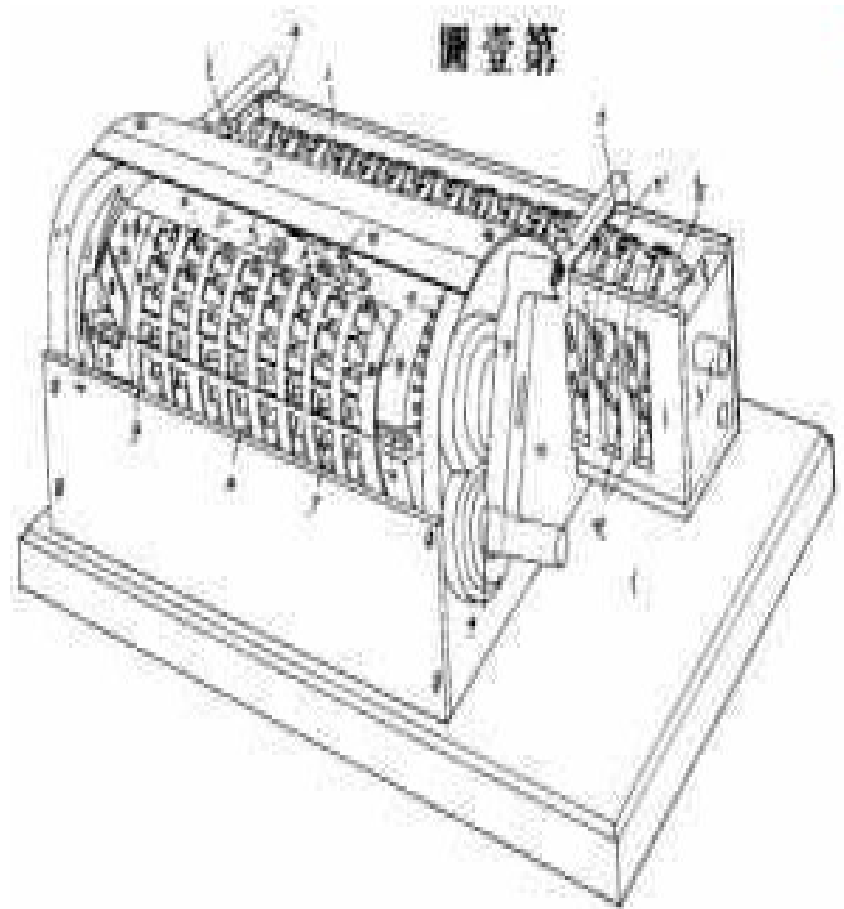


# Advances in information technology 1945-1989

# Before computers

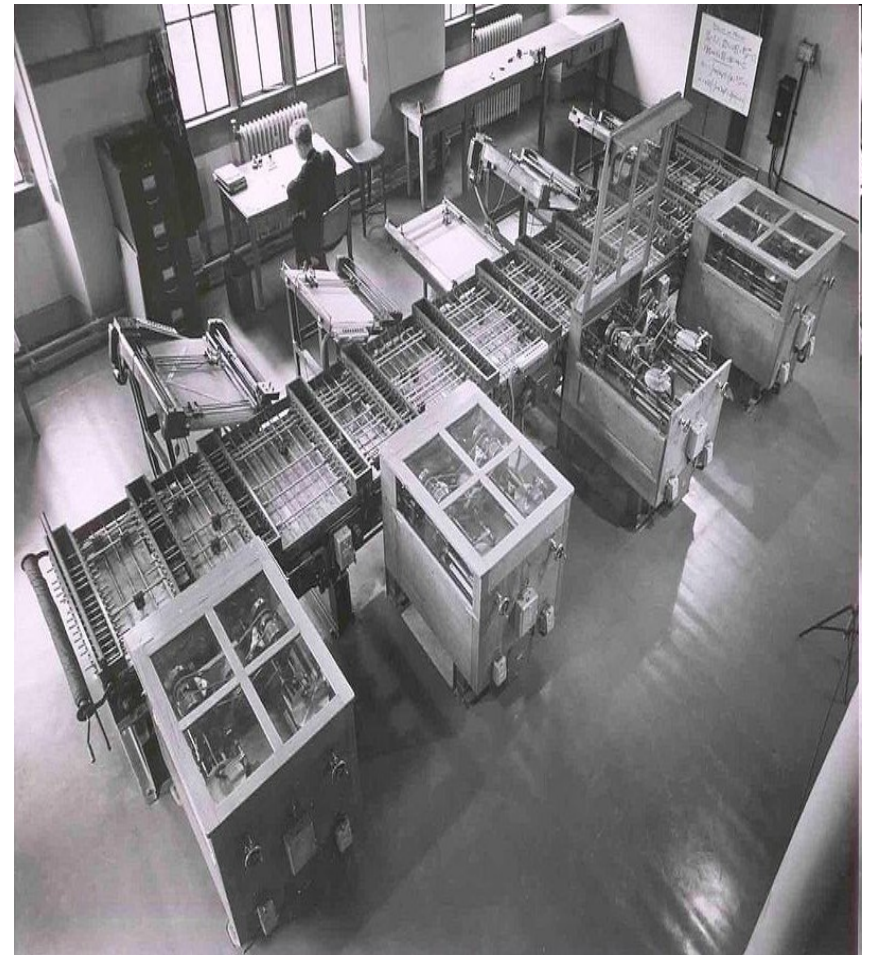
- Mechanical calculating machines were developed as far back as the 1600s
- Picture shows Japanese calculating machine from 1903
- Punch card technology developed in 1800s
- Used in music machines





