"A Cloudy History of Time"

First large datacenters: ENIAC, ORDVAC, ILLIAC
Many used vacuum tubes and mechanical relays

1940

1950

1960

1970

1980

1990

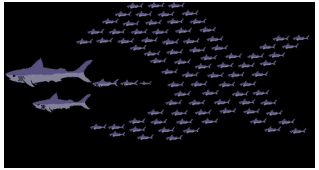
2000

2012

IBM

xerox

Honeywell

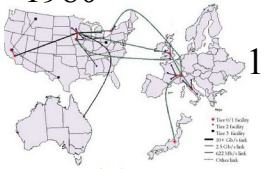


CRAY
THE SUPERCOMPUTER COMPANY

Berkeley NOW Project
Supercomputers
Server Farms (e.g., Oceano)

P2P Systems (90s-00s)
•Many Millions of users
•Many GB per day

Open Science Grid



LimeWire

KaZaA

BitTorrent

Clouds

Data Processing Industry
- 1968: $70 M. 1978: $3.15 Billion

Timesharing Industry (1975):
•Market Share: Honeywell 34%, IBM 15%,
•Xerox 10%, CDC 10%, DEC 10%, UNIVAC 10%
•Honeywell 6000 & 635, IBM 370/168,
Xerox 940 & Sigma 9, DEC PDP-10, UNIVAC 1108

Grids (1980s-2000s):
•GriPhyN (1970s-80s)
•Open Science Grid and Lambda Rail (2000s)
•Globus & other standards (1990s-2000s)