

History of Video Games

Spacewar! 1962



Spacewar! (Computer)

- Two spaceships shoot at one another while avoiding the gravity well of a central star.
- Steve Russell and Martin Graetz
- DEC PDP-1 Mainframe at MIT
 - 9.2 kb of RAM
 - 200 khz processor

Galaxy Game / Computer Space, 1971



Galaxy Game / Computer Space

- Both based on *Spacewar!*
- *Galaxy Game* built by Bill Pitts and Hugh Tuck in the student union at Stanford
 - 1 play for 10¢, 3 for 25¢
- *Computer Space* built by Nolan Bushnell of Nutting Associates in the Dutch Goose bar near Stanford
 - Came later in the year, but was commercially successful
- Arguably the first video arcade game.

Star Trek, 1971

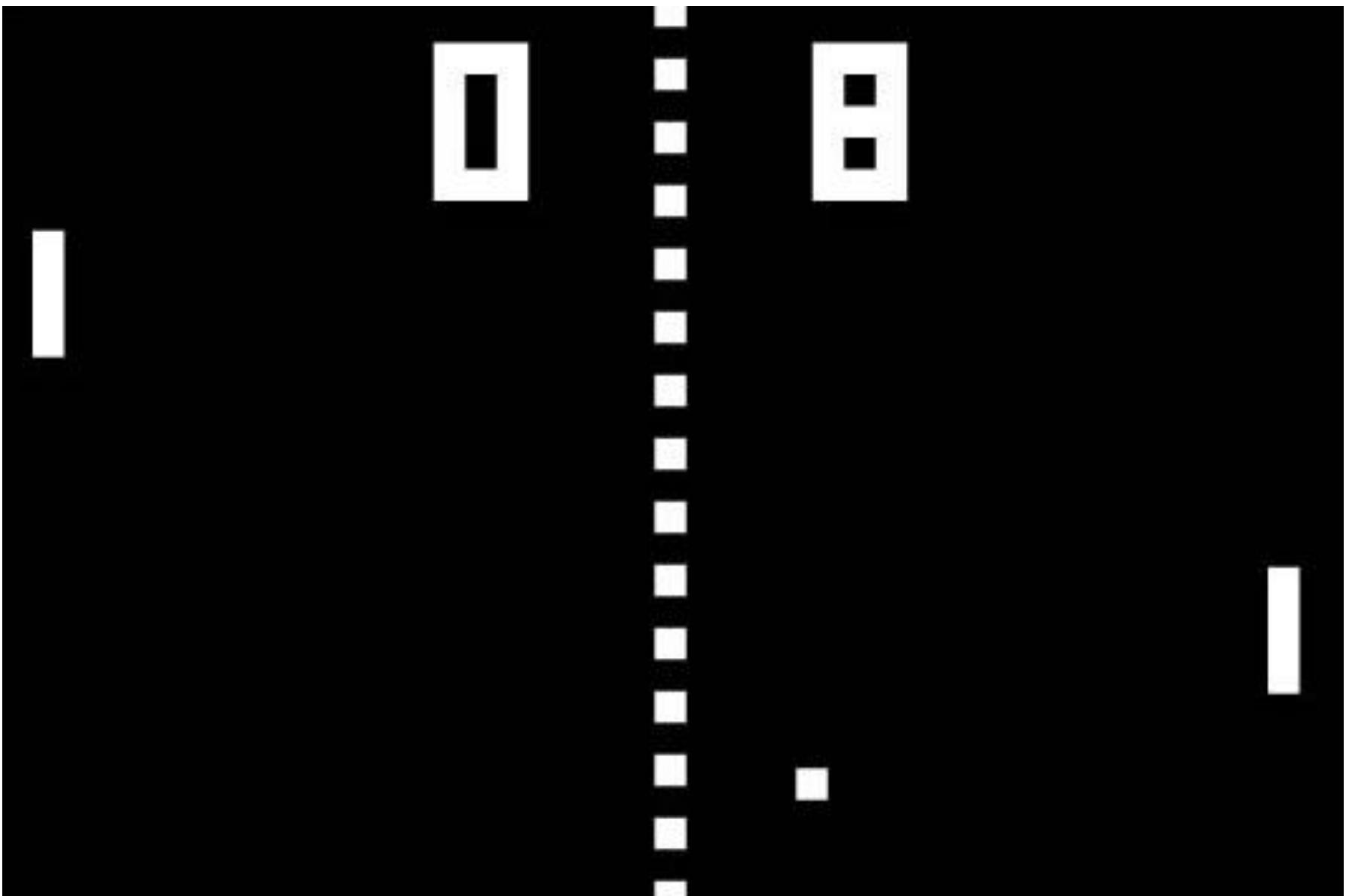
quadrant	3/1		
.	.	.	GREEN
.	.	.	
.	.	.	
.	.	.	
*	.	*	torpedoes
*	.	*	energy
.	.	.	shields
.	-E-	*	klingons

command:

Star Trek (Computer)

- Hunt Klingon ships while managing your weapons and energy.
- Perhaps the first use of existing Intellectual Property (IP) in a video game, though not officially licensed.

Pong, 1972



Pong (Arcade)

- First developed as Ping-Pong for the Magnavox Oddysey
- In 1972, Nolan Bushnell and Ted Dabney formed Atari Inc. (Syzygy Inc. was taken).
- Bushnell tricked Al Alcorn into developing a clone of Ping-Pong that featured new bounce mechanism, sound, and score.
- New game was so exciting that Atari Inc. stopped working on the racing game that was to be its first product and focused on Pong.

Pong (cont)

- Pinball manufacturer Bally Midway constantly rejected Atari's proposals to make Pong.
- A test Pong machine at Andy Capp's Tavern in Sunnyvale, CA became jammed with coins.
- Atari decided to manufacture Pong itself, and thus made its initial profits.
- Instruction on the arcade machine read, “Avoid missing ball for high score.”

Magnavox Odyssey, 1972



Magnavox Odyssey

- First commercially available home video game system
- Came with 12 games, including Ping-Pong
- Originally meant to cost \$20, its actual cost was \$99.95.
- Sold 200,000 units by 1974

Laser Clay Shooting System, 1973



Laser Clay Shooting System (Arcade)

- Developed by Gunpei Yokoi
- Nintendo's first video game product
- Eventually re-worked into *Duck Hunt*

Gran Trak 10, 1974



Gran Trak 10 (Arcade)

- Originally meant to be Atari's first game, but put off in favor of Pong.
- Commercially successful but underpriced by Atari, almost bankrupting the company.

dnd, 1974

Aura

The Elf

STR-- 30 Charmed:

IQ -- 30 Dragon 323/372

WIS-- 29

DEX-- 30

END-- 30

LEVEL- 372

This Trip:

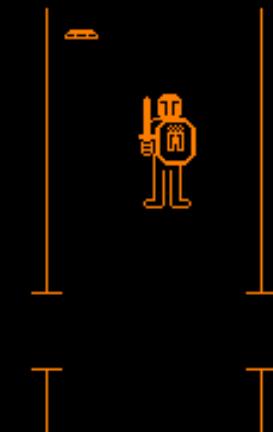
Magic-- 11+

Cleric- 11

On Level: 1

Hits-2598/3134

Gold- 866



\$ 3 in gold!!

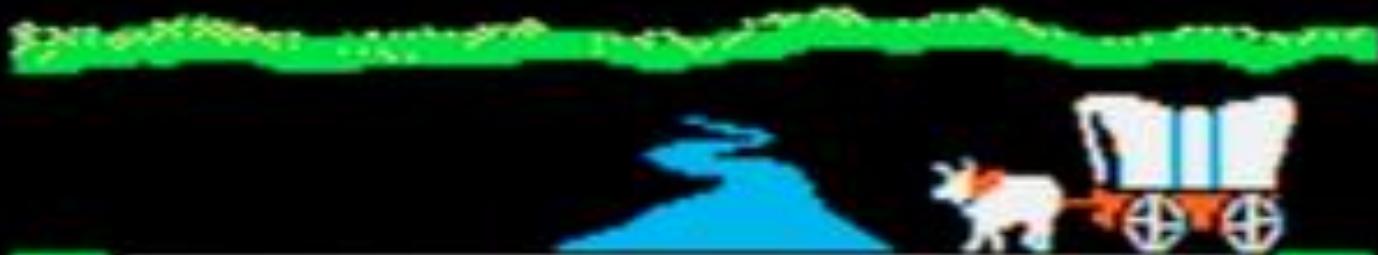
• +3 ♦ +2
• +3 ♦ +2
• +3 ♦

• ♀ ♀
• ♀ ♀ ♀ ♀ ♀ ♀
| of Fear
Warning |
Sorcery |
Healing |
Wizard's @
@ of Vision
3 Holy Water
3 Healing @
3 Vision @
3 Dragon Cnt
3 Undead Cnt
Genie ♀
@ of Elixir
@ Magic Oil
@ See Invis.
@ Protect+2
@ Power+2
@ Regener+3
@ Luck+2
@ Levitation
@ Invisible
@ X-Ray Vis.

dnd (Computer)

- Come and go from a multi-layer dungeon, fight monsters with weapons and spells, and hunt for the Grail.
- Title comes from the abbreviation D&D for Dungeons and Dragons.
- First computer role-playing game.
- First game to feature “bosses,” or more powerful monsters that must be fought at climactic moments.

Oregon Trail, 1974



You are now at the Kansas
River crossing. Would you
like to look around? ☺

Date: April 7, 1848

Weather: warm

Health: good

Food: 910 pounds

Next landmark: 0 miles

Miles traveled: 102 miles

Oregon Trail (Computer)

- Simulates a family of pioneers crossing the Western US
- One of the first educational games

Colossal Cave Adventure, 1976

```
PAUSE INIT DONE statement executed
o resume execution, type go. Other input will terminate the job.
o
xecution resumes after PAUSE.
WELCOME TO ADVENTURE!! WOULD YOU LIKE INSTRUCTIONS?
```

SOMEWHERE NEARBY IS COLOSSAL CAVE, WHERE OTHERS HAVE FOUND
FORTUNES IN TREASURE AND GOLD, THOUGH IT IS RUMORED
THAT SOME WHO ENTER ARE NEVER SEEN AGAIN. MAGIC IS SAID
TO WORK IN THE CAVE. I WILL BE YOUR EYES AND HANDS. DIRECT
ME WITH COMMANDS OF 1 OR 2 WORDS.
(ERRORS, SUGGESTIONS, COMPLAINTS TO CROWTHER)
(IF STUCK TYPE HELP FOR SOME HINTS)

YOU ARE STANDING AT THE END OF A ROAD BEFORE A SMALL BRICK
BUILDING . AROUND YOU IS A FOREST. A SMALL
STREAM FLOWS OUT OF THE BUILDING AND DOWN A GULLY.

Colossal Cave Adventure (Computer)

- Explore an underground cave network and solve puzzles by typing simple English commands.
- Created by Will Crowther to connect with his two daughters after his divorce.
- First adventure game and first interactive fiction.
- In general, early PC games were part of hacker culture and not yet an industry.

