

SECTION – A

Computer Networks

Internet

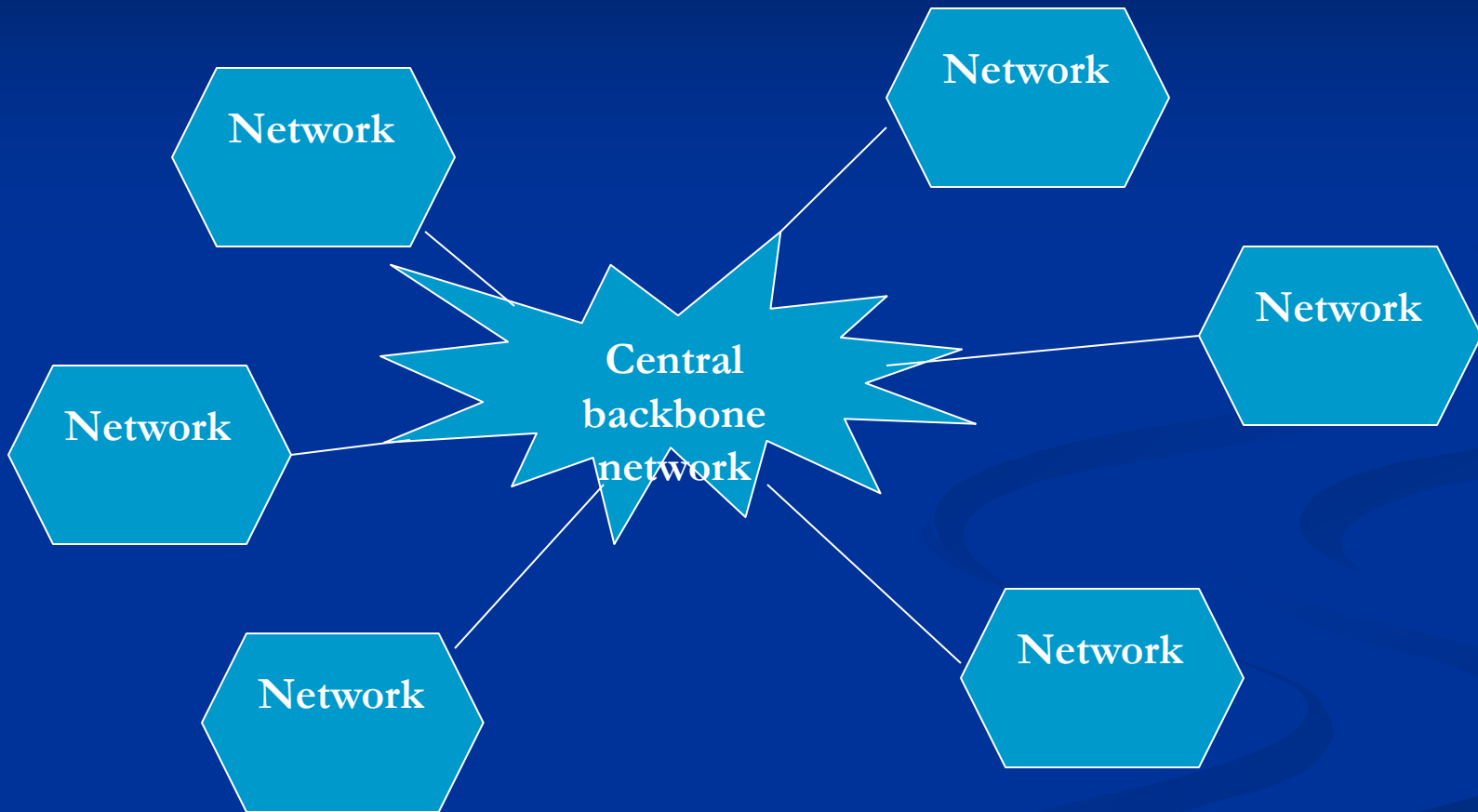
Outline of the talk

- Various Aspects of internet
- Way it has evolved
- Way it has incorporated different technologies and applications under single umbrella making it the most popularly used infrastructure in terms of information exchange and communication.

What is Internet

- The network formed by the co-operative interconnection of a large number of computer networks.
 - Network of networks
 - No one owns the internet. (No single owner)
 - Every person who makes a connection owns a slice of internet.
 - There is no central administration to the internet.

Logical picture of Internet



So what is it actually?

- A community of people.
 - who use and develop the networks.
- A collection of resources.
 - that can be reached from those networks.
- A setup to facilitate collaboration. (messaging facilities, Blogs, discussion forums etc)
 - among members of the research and educational communities, world-wide.
- The connected networks use the TCP/IP protocol.

Key Milestones in Evolution

- 1950's
 - ARPA(Advance Research Projects Agency)
- 1970's
 - ARPANET creates standard ancestor to Transmission Control Protocol (TCP)
- 1971 (ARPANET felt)
 - Universities added to network.
 - Telnet and FTP are available.
- 1972
 - First electronic mail message sent.

Cont..

- 1973
 - ARPANET connected to England and Norway.
- 1974-
 - TCP starts being used for communicating across a system of networks.
- 1982-
 - US DoD starts building defense data networks based on ARPANET technology.
- 1983-
 - ARPANET splits into ARPANET and MILNET. (Military Network)

Cont..

■ 1983

- Internet now in place.
- TCP/IP standardized.

■ 1986-

- National Science Foundation (NSF) implements **NSFNET**; (objective was to create a strong backbone network which binds regional n/w) a system of regional network of routers connected over a backbone network.

■ 1991-

- Archie(FTP Search engine) and Gopher (more intelligent version of Archie, based on categories covers FTP sites and non-FTP sites) released.

Contd.

- 1992-
 - Internet links more than 17,000 networks in 33 countries' 3 million hosts.
- 1993-
 - World Wide Web is launched.
- 1995-
 - Interconnected network service providers start offering service.
- 1995-
 - About 30 million users.

Important Internet Applications

- Telnet
- File Transfer Protocol (FTP)
- Electronic Mail (Email)
- Gopher
- Internet Relay Chat (IRC)
- Usenet News
- World Wide Web (WWW)