

“Computers are now Media”

15/5/2002 Harashima

(Notice: This material is a translation of the original material in Japanese

- translation errors may still exist)

● History of the Computer

1946 ENIAC (University of Pennsylvania)

1st generation vacuum tube (1946-1956)

2nd generation transistor (1957-64)

3rd generation IC (1964-71)

4th generation LSI (1971-)

5th generation non von Neumann-type, inference (1982-1991)

6th generation neuro, learning

● History of Multimedia (1)

1945 Concept of MEMEX (V.Bushe)

1968 NLS System (Douglass, Engelbert)

multi-window, mouse, bitmap display,

hypertext, e-mail, word processor

1968 Concept of Dynabook (Alan Cay)

size A4, mobile-phone, graphic mode no worse than newspaper

audio input, mouse input, networking, wireless communication

1969 ARPA NET (US Department of Defense)

● History of the Personal Computer

1968 Concept of Dynabook (Alan Cay)

1973 Alto (Xerox Co.) 75 Atari 8800 (Atari Co.)

1977 Apple (Apple Computer, Inc.)

1979 PC9801 82 PC9801 (NEC)

1981 IBMPC 87 IBM-PC/AT

1984 Macintosh (Apple Computer, Inc.)

1991 Windows (Microsoft Co.)

● History of the Internet

1969 ARPANET starts operation (DOD Network)

1973 Ethernet invented

1974 TCP/IP introduced → ARPA adopted

1981 CSNET, BITNET

1983 ARPA into Network for research purposes (independence of military MILNET)

1986 NSFnet starts operation (National Science Foundation)

1990 take over APPANET→ Internet

● History of Multimedia (2)

1986 First CD-ROM International Conference convened (USA)

1987 Cyberspace (SF *Neuromancer*, by William Gibson)

1989 VR

1989-93 WWW, Mosaic

1993.9 Notion of Information Infrastructure (NII)

1994.3 GII

1993 commercial internet