access contention B channel bearer service broadband ISDN (B-ISDN) circuit transfer mode contribution customer access D channel demand service digital subscriber line (DSL) distribution distribution service event frame functional signaling H-channel hybrid interface structure interactive service interface functionality interface payload ISDN labeled channel labeled interface structure labeled multiplexing labeled statistical channel LAP-D

messaging service network element (NE) network termination network termination 1 (NT1) network termination 2 (NT2) positioned channel post-production processing primary rate interface (PRI) reference configuration reference point reserved circuit service retrieval service R interface Signaling System No. 7 (SS7) S interface synchronous transfer mode teleaction service terminal adapter **T**-interface transfer mode transit delay T reference point U interface V reference point wide area network (WAN)

# LANs / MANs / WANs:

baseband local area network bridge brouter carrier sense domain name server Ethernet fiber distributed data interface (FDDI) head-end iabber LAN application (software) lobe attaching unit local area network (LAN) logical link control (LLC) sublayer metropolitan area network (MAN) network control program (NCP) network interface device (NID) network topology physical signaling sublayer (PLS) ring latency ring network server S interface

slotted-ring network switched multimegabit data services (SMDS) tail circuit token token-bus network token passing token ring adapter truncated binary exponential backoff wide area network (WAN)

#### Layered Systems / Open Architecture:

abstract syntax encapsulation expedited data unit GOSIP high-level control intermediate system LAP-B layer layered system logical link control (LLC) sublayer medium access control (MAC) sublayer *n*-entity network termination 1 (NT1) network termination 2 (NT2) *n*-user open system open systems architecture **Open Systems Interconnection** (OSI) **Open Systems Interconnection** (OSI)-architecture **Open Systems Interconnection** (OSI)-Protocol Specification **Open Systems** Interconnection—Reference Model (OSI-RM) **Open Systems Interconnection** (OSI)—Service Definitions **Open Systems Interconnection** (OSI)-Systems Management peer entity peer group physical signaling sublayer (PLS) protocol protocol-control information

protocol data unit (PDU) protocol hierarchy service service access point (SAP) service data unit (SDU) SONET standardized profile TCP TCP / IP TCP / IP TCP / IP Suite terminal endpoint (TE) functional group virtual terminal (VT) wrapping

#### Loss / Attenuation:

absorption absorption band absorption coefficient absorption index absorption loss angular misalignment loss antenna dissipative loss area loss attenuation attenuation coefficient attenuation constant attenuation-limited operation attenuator bridging loss cloud attenuation coupling loss cutoff attenuator differential mode attenuation flat fading free-space loss gap loss gap-loss attenuator insertion loss insertion-loss-vs.-frequency characteristic lateral offset loss loss lossy medium macrobend loss modal loss net loss net loss variation numerical aperture loss path loss

precipitation attenuation preemphasis proration reflection loss return loss scattering loss selective fading shadow loss splice loss transmission loss via net loss (VNL)

# Modems:

AT Commands modem modem patch narrowband modem wideband modem

# **Modulation:**

absorption modulation adaptive differential pulse-code modulation (ADPCM) amplitude modulation (AM) angle modulation bandwidth (BW) baseband baseband modulation binary modulation bit-by-bit asynchronous operation carrier shift center frequency chip rate chirping code-division multiple access (CDMA) coherent differential phase-shift keying (CDPSK) conditioned diphase modulation continuously variable slope delta (CVSD) modulation Costas loop cross modulation delta modulation (DM) delta-sigma modulation demand assignment multiple access (DAMA) demodulation differential modulation