Sea Wolf, 1976



Sea Wolf (Arcade)

- Concept: Pilot a military submarine.
- Use a periscope to aim.
- First game to feature a high score list.

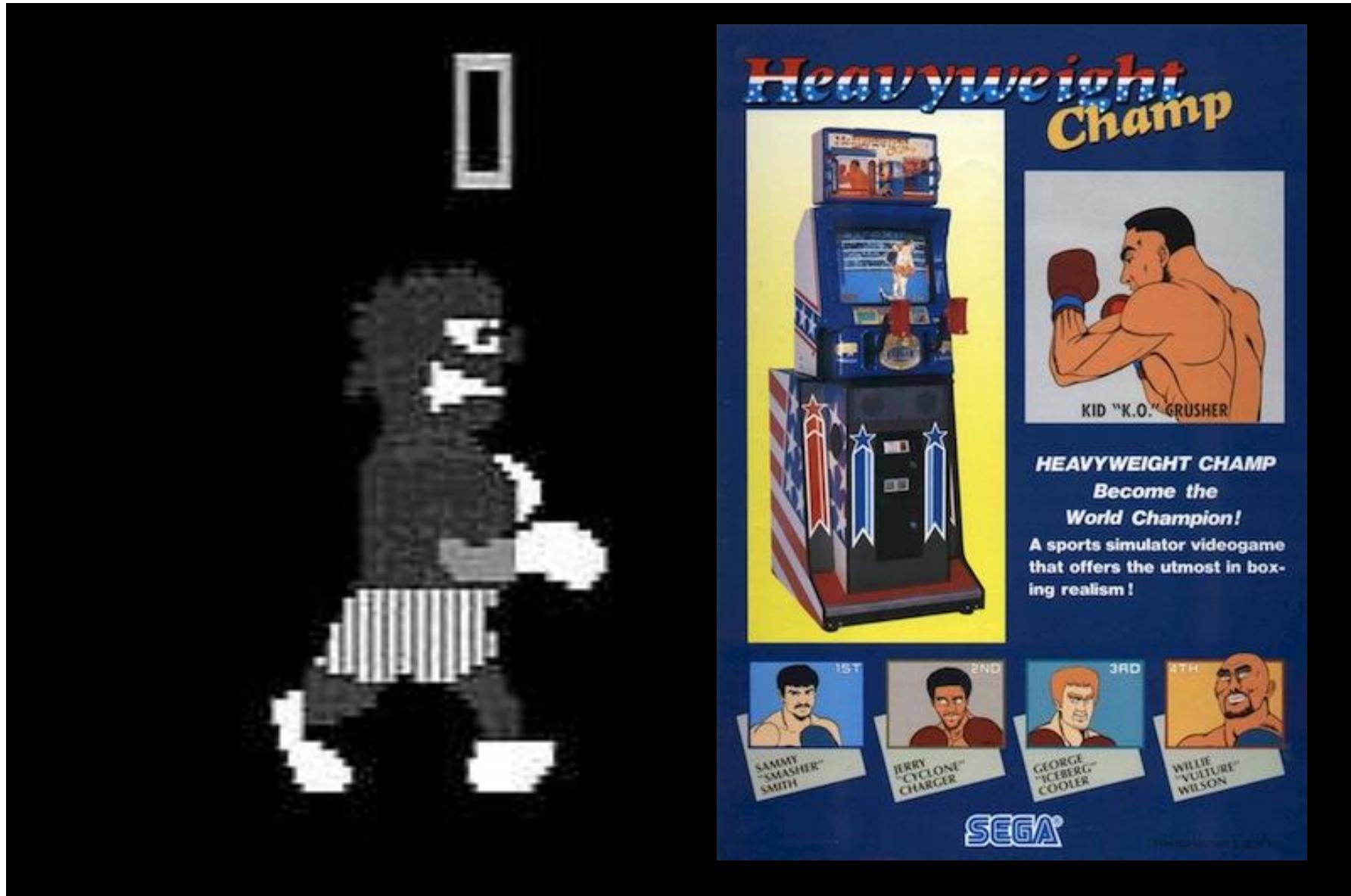
Breakout, 1976



Breakout (Arcade)

- Single player version of Pong in which the ball is used to break blocks.
- Steve Jobs, working for Atari, developed the game with the help of Steve Wozniak. The two would later found Apple Computer together.
- When the Japanese company Namco couldn't import *Breakout* machines fast enough to satisfy demand, the Yakuza began manufacturing illegal copies.

Heavyweight Champ, 1976



Heavyweight Champ (Arcade)

- Developed by SEGA.
- Boxing match using boxing glove controllers.
- First game to feature person-to-person violence.
- First fighting game.

Discussion

- Interesting and creative interfaces
- Role of violence
- First copyright debates and lawsuits
 - (Copyright protects the expression of an idea, not the idea itself.)

Atari 2600, 1977



Atari 2600

- Cost \$100,000,000 to develop.
- Sold for \$249.
- Eventually sold about 30,000,000 units.
- Popularized the use of storing game code separate from the machine itself.
- *Not* the most powerful hardware on the market.
- Initially successful because of its games.
- No quality control for games, so it did not age well.

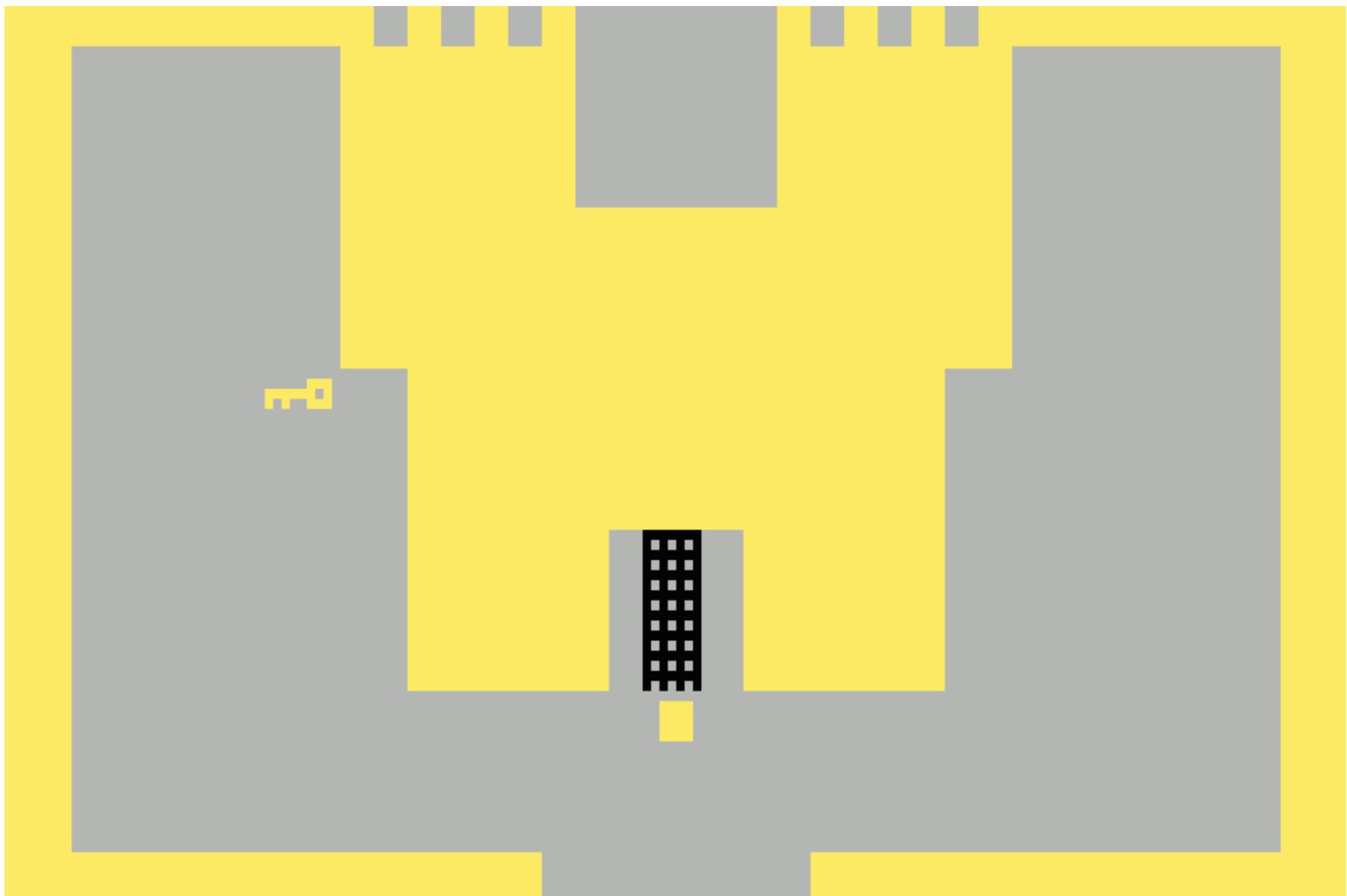
Space Invaders, 1978



Space Invaders (Arcade)

- Tomohiro Nishikado of Taito
- Aliens were originally going to be humans, but this was vetoed by upper management.
- Caused a shortage of ¥100 coins that prompted the Bank of Japan to investigate Taito.
- Arguably the first Shoot ‘Em Up (or Shmup)

