

HISTORY OF VIDEO GAMES

- **The Birth of The Video Game**
- **The Race to Make The First Video Game**
- **The Atari Revolution**

THE BIRTH OF THE VIDEO GAME

CH 1: THE BIRTH OF THE VIDEO GAME

- The Cold War
 - Diplomacy & Warfare
 - Economic Development
 - Propaganda
 - Espionage
 - Technological
- Technological Race

CH 1: THE BIRTH OF THE VIDEO GAME

- Technological Advances

- 1946- University of Pennsylvania, First Programmable Computer
- Electronic Numeric Integrator And Calculator (ENIAC)
- \$500K- Mechanical Relays & Vacuum tubes
- Calculate Artillery-Firing Tables for US Army
- Giant Brain

- Artificial Intelligence

CH 1: THE BIRTH OF THE VIDEO GAME

- Artificial Intelligence (AI)
 - Alan Turing (British Mathematician) Claude Shannon (Computer Expert)
 - Theories: Foundation of Modern Computing
 - Computer vs. Human (Chess)
 - Turing: Wrote the first computer Chess program in 1947
 - Shannon and Alex Bernstein: Tested AI during 1950 by getting computers to play simple games
- 1950s: Computers & Simple Games

CH 1: THE BIRTH OF THE VIDEO GAME

- 1951: Festival of Britain & John Bennett
 - UK Labor Government
 - Nimrod: Computer to play a game called Nim
 - Objective: Show how computers can do mathematical calculations
 - Objective failed but the audience love the game
- 1952: Noughts and Crosses & Alexander Douglas
 - University of Cambridge- Electronic Delayed Storage Automatic Calculator (EDSAC)
 - Wrote the game for his PhD Thesis-

CH 1: THE BIRTH OF THE VIDEO GAME

- 1952: IBM Employee Arthur “Art” Samuel
 - IBM 701: First Commercial Computer
 - Play Checkers
 - 1955: Created a Checkers version that learns from mistakes
 - 1961: Game started defeating US Checker Champions
- Meanwhile Television Sets

CH 1: THE BIRTH OF THE VIDEO GAME

- Meanwhile Television Sets
 - 1940s: TV sets were making their way into homes
 - WWII: change to radar displays
 - 1947: Dumon Network explored idea of playing games on TV sets
 - Thomas Goldsmith & Estle Mann: Cathode-Ray Tube Amusement Device
 - Created virtual explosion when target was hit.
 - 1951: Ralph Baer used testing equipment; created horizontal and vertical lines, cross-hatch patterns, & colour lines on a screen
- Late 1950s: Video Games Still Elusive

CH 1: THE BIRTH OF THE VIDEO GAME

- Late 1950s: Video Games Still Elusive
 - Computer Scientist: Tools for research
 - Engineers: Saw TV as two-way experience
 - William Higinbotham & Robert Dvor: Interactive exhibit: tennis game played on oscilloscope
 - 1959 Tennis for Two: High School students loved the game
- 1960s: New Dawn

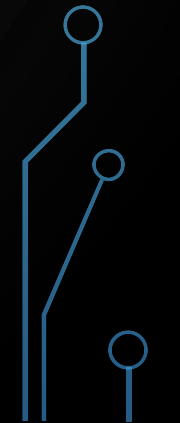
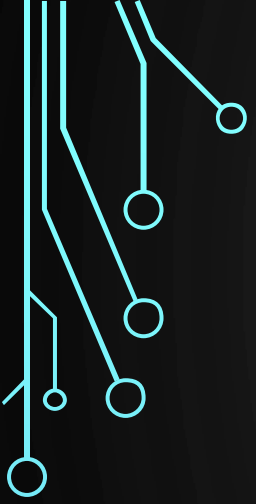
CH 1: THE BIRTH OF THE VIDEO GAME

