Future

All I want you to tell me is what will be the networking technology in the year 2000.

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- Networking Trends
- Life Cycle of Technologies
Trend: Networking is Critical

- Communication more critical than computing
  ⇒ Bus performance vs ALU speed
  ⇒ I/O performance vs SPECMarks

- User Location:
  - 1980: Desktop  1990: Mobile

- System Extent:
  - 1980: 1 Node within 10 m
  - 1990: 100 nodes within 10 km
Last 10 years: Individual computing
Next 10 years: Cooperative computing

Past: Corporate networks
Future:
  - Intercorporate networks
  - National Info Infrastructures
  - Global Info Infrastructures
Trend: Telecommunication and Networking

- From computerization of telephone traffic switching to telephonization of computer traffic switching.
Life Cycles of Technologies

Number of Problems Solved

Time

You are here
Life Cycles of Networking Technology

Number of Hosts
Bytes per Hosts
Number of Networks
MIPS
Memory Size
Storage

You are here
Trend: Exponential Growth

Number of Hosts on the Internet

- Jul-81
- Oct-85
- Jul-88
- Oct-89
- Oct-91
- Oct-92
- Oct-93

The Ohio State University  Raj Jain
Networking in Social Fabric

- USENET: Ten million news articles/month
- 18 on-line coffee houses in San Francisco
- National Public Radio Program
- Supreme court decision within one day
- Real estate, on-line catalog
- 137 countries reachable via Email
Networking is critical and growing exponentially.

Computer and Telecommunications industry merging

Networking is becoming an essential part of social fabric