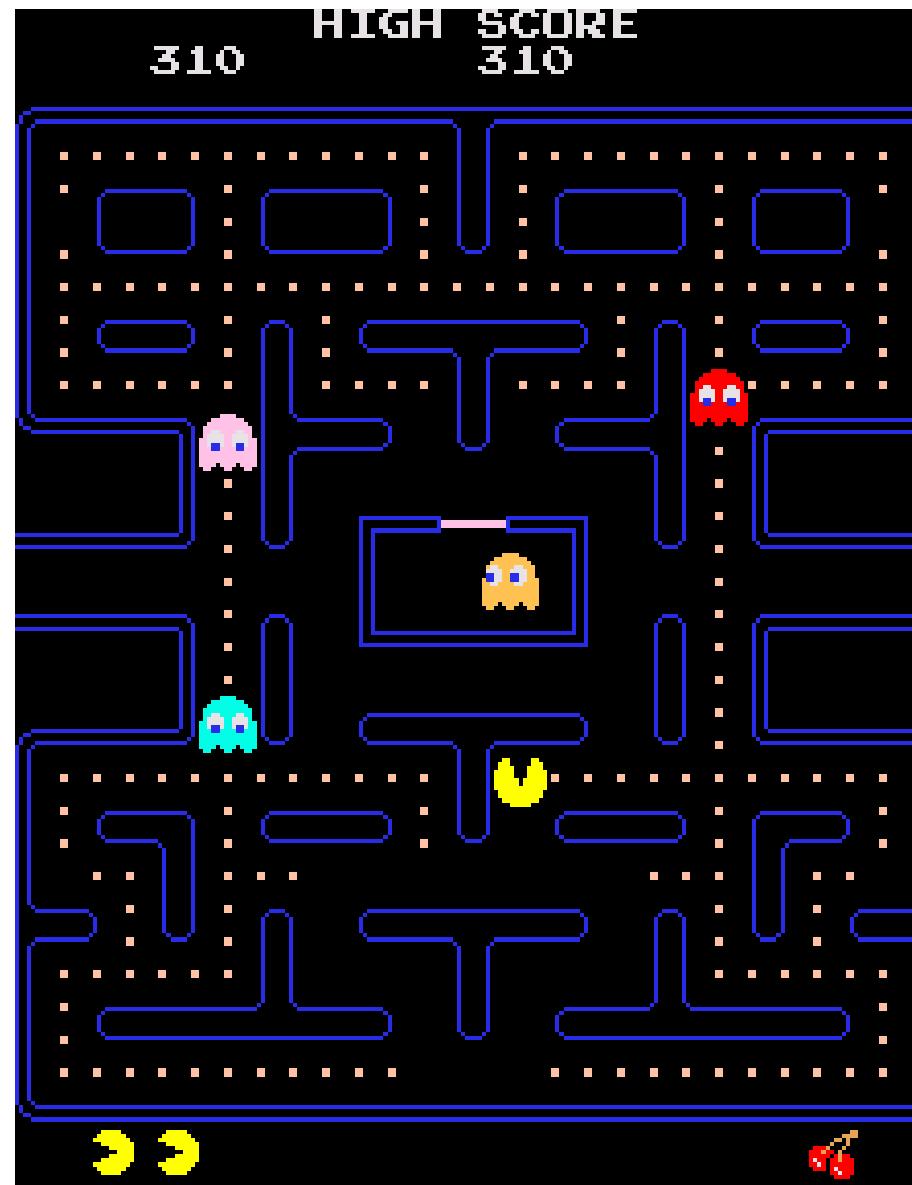
Adventure, 1979



Adventure (Atari 2600)

- Explore 29 screens, pick up items, fight dragons, and search for the grail.
- Graphical port of *Colossal Cave Adventure*
- Creator by Warren Robinet, angry that Atari did not credit designers, created a 30th room that read “Created by Warren Robinet,” which is often considered the first Easter Egg.

Pac-Man, 1980



Pac-Man (Arcade)

- Navigate a maze eating dots and avoiding ghosts. Power Pills allow you to eat the ghosts for a short period of time.
- Initially designed to appeal to women because women like eating desserts.
- The game did attract an unusually high number of female players and helped to make arcades popular in the US.
- Spawning real-world products such as lunchboxes and a cartoon show.

Defender, 1980



Defender (Arcade)

- Designed for thrill-seeking males and dubbed a “sperm game” by its designer, Eugene Jarvis.
- Extremely complex and difficult to play.
- Aimed at experts; not novice-friendly.
- Perhaps this game is the beginning of the distinction between hard-core and casual players.

Essex MUD, 1980

Telnet british-legends.com

*n
Path.
You are standing on a path which leads off a road to the north, to a cottage south of you. To the west and east are separate gardens.

*w
Flower garden.
You are in a well-kept garden. There is an unexpectedly sweet smell here, and you notice lots of flowers. To the east across a path there is more garden.

*w
Cliff.
You are standing on the edge of a cliff surrounded by forest to the north and a river to the south. A chill wind blows up the unclimbable and unscaled heights. At the base of the cliff you can just make out the shapes of jagged rocks.

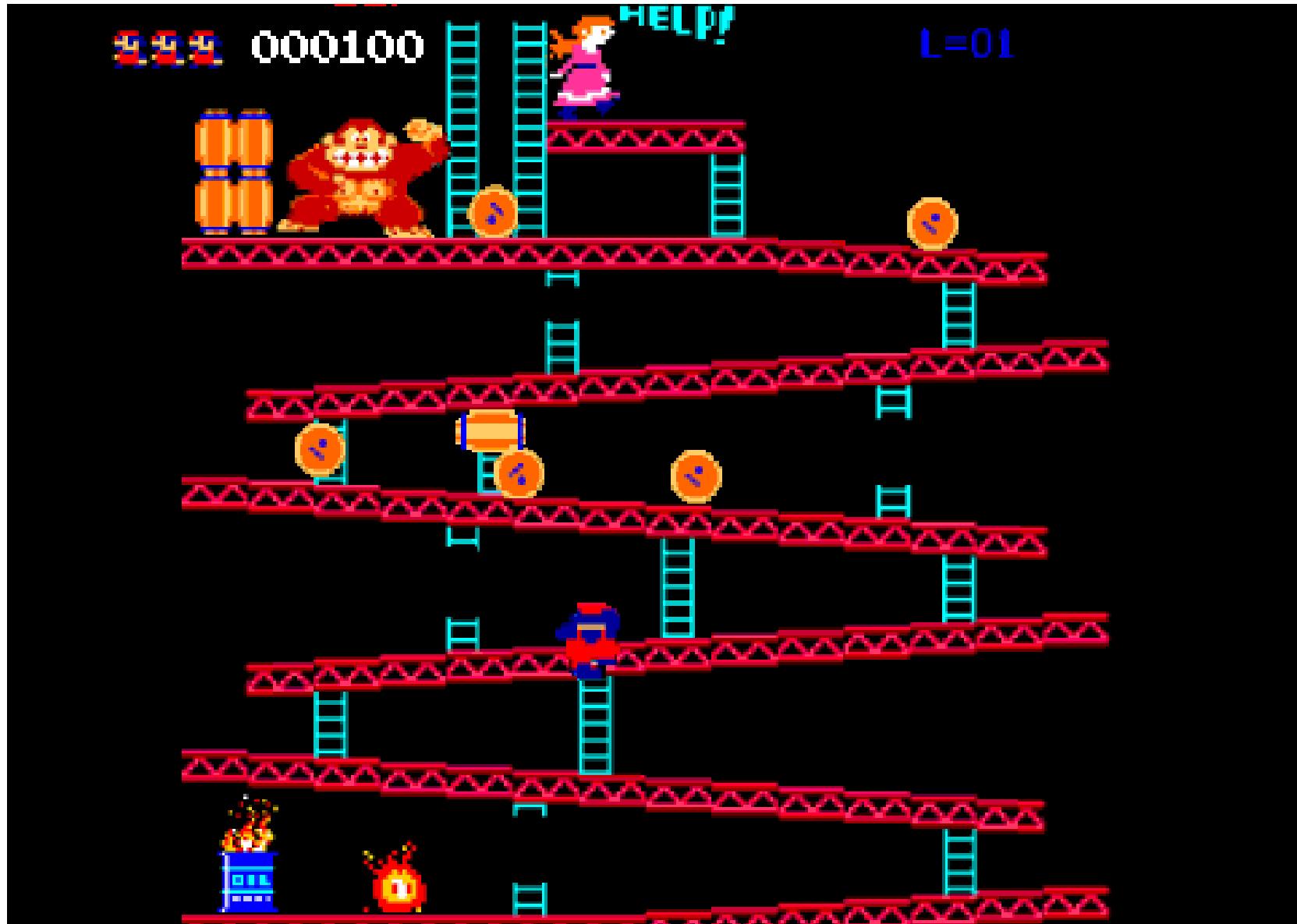
*w
As you approach the edge of the cliff the rock starts to crumble. Hurriedly, you retreat as you feel the ground begin to give way under your feet!

*leap
You are splattered over a very large area, or at least most of you is. The rest of your remains are, evn now, being eaten by the seagulls (especially your eyes). If you'd have looked properly before you leaped you might have decided not to jump!
Persona updated.
Would you like to play again?
:

Essex MUD (Computer)

- A multi-player variant of games like *Colossal Cave Adventure* available for multiple people to play simultaneously over the internet.
- Perhaps the first online multi-player virtual world
- MUD = Multi-User Dungeon
- Later MUD's would become the precursors to Massively-Multiplayer Online Role Playing Games (MMORPG's).

Donkey Kong, 1981



Donkey Kong (Arcade)

- Climb a series of platforms, avoiding rolling barrels, to rescue the princess from a stubborn (donkey) gorilla.
- Shigeru Miyamoto of Nintendo
- Nintendo's first major success in video games
- First Platformer game
- Protagonist Jumpman was eventually renamed to Mario after Nintendo's American office landlord, who allows the company to postpone paying its rent before the release of this game.

Donkey Kong (cont)

- Both Mario and Donkey Kong went on to become successful Nintendo game franchises.
- Atari passed up the rights to a console version of this game, helping to bring about its downfall in the North American video game crash of 1983.
- Universal Studios tried to sue Nintendo over the use of King Kong, but lost due to King Kong being in the public domain.

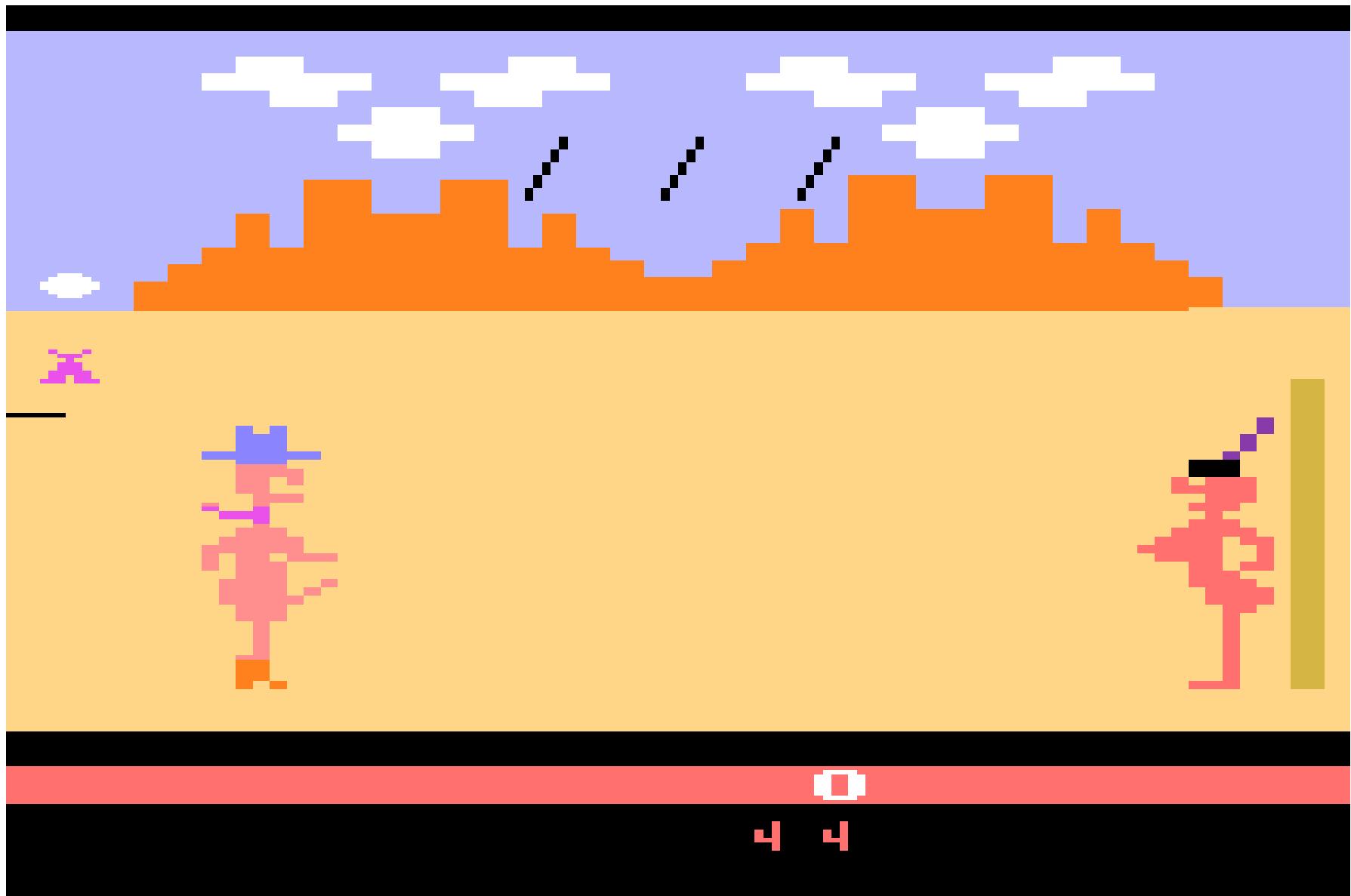
E. T. the Extra-Terrestrial, 1982



E.T. the Extra-Terrestrial (Atari 2600)

