

Video Game History & Genres

456340-1
Fall 2009
9/14/2009
Kyoung Shin Park
Multimedia Engineering
Dankook University

A Brief History of Video Game

<http://www.gamespot.com/gamespot/features/video/hov/index.html>

2

Before the Games: 1889-1970

- 1889
 - Fusajiro Yamauchi establishes the Marufuku Company to manufacture and distribute **Hanafuda (flower cards)**, **Japanese playing cards**. 1951 – Changes name to The **Nintendo** Playing Card Company. "Nintendo" means "leave luck to heaven."



- 1947
 - Akio Morita and Masaru Ibuka establish Tokyo Telecommunications Engineering Company. Licensed transistor from Bell Labs in 1952. The transistor radio is a success in Japan, and Ibuka and Morita begin looking at marketing their products in the United States and Europe. **Sony** was born (from Latin word sonus (sound)).

Before the Games: 1889-1970

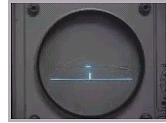
- 1951
 - **Ralph Baer**, an engineer with Loral, a company that develops and manufactures complex military airborne electronics, is instructed to "build the best TV set in the world." **Baer suggests they add some kind of interactive game to the TV set to distinguish it from other companies' TVs, but management ignores the idea.**
- 1954
 - Former US Korean War veteran **David Rosen** starts Service Games to export coin-op machines to Japan. In the 1960s, Rosen made his own coin-operated games, so he purchases a Tokyo jukebox and slot-machine company.
 - The name **SEGA**, short for "SErvice GAMES," is stamped on the games .



Before the Games: 1889-1970

□ 1958

- Brookhaven National Lab physicist **Willy Higinbotham** invents **interactive table-tennis-like game** on an oscilloscope to keep visitors from getting bored. Believing that he hasn't invented anything, Higinbotham doesn't patent the device.



□ 1961

- **Spacewar**. MIT student **Steve Russell** creates Spacewar, the first interactive computer game, on a Digital PDP-1. Spacewar used new teletype terminals with CRT screens to display the graphics. Program is 9K bytes.



5

Before the Games: 1889-1970

□ 1962

- **Nolan Bushnell** enrolls in engineering school at the University of Utah, where he is first exposed to Russell's Spacewar.

□ 1965

- Nolan Bushnell gets a summer job at a Salt Lake City carnival, where he is in charge of the arcade. Bushnell envisions an arcade filled with computer games but realizes it's only a dream, since computers are much too expensive to make the idea feasible.



6

Before the Games: 1889-1970

□ 1966

- Ralph Baer rekindles his idea for a secondary use for television sets. He begins researching interactive television games. The defense contractor he works for, Sanders Associates, is interested and gives him the latitude needed to develop it.

□ 1967

- Baer and his team succeed in creating an interactive game that can be played on a television screen. They develop a chase game and follow it up with a video tennis game. They also modify a toy gun so it can distinguish spots of light on the screen.

□ 1970

- Magnavox licenses Baer's TV game from Sanders Associates.
- Bushnell builds an arcade version of Spacewar. Bushnell calls his game **Computer Space**.
- Arcade-game manufacturer Nutting Associates purchases Computer Space and hires Bushnell to oversee the building of it.

The Game Begin: 1971-1977

□ 1971

- **Nutting Releases First Arcade Video Game-Computer Space** but public finds it too difficult to play.



□ 1972

- **Magnavox begins manufacturing the Odyssey**, Baer's TV game system.
- Computer Space does not sell well, and Bushnell comes to the conclusion that it is too difficult to play. He realizes that if he can design a simple game, it might be a major draw. He informs Nutting, who tells him to go ahead and design a new machine. Bushnell decides that since he is the brains behind video games he should get a larger share of the profits. When he demands a third of Nutting Associates and doesn't get it, he leaves the company.



8

The Game Begin: 1971-1977

□ 1972

- **Bushnell Starts Atari**, a term from the Japanese game Go, whose meaning is equivalent to "check" in chess.
- **Pong Is Born** - Bushnell hires Al Alcorn to program games. Since Alcorn is inexperienced, Bushnell has him program a simple video tennis game as an exercise. They call the game Pong, for two reasons: first, "pong" is the sound the game makes when the ball hits a paddle or the side of the screen, and second, the name Ping-Pong is already copyrighted.
- Bushnell tries selling Pong to established arcade manufacturers. After finding Bally disinterested, Bushnell decides to market the game himself. Pong is test-marketed in Andy Capps, a local bar. Within two weeks the test unit breaks down because the coin drop is flooded with quarters. Pong is a success.
- **Magnavox Releases Odyssey**. Many people buy it because it is the closest thing they can get to a home version of Pong.