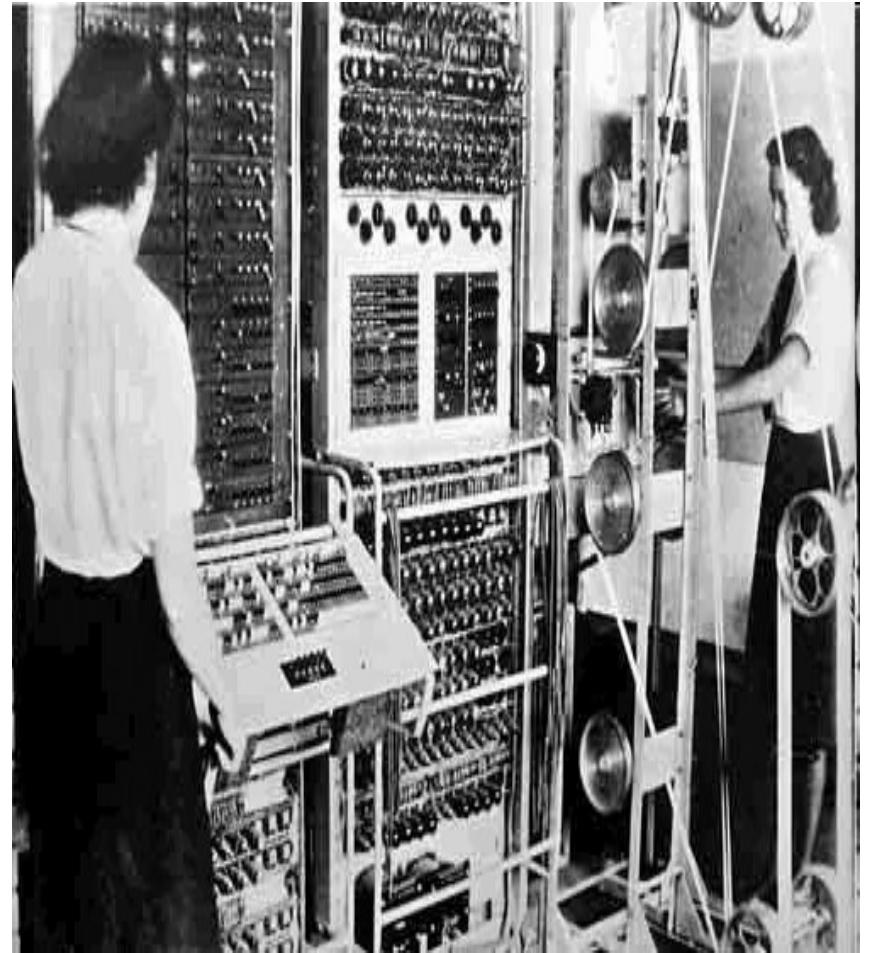
# 1<sup>st</sup> Computers

- Mechanical and analog computers developed in 1920s and 1930s
- Picture shows Cambridge Differential Analyser 1938