- Atari management paid \$25,000,000 for the rights to make a game based on the blockbuster movie, but did not consult any of the engineers who would design it.
- Game had to be made in 5 weeks in order to make it to shelves in time for Christmas, 1982.
- Most of the 5,000,000 cartridges went unsold and were eventually dumped into a New Mexico landfill.
- Frequently cited as one of the worst games ever made, and contributed to the 1983 crash.

Custer's Revenge, 1982



Custer's Revenge (Atari 2600)

- Dodge arrows while moving closer to rape a bound Native American woman.
- Banned in Oklahoma City.
- Fueled the debate about violence and other explicit content in games that led to the North American video game crash of 1983.

Discussion

- Sexism in games and gamer culture

Pitfall! 1982

1 899
II 19 : 38



ATARI

Pitfall! (Atari 2600)

- Run through a jungle from left to right avoiding hazards and collecting treasure.
- First use of Procedural Content Generation (PCG) in games.
- 256 screens created with only 50 bytes of code.

North American Video Game Crash

- Between 1982 and 1985, the bottom fell out of the console video game market.
- Estimates say the market lost between 50% and 95% of its revenue.
- Consumers debated the effect of violence and explicit content in games.
- Many thought video games were a fad that had passed.

ZX Spectrum and Commodore 64, 1982



Personal Home Computers

- The early 1980's saw an explosion of commercially available home computers.
- The ZX Spectrum (UK) and the Commodore 64 (US) were especially affordable, and thus attractive to most home users.
- PC games move from universities into the home.
- As the bottom dropped out of the console video game market, PC games increased in popularity.

Microsoft Flight Simulator, 1982



Microsoft Flight Simulator (PC)

- One of the earliest successful Flight Simulator programs
- Sequels still developed to this day

Dragon's Lair, 1983



Dragon's Lair (Arcade)

- Experience a visually stunning fantasy environment to rescue a maiden by performing quicktime events.
- Rick Dyer of Advanced Microcomputer Systems and Don Bluth of Disney
- First game released on Laserdisk
- Advanced players' expectations of graphics.
- Early example of exploratory play to see how many ways you could die.

Nintendo Famicon, 1983 / Nintendo Entertainment System, 1985



Nintendo Famicom / Nintendo Entertainment System (NES)

- Nintendo CEO Hiroshi Yamauchi told investors that the games, not the system, would be the source of profit.
- Nintendo was very protective of their license and allowed few third party games.
- The collapse of the console game industry in North American opened the market to Japanese developers.
- By 1985 the Famicom had rebuilt consumer confidence in console games, and Nintendo had as much as 90% of the market.

The Black Onyx, 1983



The Black Onyx (PC)

- A computer Role Playing Game based on Dungeons and Dragons.
- Created by American ex-patriot Henk Rogers while living in Japan.
- Gave rise to the Japanese RPG, or JRPG.
- First game to use horizontal bar that fills or lowers to indicate character health.

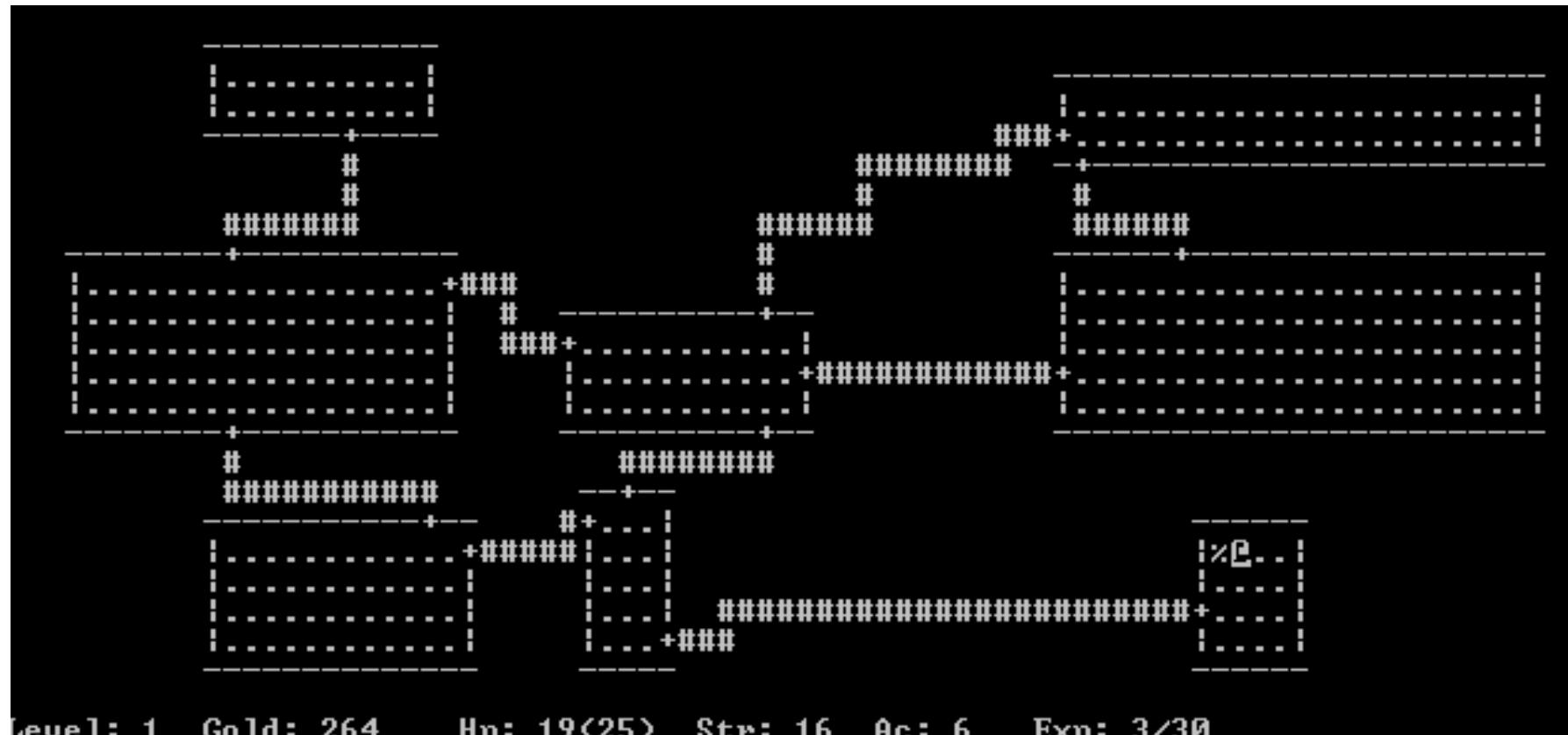
Ultima III: Exodus, 1983



Ultima III: Exodus (PC)

- Explore a large fantasy world and defeat foes using might and magic.
- Grid-based combat laid the foundations of the Tactical RPG sub-genre
- Included innovative open world mechanics
 - Bribe guards to make them leave their posts
 - Steal from townspeople
 - Fight townspeople, prompting guards to chase you

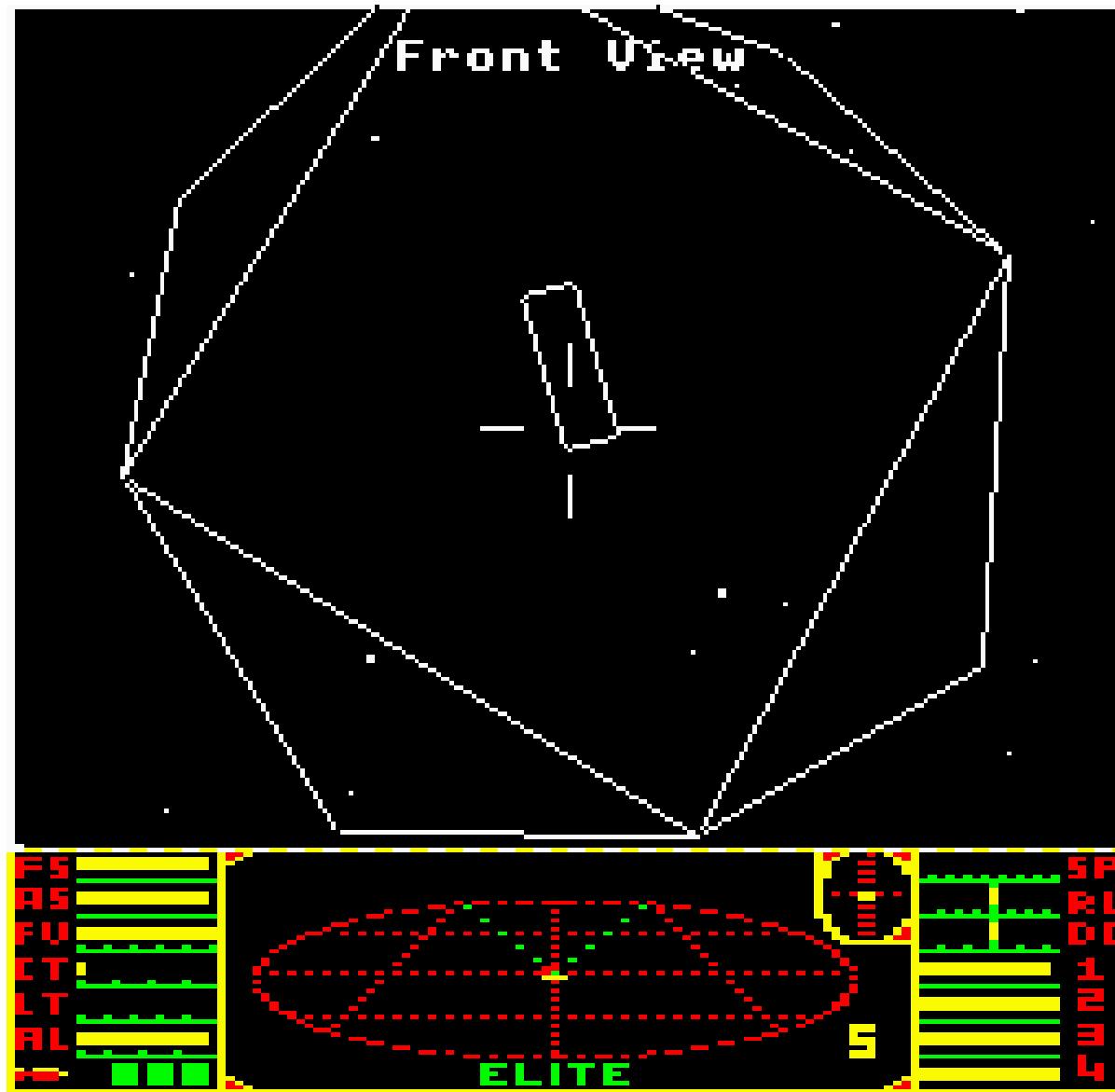
Rogue, ~1984



Rogue (PC)