The Game Begin: 1971-1977

□ 1972

- **Gregory Yob** wrote the hide-and-seek game *Hunt the Wumpus* for the PDP-10, which can be considered the first text adventure.

```
root@amitage:~#
HUNT THE WUMPU
For sound effects, run as the superuser
INSTRUCTIONS (Y-N)? n
YOU ARE IN ROOM 10
BATS NEARBY!
TUNNELS LEAD TO 2 9 11
SHOOT OR MOVE (S-M)? m
WHERE TOP?
ZAP--SUPER BAT SNATCH! ELSEWHEREVILLE FOR YOU!
ZAP--SUPER BAT SNATCH! ELSEWHEREVILLE FOR YOU!
YOU ARE IN ROOM 7
TUNNELS LEAD TO 6 8 17
SHOOT OR MOVE (S-M)? m
WHERE TOP?17
YOU ARE IN ROOM 17
TUNNELS LEAD TO 7 16 18
SHOOT OR MOVE (S-M)? m
The GIMP
```

The Game Begin: 1971-1977

□ 1976

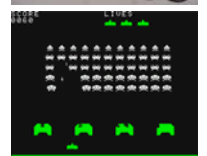
- Fairchild Camera & Instrument releases its Video Entertainment System (later renamed Channel F), the first programmable home game console. Cartridges are born.
- Exidy Games releases *Death Race 2000*, a driving game based on a 1975 movie of the same name. Public outcry against video game violence gains national attention, and the game is taken off the market.
- **Breakout**, Atari Inc., 1976. Designed by Atari's 40th employee **Steve Jobs**, aided by videogame enthusiast **Steve Wozniak**. The two later went on to found Apple Computer, using parts "borrowed" from Atari to build their first prototype.



The Game Begin: 1971-1977

□ 1977

- **Atari Is Sold for \$28 Million**
Nolan Bushnell sells Atari to Warner Communications for \$28 million. Bushnell remains with Atari as chairman of the board.
- Atari releases its first programmable (cartridge-based) game system, the **Video Computer System (VCS--later known as the Atari 2600)**, in time for Christmas, for \$249. CPU 1.19 MH, 6507 Processor, 128 byte RAM, 6Kb ROM. Gamepack upto 2Kb.
- Bally releases a programmable console called the Bally Professional Arcade. With a retail price of \$350, the system fails to catch on.



The Game Begin: 1971-1977

1978

- Nintendo releases Othello, a decidedly simplistic arcade cocktail-table game.
- Atari releases the arcade game Football. The game features a revolutionary new controller called the trackball.
- Midway imports *Space Invaders* from Taito. Space Invaders gives you a goal by displaying the current high score for you to beat.
- Atari begins selling its line of 400 and 800 computers to compete against Apple. The public, however, associates Atari with games, and the computers are never taken seriously.



Atari 400/800 – the 1st Personal Computer with a Graphics Processor

- No support for polygons whatsoever.
 - Polygons didn't show up till 1994 even though there were \$10000-\$500000 workstations available that could do this by late 80s.
- Programmed entirely in Assembly Language (translates to Machine code)
- 6502 Motorola Processor – 1 MHz
- Has it's own graphics processors (ANTIC and GTIA).
- Player/Missile Graphics (Sprites):
 - Sprites are graphical elements independent of main graphics memory. Used to implement, game characters and missiles.
 - 4, 1 color (8 pixel wide sprite as 1 long vertical strip)
 - 4, 1 color (2 pixel wide sprite as 1 long vertical strip)
 - Moving sprites horizontally is 1 register call. Moving it vertically requires clearing sprite and copying it.

Atari 400/800 – the 1st Personal Computer with a Graphics Processor

- Character-set graphics
 - Programmable character-set pixels. Used mainly for creating scrolling backdrops.
- Memory-mapped graphics
 - Graphics system can point to any address location and use it as graphics memory. Mainly for side-scrolling games.
- Vertical Blank Interrupts
 - Use vertical retrace of raster to do graphics updates (sprite movement, and side-scrolling) so that graphics does not flicker. equivalent to double-buffering in modern graphics systems and "threading". Only have a few milliseconds to do your computation.
- Display List Interrupts
 - Modify screen data as the raster scans across the screen. This is the only way to get multi-color sprites.
- 4 voice sound.