# Computers during WWII

- Enigma codebreaking machine developed by Alan Turing in Bletchley Park during World War II to decipher German code
- Picture shows Colossus which was also used to decipher German code



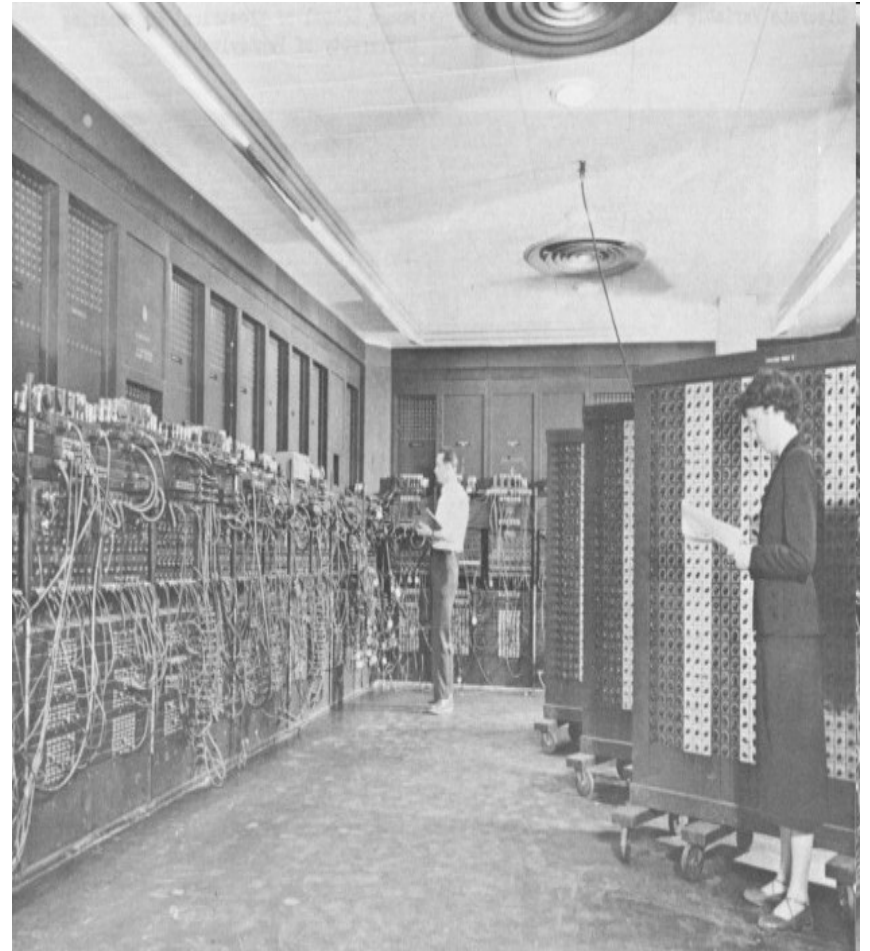
# Mark 1

- Developed by Harvard University and IBM
- Used mechanical switches



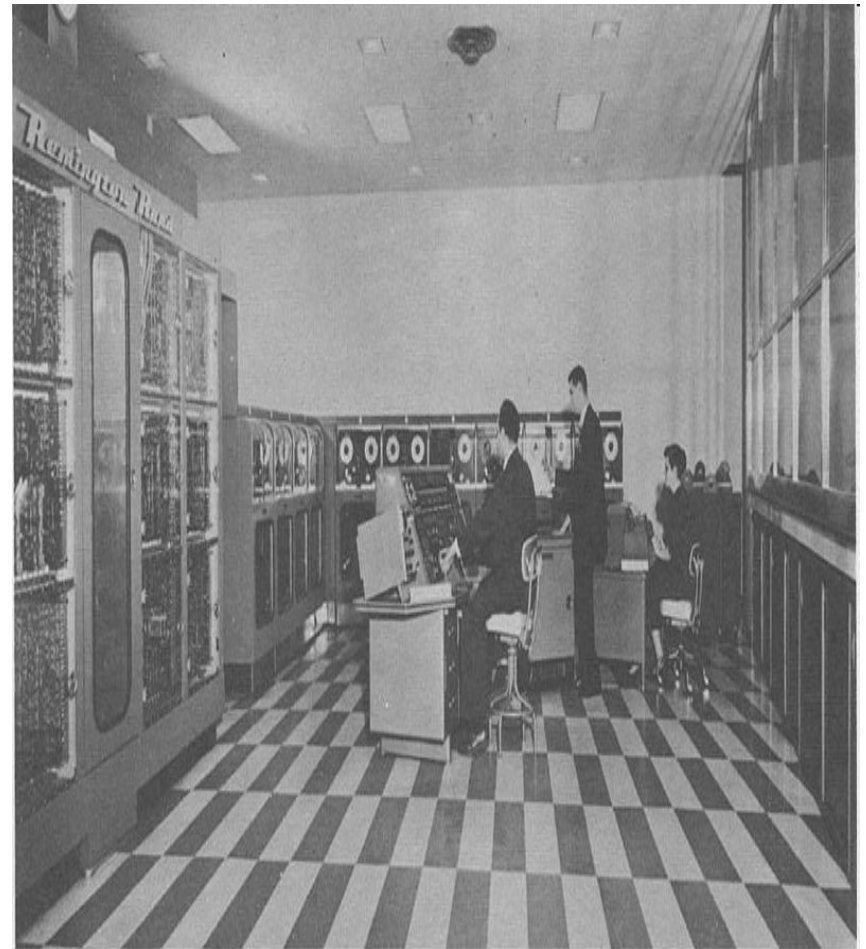