- Descend through a randomly-generated dungeon fighting monsters in your quest for treasure.
- Established the Roguelike genre
- One of the most notable example of Procedural Content Generation (PCG) in games

Elite, 1984



Elite (PC)

- Explore a massive, randomly generated universe. Trade, fight, and explore to earn money and upgrade your spaceship.
- One of the first games to use 3D graphics with hidden line removal.
- Another important early use of Procedural Content Generation in games.
- One of the first open world games

Gauntlet, 1985



Gauntlet (Arcade)

- 4 players with different abilities cooperate to descend through a series of dungeons, but must compete for food and treasure.
- First class-based multi-player cooperative game

Super Mario Bros. 1985



Super Mario Bros. (NES)

- Move from left to right, jumping on platforms and stomping on enemies while collecting powerups.
- Shigeru Miyamoto (game) and Koji Kondo (music) plus others at Nintendo
- Interface innovation: jump button rather than using the up button on a direction pad
- First use of the term “side-scroller”

Super Mario Bros. (cont)

- At over 40,000,000 units sold, it remained the best selling video game for over 20 years.
- At one point, Mario was more recognizable to US children than Mickey Mouse.

The Legend of Zelda, 1986



The Legend of Zelda (NES)

- Shigeru Miyamoto's attempt to create an action-adventure game without the dark aesthetic of Dungeons and Dragons
- One of the first console games that allowed the player to save progress using battery-powered memory built into the cartridge
- The size of the game world prompted Nintendo management to demand that the game be published with a 1-800 help line. The phone operators quickly grew from 4 to 200.

Dragon Quest, 1986



Dragon Quest (NES)

- Yuji Horii's attempt to make an RPG that was more typical of Japan.
- Art by Akira Toriyama (of *Dragonball* fame)
- Birth of the JRPG sub-genre:
 - Colorful landscapes
 - Linear story
 - Colloquial dialog

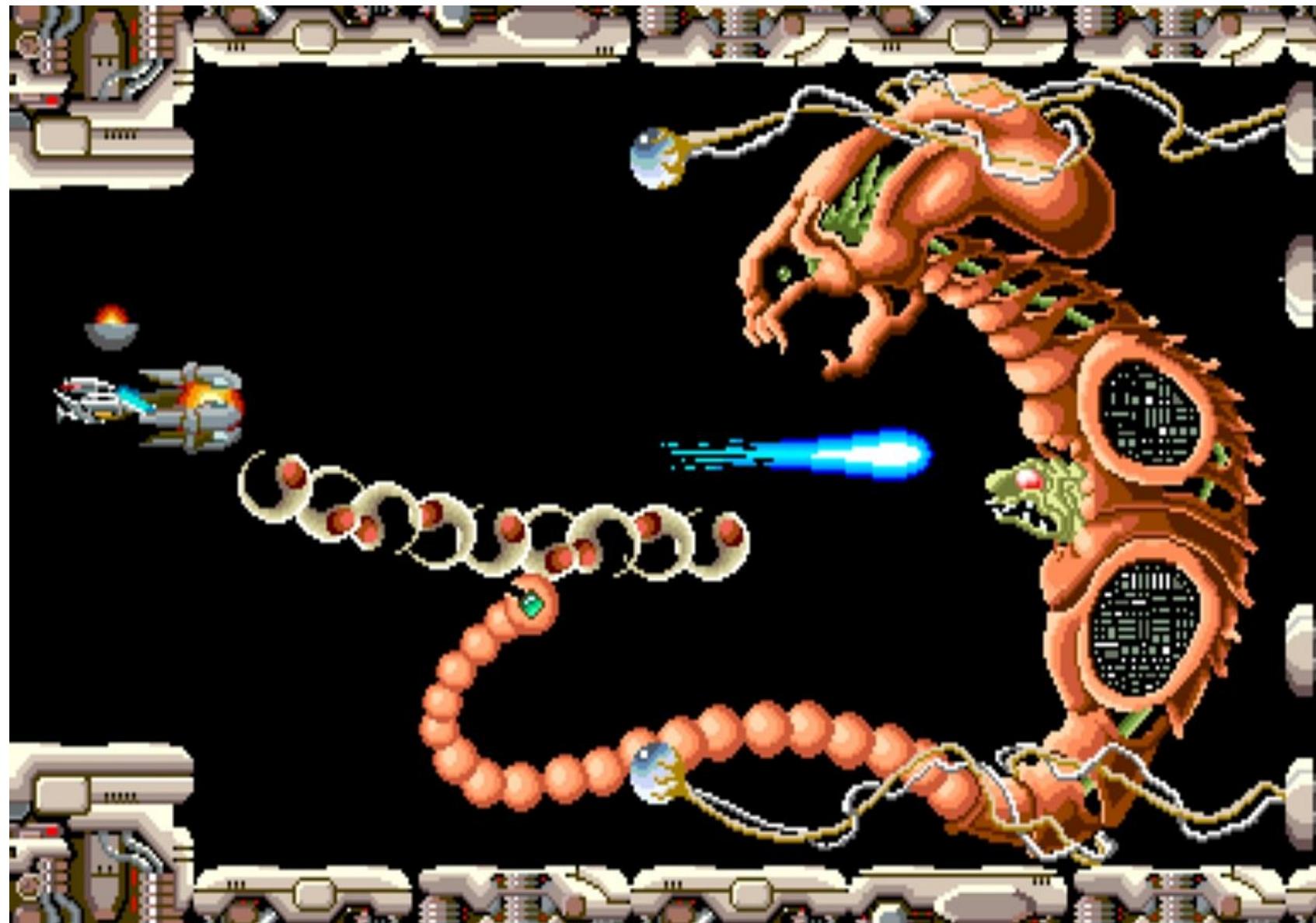
Metal Gear, 1987



Metal Gear (NES)

- Sneak around a military base, avoiding guards and fighting futuristic robots.
- Pioneered the Stealth Action sub-genre

R-Type, 1987



R-Type (Arcade)

- Fly from right to left collecting powerups and shooting down waves of enemies.
- Marks the evolution of the Shoot ‘Em Up genre into the Bullet Hell sub-genre.

Manic Mansion, 1987



Use
Push
Pull
Give
key
dime

Open
Close
Read

Walk to
Pick up
What is

New Kid
Unlock
Use

Turn on
Turn off
Fix

record
paint remover

Manic Mansion (PC)

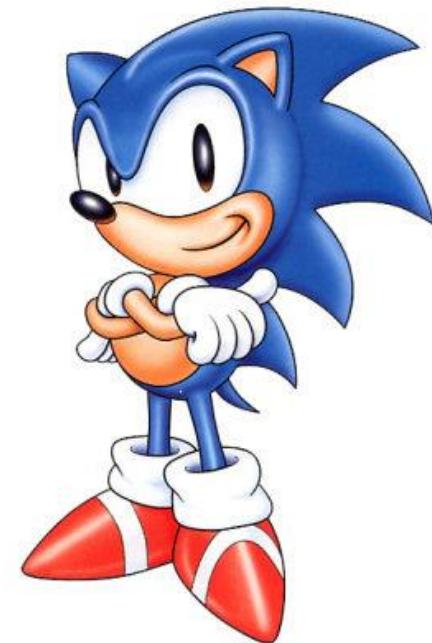
- Explore a humorous haunted mansion with a team of witty characters to collect items that allow you to solve puzzles.
- Ron Gilbert of LucasArts
- Changed the interface from arcane text parsing to a graphical menu of verbs
- The SCUMM engine developed to make the game was later used for many other adventure game titles.

Sega Mega Drive, 1988 / Sega Genesis, 1989

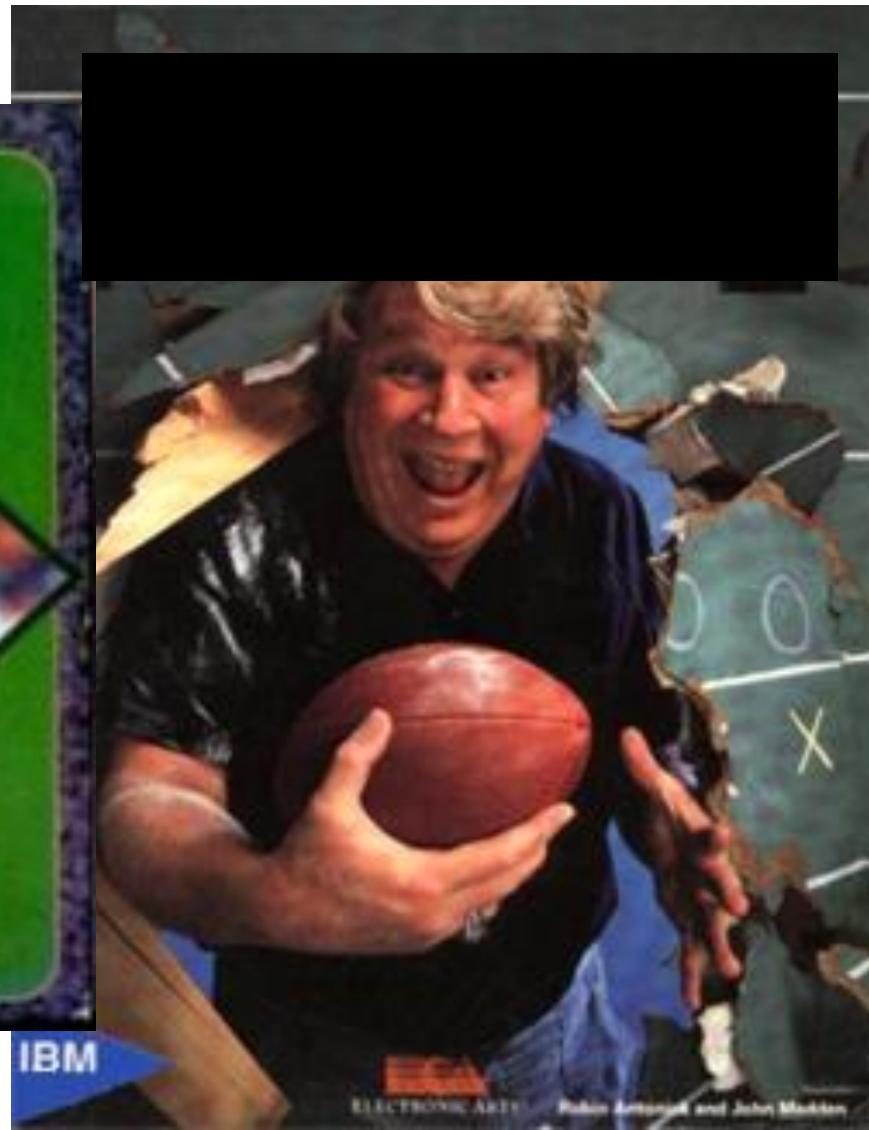


Sega Mega Drive

- More powerful hardware (16 bit vs. the 8 bit Famicom), better graphics, and better sound
- Allowed Sega to challenge Nintendo, which owned 90% of the market at the time
- Add-on allowed backwards compatibility for the first time in consoles
- Introduced Sonic the Hedgehog to rival Mario as a system mascot in 1991