Atari Graphics Modes

	GRAPHICS MODE	ANTIC MODE	DISPLAY TYPE	AVAILABLE COLORS	SCREEN SIZE Columns x Rows	SCAN LINE MODE	BYTES/LINE	MEMORY USED (Bytes)	COLOR REGISTER NUMBERS			COLOR SHADOW REGISTER NUMBER	REGISTER
									FOREGROUND	BACKGROUND	BORDER		
TEXT MODES	0	2	Standard Text	1 Color & 2 Luminances	40 x 24	8	40	962	1 (color is not selectable)	2	4	---	---
	1	6	Double-Width Text	5	20 x 20 (Split) 20 x 24 (Full)	8	20	674 672	0,1,2,3	4	4	See Table	---
	2	7	Double-Width Double-Height Text	5	20 x 10 (Split) 20 x 12 (Full)	16	20	424 420	0,1,2,3	4	4	See Table	---
PIXEL MODES	3	8	FOUR COLOR GRAPHICS	4	40 x 20 (Split) 40 x 24 (Full)	8	10	434 432	0,1,2	4	4	Color 0 Register 4	712
	5	A		4	80 x 40 (Split) 80 x 48 (Full)	4	20	1174 1176	0,1,2	4	4	Color 1 Register 0	708
	7	D		4	160 x 80 (Split) 160 x 96 (Full)	2	40	4180 4200	0,1,2	4	4	Color 2 Register 1 Color 3 Register 2	710 709
	4	9		TWO COLOR GRAPHICS	2	80 x 40 (Split) 80 x 48 (Full)	4	10	694 696	0	4	4	Color 0 Register 4
	6	0	2	160 x 80 (Split) 160 x 96 (Full)	2	20	2174 2184	0	4	4	Color 1 Register 0	708	
	8	F	High Resolution Graphics	1 Color 2 Luminances	320 x 160 (Split) 320 x 192 (Full)	1	40	6112 6138	1 (color is not selectable)	2	4	Color 0 Register 2 Color 1 Register 2	710 709
GTIA MODES	9	---	16 Luminance Medium Resolution	1 Color 16 Luminance	80 x 192 (Full)	1	40	8138	4	---	---	Color 0-15=Luminance Register 4=Color	712
	10	---	9 Color Medium Resolution	9	80 x 192 (Full)	1	40	8138	1-8	0	0	Set Registers By Pokes	712
	11	---	16 Color Medium Resolution	16	80 x 192 (Full)	1	40	8138	0-15	---	---	Color 0-15=Color Register 4=Luminance	712
CHARACTER	12*	4	Multi-Color Character	4	40 x 20 (Split) 40 x 24 (Full)	0	40	1124 1152	0,1,2,3	4	4	Register 0 Register 1 Register 2	708 709 710
	13*	5	Double High Multi-Color Char.	4	40 x 10 (Split) 40 x 12 (Full)	16	40	664 660	0,1,2,3	4	4	---	---
BIT-MAPPED	14*	C	Two Color Bit-Mapped	2	160 x 160 (Split) 160 x 192 (Full)	2	20	4270 4266	0	4	4	Register 0	708
	16*	E	Four Color Bit Mapped	2	160 x 160 (Split) 160 x 192 (Full)	2	40	8112 8136	0,1,2	4	4	Register 0 Register 1 Register 2	708 706 710

* BASIC modes on XL machines only

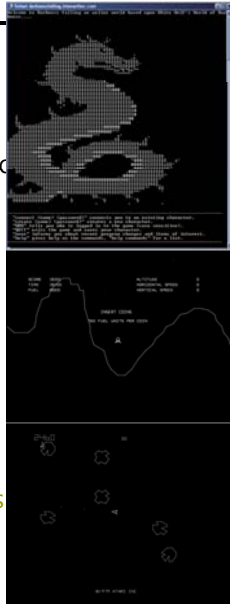
The Golden Age: 1978-1981

□ 1978

- The first Multi-User Dungeon was usually just called **MUD**, and was written in 1978 by **Roy Trubshaw**, a student at Essex University in England, originally in the MACRO-10 language for a DECsystem-10 computer. MUD was the first adventure game to support multiple users.

□ 1979

- Atari releases **Lunar Lander**, its first vector graphics game.
- Despite Lunar Lander's popularity, Atari halts production of the game and begins releasing **Asteroids** in the Lunar Lander cabinets. Asteroids introduces a new feature to arcades: **High scorers** can enter their three-character initials at the end of the game.



The Golden Age: 1978-1981

□ 1980

- Several VCS programmers leave Atari in a dispute over game credits and form Activision, the first "third-party developer" and now a rival VCS software house. While **Atari doesn't give individual programmers credit for their work**, **Activision recognizes individual game developers by including their names on the game packaging and in the marketing efforts.**
- Atari coin-op designer Ed Rottberg creates Battlezone, the first three-dimensional first-person game. The US government later commissions an enhanced version of **Battlezone** for military training purposes.



The Golden Age: 1978-1981

□ 1980

- Namco releases **Pac-Man**, the most popular arcade game of all time. **Originally named Puck Man**, the game is renamed after executives see the potential for vandals to scratch out part of the letter P on the game's marquee, which might discourage parents from letting their children play. **Pac-Man becomes the first video game to be popular with both males and females.**



The Golden Age: 1978-1981

□ 1980

- Williams, a Chicago-based manufacturer of pinball machines, releases **Defender**, its first video game. Designed by Eugene Jarvis, Defender is a side-scrolling shooter that features the industry's first virtual world. **Because the monitor can only display a portion of the action**, a "radar" at the top of the screen shows the overall picture of events that are **occurring outside the boundaries** of the screen. Defender becomes an immediate hit.