differential phase-shift keying (DPSK) differential pulse-code modulation (DPCM) digital frequency modulation digital modulation digital phase modulation direct-sequence modulation disparity double modulation electro-optic modulator exalted-carrier reception fixed-reference modulation frequency modulation (FM) frequency-shift keying (FSK) full modulation incremental phase modulation (IPM) indirect control intensity modulation (IM) isochronous demodulation isochronous modulation keying load capacity low-level modulation maximum modulating frequency mechanically induced modulation modulation multicarrier modulation (MCM) overmodulation percentage modulation phase deviation phase modulation (PM) phase-shift keying (PSK) preemphasis improvement preemphasis network pseudorandom noise pulse-amplitude modulation (PAM) pulse-code modulation (PCM) pulse-duration modulation (PDM) pulse-frequency modulation (PFM) pulse-position modulation (PPM) quadrature amplitude modulation (OAM) quadrature modulation quadrature phase-shift keying (QPSK) quantization quasi-analog transmission radio

reduced carrier single-sideband emission reduced carrier transmission signal transition significant condition single-sideband (SSB) emission single-sideband (SSB) equipment reference level single-sideband suppressed carrier (SSB-SC) transmission start-stop margin start-stop modulation stereophonic crosstalk sub-band adaptive differential pulse code modulation (SB-ADPCM) subcarrier supergroup distribution frame (SGDF) suppressed carrier transmission thin-film optical modulator unbalanced modulator vestigial sideband (VSB) transmission white facsimile transmission

Multiplexing: asynchronous time-division multiplexing (ATDM) asynchronous transfer mode (ATM) carrier system cell relay channel bank common-channel interoffice signaling (CCIS) demultiplexing D-4 digital multiplexer digital multiplex hierarchy digital signal (DS) digroup drop and insert erect position fractional T1 frame framing group group distribution frame (GDF) heterogeneous multiplexing homogeneous multiplexing inverse multiplexer

inverted position labeled multiplexing master frequency generator multicarrier modulation (MCM) multichannel multiframe multiplex aggregate bit rate multiplex baseband multiplexer / demultiplexer (muldem) multiplexer (MUX) multiplex hierarchy multiplexing (MUXing) multiplex link encryption orthogonal multiplex precombining pregroup combining quadruple diversity space-division multiplexing statistical multiplexing statistical time-division multiplexing supergroup distribution frame (SGDF) synchronous TDM synchronous transfer mode system loading T-carrier thin-film optical multiplexer time-division multiple access (TDMA) time-division multiplexing (TDM) transmultiplexer trunk group multiplexer (TGM) two-pilot regulation wavelength-division multiplexing (WDM)

#### **Networking:**

access group address field asynchronous network backbone branching network client closed user group commercial refile control station delayed-delivery facility democratically synchronized network

despotically synchronized network differentiating network directed net distributed control distributed network distributed-queue dual-bus (DQDB) [network] endpoint node equivalent network free net gateway global address GOSIP group address hierarchical computer network hierarchically synchronized network hotline hybrid communications network hypermedia intelligent network (IN) intelligent peripheral (IP) interconnection intermediate element internetworking interworking functions leg link logical topology loop transmission maritime broadcast communications net master station mediation function multicast multichannel multilevel precedence and preemption (MLPP) multilink operation multiple media multipoint access net operation network network control program (NCP) network engineering network interface network interface card network topology noncentralized operation nonsynchronous network open network architecture (ONA) overhead information

packet switching path PCS physical topology point-to-point link polling port portability POSIX precedence primary channel primary station public data network (PDN public switched network (PSN) radio net relay remote access remote logon route routine message seizing server service termination point signal center signal transfer point (STP) sliding window slot slotted-ring network slot time sublayer subnetwork switched circuit symmetrical channel synchronous data link control (SDLC) synchronous network synchronous transmission system failure transfer system follow-up system signaling and supervision tandem teleconference Terminal Access Controller (TAC) terminal adapter terminal endpoint (TE) functional group through group through supergroup **T**-interface token-bus network token passing

token-ring network trace packet unidirectional operation U interface Universal Personal Telecommunications (UPT) service virtual network virus wrapping

#### **Network Management:**

accounting management administrative management complex (AMC) attribute customer management complex fault management managed object network administration network management network manager operations system performance management security management system management telecommunications management network (TMN)