- 1960s: New Dawn
 - MIT: Gets a PDP-1 computer from Digital Equipment Company (DEC)
 - Club Members decided to use it to make a game
 - Wayne Witaelem: Game must have action, skill level, & controlling objects- Space War
 - 1961: Steve Russell started making Space War after receiving sine-cosine routines
 - Dan Edwards: inserted star into play arena to add gravitational pull
 - 1962: Space War completed: Hit with MIT students
- 1966: Ralph Baer

CH 1: THE BIRTH OF THE VIDEO GAME

- 1966: Ralph Baer
 - Proposal: “Hey, Let’s Play A Games”- Plugin TV Device (\$19.95)
 - Received funding and space to work on game
- 1967: Brown Box Games
 - Chase Game & Ping Pong
 - Shooter: Rifle & Plunger
- TelPrompter Corporation
 - Interested in Brown Box Games
 - Talks broke down

THE RACE TO MAKE THE FIRST VIDEO GAME



CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- Meanwhile Coined-Operated Machines
- 1966: Bill Pitts
 - 1964: Stanford University & Buildings
 - PDP-6: Timesharing Computer (20 Teletypes)
- 1966: Hugh Tuck
 - During visit with Pitts, played Spacewar on Stanford's PDP-6
 - Mentioned "coined-operated" version of game
 - PDP-11
- Galaxy Game

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- Galaxy Game
 - Pitts & Tuck
 - Recreate Spacewar
 - 1971 Stanford University: Tresidder Student Union
- Computer Space
 - Nolan Bushnell
 - 1960s: University of Utah & Spacewar
 - Data General Nova Computer
 - Computer: 4 monitors & 4 coin slots =\$\$\$
 - Ted Dabney: Ampex engineer

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- Computer Space
 - Nolan Bushnell
 - Data General Nova Computer
 - Nova: Too slow; built additional hardware (still did not work)
- Computer Quiz & I.Q. Computer
 - Bill & Dave Nutting
 - US Navy: Multiple-choice quiz machine
 - Add coin slots: Popular bar game
 - Nutting Industry & Nutting Associates
- The Bushnell Invitation

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- The Bushnell Invitation
 - Pitts & Tuck
 - Checkout the competition
 - Difference in approach: Geek vs. Profit
- Results
 - 1971: *Galaxy Game*, first coin-operated video game
 - 1971: Computer Space, Bar Scene-Dutch Goose Bar vs. Working Man's Beer Bars
- Brown Box Collection

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- **Brown Box Collection**

- Ralph Baer: 1968 licenses & TelePrompster
- 1971: TV Manufactures: RCA then Magnavox
- Game Console: Odyssey
- Collection of 7 games (12 titles)- chase-maze, shooter, educational, Ping-Pong
- \$19.95 to \$99.95
- 1972: Odyssey was on display (Airport Mirina in Burlingame, CA)

- **Nolan Bushnell**

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- Nolan Bushnell
 - Syzygy: Bushnell and Dabney
 - Driving Video Game: Computer Space
 - Chess & Check
 - 1972: Go = Atari Incorporated
 - Al Alcorn (Ampex engineer trainee)
- Ping-Pong

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- Ping-Pong
 - Simple Game: Bat & Ball (fake GE deal, based on Odyssey)
 - Way to get Alcorn use to Bushnell's Circuits
 - AI Alcorn: angles, scores, & sound fx
 - Simple Instruction: "Avoid Missing Ball For High Score"
 - Change of Plans
- 1972: Pong's Test

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- 1972: Pong's Test
 - Andy's Capp's Tavern
 - Broken Game
 - However, \$50/\$200 a week
 - \$280/\$900
 - 2000/4000
 - Banks
- The Mafia Issue

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- The Mafia Issue
 - Organized Crime & pinball machines
 - 1934: Mayor Fiorella La Guardia
 - Mission: Ban pinball machines and the arcades
 - 1942 - 1976
- Wells Fargo
 - \$50k/150 Pong Machines
 - Roller Skating Rink
- The Clones