The Golden Age: 1978-1981

□ 1981

- Nintendo artist Shigeru Miyamoto creates **Donkey Kong**. The hero, originally called Jumpman, is a squat carpenter racing to save his girlfriend Paulin from a crazed monkey. Jumpman is later named **Mario** by Nintendo of America's staff, in honor of his resemblance to **their landlord Mario Segali**.
- Atari releases **Tempest**, a color-vector arcade game based on still-unstable graphics technology that is prone to early failure. The machine attracts crowds of devoted players.
- A man dies of a heart attack while playing **Berserk-video gaming's only known fatality**.
- Electronic Games - First Video Game Magazine by Arnie Katz & Bill Kunkel



The Great Crash: 1982-1984

□ 1982

- Coleco releases the **Colecovision**, a cartridge-based game console buoyed not only by superior graphics and sound, but also by support from a growing game company: Nintendo. Nintendo licenses Donkey Kong and Donkey Kong Junior to Coleco.
- Atari releases the **5200 game console** to compete with the Colecovision, although it had originally been designed to compete with the Intellivision.
- General Consumer Electronics (GCE) releases the **Vectrex**, the **first and only home console based on vector graphics** technology. The Vectrex includes a built-in game (Minesweeper, an impressive Asteroids clone) and one four-button analog joystick controller.
- On December 7 (3:04pm Eastern Standard Time), Atari announces that VCS sales did not meet predictions. Warner Communications stock drops 32 percent in a single day.

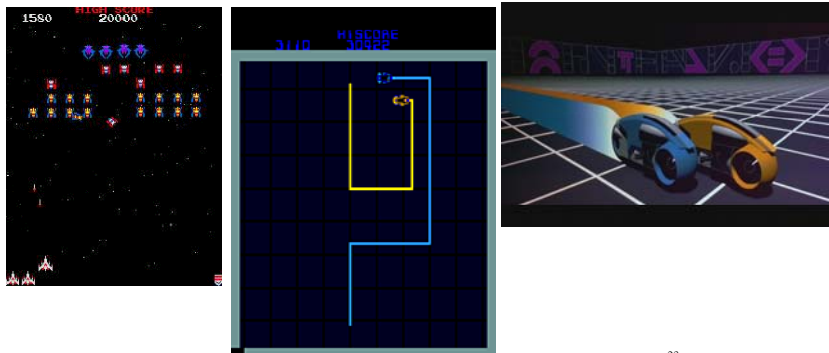


22

The Great Crash: 1982-1984

□ 1982

- Fixed shooter arcade game, Namco 'Galaga', is popular in Korea
- TRON – the film is released.
- First time a film had created a story about the inside of a computer, which spawned many arcade games.

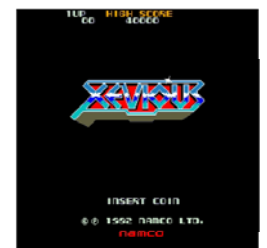
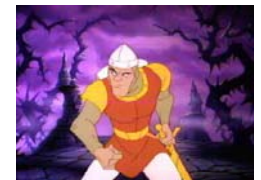


23

The Great Crash: 1982-1984

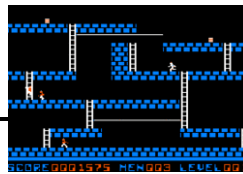
□ 1983

- Cinematronics releases Rick Dyer's **Dragon's Lair** (animated by **Don Bluth**), the **first arcade game to feature laser-disc technology**.
- Commodore releases the Commodore 64, an inexpensive but powerful computer that outperforms any video game console.
- With too many products on the shelves from a multitude of publishers, many third-party companies go out of business. The games from these companies are then discounted heavily. Companies that are still in business cannot compete against the cheap games, so they wind up losing money because of unsold inventory.
- Namco release a shooting game '**Xevious**'.



24

The Great Crash: 1982-1984



- 1983
 - *Lode Runner* published by Brøderbund is one of the first games to include a level editor, a feature that allows players to create their own levels for the game. This feature bolstered the game's popularity, as magazines such as *Computer Gaming World* held contests to see who could build the best level.
- 1984
 - Milton Bradley begins distributing the Vectrex. The company quickly lowers the price to make it competitive with the consoles. The price is eventually dropped to \$100, forcing Milton Bradley to lose money with each until sold. Milton Bradley finally cancels the Vectrex.

Vectrex 3D imager (uses CDROM drive to shutter glasses in synch with Vectrex screen)



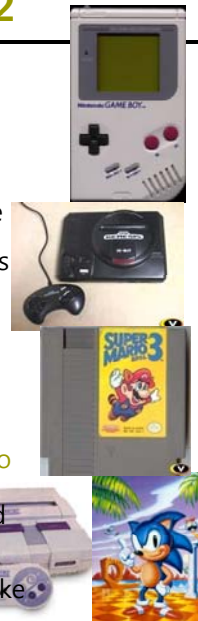
Video Games Are Back: 1985-1988

- 1985
 - Nintendo test-markets its Nintendo Entertainment System (NES) in New York. Retailers are so skeptical about video games that Nintendo has to agree to buy back all unpurchased inventory. Armed with a large number of Nintendo-developed original titles and arcade games, the NES is a hit in a limited market release.
 - Russian Alex Pajitnov designs *Tetris*, a simple but addicting puzzle game that can be played on PCs.
- 1986
 - Nintendo Releases the NES Nationwide. The system debuts with *Super Mario Bros.*, an arcade conversion, which becomes an instant hit.
 - Sega Releases NES Competition.
 - Atari reevaluates the popularity of video games and decides to release the 7800 game console.