#### **Networks:**

ARPANet Automatic Digital Network (AUTODIN) Automatic Secure Voice Communications Network (AUTOSEVOCOM) Automatic Voice Network (AUTOVON) command net common user network communications net communications network computer network Defense Communications System (DCS) Defense Data Network (DDN) Defense Switched Network (DSN) **Emergency Broadcast System** (EBS) integrated digital network (IDN)

[The] Internet joint multichannel trunking and switching system Joint Tactical Information Distribution System (JTIDS) National Communications System (NCS) National Information Infrastructure (NII) value-added network (VAN)

# Network Topology / Architecture:

client-server architecture network architecture network connectivity network topology node physical topology ring network

# Noise:

ambient noise level antenna noise temperature atmospheric noise background noise blue noise carrier noise level carrier-to-noise ratio (CNR) carrier-to-receiver noise density (C/kT)channel noise level circuit noise level closed-loop noise bandwidth C-message weighting cosmic noise effective input noise temperature equipment intermodulation noise equivalent noise resistance equivalent noise temperature equivalent pulse code modulation (PCM) noise equivalent satellite link noise temperature feeder echo noise flat weighting FM improvement factor FM improvement threshold front-end noise temperature HA1-receiver weighting

idle-channel noise impulse noise in-band noise power ratio intermodulation noise intrinsic noise loop noise modal noise mode partition noise noise notched noise 144-line weighting 144-receiver weighting phase noise photon noise process gain proration pseudorandom noise psophometric weighting quantizing noise quantum noise quantum-noise-limited operation random noise received noise power reference noise shot noise signal-plus-noise-to-noise ratio ((S+N) / N)signal-to-noise ratio (SNR) signal-to-noise ratio per bit SINAD snow stereophonic crosstalk thermal noise total channel noise white noise worst hour of the year

#### NS / EP:

assignment communications survivability interoperability National Communications System (NCS) National Coordinating Center (NCC) for Telecommunications NS / EP telecommunications priority level priority level assignment private NS / EP telecommunications services provisioning public switched NS / EP telecommunications services service identification Telecommunications Service Priority (TSP) service Telecommunications Service Priority (TSP) system

#### **Organizations:**

administration AFNOR American National Standards Institute (ANSI) Bell Operating Company (BOC) Canadian Standards Association (CSA) CCIR CCITT common carrier Deutsches Institut für Normung (DIN) FCC International Telecommunication Union (ITU) ISO Joint Telecommunications Resources Board (JTRB) National Command Authorities (NCA) National Communications System (NCS) National Coordinating Center (NCC) for Telecommunications public utilities commission (PUC) Radio Regulations Board (formerly IFRB) recognized operating agency (ROA) Regional Bell Operating Company (RBOC) specialized common carrier (SCC)

# PCS / UPT / cellular mobile:

base station call associated signaling (CAS) call management cell cellular mobile fixed access interworking functions mobile services switching center (MSC) non-call associated signaling (NCAS) non-fixed access PCS PCS switching center PCS System personal mobility personal registration personal terminal public land mobile network (PLMN) radio interface service access terminal mobility terminal mobility management Universal Personal Telecommunications (UPT) service UPT access code validation wireless access mode wireless mobility management wireless terminal.

# **Power:**

bel (B) carrier power (of a radio transmitter) carrier-to-receiver noise density (C/kT)dB power radiance radiant emittance radiant intensity radiant power radiation efficiency rated output power reflectance relative transmission level rf power margin sensitivity signal level signal-to-crosstalk ratio SINAD singing margin single-polarized antenna

single-sideband (SSB) equipment reference level spectral density susceptibility threshold system loading

#### **Power (Electrical):**

apparent power auxiliary power demand factor demand load disconnect switch effective power inverter level load load factor nonoperational load operational load power budget power factor power failure transfer primary distribution system primary power primary substation protector station load technical load uninterruptible power supply volt-amperes reactive (vars)