Earl Weaver Baseball, 1987 and John Madden Football, 1988



Earl Weaver Baseball (PC) and *John Madden Football* (Mega Drive)

- Established genre conventions for Sports games, including multiple camera angles and celebrity endorsements.
- Laid the groundwork for Electronic Arts' Sports series
- Teams were fictional; EA had not yet negotiated the rights to use real teams and players.

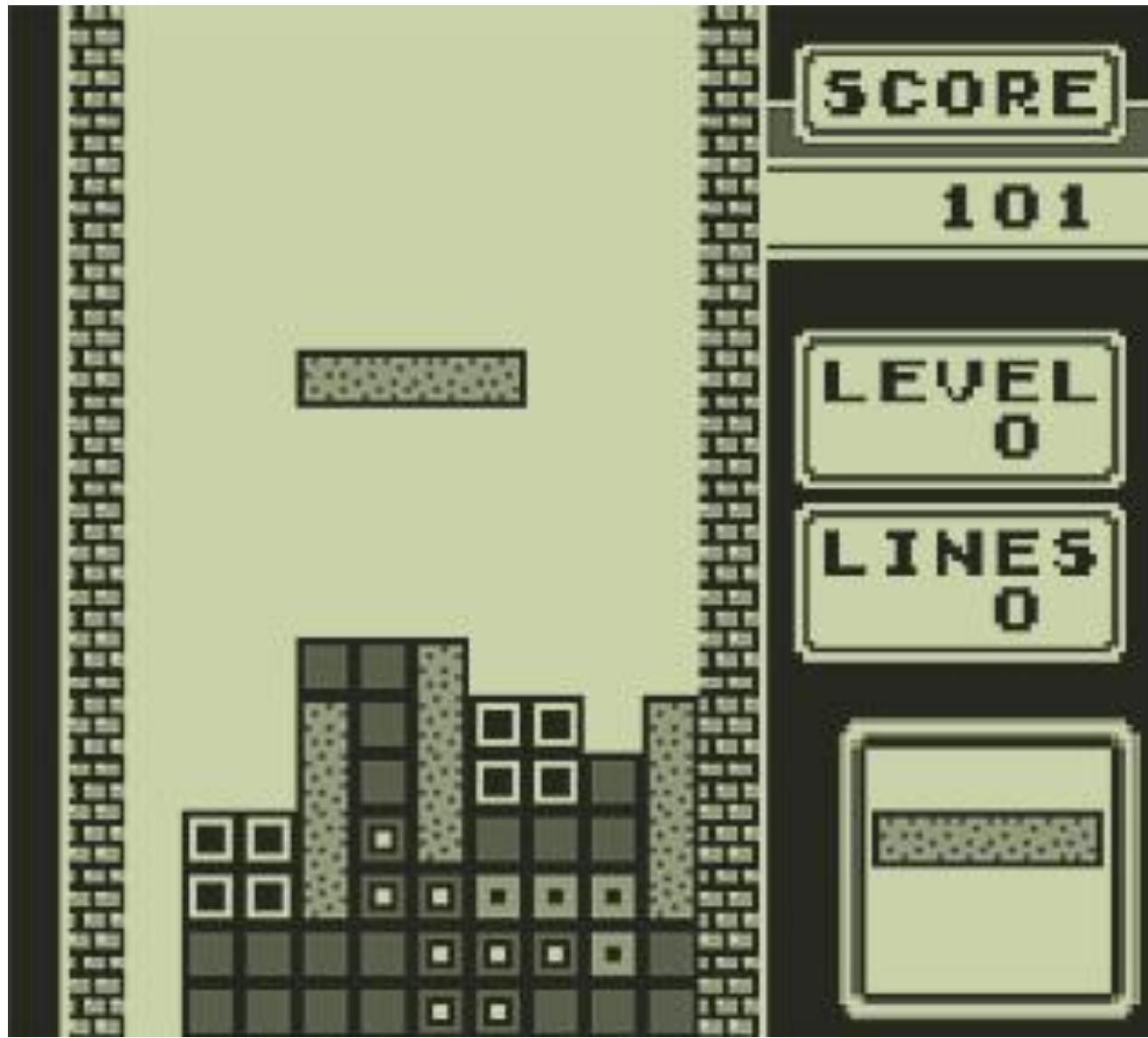
Nintendo Game Boy, 1989



Nintendo Game Boy

- First majorly successful handheld game system
- Hardware was already (intentionally) obsolete when it was released to keep manufacturing costs down
 - Monochrome graphics
 - Poor speaker
 - Longer battery life

Tetris, 1984



Tetris (various)

- Arrange falling pieces made of 4 squares into lines to make space on the screen.
- Alexey Pajitnov in Russia
- Development was delayed because Alexey spent too much time playing his own game.
- Perhaps the most ported game of all time
- Helped solidify the Game Boy as the undisputed king of handheld gaming

Discussion

- Console wars: hardware vs. games

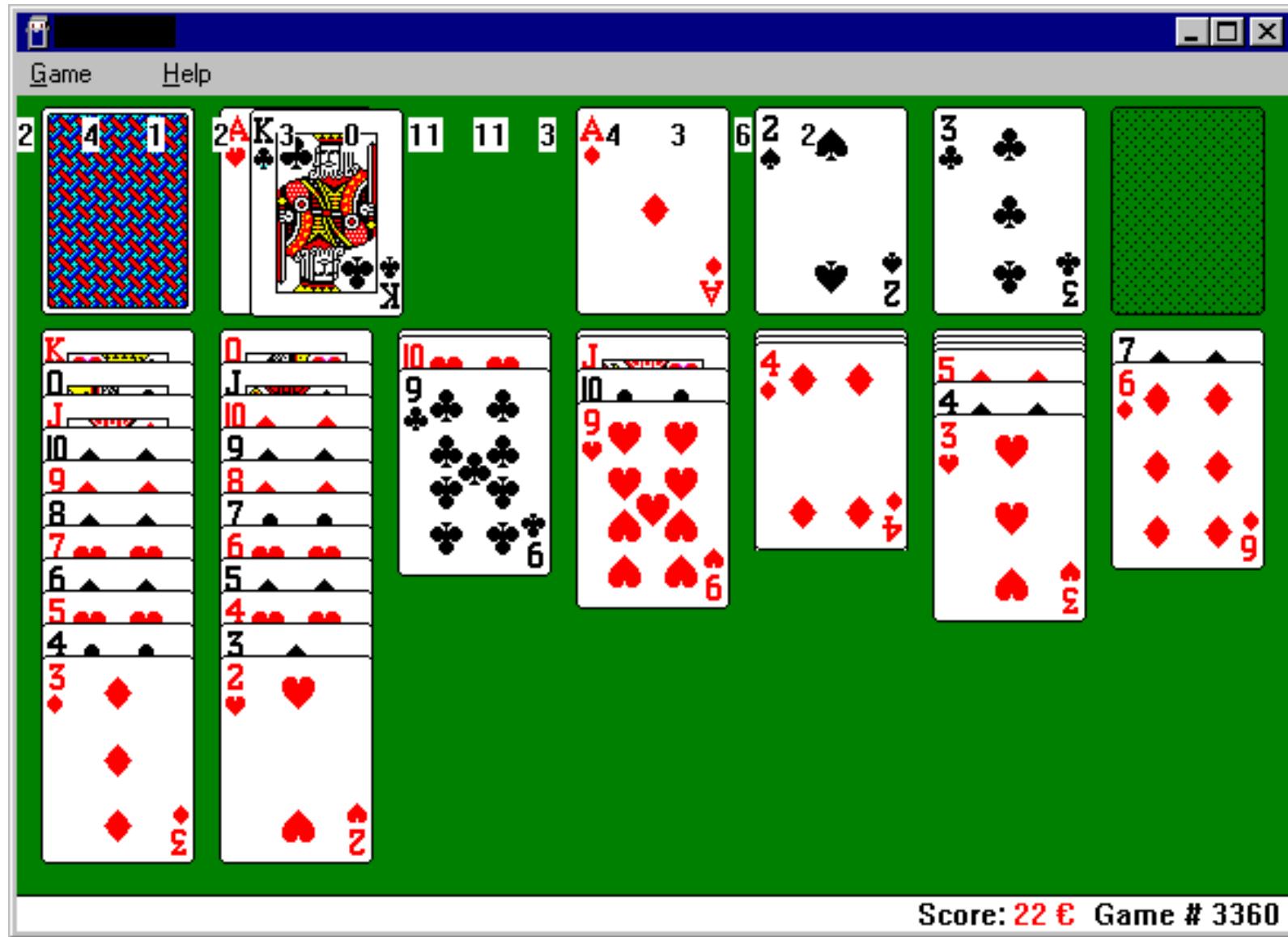
SimCity, 1989



SimCity (PC)

- Plan a developing city and recover from disasters.
- Designer Will Wright enjoyed the level editor for *Raid on Bungling Bay* more than the game itself, which inspired this game.
- One of the first successful Sandbox games

Microsoft Solitaire, 1990



Microsoft Solitaire (PC)

- Solitaire on the computer
- Meant to introduce users not familiar with graphical user interfaces to Windows 3.0 and input devices like the mouse
- One of the earliest successful casual games

The Secret of Monkey Island, 1990



The Secret of Monkey Island (PC)

- Help young Guybrush Threepwood become a Caribbean pirate and rescue the mayor of the island from an evil ghost pirate.
- Advanced the art, animation, and music of adventure games
- Considered a shining example of the adventure game genre
- Puzzles were designed to be more intuitive, allowing players to deduce what to do.
- Player cannot die, only get stuck.