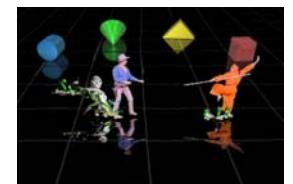
Home Market Expands: 1989-1992

- 1987
 - Square published 'Final Fantasy'
- 1989
 - 국내 최초 게임잡지 '게임 월드' 발간
 - Nintendo releases its handheld *Game Boy* (\$109). The system comes with *Tetris*, and despite a tiny monochrome screen, it begins to build a historic sales record. A Game Boy version of *Super Mario* (*Super Mario Land*), a *Breakout* clone (*Alleyway*), and a baseball game are quickly released.
 - Sega releases the 16-bit *Genesis* in the United States after limited success in Japan. \$249
- 1991
 - Nintendo release the most popular game *Super Mario 3*
 - Nintendo releases the Super Famicom in America and calls the \$249 console the *Super NES* (SNES). Journalists begin to wonder aloud whether Mario will be enough to convince NES-dedicated parents to make the investment in a new machine.



Home Market Expands: 1989-1992

- 1991
 - Sega unveils *Sonic the Hedgehog*, which it hopes is a force that will one day conquer the NES and SNES. Charmed by the character, critics are quick to support it but call the choice between Mario and Sonic a toss-up. Most pick *Super Mario World* as the better of the two.
 - *Time Traveler*, Sega, 1991. *Time Traveler* was the first of two "Hologram" games that Sega produced. The game characters appeared to be holographically projected onto the playing area. *Time Traveler* contained a laser disc player and a T.V. monitor that was aimed into a curved mirror. The 2-D image was reflected through the surface glass and produced an illusion of depth. The images seemed to have dimension, but the game didn't truly produce holograms.



Home Market Expands: 1989-1992

□ 1993

- Incensed by the violence in **Mortal Kombat** and **Night Trap**, Senators Joseph Lieberman (Connecticut) and Herbert Kohl (Wisconsin) launch a Senate "investigation" into video game violence, threaten to somehow effect a ban on "violent" games, and eventually soften their demands and concede to an industry-wide rating system.



29

The 32-Bit Era Begins: 1993-1997

□ 1994

- ID Software (John Carmack & John Romero) first-person shooting game '**DOOM**' release
- The 32-bit **Sega Saturn** and **Sony PlayStation** are launched in Japan. By year's end, critics are pointing to the PlayStation as the superior machine.
- The Entertainment Software Rating Board (**ESRB**) is established.



30

ESRB is established in 1994

The Entertainment Software Rating Board (ESRB)

	Early Childhood Titles rated "Early Childhood (EC)" have content suitable for children ages three and older and do not contain any material that parents would find inappropriate.
	Kids to Adults Titles rated "Kids to Adults (K-A)" have content suitable for persons ages six and older. These titles will appeal to people of many ages and tastes. They may contain minimal violence, some comic mischief (for example, slapstick comedy), or some crude language.
	Everyone As of January 1, 1998, the new "Everyone" designation will replace the "Kids to Adults" rating. Titles rated "Everyone (E)" have content suitable for persons ages six and older. These titles will appeal to people of many ages and tastes. They may contain minimal violence, some comic mischief (for example, slapstick comedy), or some crude language.
	Teen Titles rated "Teen (T)" have content suitable for persons ages 13 and older. Titles in this category may contain violent content, mild or strong language, and/or suggestive themes.
	Mature Titles rated "Mature (M)" have content suitable for persons ages 17 and older. These products may include more intense violence or language than products in the Teen category. In addition, these titles may also include mature sexual themes.
	Adults Only Titles rated "Adults Only (AO)" have content suitable only for adults. These products may include graphic depictions of sex and/or violence. Adults Only products are not intended to be sold or rented to persons under the age of 18.
	Rating Pending Product has been submitted to the ESRB and is awaiting final rating.

The 32-Bit Era Begins: 1993-1997

□ 1995

- Nintendo releases the **Virtual Boy** (\$179).
- Sony releases the **PlayStation** in the United States for \$299, \$100 less than expected. Sales are strong, and a collection of good release titles receives praise from the media and consumers.
- The launch of the **N64** in Japan supposedly nearly causes riots, but because of a much-improved system of distribution, people are able to buy N64 machines through local convenience stores without problems.
- **Mortal Kombat**- the film is released. First time an arcade game had created a film.
- **Microsoft Windows95** is released. Game SDK DirectX included.



