Computer Networks SECTION – A

Emergence of Computer Networks

Outline of the talk

- **Emergence of Computer Networks**
  - Historical events in Computer Networks.
  - A Brief History

Historical Events

- 1948 first commercial computer installed, UNIVAC I

- 1958 first U.S. communication satellite.

- 1964 SABRE Airline reservation ,uses system packet switching network, (proposed by RAND Corporation).

- 1969 ARPANET first packet switching network begins operation.

Historical Events

- **1971 first computer chip (previous computers made through GATES and all)**

  4 bit, 2300 transistors

- **1972 Ethernet specifications formulated.**

- **1974 IBM introduces SNA**

- **1975 Altair 8800 first commercial micro-computer sold as a kit.**

Historical Events

- 1975 Paul Alan/ Bill Gates wrote a BASIC language interpreter for the Altair, they formed Microsoft.

- 1976 Woznaik and Jobs built Apple I and formed Apple computer company.

- 1979 VisiCalc first commercial Spread sheet introduced

Historical Events

- 1981 IBM introduced IBM PC one floppy.
- 1983 TCP/IP becomes the official protocol on ARPANET. (ARPANET is n/w setup in USA under DRDO which had a very farnishing impact on the way network is developed)
- 1984 Apple introduced GUI with Apple Macintosh.
- 1986 Laptop PC.

Historical Events

- 1988 OS/2 shipped by IBM first multitasking operating system for PC 1989

    Intel releases 486

- 1989 Microsoft releases Windows 3.0 1991

- 1989 NSF (National Science Foundation) replaces ARPANET as internet backbone.

- 1991 WWW invented by CERN physicist Tim Berners – Lee.

Historical Events

- 1992 Mosaic release first GUI web browser.
- 1995 Netscape goes from startup to $2.9 billion in one year.
- 2000 .com melt down.

A Brief History

- **In mid 1960's USA DoD wanted a command and control network that could survive a nuclear attack. (need of Distributed n/w)**

- **The subnets would consist of Honeywell 12KW Intermediate message processors connected by 64 Kbps lines leased from telephone company.**

A Brief History

- Later IMP software was changed to Terminal Interface Processor to allow connection of terminals.

- In late 1970's NSF set up a machine connected to the ARPANET to which other Universities could dial up and connect.

- By mid 1980's NSF built a new backbone to connect its super computing centre's to some regional networks.

A Brief History

- **NSF later upgraded its backbone to 448 Kbps and then to 1.5 Mbps fiber backbone which allowed network connection to thousands of universities, research labs, libraries, museums etc.**

- **As growth continued and commercial houses began to join, the decentralized model began to take hold.**