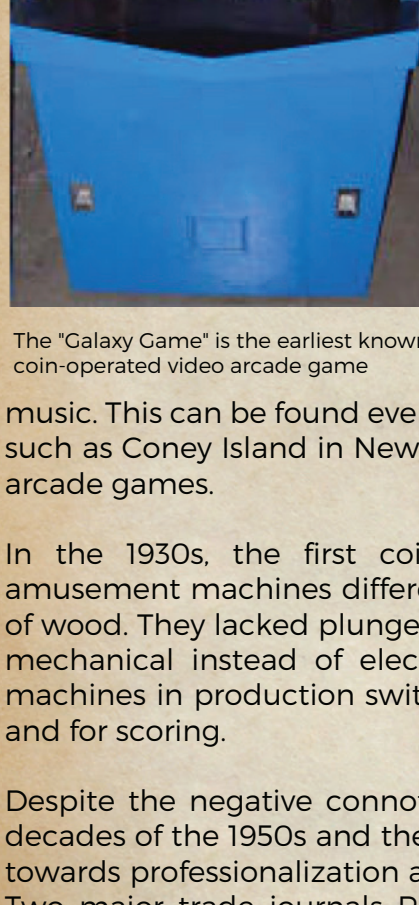


LET'S TAKE THIS TIME TO LOOK BACK AT OUR INDUSTRY'S RICH HISTORY AND FUTURE!

THE DEAL DIARIES

FOURTH CHAPTER: ARCADE GAMES

ARE YOU READY FOR THE ADRENALINE RUSH?



The "Galaxy Game" is the earliest known coin-operated video arcade game

The evolution of video arcade games represents many different industries, including scientific, computer, amusement, and consumer electronics.

An arcade game is a coin-operated entertainment machine typically installed in public businesses such as restaurants, malls and amusement centres. Most arcade games are video games, pinball machines, electro-mechanical games, redemption games or merchandisers.

While exact dates are debated, the golden age of arcade video games is usually defined as a period around the late 1970s.

The first popular 'arcade games' included early amusement-park midway games such as shooting galleries, ball toss games, and the earliest coin-operated machines, such as those that claimed to tell a person's fortune or that played mechanical music. This can be found even today. The old Midways of 1920s-era amusement parks, such as Coney Island in New York, provided the inspiration and atmosphere for later arcade games.

In the 1930s, the first coin-operated pinball machines emerged. These early amusement machines differed from their later electronic cousins which were made of wood. They lacked plungers or lit-up bonus surfaces on the playing field, and used mechanical instead of electronic scoring-readouts. By around 1977 most pinball machines in production switched to using solid-state electronics both for operation and for scoring.

Despite the negative connotations of the coin operated industry in the preceding decades of the 1950s and the 1960s, by the 1970s, those in the industry were working towards professionalization and changing the perception as a legitimate business. Two major trade journals RePlay Magazine published in 1975 and Play Meter published in 1974 offered profiles on industry professionals and updates on industry news that helped professionalize the industry.

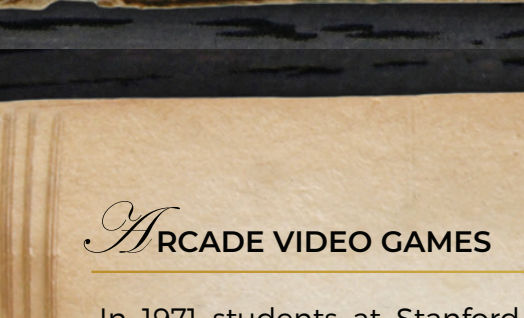
ARCADE GAMES WITH NEW TECHNOLOGY

In 1966 Sega introduced an electro-mechanical game called Periscope - an early submarine simulator and light gun shooter which used lights and plastic waves to simulate sinking ships from a submarine. It became an instant success in Japan, Europe, and North America, where it was the first arcade game to cost a quarter per play, which would remain the standard price for arcade games for many years to come. In 1967 Taito released an electro-mechanical arcade game of their own, Crown Soccer Special, a two-player sports game that simulated association football, using various electronic components, including electronic versions of pinball flippers.