The 32-Bit Era Begins: 1993-1997

□ 1996

- The N64 is released in United States. More than 1.7 million units are sold in three months.
- Sony sales are said to top \$12 million per day through the Christmas shopping season, and the PlayStation holds on to its worldwide place as the number-one next-generation game console.
- In Korea, Nexon release a world-first MUG (Multiple User Graphic) online game, 'The Kingdom of the Winds'.



The 32-Bit Era Begins: 1993-1997



□ 1997

- The PlayStation Is the Most Popular Gaming Console Sony releases figures in April that prove the PlayStation is the most popular gaming system in the world. The figures show that 5 million units have been sold in Japan, 4 million in the United States, and 2.2 million in Europe. These numbers nearly double four months later, when the 20 millionth unit is sold. Analysts believe the PlayStation's popularity will carry it through 1998.
- Bandai released the Tamagotchi in Japan. Quickly became a national obsession in Japan, selling for hundreds of dollars, well above its original \$16 price tag.
- October 4, 1997, Gumppei Yokoi, the inventor of the Game Boy, was involved in a car accident. When the 56-year-old Yokoi stepped out of his car to inspect the damage, he was hit by another car and was killed. Although the Game Boy was Yokoi's most successful product, he was also responsible for the Virtual Boy, and the cross-key directional pad that eventually replaced the joystick as the controller of choice.

The 32-Bit Era Begins: 1993-1997

□ 1997

- Richard Garriott & Ralph Koster developed the first MMORPG (Massively Multi-player Online Role-Playing Game), 'Ultima Online'.
- In 1998, 100,000 online paying subscribers in Ultima Online
- In 2003, 250,000 online paying subscribers in Ultima Online



The Modern Age: 1998-1999

□ 1998

- The IDSA (Interactive Digital Software Association) announces that 1998 was a banner year for the electronic entertainment industry. During the first six months of 1998, sales were up 30 percent from all of 1997, which itself had been a record year.
- Unfortunately, the news isn't all rosy. The IDSA also reports that the home video game industry is flourishing at the expense of the arcade industry.
- Blizzard Entertainment release networked real-time strategy (RTS) game 'Starcraft'.
- In Korea, NCSOFT release MUG (Multiple User Graphic) game 'Lineage' inspired by Ultima Online



The Modern Age: 1998-1999



- 1999
 - On September 10, Sega of America reports earnings of \$98 million within the first 24 hours of launching the Dreamcast in the United States. Dreamcast offers first online capability in 2000.
- 2000
 - Sony launches the PlayStation 2 in Japan on March 4. In two days, the company sells 1 million consoles--a new record. As is the case with all Japanese launches, gamers begin lining up outside stores two days in advance. Unfortunately, demand exceeds supply and not everybody gets a console, including those who preordered. Robberies of PlayStation 2s are reported.
 - Lines begin forming outside of Sony's Metreon store in San Francisco roughly 28 hours before the PlayStation is set to go on sale in the United States on October 26. Eventually, more than 1,000 people line up. Nearly half of them go home empty-handed.

The New Era: 2000-2001

- 2000
 - In Korea, CCR 'Fortress' online shooting game has 15 million online players
 - Korea e-Sports Association (한국프로게임협회) established in 2000 with the approval of the Ministry of Culture, Sports, and Tourism. Hosting the world largest e-Sports 'Pro-League'
 - World first game TV channel (Ongamenet)



The New Era: 2000-2001

- 2001
 - On January 31, Sega of America finally announces a major restructuring--an announcement that has been expected for several weeks. The price of Sega's own Dreamcast will drop to \$99.95 beginning on February 4, and production of new Dreamcasts will cease on March 31. At that time, the company will exit from the hardware business and become a software developer, specifically in the area of online gaming. Sega of Japan follows suit two days later and announces that the price of the Japanese Dreamcast will be reduced on March 1.
 - A fixture in the arcade industry since 1973, Midway Games announces in June that it is leaving the coin-op market to focus solely on console development. The company had already trimmed approximately 60 employees from its coin-op division in March.
 - Video game go to the Movies - Lara Croft: Tomb Raider (6/15) Final Fantasy: The Spirits Within (7/11)

The New Era: 2000-2001

- 2001
 - The results of an Interactive Digital Software Association survey reveal that the average family spends 10 to 11 hours per week playing console or computer games, with 34 percent of respondents calling games "the most fun entertainment activity," as compared with 16 percent for television.
 - Following in the footsteps of the US Army's use of Battlezone in the early '80s, the US Department of Defense licenses the Rainbow Six: Rogue Spear game engine for tactical training exercises.
 - 9/11 happens. Changes are made to Flight Simulator 2002 to remove the World Trade Center towers from the flying environment and a patch is released to remove them from Flight Simulator 2000.