# ENIAC

- 1<sup>st</sup> Electronic computer
- Weighed 30 tonnes
- Developed in 1946
- Needed several people to operate it
- Developed by University of Pennsylvania
- Used for military applications



# UNIVAC

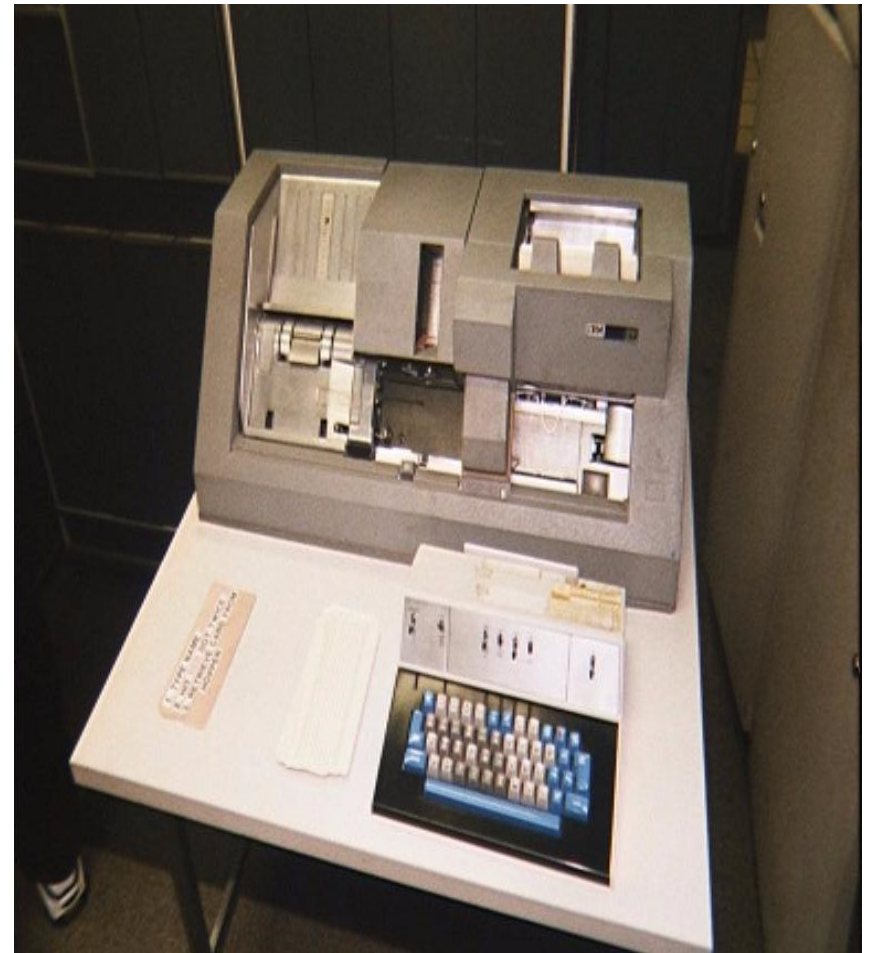
- 1<sup>st</sup> commercially available computer
- Just 46 sold
- Cost \$1million