# **Protocols:**

acknowledgement Advanced Data Communication Control Procedures (ADCCP) binary synchronous (bi-sync) communication carrier sense multiple access with collision avoidance (CSMA / CA) carrier sense multiple access with collision detection (CSMA / CD) **Common Management Information** Protocol (CMIP) connection-oriented data transfer protocol disconnect command (DISC) facility frame relay FTP GOSIP

high-level data link control (HDLC) HTTP **ICMP** internet protocol (IP) LAP-B LAP-D link protocol mode network interface device (NID) NFS **Open Systems Interconnection** (OSI)-Protocol Specification ping protocol protocol-control information protocol converter protocol data unit (PDU) protocol hierarchy protocol translator remote operations service element (ROSE) protocol response PDU route segment serial Simple Mail Transfer Protocol (SMTP) Simple Network Management Protocol (SNMP) SLIP slot slot time synchronous data link control (SDLC) TCP TCP / IP TCP / IP Suite Telnet transmission control protocol User Datagram Protocol (UDP) zero-bit insertion

# **Radio:**

adaptive radio airborne radio relay air-ground radiotelephone service allcall amateur service anycall atmospheric noise

automated radio automatic link establishment (ALE) automatic message exchange (AME) automatic sounding brick broadcasting-satellite service broadcasting satellite space station broadcasting service broadcasting station broadcast operation capture effect carrier synchronization cellular mobile clear channel closed circuit combat-net radio (CNR) connectivity exchange (CONEX) controller cross-band radiotelegraph procedure coverage dead space deemphasis detector deviation ratio diffraction region digital selective calling (DSC) directed net direction finding discriminator distance measuring equipment (DME) diversity reception diversity transmission duplex operation emergency locator transmitter (ELT) emergency position-indicating radiobeacon station emphasis feeder link FM blanketing FM improvement factor FM improvement threshold Fresnel zone harmful interference heterodyne repeater homing horn indefinite call sign inside plant

k-factor link linking protection (LP) link quality analysis (LQA) maximum usable frequency (MUF) meaconing mean power [of a radio transmitter] medium message heading message part meteor burst communications multi-satellite link narrowband radio voice frequency (NBRVF) near-vertical-incidence skywave net control station (NCS) net operation net radio interface (NRI) off-the-air off-the-air monitoring on-the-air path PBER PCS peak envelope power (of a radio transmitter) [PEP, pX, PX] pilot precipitation static (p-static) preemphasis preemphasis improvement preemphasis network preliminary call primary service area propagation mode propagation path obstruction protection interval (PI) push-to-talk operation quadruple diversity query call radiation radio radio and wire integration (RWI) radio channel radio common carrier (RCC) radiocommunication random access discrete address (RADA) reflecting layer rural radio service rural subscriber station scan-stop lockup

ship Earth station shortwave smooth Earth sounding sporadic E propagation spurious response stereophonic sound subcarrier stressed environment sudden ionospheric disturbance (SID) sunspot surface wave tail circuit terrestrial radiocommunication terrestrial station transmitter power output rating traveling wave **TRI-TAC** equipment vestigial sideband (VSB) transmission white area wildcard character

#### **Routing:**

adaptive routing alternate routing avoidance routing call tracing circuit routing circuit switching unit (CSU) collective routing destination routing deterministic routing dynamically adaptive routing flood search routing free routing heuristic routing hierarchical routing hybrid routing mediation function multicast address network administration primary route rerouting route route diversity route matrix routing sender spill-forward feature

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spur

#### Satellites:

acquisition active satellite aeronautical mobile-satellite service aeronautical mobile-satellite (OR) [off-route] service aeronautical mobile-satellite (R) [route] service amateur-satellite service apogee broadcasting-satellite service broadcasting satellite space station carrier-to-receiver noise density (C/kT)C-band chip coast Earth station communications satellite community reception [in the broadcasting-satellite service] coordination area cross-site link direct orbit downlink (D / L) dual access Earth coverage Earth exploration-satellite service Earth station Earth terminal Earth terminal complex equatorial orbit equivalent satellite link noise temperature fixed-satellite service footprint geostationary orbit geosynchronous orbit handoff inclination of an orbit (of an Earth satellite) inclined orbit individual reception [in the broadcasting-satellite service] inter-satellite service land mobile-satellite service maritime mobile-satellite service meteorological-satellite service mobile Earth station