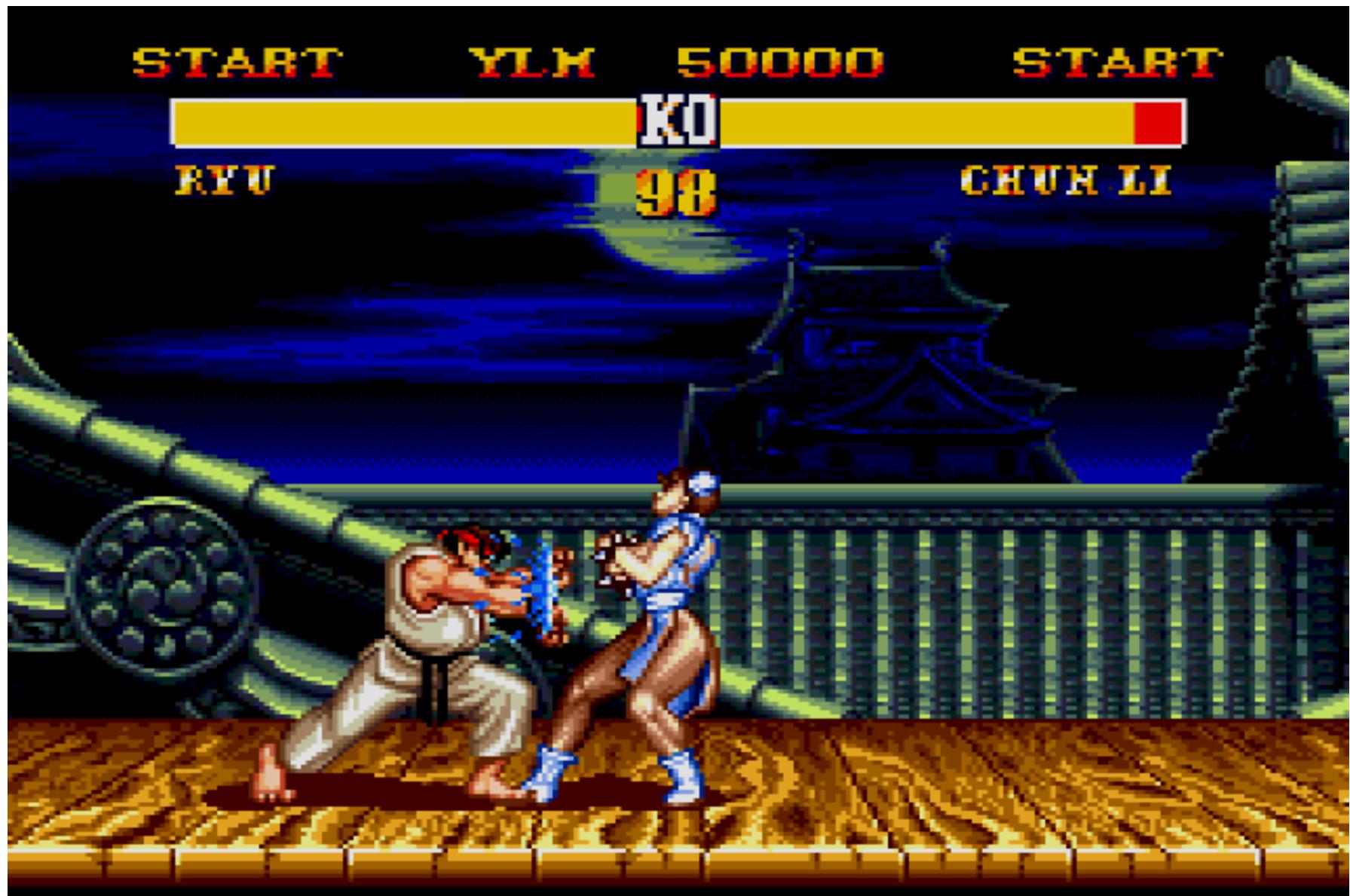
Nintendo Super Famicom 1990 / Super Nintendo Entertainment System, 1990



Nintendo Super Famicom / Super Nintendo Entertainment System

- 16 bit system with better hardware, color, music, and graphics rendering
- Direct competitor of the Sega Mega Drive
- Japanese launch involved much secrecy and cultural uproar
 - 1.5 million systems were pre-ordered, but only 300,000 were manufactured by the release date
 - Supposed Yakuza plot to hijack the delivery trucks
- Eventually overtook the Mega Drive thanks for its high quality games

Street Fighter II, 1991



Street Fighter II (Sega Mega Drive)

- Two players fight using karate and high-power special moves until one is defeated.
- The prequel, *Street Fighter*, introduced the genre convention of performing complex inputs to perform secret special attacks.
- Established genre convention of using combination attacks (combo's) that an opponent could not block

Dune II, 1992



Dune II (PC)

- Control an army of civilian and military units to gather resources, unlock new technology, and build an army, and eliminate the enemy.
- Arguably the first Real Time Strategy game
- The setting of a later, similar game by the same studio, *Command and Conquer*, was changed from Medieval to futuristic and included terrorist enemies to tie in with sentiments about the Gulf War.

Discussion

- Console Games
 - Still rooted in their arcade origins
 - Developed various actions / adventure games
- PC Games
 - Explored new kinds of games and play (e.g. casual)
 - No standardized hardware

Wolfenstein 3D, 1992



Wolfenstein 3D (PC)

- Navigate a maze-like bunker shooting Nazis and hunting for Hitler.
- One of the first games to use textured 3D surfaces
- Based on an earlier stealth action game *Castle Wolfenstein*, but stealth was removed in favor of more shooting and a faster pace.
- Spurred controversy over its gratuitous gun violence and use of Nazi imagery
- Helped define the First Person Shooter genre

Mortal Kombat, 1992



Mortal Kombat (various)

- Fighting game featuring realistic graphics and gory combat
- Used photos of real actors to create the sprites and animation
- Graphic depictions of blood and death caused US senators Joseph Lieberman and Herb Kohl to launch an investigation into whether or not video games were corrupting society.

Gunstar Heroes, 1993



Gunstar Heroes (Sega Mega Drive)

- Twin action heroes combine four simple weapons to create devastating barrages of gunfire to fight off evil overlords.
- A shining example of a side-scrolling Shoot ‘Em Up
- Remembered for its creative and cinematic boss battles

Myst, 1993



Myst (PC)

- Explore a vast, empty island full of puzzles as you learn about the eerie story of its previous inhabitants.
- Use of the PC's new CD-ROM hardware allowed the game to deliver a new level of photo-realism.
- Remained the top selling video game for 9 years

Super Metroid, 1994



Super Metroid (SNES)

- Explore the dark, lonely ruins of an alien planet to discover upgrades to your spacesuit that allow further exploration and combat.
- Samus Aran is one of the best-known female video game protagonists and one of the only Nintendo characters to wield a gun.
- Typified the aesthetic of many survival horror games to come
- Founded the Metroidvania subgenre along with *Castlevania: Symphony of the Night*

Marathon, 1994



Marathon (PC)

- Introduced or was an early adopter of innovations in First-Person Shooters:
 - Ability to look in any direction
 - Emphasis on story
 - Friendly Non-Player Characters (NPC's)
 - Different game modes, such as King of the Hill

Sony PlayStation, 1994



Sony PlayStation

- Originally, Nintendo and Sony has planned to create a Super Famicom with a CD-ROM, but Nintendo backed out of the deal in a way that was publically embarrassing to Sony.
- Development was driven by both technology and a desire for revenge.
- Excellent 3D graphics and the large storage of a CD-ROM made the console a success.

Nintendo Virtual Boy, 1995



Nintendo Virtual Boy

- Stereoscopic 3D created with headache-inducing red graphics
- Nintendo's only hardware failure
- Ended the career of Gunpei Yokoi
- Stereoscopic 3D was eventually used by the extremely successful Nintendo 3DS years later.

Pokémon, 1996

BULBASAUR

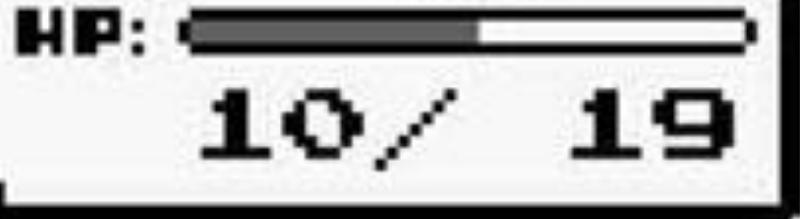
:L5

HP: 



SQUIRTLE

:L5

HP: 
10 / 19

Pokémon (Game Boy)

- Discover, catalog, capture, trade, train, and battle hundreds of pocket monsters.
- As of September 2014, there are 719 Pokémons
- The Game Boy was outdated at launch and was now 7 years old, nearing the end of its life.
- Linear, simplistic story
- Low resolution graphics
- Nintendo's second most valuable franchise after Mario and one of the most valuable in the history of video games

Resident Evil, 1996



Resident Evil (PlayStation)

- Explore a dark mansion infested with zombies while managing meager resources.
- Limited ammunition and save locations heightened pressure on the player.
- Used cinematic techniques to create suspense:
 - Sound of footsteps off camera
 - Blind spots
- Solidified the Survival Horror genre

Quake, 1996



Quake (PC)

- First-person shooter in the vein of Wolfenstein 3D and Doom
- Notable for its advanced in 3D rendering
- Popularized multi-player online play for this genre
- Allowed players to modify the game, making *Quake* perhaps the first popular 3D game engine

Nintendo 64, 1996



Nintendo 64

- Nintendo's move into 3D gaming
- Various factors drove game makers to the Sony PlayStation:
 - Few N64 games
 - Expensive licensing
 - Cartridges expensive to manufacture relative to Sony's CD-ROM-based system

Super Mario 64, 1996



Super Mario 64 (N64)

- Run, jump, and fly through a 3D Mario world to collect stars and free the princess.
- Intense focus on the mechanics of controlling Mario make it both a fun toy and engaging game.
- Progress is measured in stars, which are awarded for various reasons and can be pursued in a non-linear fashion, making the game appealing to many kinds of players.
- Manipulation of the camera was often awkward.

Meridian 59, 1996



Meridian 59 (PC)

- First Massivly Multi-Player Online Role Playing Game (MMORPG)
- Helped define the genre:
 - Navigating a shared 3D fantasy world
 - Monthly subscription fee
 - Factions, political groups defined by the game's story
 - Player-run guilds that gave members a sense of belonging and facilitated social interaction
 - Persistent world features, such as the ability to capture and lose guild halls

Tomb Raider, 1996



Tomb Raider (various)

- Action puzzle game where you explore ancient tombs, shoot monsters, and collect treasure
- Protagonist Lara Croft is one of the best-known female protagonists and features typically impossible body proportions.
- Lara appeared in a U2 concert, as a clothing model, and on the covers of various non-game-related magazines. These out-of-game appearances helped to bring gaming into mainstream culture.