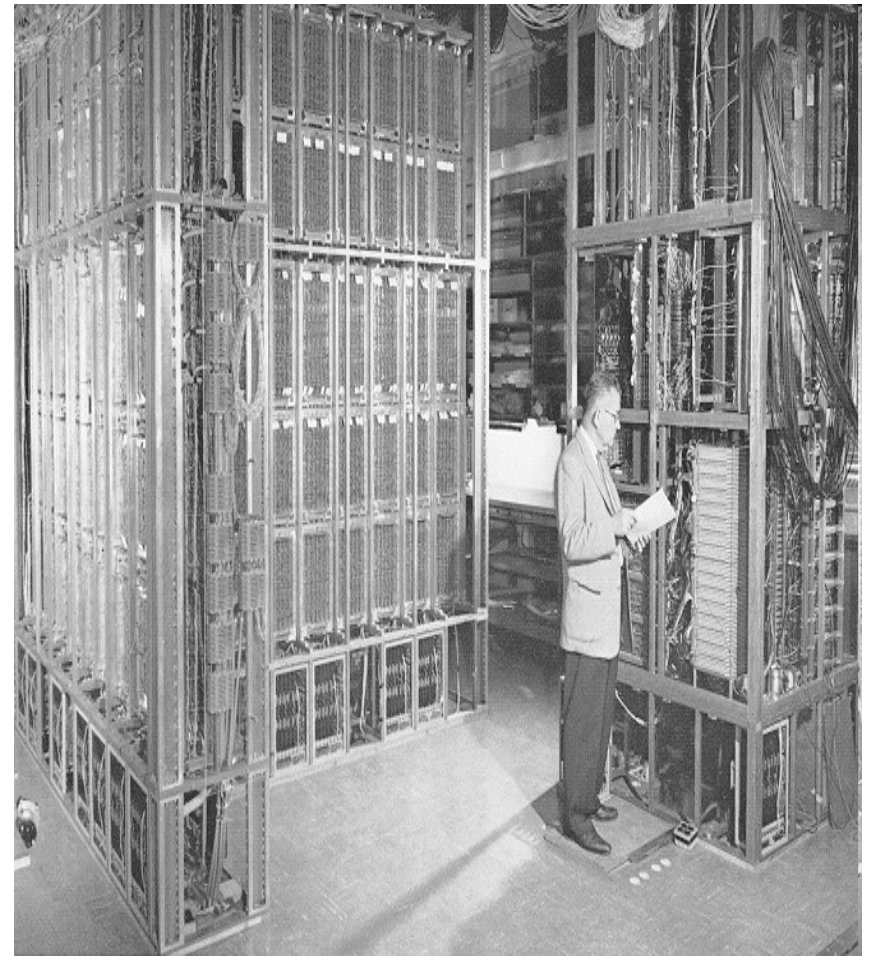
# 2<sup>nd</sup> Generation of Computers

- Used 'Punch Cards' to input information
- Transistor developed in 1947 and replaced Vacuum tubes
- Initially transistors used in TVs and Radios
- IBM put transistors in computers in 1959



