A Brief History of Computer Games

By Mark Overmars

Part One - before 2010

1950 - 1959

Preliminary experimentation

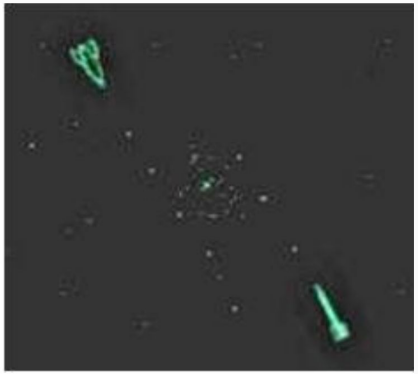
1950 - 1959

- OXO - 1952
- Tennis for Two - 1958

1960 - 1969

Early beginnings

1960 - 1969



- Spacewar! - 1961
  - Developed at MIT on a PDP1
- Periscope - 1966
  - Sega’s first electronic game

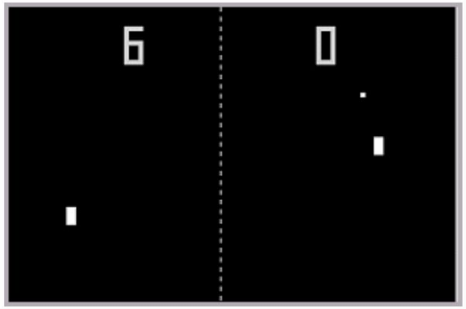
1970 - 1979

The golden age for arcade games

1970 - 1979

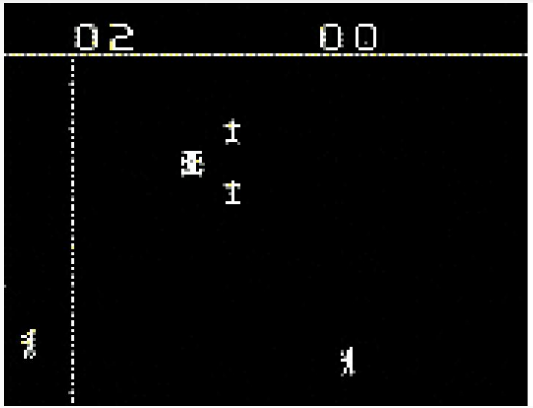
- Computer Space - 1971
  - Unsuccessful
- Pong - 1972
  - Atari’s first game

- Color introduced in 1978
- Space Invaders - same year
- Asteroids - 1979
- Pac-Man - 1980



1970 - 1979

- Death Race - 1976
  - Disappeared due to controversy
- Home consoles could connect to TVs
  - Odyssey was the first
- Channel F system - 1976
  - Play different games on same system
- VCS system (aka. Atari 2600) - 1977
  - Bundled with Space Invaders
  - 1000 different game cartridges produced
  - 1 KB memory for program + data

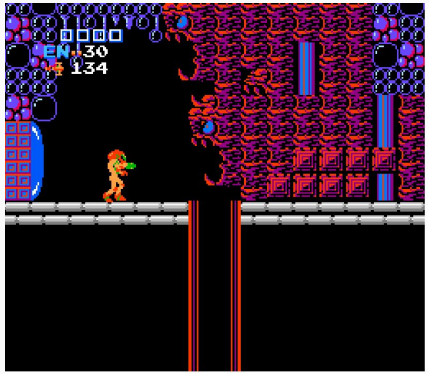


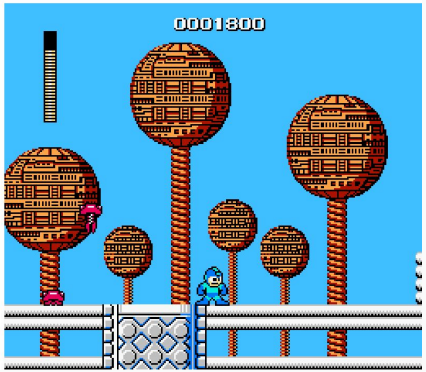
1980 - 1989

The rise of the game consoles

1980 - 1989

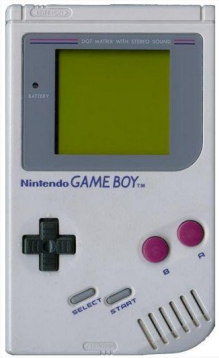
- Several famous game franchises started this decade
  - Donkey Kong, Mario Bros., Metroid, The Legend of Zelda, Mega Man, Final Fantasy, Metal Gear, Prince of Persia
- E.T. by Atari
  - Only 6 weeks development
  - Led to a market crash in 1984
- Cheap personal computers
  - Rewritable memory allowed for saving
    - Floppy disks or cassette tapes
  - E.g. Commodore 64, Atari ST





1980 - 1989

- Nintendo NES - 1985
  - Bundled with Super Mario Bros.
- Sega Master System - 1986
  - More advanced than NES
- NES more popular due to its games
- Nintendo Game Boy - 1989
  - Bundled with Tetris
  - Had little real competition



1990 - 1999

A boost in computing power

1990 - 1999

- Sega Mega Drive (aka. Genesis) - 1989
- Nintendo Super NES - same year

- Nintendo had Mario,
  Sega introduced Sonic

  - Both 16-bit, 64-128 KB memory,
    hardware for drawing sprites, higher screen resolution

