

Some Key Moments in the History of Video Games



International Center for the
History of Electronic Games

1940

Edward U. Condon designs a computer for the Westinghouse display at the World's Fair that plays the traditional game Nim in which players try to avoid picking up the last match. Tens of thousands of people play it, and the computer wins at least 90% of the games.

1947

Thomas T. Goldsmith Jr. and Estle Ray Mann file a patent for a "cathode ray tube amusement device." Their game, which uses a cathode ray tube hooked to an oscilloscope display, challenges players to fire a gun at a target.

1950

Claude Shannon lays out the basic guidelines for programming a chess-playing computer in an article, "Programming a Computer for Playing Chess." That same year both he and Englishman Alan Turing create chess programs.

1952

A. S. Douglass creates *OXO* (a game known as noughts and crosses in the United Kingdom and tic-tac-toe in the United States) on Cambridge's EDSAC computer as part of his research on human-computer interactions.

1954

Programmers at New Mexico's Los Alamos laboratories, the birthplace of the atomic bomb, develop the first blackjack program on an IBM-701 computer.

1955

The long tradition of military wargaming enters the computer age when the U.S. military designs *Hutspiel*, in which Red and Blue players (representing NATO and Soviet commanders) wage war.

1956

Arthur Samuel demonstrates his computer checkers program, written on an IBM-701, on national television. Six years later the program defeats a checkers master.

1957

Alex Bernstein writes the first complete computer chess program on an IBM-704 computer—a program advanced enough to evaluate four half-moves ahead.

1958

Willy Higinbotham creates a tennis game on an oscilloscope and analog computer for public demonstration at Brookhaven National Laboratory in 1958. Although dismantled two years later and largely forgotten, it anticipated later video games such as *Pong*.

1959

Students at MIT create *Mouse in the Maze* on MIT's TX-0 computer. Users first draw a maze with a light pen, then a mouse navigates the labyrinth searching for cheese. In a revised version, a bibulous mouse seeks out martinis yet still somehow remembers the path it took.

1962

MIT student Steve Russell invents *Spacewar!*, the first computer-based video game. Over the following decade, the game spreads to computers across the country.

1963

Months after the Cuban Missile Crisis, the U.S. Defense Department completes a computer war game known as *STAGE* (Simulation of Total Atomic Global Exchange) which “shows” that the United States would defeat the Soviet Union in a thermonuclear war.

1964

Everyone is a programmer. That’s the creed of Dartmouth’s John Kemeny who creates the computer time-share system and BASIC programming language at Dartmouth. Both make it easy for students to write computer games. Soon, countless games are being created.

1965

A day after Dartmouth defeats Princeton 28–14 in football to win the Ivy League championship, a Dartmouth student programs the first computer football game. Earlier that year, John Kemeny and Keith Bellairs had created the first computer game in BASIC.

1966

While waiting for a colleague at a New York City bus station, Ralph Baer conceives the idea of playing a video game on television. On September 1, he writes down his ideas that become the basis of his development of television video games.

1967

Ralph Baer develops his “Brown Box,” the video game prototype that lets users play tennis and other games.

1968

Ralph Baer patents his interactive television game. In 1972, Magnavox releases Odyssey, the first home video game system, based on his designs.

1969

Only months after the Apollo XI mission, Lexington, Massachusetts student Jim Storer creates *Lunar Lander*—a moon-landing simulation game—on his high school’s PDP-8. Variations of this text-based game are developed for other computers, and eventually an arcade version.

1970

Scientific American publishes the rules for *LIFE* in Martin Gardner’s “Mathematical Games” column. In this simulation, isolated or overcrowded cells die, while others live and reproduce. Hackers rush to implement it on their computers, watching beautiful patterns emerge and change.

1971

Minnesota college students Don Rawitsch, Bill Heinemann, and Paul Dillenberger create *Oregon Trail*, a simulation of pioneers' westward trek. Originally played on a single teletype machine, Rawitsch later brought the game to the Minnesota Educational Computer Consortium (MECC) which distributed it nationally.