The New Era: 2000-2001

□ 2001

- On November 15, at an event in Times Square's Toys "R Us, Microsoft officially launches the Xbox. Based on PC architecture, the \$299 console comes equipped with a 733Mhz CPU, Nvidia GPU, 10GB hard drive, and built-in Ethernet port. In less than a month, Microsoft ships 1.1 million units to retailers. The system's best-selling launch title is Halo.
- Nintendo's GameCube is released in Japan on September 13 and North America on November 18. The diminutive cube-shaped console uses propriety discs based on DVD technology and is priced at \$199, \$100 less than the Xbox and PS2. Nintendo reports that \$98 million worth of systems, games, and accessories were sold on the US launch day, with more than 500,000 systems sold in the first week. Luigi's Mansion is the best-selling launch title for the console.



The New Era: 2000-2001

□ 2001

- Nintendo's GameBoy Advance (mobile game console) is released.
- Webzen 'Mu' 3D graphics online game
- Nako Interactive 'Laghaim' 3D online game
- Gravity Interactive 'Ragnarok' MMORPG based on manhwa Ragnarok



42

2003~

□ 2003

- NCSoft Lineage II
- Nexon Kartrider online multiplayer racing casual game
- Blizzard 'World of Warcraft (WOW)' MMORPG. 1.5 million online subscribers in 2005 & 500000 multiple online players on the server.



43

2003~

□ 2004

- Sony PSP (PlayStation Portable) mobile game console is released in Japan in Dec. 2004 & North American and Europe in Mar. 2005.
- PSP is the first handheld video game console to use an optical disc format, Universal Media Disc (UMD), as its primary storage medium. Other distinguishing features of the console include its large viewing screen, robust multi-media capabilities, and connectivity with the PlayStation 3, other PSPs, and the Internet.



□ 2005 ~

- Xbox 360 (\$399) is released in Nov. 2005.
- Sony PS3 is originally released in Nov. 2006. 20G hard (\$499), 60G hard (\$599). PS3 is released in Korea in Jun. Harddrive 520000 Won.
- Nintendo Wii (\$250) is released in Nov. 2006.



Nintendo Wii

- Wii Lego Star Wars
- <http://kr.youtube.com/watch?v=bBbPedf3bns>

Lego Star Wars: Complete Saga Gameplay Wii



45

Nintendo Wii

- Wii Sports
- <http://kr.youtube.com/watch?v=8SdZm4XQRP8>

Wii Sports



46

Nintendo Wii

- Wii Fit
- <http://kr.youtube.com/watch?v=kIOLP1omM3s>

Wii fit



47

PS3

- Final Fantasy 7 PS3
- <http://kr.youtube.com/watch?v=thsnDqQu0mQ>

Final Fantasy 7 PS3



48

Xbox 360

- Nascar racing game of 2007
- <http://kr.youtube.com/watch?v=niNay-h0mEQ>

Xbox 360 racing games of 2007



49

iPhone

- Wired 10 iPhone Games You Must Own
 - <http://www.wired.com/gamelife/2009/01/ten-iphone-game/>
- <http://www.youtube.com/watch?v=cdxwkv3fRg>



Super Tank



50

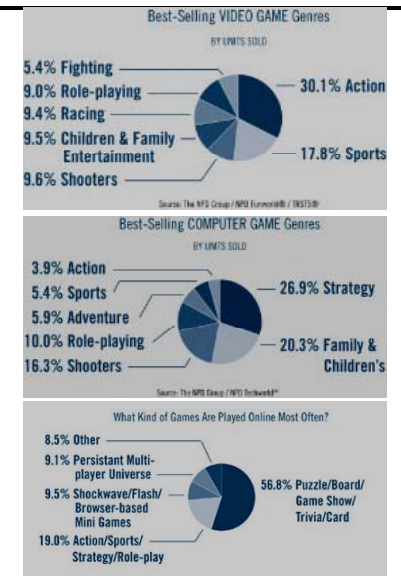
Game Trend

- PC Platforms
- Console Platforms
 - SONY PS3, MS Xbox360
 - Focus on high-quality 3D graphics & multimedia experience
 - Nintendo Wii
 - Focus on interactive experience with motion
- Mobile Platforms
 - Nintendo DS, SONY PSP, nGage
 - Apple iPhone
 - 165 new applications per day
 - Handheld console quality graphics
 - Touch capability
 - Always on & connected to the network

51

Video Game Genres

- Action (1st or 3rd person shooter)
- Adventure
- Driving
- Puzzle
- RPG (Role-Playing Game)
- Space Simulations
- Simulations
- Sports
- Strategy
 - Empire building
 - Real-time Strategy
- Fighters
- Horror
- Arcade Remakes
- Stealth



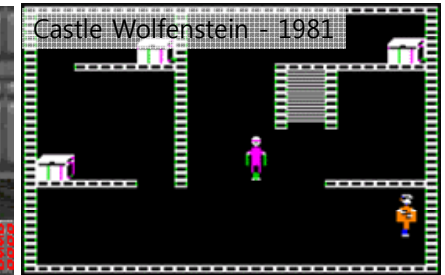
Gameplay

- Gameplay is the degree and nature of the interactivity that the game includes- ie. How the player is able to interact with the game-world and how that game-world reacts to the choices the player makes.
- In the game that you design, try to articulate its gameplay in a concise sentence and FOCUS on this goal throughout the development of the game.