multiple access multi-satellite link orbit orbit determination passive satellite periapsis perigee period [of a satellite] polar orbit preassignment access plan pulse-address multiple access (PAMA) radiodetermination-satellite service radionavigation-satellite service resource controller (RC) retrograde orbit satellite ship Earth station space subsystem spacecraft space operation service space radiocommunication space research service space system space telecommand space tracking spot beam standard frequency and time signalsatellite service synchronous orbit synchronous satellite tail circuit uplink (U / L) view

#### Security:

access anti-jam anti-spoof authenticate authentication authenticator automated information systems security between-the-lines entry BLACK BLACK signal browsing bug certification

clipper chip code communications deception communications-electronics (C-E) communications intelligence (COMINT) communications protection communications security [COMSEC] compromise computer security (COMPUSEC) COMSEC equipment configuration management controlled area controlled security operation controlled space data security electronic emission security emanations security (EMSEC) emission security end-to-end security environmental security information security information systems security (INFOSEC) label limited protection monitoring NAK attack operations security password penetration privacy scrambler secure communications secure transmission security security filter security kernel security management self-authentication sensitive information server signals security transmission security key (TSK) trusted computing base (TCB) trusted computer system (TCS) Warner exemption

#### Services:

aeronautical fixed service aeronautical mobile (OR) [offroute] service aeronautical mobile (R) [route] service aeronautical mobile-satellite service aeronautical mobile-satellite (OR) [off-route] service aeronautical mobile-satellite (R) [route] service aeronautical mobile service aeronautical multicom service aeronautical radionavigationsatellite service aeronautical radionavigation service amateur-satellite service amateur service Archie Armed Forces Radio Service (AFRS) attendant position base communications (basecom) basic exchange telecommunications radio service (BETRS) basic service basic service element (BSE) basic serving arrangement (BSA) Centrex® (CTX) service class of service common management information service (CMIS) comparably efficient interconnection (CEI) complementary network service (CNS) consolidated local telecommunications service conversational service custom local area signaling service (CLASS) dedicated service domestic fixed public service domestic public radio services eight-hundred (800) service enhanced service facility

Federal Telecommunications System (FTS) five-hundred (500) service flat rate service

foreign exchange (FX) service FTS2000 interactive service intercom inter-satellite service leased circuit maritime mobile-satellite service maritime mobile service maritime radionavigation-satellite service maritime radionavigation service message service meteorological aids service meteorological-satellite service mobile-satellite service mobile service multipoint distribution service nine-hundred (900) service other common carrier (OCC) paging PCS port operations service private NS / EP telecommunications services provisioning public data transmission service public switched network (PSN) public switched NS / EP telecommunications services public switched telephone network (PSTN) radio channel radio common carrier (RCC) radiodetermination-satellite service radiolocation service radionavigation-satellite service resale carrier resale service reserved circuit service restricted access retrieval service rural radio service rural subscriber station safety service service access point (SAP) service bit seven-hundred (700) service space research service special grade of service standard frequency and time signalsatellite service

teleaction service telecommunications service **Telecommunications Service** Priority (TSP) service teletex teletext Telex® unbundling Universal Personal Telecommunications (UPT) service universal service viewdata voice grade white pages Wide Area Telephone Service (WATS) World Wide Web (WWW)

**Service Features:** 

abbreviated dialing access control add-on conference automatic answering automatic identified outward dialing (AIOD) automatic message accounting (AMA) automatic number identification (ANI) automatic redial automatic sequential connection busy verification call detail recording (CDR) called-line identification facility called-party camp-on caller ID call forwarding call hold calling-line identification facility calling-party camp-on call pickup call restriction calls-barred facility call splitting call transfer call waiting classmark conference call consultation hold

dial service assistance (DSA) dial-up direct dialing service direct distance dialing (DDD) direct inward dialing (DID) direct outward dialing (DOD) essential service extended area service (EAS) fixed loop group alerting and dispatching system line load control multiaddress calling network inward dialing (NID) network outward dialing (NOD) remote access remote call forwarding service feature speed calling spill-forward feature three-way calling transit network identification verified off-hook virtual call virtual circuit capability