Sega later produced gun games which resembled first-person shooter video games, but which were in fact electro-mechanical games that used rear image projection in a manner similar to the ancient zoetrope to produce moving animations on a screen. The first of these, the light-gun game Duck Hunt, appeared in 1969; it featured animated moving targets on a screen, printed out the player's score on a ticket, and had volume-controllable sound-effects.

Within that same year, Sega released an electro-mechanical arcade racing game, Grand Prix, which had a first-person view, electronic sound, a dashboard with a racing wheel and accelerator, and a forward-scrolling road projected on a screen.

During the 1970s, following the release of Pong in 1972, electronic video-games gradually replaced electro-mechanical arcade games. In 1972, Sega released an electro-mechanical game called Killer Shark, a first-person light-gun shooter known for appearing in the 1975 film Jaws. In 1974, Nintendo released Wild Gunman, a light-gun shooter that used full motion video-projection from 16mm film to display live-action cowboy opponents on the screen. One of the last successful electro-mechanical arcade games was F-1, a racing game developed by Namco and distributed by Atari in 1976; this game appeared in the films Dawn of the Dead (1978) and Midnight Madness (1980), as did Sega's Jet Rocket in the latter film. The 1978 video game Space Invaders, however, dealt a yet more powerful blow to the popularity of electro-mechanical games.



Ted Dabney, left; Nolan Bushnell, Fred Marincic and Allan Alcorn in 1973 with a Pong console at the Atari offices in Santa Clara, California

ARCADE VIDEO GAMES

In 1971 students at Stanford University set up the Galaxy Game, a coin-operated version of the video game Spacewar. This ranks as the earliest known instance of a coin-operated video game. Later in the same year Nolan Bushnell created the first mass-manufactured game, Computer Space, for Nutting Associates.

In 1972 Nolan Bushnell and Ted Dabney formed Atari. Atari essentially invented the coin-operated video game industry with the game Pong that was released in November 1972, the first successful electronic ping-pong video game. Pong proved popular, but imitators helped to keep Atari from dominating the fledgling coin-operated video-game market. Nolan Bushnell also visited the DEAL Dubai show in 2016.



Taito's Space Invaders, in 1978, proved to be the first blockbuster arcade video game. Its success marked the beginning of the golden age of arcade video games. Video game arcades sprang up in shopping malls, and small 'corner arcades' appeared in restaurants, grocery stores, bars and movie theaters all over the United States, Japan, Hong Kong and other countries during the late 1970s and early 1980s. Space Invaders (1978), Galaxian (1979), Defender (1980), and Bosconian (1981) were especially popular.

By 1981, the arcade video game industry was worth US\$8 billion (\$22.5 billion in 2019). Most games in this period were designed by Japanese companies such as Namco and Taito but licensed by American game developers such as Midway Games and Atari.

During the late 1970s and 1980s, chains such as Chuck E. Cheese's, Ground Round, Dave and Busters, ShowBiz Pizza Place and Gatti's Pizza combined the traditional restaurant or bar environment with arcades. By the late 1980s, the arcade video game craze was beginning to fade due to advances in home video game console technology. By 1991, US arcade video game revenues had fallen to \$2.1 billion.

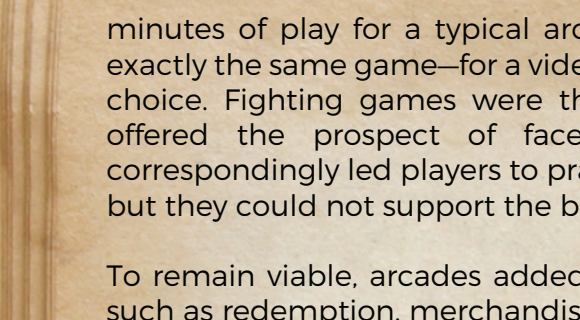
NEW BEGINNINGS

Arcades experienced a major resurgence with the 1991 release of Capcom's Street Fighter II, which popularized competitive fighting games and revived the arcade industry to a level of popularity not seen since the days of Pac-Man, setting off a renaissance for the arcade game industry in the early 1990s. Its success led to a wave of other popular games which mostly were in the fighting genre, such as Pit-Fighter (1990) by Atari, Mortal Kombat by Midway Games among others. In 1993, Electronic Games noted that when 'historians look back at the world of coin-op during the early 1990s, one of the defining highlights of the video game art form will undoubtedly focus on fighting/martial arts themes which it described as 'the backbone of the industry' at the time.