1972

Nolan Bushnell and Al Alcorn of Atari develop an arcade table tennis game. When they test it in Andy Capps Tavern in Sunnyvale, California, it stops working. Why? Because people played it so much it jammed with quarters. *Pong*, an arcade legend, is born.

1973

A year after launching the first general computer magazine, *Creative Computing*, David Ahl publishes *101 BASIC Computer Games*, allowing gamers to become an ancient Sumerian king in HMRABI, find the creatures hiding in a grid in MUGWMP, and general the North versus the South in CIVILW.

1974

Two decades before *Doom*, *Maze Wars* introduces the first-person shooter by taking players into a labyrinth of passages made from wire-frame graphics.

1975

Atari introduces its home version of *Pong*. Atari's founder, Nolan Bushnell, cannot find any partners in the toy business, so he sells the first units through the Sears Roebuck sporting goods department.

1976

Don Woods's version of the pioneering text-based game, *Adventure* (first created by William Crowther in 1975), plunges players into an imaginary world of caves with treasures. Inspired by *Dungeons and Dragons*, it paves the way for *Zork* and thousands of other computer role-playing games.

1977

Atari releases the Video Computer System, more commonly known as Atari 2600. Featuring a joystick, interchangeable cartridges, games in color, and switches for selecting games and setting difficulty levels, it makes millions of Americans home video game players.

1978

Taito's *Space Invaders* descends on Japan, causing a shortage of 100-yen coins. Within a year, 60,000 *Space Invaders* machines in the United States tempt Americans to spend millions of quarters driving back the seemingly unstoppable ranks of attacking aliens.

1979

Toy-maker Mattel supplements its handheld electronic games with a new console, the Intellivision. Intellivision has better graphics and more sophisticated controls than Atari 2600, and players love its sports games. Mattel sells three million Intellivision units.

1980

A missing slice of pizza inspires Namco's Toru Iwatani to create Pac-Man, which goes on sale in July 1980. Two years later, Ms. Pac-Man strikes a blow for gender equality by becoming the best-selling arcade game of all time. That year a version of Pac-Man for Atari 2600 becomes a console hit.

1981

Video game fans go ape over Nintendo's *Donkey Kong*, featuring a character that would become world-famous: Jumpman. Never heard of him? That's because he's better known as Mario—the name he took when his creator, Shigeru Miyamoto, makes him the star of a later game by Nintendo.

1982

Disney taps into the video game craze by releasing the movie *Tron*. An arcade game featuring many of the contests from the movie also becomes a hit.

1983

Multiplayer play takes a huge step forward with Dan Bunten's *M.U.L.E.* In the game, players compete to gather the most resources while saving their colony on the planet of Irata.

1984

Russian mathematician Alexey Pajitnov creates Tetris, a simple but addictive puzzle game. The game leaks out from behind the Iron Curtain, and four years later, Nintendo bundles it with every new Game Boy.

1985

The Nintendo Entertainment System (NES) revives an ailing United States video game industry two years after the Nintendo Corporation released it in Japan as Famicom.

1986

The emerging educational software market leaps ahead with the introduction of The Learning Company's *Reader Rabbit* program. The educational computer business mushrooms with the introduction of CD-ROMs in the 1990s, but crashes with the rise of the Internet.

1987

It's a good year for fantasy role-playing games, as Shigeru Miyamoto creates *Legend of Zelda*, SSI wins the video game license for *Dungeons and Dragons*, and Sierra's *Leisure Suit Larry* gives players a different kind of adult role playing game.

1988

John Madden Football introduces gridiron realism to computer games, making this game—and its many console sequels—perennial best-sellers.

1989

Nintendo's Game Boy popularizes handheld gaming. Game Boy is not the first handheld system with interchangeable cartridges—Milton Bradley introduced Microvision 10 years earlier—but it charms users with its good game play, ease of use, and long battery life.

1990

Microsoft bundles a video game version of the classic card game solitaire with Windows 3.0. Millions of users who would not normally pick up a game console find they enjoy playing computer games. Solitaire becomes one of the most popular electronic games ever and provides a gaming model for quick, easy-to-play, casual games like *Bejeweled*.