#### **Standards:**

ANSI / EIA / TIA-568 ASCII basic mode link control basic rate interface (BRI) de facto standard frequency standard functional profile GOSIP) group industry standard interface standard International Telegraph Alphabet Number 5 (ITA-5) interoperability standard message handling system (MHS) National Electric Code® (NEC) network terminal number (NTN) NTSC standard **Open Systems Interconnection** (OSI) **Open Systems Interconnection** (OSI)-architecture

**Open Systems Interconnection** (OSI)-Protocol Specification **Open Systems** Interconnection—Reference Model (OSI—RM) **Open Systems Interconnection** (OSI)—Service Definitions **Open Systems Interconnection** (OSI)-Systems Management POSIX precise frequency primary frequency standard proprietary standard p x 64 quarter common intermediate format (OCIF) R interface rubidium clock rubidium standard secondary frequency standard secondary time standard serial Signaling System No. 7 (SS7) SONET standard standard optical source standard time and frequency signal (STFS) service system standard terminal adapter time standard V-series Recommendations X.-series Recommendations

#### Storage:

accumulator archiving arithmetic overflow arithmetic register arithmetic underflow associative storage auxiliary storage buffer cache memory CD ROM channel clear computer program origin direct access direct address

diskette disk pack elastic buffer erase field file file transfer, access, and management (FTAM) hard sectoring head interblock gap internal memory loader machine-readable medium magnetic card magnetic core storage magnetic drum magnetic tape main storage medium memory off-line storage optical disk overlav overload packing density permanent storage phase-encoded (PE) recording phase flux reversal print-through programmable read-only memory (PROM) queue queue traffic queuing random access memory (RAM) read head reading read-only memory (ROM) read-only storage record record communication record information record medium regeneration register rotational position sensing sector sectoring seek seek time

shift register simple buffering skew soft sectoring spooling storage storage cell store-and-forward (S-F) store-and-forward switching center streaming tape drive streaming tape recording tag image file format (TIFF) tape relay track track density tracking error variable length buffer virtual memory virtual storage volatile storage volume work space write

#### Switching:

analog switch broadband exchange (BEX) burst switching call progress signal circuit-switched data transmission service circuit switching class of office common control congestion crosspoint digital switching distributed switching electronic switching system (ESS) fast packet switching first-in last-out (FIFO) interrupted continuous wave (ICW) joint multichannel trunking and switching system message switching multiple access multiple homing nonblocking switch off-hook signal one-way trunk

pilot-make-busy (PMB) circuit private exchange (PX) public switched network (PSN) public switched NS / EP telecommunications services public switched telephone network (PSTN) queuing delay rotary hunting seizing semiautomatic switching system signal transfer point (STP) space-division switching spill forward split homing step-by-step (SXS) switching system switch switchboard switch busy hour switching synchronous transfer mode Tactical Automatic Digital Switching System (TADSS) thin-film optical switch three-way calling time-division switching trunk wink pulsing

#### Synchronization:

bilateral synchronization carrier synchronization digital synchronization double-ended synchronization frame synchronization linear analog synchronization lip synchronization mutually synchronized network mutual synchronization nonsynchronous data transmission channel pilot single-ended synchronization synchronism synchronization synchronization bit synchronization code synchronization pulse synchronous

timing tracking accuracy unilateral synchronization system

#### **Telegraphy:**

A-condition Baudot code cable chad tape characteristic distortion character-stepped double-frequency shift keying (DFSK) end distortion equal-length code frequency-shift telegraphy internal bias local battery mark narrative traffic neutral direct-current telegraph system neutral operation polar direct-current telegraph transmission polarential telegraph system polar operation push-to-type operation radiotelegram radio telegraphy record communication reperforator sending-end crossfire space tape relay telegram telegraphy teleprinter teletypewriter (TTY) terminal equipment tone diversity TTY / TDD twinplex two-tone keying voice-frequency telegraph (VFTG) word