By 1994, arcade games in the United States were generating revenues of \$7 billion in quarters which is equivalent to \$121 billion in 2020, in comparison to home console game sales of \$6 billion, with many of the best-selling home video games in the early 1990s often being arcade ports. Combined, total US arcade and console game revenues of \$13 billion in 1994 which is approximately \$22.4 billion in 2020, was nearly two and a half times the \$5 billion revenue grossed by movies in the United States at the time.

Around the mid-1990s, the fifth-generation home consoles, Sega Saturn, PlayStation, and Nintendo 64, began offering true 3D graphics, improved sound, and better 2D graphics, than the previous generation. By 1995, personal computers followed, with 3D accelerator cards.

CHALLENGES IN 1990'S



A 20th anniversary arcade machine, combining the two classic games Ms Pac-Man and Galaga.

Arcade video games had declined in popularity so much by the late 1990s, that revenues in the United States dropped to US\$1.33 billion in 1999, and reached a low of \$866 million in 2004. The gap in release dates and quality between console ports and the arcade games they were ported from dramatically narrowed, thus setting up home consoles as a major competitor with arcades. Furthermore, by the early 2000s, networked gaming via computers and then consoles across the Internet had also appeared, replacing the venue of head-to-head competition and social atmosphere once provided solely by arcades.

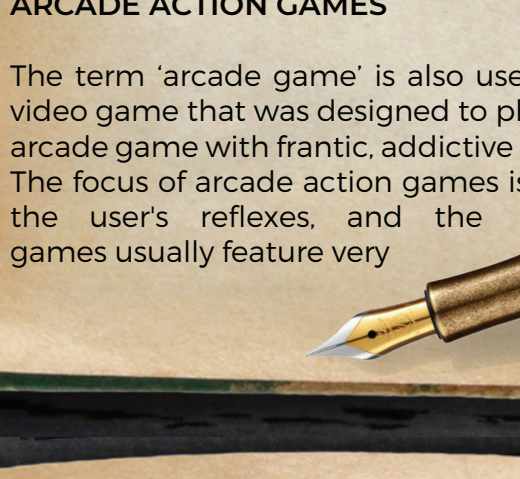
The arcade market suffered from a lack of diversity even compared to other gaming markets, a 1996 survey showed that 70% of arcade players were teenage males, leading to a cycle in which the uniformity of the audience discouraged innovation in game design, which in turn further discouraged people outside the narrow target audience from visiting arcades. The arcades lost their status as the forefront of new game releases. Given the choice between playing a game at an arcade three or four times, perhaps 15

minutes of play for a typical arcade game, and renting, at about the same price, exactly the same game—for a video game console—the console became the preferred choice. Fighting games were the most attractive feature for arcades, since they offered the prospect of face-to-face competition and tournaments, which correspondingly led players to practice more (and spend more money in the arcade), but they could not support the business all by themselves.

To remain viable, arcades added other elements to complement the video games such as redemption, merchandiser games and food service, typically snacks and fast food. Referred to as 'fun centers' or 'family fun centers', some of the longstanding chains such as Chuck E. Cheese's and Gatti's Pizza (GattiTowns) also changed to this format.

Many 1980s-era video game arcades have long since closed, and classic coin-operated games have become largely the province of dedicated gamers and hobbyists. In the 2010s, some movie theaters and family fun centers still had small arcades.

ARCADE TRANSFORMATION BETWEEN 2000-2010



A man playing a drumming arcade game, DrumMania in Japan in 2005.