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- The Clones
 - Chicago Coin & Williams- remake
 - Nutting Associates: Computer Space Balls
 - Allied Leisure: Paddle Battle & Tennis Tourney 1972-73 sales (\$1.5 mill to \$11.4 mill)
 - Bally Midway: Licensing deal from Atari
- Global
 - Japan: Elepong (Taito)
 - Italy: TV Joker (Zaccaria)
 - French: Smatch
- Video Games: 1974 Stats

CH 2: THE RACE TO MAKE THE FIRST VIDEO GAME

- Video Games: 1974 Stats
 - ~100,000 coined-operated video games (US)
 - ~\$250 million per year
 - Expanded beyond the labor class
 - Lounges: would take in video games but not the pinball machines
 - Video games went from rat holes to family amusement parks
- Nolan Bushnell Mission:
 - Show Computer Space was the new era in the amusement business

CH 3: THE ATARI REVOLUTION

CH 3: THE ATARI REVOLUTION

- Pong's Success
 - >6 Months
 - Technological dreams of Cold War
 - Bob Lawton: "Video games has fewer moving pieces"
 - 15 Companies have gotten into the coin-operated business
 - Clones & Twists
- Atari Culture

CH 3: THE ATARI REVOLUTION

- Atari's Culture
 - Aquarius & Hippy Revolution
 - Dress Code
 - Parties
 - Blind Eye
 - Laid Back
 - Dedication
- Atari's Next Gen Games

CH 3: THE ATARI REVOLUTION

- Atari's Next Gen Games
 - Space Race: Meteor Storms
 - Gotcha: Virtual kiss chase through maze
 - Qwak!: Virtual duck hunt
 - Missile Command: Revamped Missile Radar
 - Gran Track 10: driving game (accounting error)
- Nutting Associates
 - Missile Radar: Shooting down incoming missiles
- Atari International

CH 3: THE ATARI REVOLUTION

- Atari International
 - 1973: Atari Japan-
 - Hard Market: Regulation & competition
 - Competition: Sega & Taito
 - 1974: Tomonhiro Nishikado- Soccer & Speed Race (large course & rival cars)
 - 1974: Atari Japan- sold to Namco (1955) , exclusive distributor of Atari games for the next 10 years
- Atari's Rebirth

CH 3: THE ATARI REVOLUTION

- Atari's Rebirth
 - Bogus Rival: Repackage Atari Games sell to forbidden distributors
 - Defensive Strategy: Knock of the clones
 - Kee Games: Joe Keenan & Bristow
 - Fake story: Suing for trade secrets and eventually settled
 - New Game: Tank (1974)
 - Kee Games Merged with Atari
- Family Living Rooms

CH 3: THE ATARI REVOLUTION

- Family Living Rooms
 - Harold Lee
 - Odyssey: Improve on the system by using integrating circuits
 - Bob Brown: assisted Lee with the project/ fit into a single integrated circuit
 - 1975: Don Valentine (venture capitalist) \$20 million in funds
- Atari's mini-Pong Debut

CH 3: THE ATARI REVOLUTION

- Atari's mini-Pong Debut
 - Cost: \$19.95
 - Toy Trade Fair, Toy Channel, & Toy Stores
 - \$29 problem
 - 1975: Sears Roebuck: 900 stores & advertising
- 1975 Christmas

CH 3: THE ATARI REVOLUTION

- 1975 Christmas
 - Renamed Sears Tele-Games Pong
 - 150,000 units
 - Customers: Sense of Control
- Competitors
 - General Instruments: AY-3-8500 Microchip allowed any company to make home consoles
 - 1976 Christmas: Coleco & Magnavox
- Statistics
 - 1977: 60 pong style gam

CH 3: THE ATARI REVOLUTION

- Statistics in 1977
 - 60 pong style game consoles around the world
 - ~13 million sold in US
- The Future
 - New Microchip: The Microprocessor
 - Changed what & how people play