1991

Sega needs an iconic hero for its Genesis (known as Mega Drive in Japan) system and finds it in *Sonic the Hedgehog*. Gamers, especially in the United States, snap up Sega systems and love the little blue guy's blazing speed and edgy attitude.

1992

Westwood Studios' *Dune II* establishes the popularity of real-time strategy games that require players to act as military leaders deploying their resources and forces on the fly in order to defeat opponents.

1993

Concern about bloodshed in games such as *Mortal Kombat* prompts United States Senate hearings on video game violence. The controversy riles the industry and prompts the creation of a video game rating system. Ironically, that same year the game *Doom* popularizes "first person shooters."

1994

Blizzard releases *Warcraft: Orcs and Humans*, a real-time strategy game that introduces millions of players to the legendary world of Azeroth.

1995

Sony releases PlayStation in the United States, selling for \$100 less than Sega Saturn. The lower price point, along with the arrival of Nintendo 64 in 1996, weakens Sega's home console business. When Sony PlayStation 2 debuts in 2000, it becomes the dominant home console and Sega exits the home console business.

1996

Lara Croft debuts as the star of Eidos's adventure game *Tomb Raider*. Players love her, but critics charge that she's an example of sexism in video games.

1997

Machine triumphs over man as IBM's supercomputer chess program Deep Blue defeats world champion Gary Kasparov in a match.

1998

Legend of Zelda: Ocarina of Time transports players to the richly imagined world of Hyrule, full of engaging characters, thought-provoking puzzles, and the most memorable musical instrument to ever appear in a video game.

1999

Sony Online Entertainment's *Everquest* leads hundreds of thousands of users to join guilds, fight monsters, and level up in the multiplayer online world of Norrath.

2000

Will Wright's *The Sims* models real life. It is not the first simulation game—*Utopia* on Intellivision (1982), Peter Molyneux's *Populous* (1989), Sid Meier's *Civilization* (1991), and Wright's own *SimCity* (1989) preceded it—but it becomes the best-selling computer game ever and the most popular game with female players.

2001

Microsoft enters the video game market with Xbox and hit games like *Halo: Combat Evolved*. Four years later, Xbox 360 gains millions of fans with its advanced graphics and seamless online play.

2002

While walking through the aisles of an electronics store, Lt. Colonel Casey Wardynski conceives of a U.S. Army branded video game. In 2002, the army releases *America's Army* to help recruit and communicate with a new generation of electronic gamers.

2003

Valve energizes PC gaming with its release of Steam. The digital distribution platform allows players to download, play, and update games.

2004

Nintendo maintains its dominance of the handheld market with the Nintendo DS, an easy-to-use, portable gaming system packed with two processors, two screens, multiplayer capabilities, and a stylus for the touchscreen. Great games like *Super Mario Kart DS* helped too.

2005

Microsoft's Xbox 360 brings high-definition realism to the game market, as well as even better multiplayer competitions on Xbox Live and popular titles such as *Alan Wake*.

2006

Nintendo Wii gets gamers off the couch and moving with innovative, motion-sensitive remotes. Not only does Nintendo make gaming more active, it also appeals to millions of people who never before liked video games.

2007

Grab your guitar, microphone, bass, or drums, and start playing *Rock Band*. That's what millions of would-be musicians did with Harmonix's hit title.

2008

More than 10 million worldwide subscribers make *World of Warcraft* the most popular massively multiplayer online (MMO) game. MMOs create entire virtual universes for players and redefine how we play, learn, and relate to each other.

2009

Social games like *Farmville* and mobile games like *Angry Birds* shake up the games industry. Millions of people who never would have considered themselves gamers now while away hours playing games on new platforms like Facebook and the iPhone.

2010

The indie game movement comes of age with the tremendous popularity of *Minecraft*, the addictive brick-building game from Swedish developer Markus Persson.

2011

Elder Scrolls V: Skyrim showcases the beauty, majesty, and massiveness of video games as players explore a seemingly endless, beautifully rendered fantasy world.