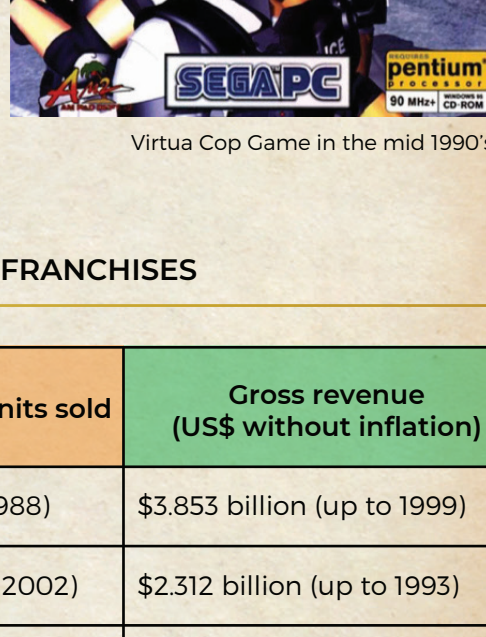
In the 2000s and 2010s, arcades found a niche market by providing games that use special controllers largely inaccessible to home users, such as dance games that have a floor that senses the user's dancing. An alternative interpretation is that the arcade was now a more socially-oriented hangout, with games that focus on an individual's performance, rather than the game's content, as the primary form of novelty. Some examples of today's popular genres are rhythm games such as Dance Dance Revolution (1998) and DrumMania (1999), and rail shooters such as Virtua Cop (1994), Time Crisis (1995) and House of the Dead (1996). Some genres, particularly dancing and rhythm games (such as Konami's Dance Dance Revolution), continue to be popular in arcades.

Worldwide, arcade game revenues gradually increased from US\$1.8 billion in 1998 to US\$3.2 billion in 2002, rivalling PC game sales of US\$3.2 billion that same year. In particular, arcade video games are a thriving industry in China, where arcades are widespread across the country. The US market had also experienced a resurgence, with the number of video game arcades across the nation increasing from 2,500 in 2003 to 3,500 in 2008, though this is significantly less than the 10,000 arcades in the early 1980s. As of 2009, a successful arcade game usually sold around 4000 to 6000 units worldwide.

ARCADE ACTION GAMES

The term 'arcade game' is also used to refer to an action video game that was designed to play similarly to an arcade game with frantic, addictive gameplay.

The focus of arcade action games is on the user's reflexes, and the games usually feature very



Virtua Cop Game in the mid 1990s.

little puzzle-solving, complex thinking, or strategy skills. Games with complex thinking are called strategy video games or puzzle video games.

In addition to restaurants and video arcades, arcade games are also found in bowling alleys, college campuses, video rental shops, dormitories, laundromats, movie theaters, supermarkets, shopping malls, airports, ice rinks, corner shops, truck stops, bars, pubs, hotels, and even bakeries. In short, arcade games are popular in places open to the public where people are likely to have free time.

SOME BEST-SELLING ARCADE VIDEO GAME FRANCHISES

Franchise	Original release year	Total hardware units sold	Gross revenue (US\$ without inflation)
Pac-Man	1980	526,412 (up to 1988)	\$3.853 billion (up to 1999)
Street Fighter	1987	500,000 (up to 2002)	\$2.312 billion (up to 1993)
Space Invaders	1978	360,000 (up to 1980)	\$2.702 billion (up to 1982)
Asteroids	1979	136,437 (up to 1999)	\$850.79 million (up to 1999)
Defender	1981	75,000 (up to 2002)	\$1 billion (up to 2002)
Mortal Kombat	1992	51,000 (up to 2002)	\$1 billion (up to 1995)
Mushiking	2003	13,500 (up to 2005)	\$530 million (up to 2007)
World Club Champion Football	2012	2,479 (up to 2015)	\$706.014 million (up to 2012)

FUTURE OF ARCADES:



Arcade games at the VR park in Dubai



Arcade games at the Magic Planet in one of the malls in UAE

The future of arcades industry is bright and it will keep evolving as it has done over the decades. The key thing moving forward would be to focus on the player's interaction levels and complete engagement with the game.

This will be a very important factor for the gaming conceptualisers and also the manufacturers to consider, especially in keeping with the current lifestyle, trends and mindsets of its target audience. UAE and the GCC region currently has some of the most interactive and sophisticated arcade games and it is currently spread across all its large malls and entertainment areas.