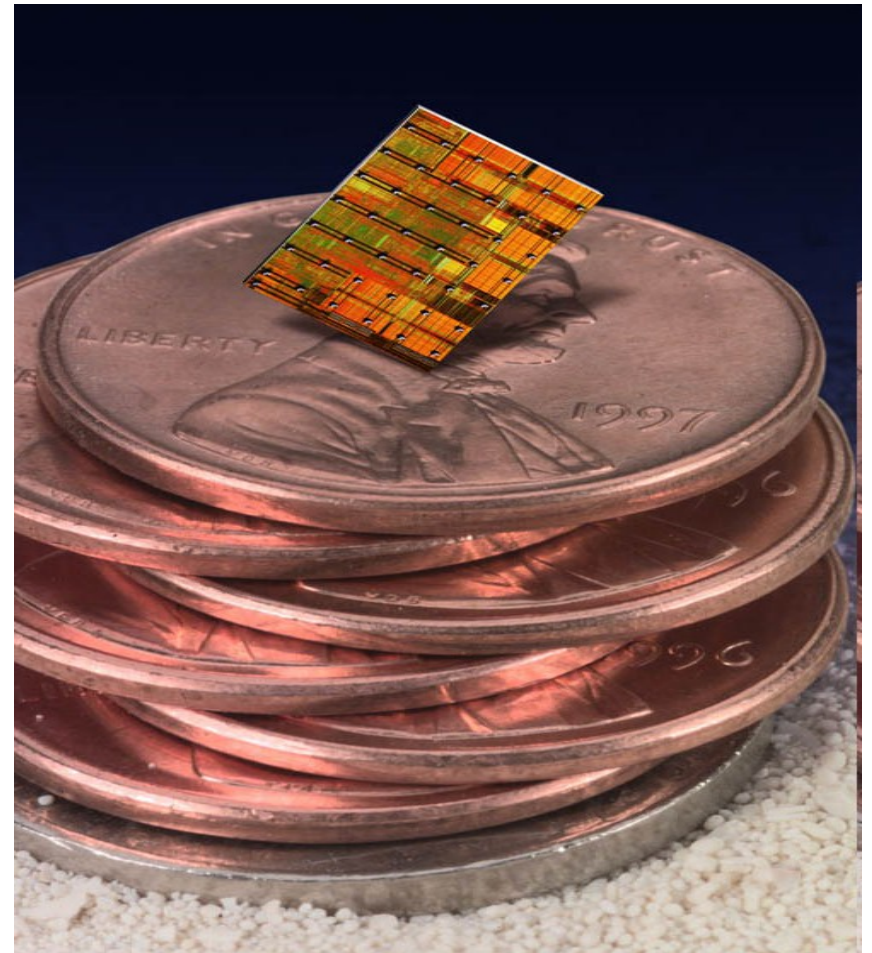
# Computers in the 1950s and 1960s

- Still very large
- Mainly used by large corporations, US military, science and research departments of universities to process and store data



# 3<sup>rd</sup> Generation of Computers

- In late 1960s the Microchip or Silicon chip was developed
- This meant much smaller computers could be produced
- Monitors and Keyboards replaced Punch Cards and Printouts



# Computers in the 1970s

- Microprocessors developed and used in computers by Intel in 1971
- Floppy discs developed in 1971
- 1<sup>st</sup> PC 1975
- Apple set up 1976
- Microsoft set up 1975



# 1969 Computer



# Personal Computers

- 1977 Apple II could be used by families and small businesses
- 1980 IBM began to produce PCs
- By 1990 65 million PCs had been sold



# Computers in the 1980s

- Apple Macintosh was 1<sup>st</sup> computer to use dropdown menus
- CD Rom began to replace floppy discs
- 1985 Microsoft Windows launched



# Computer Industry

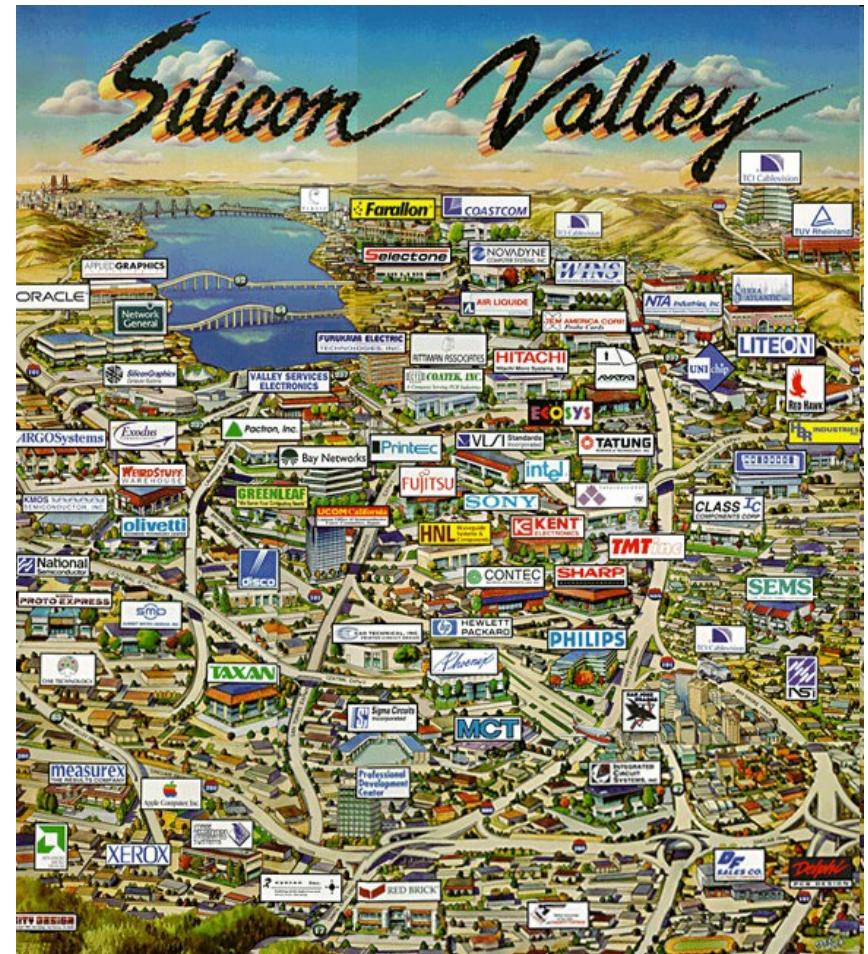
- Computer industry has revolutionised communication, transport, entertainment, science and many other aspects of life
- Industry was worth \$1m in 1958, \$100 billion by 1990