#### **Telephony Hardware:**

acoustic coupler aerial cable aerial insert applique central office (C.O.) combined distribution frame (CDF) common battery conditioned loop connecting arrangement cord circuit cord lamp cordless switchboard crossbar switch cross-connection cross-office trunk customer office terminal (COT) customer service unit (CSU) dial switching equipment digital access and cross-connect system (DACS) digital circuit patch bay digital loop carrier (DLC) digital primary patch bay digital switch distribution frame drop DSA board D-type patch bay electrically powered telephone embedded base equipment embedded customer-premises equipment end instrument end office entrance facility entrance point entrance room equal-level patch bay equipment room equipment side exchange exchange facilities extension bell four-wire repeater grandfathered systems grandfathered terminal equipment group distribution frame (GDF) high-frequency distribution frame (HFDF) individual line inside plant integrated station intercom

intermediate distribution frame (IDF) interoffice trunk interposition trunk interswitch trunk intertoll trunk intraoffice trunk key set key telephone system (KTS) K-type patch bay limited-protection voice equipment line side local battery local exchange loop local side main distribution frame (MDF) main station master frequency generator MM patch bay new customer premises equipment office classification off-premises extension (OPX) on-premises extension orderwire multiplex outside plant patch and test facility (PTF) plant private exchange (PX) private line proration protected distribution system (PDS) public switched telephone network (PSTN) rack repertory dialer rotary dial SECORD semiautomatic switching system signal center sound-powered telephone special grade access line splice closure station battery STU supergroup distribution frame (SGDF) switchboard switched circuit switched loop tandem center tandem office

technical control facility (TCF) Telecommunications Device for the Deaf (TDD) telecommunications facilities telephone terminal equipment through-group equipment through-supergroup equipment tie trunk translator tributary office videophone vodas vogad voice frequency (VF) primary patch bay

# **Television:**

advanced television (ATV) aspect ratio cable TV (CATV) cable television relay service (CARS) station chroma keying chrominance signal closed captioning closed circuit composite video distribution-quality television extended-definition television (EDTV) fixed microwave auxiliary station freeze frame television full-motion operation ghost head-end high-definition television (HDTV) improved-definition television (IDTV) lip synchronization minimum picture interval PAL PAL-M picture black picture white raster reference black level reference white level RGB scanning

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# SECAM

studio-to-transmitter link (STL) television (TV) video

#### Time / Timing:

absolute delay cesium clock channel time slot clock coasting mode coherence time coordinated clock coordinated time scale Coordinated Universal Time (UTC) data transfer time date date-time group (DTG) dating format DoD master clock epoch date equipment clock external timing reference false clock Greenwich Mean Time (GMT) heterochronous hierarchically synchronized network homochronous independent clocks indirect control International Atomic Time (TAI) isochronous isochronous demodulation isochronous modulation isochronous signal Julian date leap second local clock master clock master-slave timing mesochronous mutually synchronized network mutual synchronization near real time nodal clock nonsynchronous network oligarchically synchronized network plesiochronous precise time

precise time and time interval (PTTI) primary time standard principal clock protection interval (PI) pull-in frequency range quartz clock real time reference clock release time remote clock rise time rubidium clock rubidium standard secondary time standard serial slave clock standard frequency and time signalsatellite service standard frequency and time signal service standard frequency and time signal station standard time and frequency signal (STFS) service station clock synchronism synchronization synchronous network synchronous TDM time time ambiguity time instability time interval error (TIE) time jitter time marker time of occurrence time-out time scale time standard timing recovery timing signal timing tracking accuracy transmit-after-receive time delay transmitter attack-time delay transmitter release-time delay uniform time scale unit interval Universal Time (UT) UTC(i)

