

I. General info

- A. Ports
- B. Connection media
- C. Data Rates
- D. Protocols

II. Point-to-point connections

- A. Hardwired serial line
- B. Dial-up
 - 1. Modems
 - 2. ISDN (Integrated Services Digital Network)

III. Networks

- A. Local-area (LAN)
 - 1. LocalTalk
 - 2. Ethernet
 - a) Thick, Thin coax
 - b) Twisted-pair (10 base T)
 - c) Fast Ethernet (100 base T)
 - 3. Token-ring
 - 4. ATM (Asynchronous Transfer Mode)
- B. Wide-area (WAN)
 - 1. the Internet
 - a) Overview
 - (1) Loosely-organized group of interconnected computers, spanning the globe
 - (2) Store-and-forward
 - (3) Redundant routes
 - (4) Addressing
 - (a) IP numbers
 - (b) domain names
 - (c) URL (Universal Resource Locator)
 - b) Access
 - (1) TCP/IP (Transmission Control Protocol/Internet Protocol)
 - (a) These two protocols are the foundation of communications over the internet.
 - (b) Respective purpose: parcel out data into "packets", and route the packets in the most efficient manner to their destination.
 - (2) Physical connection
 - (a) Part-time connection
 - i) Symmetrical (same bandwidth incoming and outgoing)
 - (1) POTS (Plain-old Telephone System) dial-up
 - (2) ISDN dial-up
 - ii) Asymmetrical
 - (1) Cable modems
 - (2) ADSL (Asymmetrical Digital Subscriber Line)
 - (b) Full-time connection
 - i) ISDN flat rate
 - ii) Frame relay
 - (1) 56K

- (2) T1
- (3) T3
- (3) Account type
 - (a) Mail-only
 - (b) Shell
 - (c) SLIP (Serial Line IP) or PPP (Point-to-Point Protocol)
 - i) (MLP-Multilink PPP=ISDN with variable B channels)
- c) Services
 - (1) Mail, SMTP (Simple Mail Transfer Protocol) or POP (Post Office Protocol)
 - (2) Telnet (or rlogin)
 - (3) Finger
 - (4) FTP (File Transfer Protocol)
 - (5) News (NNTP Net News Transfer Protocol)
 - (6) Gopher
 - (7) WAIS (Wide-Area Information Server)
 - (8) Directory services
 - (a) X.500 (individual users)
 - (b) Archie (FTP-accessible files)
 - (c) Veronica (Gopher-accessible files)
 - (9) WWW (World-Wide Web)
 - (a) Vannevar Bush, Memex
 - (b) Ted Nelson, Xanadu Project
 - (c) Tim Berners-Lee, HTTP (HyperText Transfer Protocol). Initially at CERN, now head of W3 Consortium.
 - (d) NCSA, Mosaic. Marc Andreessen leaves to found Netscape with Jim Clark.
- d) Encryption & Public Key