53

Action (1st and 3rd person shooters)

Gameplay: run around and shoot things



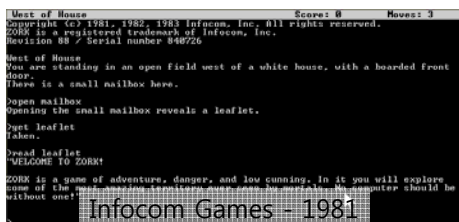
Adventure

Gameplay: solve puzzles, fight enemies, overcome physical obstacles

Mark of Kri - San Diego Studios (2002)



Tomb Raider - Eidos (1996)



A voice BOOOOOOMS out:
 Welcome to Adventure number 1:
 "ADVENTURELAND". In this Adventure
 you're to find *TREASURES* & store them
 away. To see how well you're doing say
 SCORE.
 Remember you can always say HELP
 -TELL ME WHAT TO DO? █

Adventureland - Scott Adams (1981)

Stealth: A Sub-Genre of Adventure

Gameplay: Remaining Hidden



Fighters

Gameplay: Punch & kick until opponent is defeated



Driving

Gameplay: Drive as fast as you can; stunt driving or run over people for bonus

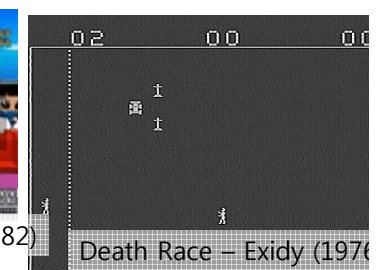
Grand Theft Auto 3 – Rockstar (2002)



Wipeout – Psygnosis (1995)



Mario Kart – Nintendo (2003)



Gameplay: Similar to adventure, less emphasis on action, more emphasis on statistical dice rolling to determine outcome



Gauntlet Dark Legacy – Midway (2003)



Space Simulations

Gameplay: Fly through space and shoot things

Rogue Squadron – LucasArts (2001)



Wing Commander – Chris Roberts, Origin (1990)



Star Raiders – Doug Neubauer, Atari (1979) (8K)



Real Time Strategy (RTS)

Gameplay: Build armies and battle



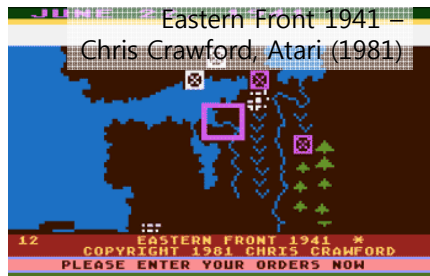
BattleZone – Activision (1998)



Command and Conquer
Westwood Studios (1995)



Archon – EOA (1983)



Eastern Front 1941 –
Chris Crawford, Atari (1981)

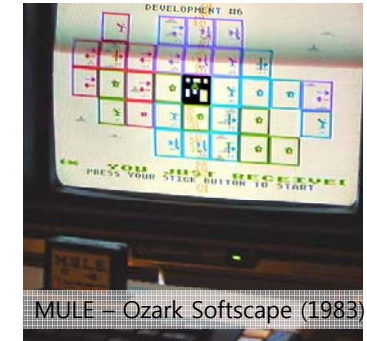
Empire Building

Gameplay: 4X games: Explore, Expand, Exploit, and Exterminate



Master of Orion – Simtex (1994)

Civilization – Sid Meier, Microprose (1991)



MULE – Ozark Softscape (1983)

The Elements of Modern Video Game

1. Developer & publisher logo screens
2. Opening animation / cutscene to provide context
3. Game configuration screen
 - Select control layout
 - Built-in tutorial
 - Game type – single or multiplayer
 - Cheats
 - Extras – unlockable gems
 - Credits
4. Level or Game prep screen and/or cutscene
 - Select attributes of your "character"- choose a person or a spaceship.
5. The Game level (save here)
6. The end-of-level cutscene
7. Save game here
8. Repeat from 4.
9. End of game cutscene.
10. Credits

References

- <http://www.ralphbaer.com>
- <http://www.atarihq.com>
- <http://www.atari-history.com>
- <http://www.gamespot.com/gamespot/features/video/hov/index.html>
- <http://www.classicgaming.com>
- <http://www.quarterarcade.com>
- <http://www.greatgamedatabase.com>
- <http://www.videotopia.com>
- http://incheon.go.kr/cybercity/servlet/html?pgm_id=CYBERCITY000034
- <http://saickho.egloos.com/580566/>
- <http://blog.daum.net/marsnine/12323553>
- <http://www.evl.uic.edu/spiff/class/cs426/>