Diablo, 1996



Diablo (PC)

- Descend through layers of dungeons, fighting monsters and collecting loot until facing the devil himself.
- Eschewed number-crunching and complex turn-based combat typical of RPG's at this time
- One of the first and most successful Action RPG's, as well as the Hack-and-Slash sub-genre
- Dungeons are procedurally generated.
- Online hub Battle.net made online play easier and more accessible.

PaRappa The Rapper, 1996



PaRappa the Rapper (PlayStation)

- First popular sound-based Rhythm game

Final Fantasy VII, 1997



Final Fantasy VII (PlayStation)

- Heroes ban together to save the planet's life energy from an giant corporation and a megalomaniac super soldier.
- Popularized the JRPG in the US
- Pushed the envelope of cinematic quality
 - Huge 3D world
 - Extensive and complicated story
 - Over 40 hours of cinematic cut scenes
 - Hollywood budget of \$45,000,000

Goldeneye 007, 1997



Goldeneye 007 (N64)

- Relive the events of the James Bond film *Goldeneye* in a first-person shooter.
- Brought the First-Person Shooter to consoles
- Considered a shining example of the First-Person Shooter genre
- Best-selling Nintendo 64 game in the US

Ultima Online, 1997



Ultima Online (PC)

- Popularized the MMORPG
- Features:
 - Item crafting
 - Player vs. Player combat
 - Persistent player housing

Fallout, 1997



Fallout (PC)

- Explore California in the wake of the nuclear apocalypse in search of a way to save your dying community of survivors.
- A shining example of early open-world RPG's
 - Different ways to complete a quest
 - NPC's react differently based on your history

Gran Turismo, 1997



Gran Turismo (PlayStation)

- 3D racing game featuring real cars and accurate physics simulation
- Demonstrated the graphical potential of the PlayStation
- Includes both sports cars and more mundane vehicles, acting as an encyclopedic historical reference for cars.

Snake, 1998



Snake (Nokia Mobile Phones)

- Popularized (non-game-focused) mobile devices as a gaming platform

Legend of Zelda: Ocarina of Time, 1998



Legend of Zelda: Ocarina of Time (N64)

- Travel between the past and future of a mysterious a fairy-tale landscape to defeat an evil monster overlord.
- A shining example of the Action Adventure genre
- The highest-rated video game of all time according to Metacritic.com
- First game to use target locking

StarCraft, 1998



StarCraft (PC)

- Mine resources and build and army as one of three races in a battle to control the galaxy.
- A shining example of the Real Time Strategy genre
- Meticulously balanced
- Popularized competitive play, especially in South Korea
- Remains one of the best-selling and most popular video games to this day

Sega Dreamcast, 1998



Sega Dreamcast

- Sega's last console
- Moderately successful, but outshined by the PlayStation II
- Innovative features:
 - Modem for online play
 - 4 controller ports
 - Removable memory card with LCD display that could act as a simple handheld gaming device

Super Smash Bros. 1999



Moby Games

Super Smash Bros. (N64)

- Nintendo's best-known and most-loved characters duke it out in a multi-player fighting game.
- Moved the Fighting game genre away from combo's and into a more strategic realm

Tony Hawk's Pro Skater, 1999



Tony Hawk's Pro Skater (PlayStation)

- Do tricks on a skateboard to earn points.
- Physics is realistic but exaggerated
- Arrived at the height of the PlayStation's popularity and the resurgence of skateboarding
- A shining example of a personal Sport game

The Sims, 2000



The Sims (PC)

- Design virtual people and their virtual houses, and encourage them to make important life decisions.
- Advanced AI and Procedural Content Generation
- Designer Will Wright started work as early as 1993, but faced resistance from management.

The Sims (cont.)

- Popular among women—more women played than men
- Popularity lasted much longer than a typical game
- In 2002 *The Sims* displaced *Myst* as the best-selling PC game of all time.

Deus Ex, 2000



Deus Ex (PC)

- Guide a cybernetically-enhanced counter-terrorism police officer through a quagmire of moral choices while pursuing a conspiracy.
- Shining example of an early Action-Adventure game that blurring the lines between FPS, RPG, and Adventure game genres
- Complex story with many branches and multiple solutions to most challenges
- Frequently appears on lists of best PC games
- NYC prophetically missing World Trade Center

Counter Strike, 2000



\$ 1880

Counter Strike (PC)

- A two-player online shootout between terrorists and counter-terrorists
- Created as a modification of Half Life
- Popularized modding games as a means of creating new games
- Prompted the companies making game engines to encourage modding and community involvement

Bejeweled Deluxe, 2001



Bejeweled Deluxe (PC)

- Swap two jewels to eliminate rows of 3 like-colored jewels.
- At the height of its popularity, this game sold a copy every 10 seconds.
- Helped popularize casual games

“PopCap players are 65% female and 70% of them are over 30. It’s a demographic that’s been completely and utterly written off as gamers.”

- James Gwertzman

Director of Business Development at PopCap

Sony PlayStation 2, 2000



PlayStation 2

- Launch was over-hyped and launch titles did not show off the system's capabilities.
- By 2010, the PS2 had sold 155,000,000 units, making it the best-selling console of all time.
- Remained in mass production until 2013
- Considered the winner of its generation

Grand Theft Auto III, 2001



Grand Theft Auto III (PS2)

- Complete a series of missions by robbing and killing just about anyone in the large, rich, open, fictional setting of Liberty City.
- Showcased the power of the PS3
- Professional voice acting, Hollywood soundtrack, and emphasis on cinematic cutscenes bridged the gap b/w film and games
- Reignited the debate over violence and depravity in video games

Nintendo GameCube, 2001



GameCube

- Nintendo playing catchup with Sony by introducing a disc-based system with better 3D capabilities and easier development
- Significantly cheaper than other consoles of its generation
- Fewer notable games than previous Nintendo consoles
- Considered the loser of its generation in the console wars

Microsoft Xbox, 2001



Xbox

- Microsoft's debut into the console gaming industry, which initially cost Microsoft \$6,000,000,000 in losses
- Launched with support for online service Xbox Live, which allowed broadband internet connections only and made online play more accessible than other consoles

Halo: Combat Evolved, 2001



Halo Combat Evolved (Xbox)

- Lead your team of space marines to survival and eventual victory on a hostile alien world.
- Launch title that legitimized the Xbox as a console
- Originally designed as an RTS, than as an Action-Adventure game, then finally as an FPS

Halo: Combat Evolved (cont.)

- Like *Mario 64*, smooth and enjoyable gameplay was a key focus
- Innovations in the FPS genre:
 - Carry only 2 weapons, making decisions strategic
 - Good teammate AI
 - Rechargeable shield creates an enjoyable rhythm between firing and taking cover

Eve Online, 2003



Eve Online (PC)

- Explore a vast space-age universe where you can trade and battle by yourself or as part of a large player-run corporation.
- One of the only successful truly persistent virtual worlds
- Extremely dedicated fanbase and player-driven plot
- Tens of thousands of dollars in virtual assets changing hands

Katamari Damacy, 2004



Katamari Damacy (PS2)

- Roll up objects in the world to create a larger ball that rolls up still larger objects until your ball is the size of a star.
- Quirky premise, graphics, and soundtrack
- Notable deviation from the action/adventure/shooter games which has already begun to dominate consoles.

World of Warcraft, 2004



World of Warcraft (PC)

- Adventure by yourself or with groups of friends to level up, take down monsters over and over, and gain better gear.
- Refined and distilled the MMORPG in many ways
- Over 12,000,000 subscribers at its high point
- At one point WoW held 62% of the global MMORPG subscription market.
- By 2010, WoW had grossed over \$10,000,000,000 making it the highest ever.

Defense of the Ancients, 2005



Defense of the Ancients (PC)

- Play as one of 5 teammates who must level up together while leading an army of minions to victory over the other team.
- Mod of *Warcraft III: The Frozen Throne*
- Beginning of the MOBA (Multi-Player Online Battle Arena) genre.

The Elder Scrolls IV: Oblivion, 2006



The Elder Scrolls IV: Oblivion (PC)

- Adventure in a huge, open fantasy world.
- Notable for the encyclopedic scope of its setting
 - 16 square miles in size
 - Over 200 optional quests to complete
 - 1,500 non-player characters, all fully voiced

Motion Control, 2006



Motion Control in Consoles

- Nintendo Wii (2006) used a handheld remote with motion sensing
 - Gave the Wii appear to non-traditional demographics for game consoles
 - Outsold other consoles of its generation
- PlayStation Eye (2007), a camera add-on to the PlayStation 3 that detected a handheld remote, plus some and sound and visual input
- Microsoft Kinect (2010), a camera add-on to the Xbox 360 that senses the position and posture of the player's body

Wii Sports, 2006



Wii Sports (Nintendo Wii)

- Play tennis, boxing, bowling, and other sports
- Shining examples of motion control games

Touch, 2007



Touch Interfaces in Games

- Popularized by the iPhone in 2007
- Now common on virtually all handheld devices and even PCs

Fruit Ninja, 2010



Fruit Ninja (iPhone etc.)

- Swipe flying fruit with your finger sword.
- Shining example of a touch game

Desktop Tower Defense, 2007



Desktop Tower Defense (PC)

- Purchase and arrange defensive units to fend off waves of attackers.
- A shining example of the Tower Defense sub-genre

Bioshock, 2007



Bioshock (PC)

- Explore an underwater post-apocalyptic Libertarian ruin while gaining body modifications to increase your abilities.
- Example of video games exploring complex, mature psychological and political themes

Portal, 2007



Portal (PC)

- Utilize teleporting portals to navigate a series of puzzles as a human guinea pig while a malevolent computer provides narration.
- Shining example of puzzles in 3D space combined with highly-refined gameplay and a simple but engaging narrative

Call of Duty: Black Ops, 2007



Call of Duty 4: Modern Warfare (Xbox 360)

- Play as a counter-terrorism commando fighting in the Middle East. Unlock more guns and abilities as your military rank increased.
- Leveraged the cultural relevance of the war on terror and conflicts in Afghanistan and Iraq
- This game and others in this series hold various records:
 - Guinness World Record for *Most Played Online Video Game*
 - *Black Ops* sold 5.6 million copies in 24 hours
 - Highest grossing console game at >\$1,500,000,000

Minecraft, 2009



Minecraft (PC)

- Gather supplies, fight off monsters, and build incredible structures in a world of cubes.
- Independent game created by one person (Markus “Notch” Persson)
- Marks the rise of numerous indie game studios
- Released early in its development with continuing updates providing new kinds of blocks and eventually an objective
- Has earned over \$100,000,000

The Last of Us, 2013



The Last of Us (PC)

- Escort a young girl across a post-apocalyptic zombie wasteland.
- Visuals, story, music, and theme are all highly artistic, prompting many to cite this as a coming of age for video games as art.
- Over 200 Game of the Year awards