1990 - 1999

- Sega Saturn - 1994
- Sony PlayStation - same year
- Nintendo 64 - 1996

- N64 focused on family games
  - Four controllers
- PS easiest to program
  - Likely led to the huge number of titles
- Game budgets of $½ mill. common

  - 500 000 polygons/s
  - 360 000 polygons/s
  - 100 000 polygons/s
  - All three 32- or 64-bit, 2-4 MB memory, hardware for 3D graphics, improved sound systems

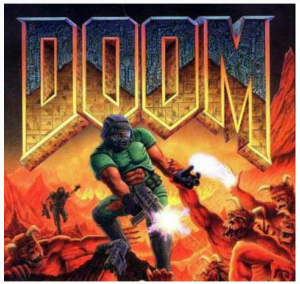
1990 - 1999

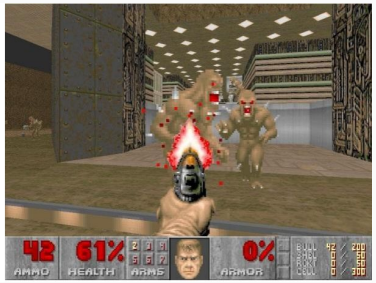
- PC games became mature
- Compared to consoles:
  - Almost every hardware aspect was better
- Many famous franchises started this decade
  - Sim City, Civilization, Tomb Raider, Quake, Half-Life, Grand Theft Auto
- Mouse and keyboard
  - Allowed for RTS games and point-and-click adventures
- Internet connection
  - Allowed for MMORPGs

- Difficult to install
  - Particularly on DOS
  - Nerd image
- Tedious to develop
  - Porting to all systems
  - Until Windows 95 and DirectX in 1995
    - Abstracted away hardware

1990 - 1999

- PC games led to a different kind of games
  - Could be played in isolation
- Mortal Kombat (1993) led to congressional hearings
  - Started discussion on the effect (and banning) of violence in games
  - Led to first rating system - the ESRB
- Most PCs had no 3D graphics hardware
  - Many games did fake 3D
    - Doom - 1993
      - Not quite the first FPS, but the most popular one
- Sales of 3D graphics cards increased
  - Difficult for devs, due to varied graphics capabilities
    - Was (and still is) easier developing for consoles





1990 - 1999

- Nintendo Game Boy Color - 1998
  - Communication with other devices
  - Pokémon - 1998
    - “Catch ‘em all”
    - Had to connect to the other version (Red or Blue) to collect them all

2000 - 2009

Diversification

2000 - 2009

- Sony PlayStation 2 - 2000
  - 65 mill. polygons/s, 150 mill. sold
- Nintendo GameCube - same year
  - 20 mill. polygons/s, 20 mill. sold
- Microsoft Xbox - 2001
  - 30 mill. polygons/s, 25 mill. sold

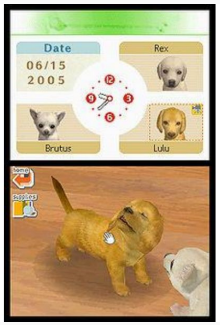
- Creating games became more complicated and expensive
  - Better graphics etc.
  - Budgets up to $5 mill. and large teams
  - Many companies bankrupt
- PC games easily cracked and copied
  - Cheaper than console games
  - Many developers stopped developing for the PC or published them later

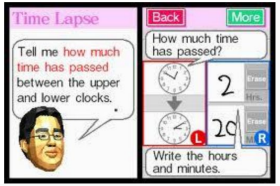
2000 - 2009

- The Sims - 2000
  - Nearly rejected
- World of Warcraft - 2004
  - Subscription-based
  - Players pay billions of dollars a year
- Casual games
  - Often Flash-based, running in browser
  - Many free; revenue through ads
  - Tile-matching games, like Bejeweled - 2001
  - Games where you locate objects in complex pictures
  - Social games, like Farmville - 2009
    - Exchange goods with friends on Facebook

2000 - 2009

- Handheld gaming devices more popular
  - Nintendo Game Boy Advance - 2001
    - Much more powerful than Game Boy Color
    - Double screen
    - 125 mill. Sold
  - Nintendo DS - 2004
    - Bottom touch screen - never before seen in gaming
    - Wi-Fi connection
  - Sony PSP - same year
    - Powerful, but too heavy and expensive





2000 - 2009

- Games on mobile phones
  - Small screens and buttons
  - All phones different
    - Devs created hundreds of versions of each game
  - Sales had to go through telephone companies
- Games on smart phones
  - iPhone - 2007
    - Excellent controls
  - App Store
    - Apple published games; 70% of revenue to devs
    - Allowed for small teams not dependent on the big publishers - aka. Indie
    - Games often sold for $1

2000 - 2009

- Microsoft Xbox 360 - 2005
  - 80 mill. sold, despite “RROD”
- Nintendo Wii - 2006
  - 100 mill. sold
- Sony PlayStation 3 - 2007
  - 80 mill. sold

- Xbox 360 introduced global achievement system
  - “Gamerscore” with online ranking
- Wii redefined the way to control games
  - Did not even support HD graphics, but the controller made it incredibly popular
  - Balance board
  - Many games were mini-game-based
    - Wii Sports (2006), WarioWare (2007)