#### **Traffic:**

activity factor adaptive channel allocation busy hour busy season calling rate call-second connections per circuit hour (CCH) directionalization FOT frequency prediction grade of service (GOS) group busy hour (GBH) high-usage trunk group holding time interconnect facility line traffic coordinator (LTC) loading minimize narrative traffic net control station (NCS) off-line recovery overflow queue queue traffic queuing record traffic scanning short haul toll traffic switch busy hour traffic

#### **Transmission / Propagation:**

absolute delay analog transmission anisochronous anomalous propagation (AP) asynchronous transmission atmospheric duct babble backscattering batched transmission bit-stream transmission burst transmission channel coupled modes critical frequency critical wavelength cross-polarized operation Dellinger effect

digital transmission group digital transmission system digital voice transmission diurnal phase shift double-sideband (DSB) transmission double-sideband reduced carrier (DSB-RC) transmission double-sideband suppressed-carrier (DSB-SC) transmission D region ducting duplex operation echo electronic line of sight elevated duct E region erlang flutter forward scatter FOT F region Fresnel zone ground wave group velocity homogeneous cladding intermediate-field region ionosphere ionospheric absorption ionospheric disturbance ionospheric forward scatter ionospheric reflection ionospheric scatter ionospheric turbulence isochronous burst transmission k-factor knife-edge effect line-of-sight (LOS) propagation magnetic storm magneto-ionic double refraction material scattering maximum usable frequency (MUF) Mie scattering multipath near-field region near-vertical-incidence skywave parallel transmission path clearance path profile primary service area propagation

propagation constant propagation mode propagation path obstruction propagation time delay pulse broadening quasi-analog transmission radiation scattering ray Rayleigh fading Rayleigh scattering reflecting layer reflection refracted ray refraction refractive index  $(n, \eta)$ relative transmission level right-hand [clockwise] polarized wave ring latency scattering scintillation serial transmission shadow loss simplex operation skip distance skip zone sky wave smooth Earth space diversity sporadic E sunspot surface wave synchronous transmission time block trapped electromagnetic wave troposphere tropospheric scatter tropospheric wave undisturbed day virtual height waveguide

# **Transmission Lines:**

artificial transmission line balanced line building out bundle cable Category 3 Category 4

Category 5 coaxial cable (coax) composite cable direct-buried cable directional coupler electrical length fiber optic cable field wire filled cable group delay hybrid cable land line lay length line long line loop medium nonloaded twisted pair on-premises wiring open wire paired cable plenum quad quadded cable reflection reflection coefficient (RC) reflection loss return loss ribbon cable sheath sheath miles shielded pair shielded twisted pair skin effect slope slope equalizer spiral-four cable strength member symmetrical pair terminal impedance termination transmission line transverse electric and magnetic (TEM) mode transverse electric (TE) mode twin cable unbalanced line underground cable uniform transmission line voltage standing wave ratio (VSWR)

#### zip-cord

#### Video:

average picture level (APL) block distortion blurring color errors continuous presence contrast control field edge busyness error blocks field frame freeze frame image interlaced scanning jerkiness mosquito noise motion compensation motion response degradation motion video object object persistence object retention panning p x 64 quarter common intermediate format (QCIF) scene cut scene cut response smearing snow spatial application spatial edge noise still image still video temporal application temporal edge noise transmission service channel video videophone windowing

# Waves:

carrier (cxr) coherence area coherence length coherent continuous wave (cw)

depolarization doppler effect electromagnetic wave (EMW) elliptical polarization envelope group delay group delay time guided wave indirect wave left-hand (anti-clockwise) polarized wave linear polarization material scattering microwave millimeter wave plane wave polarization polarization diversity Poynting vector propagation pulse carrier radiant energy radiation radio radio beam radiocommunication radio wave reflection loss reflection reflection coefficient (RC) right-hand [clockwise] polarized wave scattering signature spurious response square wave standing wave standing wave ratio (SWR) tropospheric wave waveform wavefront waveguide scattering wave impedance wavelength wavelength stability wave trap