

HISTORY OF THE INTERNET

- I. Background of Internet technology
 - A. Pioneering communications technology
 1. Morse and telegraph
 2. Calculating machines
 3. Silicon chip
 4. Remote-access computers
 - B. Development and evolution of network technology
 1. Galactic Network envisioned by John Licklider of the Department of Defense's DARPA (Defense Advanced Research Projects Agency) in 1962
 2. Packet-switching theories published by Leonard Kleinrock of MIT in 1961
 3. First wide-area computer network developed by Lawrence Roberts and Thomas Merrill of MIT in 1965
 4. Computer networks, packet-switching networks, and packet-networks research presented at 1967 conference by three groups whose research took place without knowledge of one another
 - a. MIT
 - b. RAND Corporation
 - c. National Physical Laboratory (UK)
 5. Interface Message Processor (IMP) developed by Bolt, Beranek & Newman
 6. ARPANET created with the connecting of four host computers at UCLA, Stanford Research Institute, UC Santa Barbara, and the University of Utah (1969)
 - a. Person-to-person communication (e-mail) introduced in 1972
 - b. Host-to-host protocols developed in early 1970s
 - c. Transmission control protocol/Internet protocol (TCP/IP) developed in 1974
- II. Growth of Internet technology
 - A. Competing network techniques and protocols throughout the mid-1970s and early 1980s
 - B. Improvements and standardization of techniques and protocols with increased users in the mid-1980s and the early 1990s
 1. TCP/IP adopted as standard protocol in 1984
 2. Domain Name System (DNS) introduced in 1984
 3. U.S. Congress funds national research and infrastructure improvement through High Performance Computing Act
 4. World Wide Web browser/editor program released to public in 1991, simplifying global information sharing
 5. Mosaic browser created in 1993, making Internet easier to use and graphically richer
 - C. Transition from a community of scholars, scientists, and defense contractors to widespread infrastructure in the late 1980s and early 1990s
 1. Governments encourage use of Internet throughout higher education system
 - a. JANET serves British universities (1984)
 - b. NSFNET serves U.S. universities (1985), eventually becoming the backbone of the Internet
 2. Internet workshops target private sector in the mid-1980s

Major topic

First-level subsection

Second-level subsection

First-level subsection

Second-level subsection

Third-level subsection

Second-level subsection

Third-level subsection

Major topic

First-level subsection

Second-level subsection

Figure 2-1 Sample Outline (continued)