# Computer Production

- Huge employment provided by jobs in research and development and manufacturing of computer hardware and software
- Computer industry accounts for a huge proportion of the US economy and has also completely revolutionised business, entertainment, communication, industry, science and so on
- Silicon Valley in California



# Laptops

- Laptops began to be introduced in the 1980s
- Allowed people in business, government, research to do work while travelling or to work from home



# Computer Games

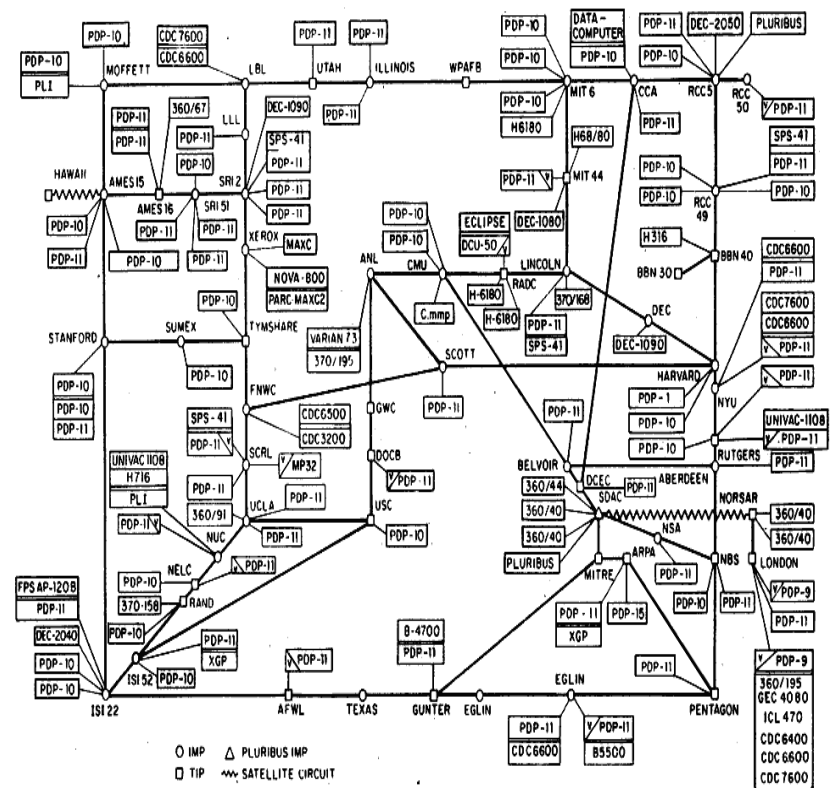
- Computer games began to be popular in the 1970s
- Gaming arcades
- Home gaming systems
- 1989-Gameboy was 1<sup>st</sup> hand held console
- X-box, Playstation



# Internet

- ARPANET 1<sup>st</sup> developed by US Defence Department as a communication system that would survive nuclear attack
- Internet used by universities in 1980s to share information from databases
- Websites developed in 1990s

ARPANET LOGICAL MAP, MARCH 1977



(PLEASE NOTE THAT WHILE THIS MAP SHOWS THE MOST POPULATION OF THE NETWORK ACCORDING TO THE BEST INFORMATION OBTAINABLE, NO CLAIM CAN BE MADE FOR ITS ACCURACY)

NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES