

Game On & Game On 2.0 Tour Pack

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1 Introduction



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Game On is the ultimate exploration of the history, culture, future and potential of videogames. **Game On** transforms the gallery space into a dynamic, experimental and interactive zone, thoroughly examining games from the design process and conceptual drawing through to the finished playable games. The exhibition showcases the finest arcade machines, consoles and hand held games to have been produced, as well as the newest advancements in game design and technology. Visitors will be able to learn about early gaming from Space War, Computer Space and Pong as well as have the opportunity to demo the latest 3D technology and gaming and the latest development in virtual reality.

Game On takes an in-depth look at the people and technologies that have revolutionized games and how we play them. Highly interactive, with over 150 playable games, visitors are able to experience the best of both new and retro games. The exhibition includes a dedicated section to arcade games, with titles such as *Pac-Man*, *Defender* and *Donkey Kong*. Playable consoles ranging from as early as 1972 through to the present day, with games such as the latest developments in virtual reality.

Game On also features multiplayer games and an area dedicated to kids and families also feature.

In addition to mapping a chronological overview of developments in technology and design, the exhibition both compares and celebrates the cultural influence of games within North America, Europe, Japan, and the rest of the world.

The exhibition also gives you a rare opportunity to examine games from the initial stage of concept design with artworks on display from popular games such as *Grand Theft Auto*, *Space Invaders*, *Spore*, *Uncharted*, *World of Warcraft*, *Tomb Raider* and *The Sims*.

A sound section of music from a range of talented musicians from Richard Jacques, Jason Hayes and Chris Hülsbeck as well as tracks from the NES, Commodore 64, Commodore Amiga and classic arcades.

Before opening at any venue **Game On** is updated with the newest pioneering games. This ensures that it is always a fresh and relevant showcase for the newest advancement in game design and technology.

Quick Facts

Hire fees	Upon application	
Duration	3 months +	
Dimensions	approx 800 –1,500 m²	
Number of staff travelling for install/de-install	5 staff for 14 day install and 5 day de-install (Venue to cover cost of flights, accommodation, per diem, visas) One member of staff stays with the show to maintain, train local staff and ensure all machines are kept fully operational at all times. We ask that hosts cover local accommodation and part of salary.	
Transport	We request that one way (incoming) transport is covered by the venue. The exhibition travels in 3x 40ft Hicube sea containers (Game On) / 4x 40ft Hicube sea containers (Game On 2.0).	

Venues - Game On

Venue	Country	Dates
Barbican Centre, London	UK	16 May – 15 September 2002
National Museums of Scotland, Edinburgh	UK	17 October – 2 February 2003
Tilburg Art Foundation, Tilburg	The Netherlands	28 May – 24 August 2003
Helsinki City Art Museum, Helsinki	Finland	18 September – 14 December 2003
Lille Festival of Culture 2004, Lille	France	19 May – 8 August 2004
Museum of Science and Industry , Chicago	USA	4 March - 5 September 2005
Eretz Israel Museum, Tel Aviv	Israel	26 September 2004 – 1 January 2005
The Tech Museum of Innovation, San Jose	USA	30 September – 31 December 2005
Museum of Science and Industry, Chicago	USA	31 January – 30 April 2006
Pacific Science Center, Seattle	USA	26 May – 31 August 2006
Science Museum, London	UK	1 December 2006 – 1 May 2007

Venue	Country	Dates
Cyberport, Hong Kong	Hong Kong	21 July – 7 October 2007
Australian Centre for Moving Image, Melbourne	Australia	6 March – 13 July 2008
State Library of Queensland, Brisbane	Australia	15 November 2008 – 15 February 2009
National Science and Technology Museum, Kaohsiung	Taiwan	18 July – 31 October 2009
The Cellars of Cureghem, Brussels	Belgium	22 December 2009 – 18 April 2010
The Ambassador Theatre, Dublin	Ireland	20 September 2010 – 30 January 2011
Galeria Monterrey, Monterrey	Mexico	01 May – 03 July 2011
Museu da Imagen e do Som (MIS), São Paulo	Brazil	10 November 2011 – 8 January 2012
CCBB, Brasília	Brazil	26 January 2012 – 26 February 2012
Museum of Popular Art, Lisbon	Portugal	22 March – 29 July 2012
Design Centre, Budapest	Hungary	8 October 2012 – 8 January 2013
Costanera Centre, Santiago	Chile	27 March – 15 May 2013
Tecnopolis, Buenos Aires	Argentina	12 July – 3 November 2013
Montreal Science Centre, Montreal	Canada	15 April – 13 September 2015
Japan Miraikan, Tokyo	Japan	1 March – 30 May 2016
Trznice Hall 40, Prague	Czech Republic	21 September 2017 – 31 March 2018
OCT Creative Exhibition Center, Shenzhen	China	18 August - 14 October 2018
Jinsong Oriental Art Center, Chengdu	China	6 July 2019 - 28 October 2019

Venues - Game On 2.0

Venue	Country	Dates
Queen Victoria Museum & Art Gallery, Launceston	Tasmania	3 July - 3 October 2010
Technopolis, Athens	Greece	16 December 2010 – 16 March 2011
Oregon Museum of Science and Industry, Oregon	USA	25 June – 18 September 2011

Venue	Country	Dates
KinoKino, Sandnes	Norway	25 February - 9 June 2012
Ontario Science Centre, Ontario	Canada	9 March - 2 September 2013
Tekniska Museet, Stockholm	Sweden	25 October 2013 - 28 September 2014
Life, Newcastle	UK	23 May - 3 January 2016
Norsk Teknisk Museum, Oslo	Norway	9 March 2016 - 29 January 2017
Spacio Tirzo, Rome	Italy	4 March - 4 June 2017
Bienal, São Paulo	Brazil	15 May - 15 November 2017
Village Mall, Rio de Janeiro	Brazil	1 December 2017 - 25 February 2018
Life Science Centre, Newcastle	UK	25 May - 4 September 2019
Fundacion Canal, Madrid	Spain	25 November - 31 May 2020

2 Early Games & Arcade Games



Early Games instalaltion photo, (2006) Museum of Science and Industry, Chicago

The origins of video games can be traced back to the earliest days of computing. Machines developed for code breaking, pure mathematics and missile telemetry were quickly put to more playful use.

In 1951, Christopher Strachey wrote a version of *Chess* on the Manchester Mark 1, one of the earliest stored-program computers, with input and output via a punch card and no monitor with a chess board to 'see'. A year later, Alexander Douglas wrote OXO on the EDSAC (Electronic Delay Storage Automatic Calculator), which displayed a noughts and crosses board on a cathode ray tube and resulted in the first game interface that would be recognisable to today's gamers.

It would take another decade for computers to improve sufficiently enough to allow for the development of a game that

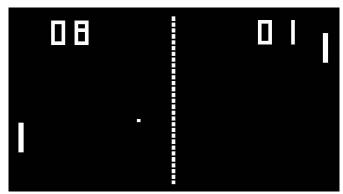
would bare resemblance to those available today. The first such game was *Spacewar*, designed by Steve Russell and his peers for the PDP-1 computer installed at MIT in 1962. It was a fast-paced, two-player spaceship combat game played in real time, simulating motion, momentum and audio. *Spacewar* was the first game to show how immersive video games could potentially be.

Inspired by Spacewar and a belief in games' potential appeal to a non-academic audience, Nolan Bushnell, together with a Pinball manufacturer, Nutting Associates, developed the first commercially available arcade game Computer Space (1971). Bushnell would go on to found Atari with Al Alcorn and produce what most people remember as the first arcade game, Pong (1972).

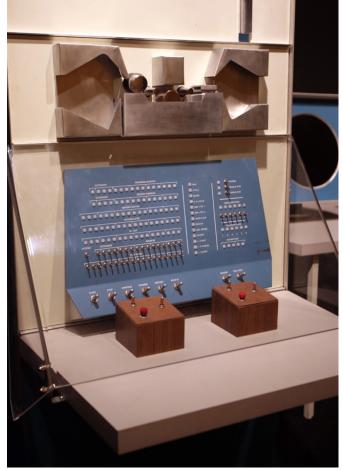
2 Early Games & Arcade Games



Arcades section Early Games & Arcade Games



Video game Pong (1979) USA



Replica PDP-1 (1959) USA



Installation shot
Early Games & Arcade Games, (2008) ACMI, Melbourne



Space Invaders section

3 Home Consoles & PC for Games



This section looks at the evolution of video games in the home - from the first home console, the *Magnavox Odyssey* (1972), through to the modern console age.

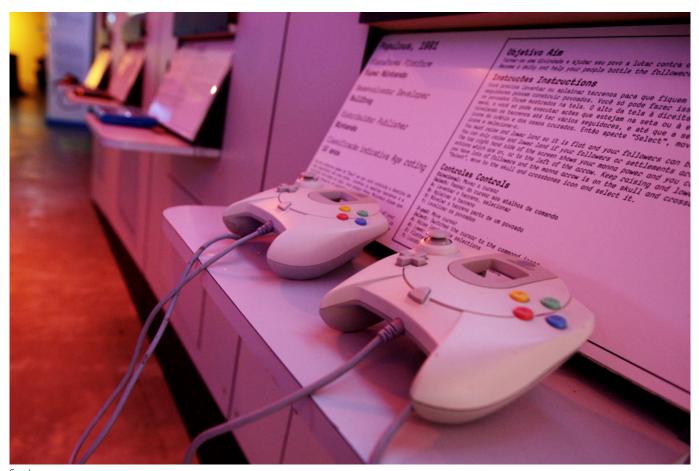
As the cost of computing components fell in the 70s this allowed arcades to become an affordable pastime for many in North America, Japan and Europe. The next challenge was to bring computers and videogames to hobbyists and families in their homes. Here, ten of the most influential home consoles, design

icons in themselves, are showcased together with the games that made them popular.

Machines include the Atari 2600 (1977), Sinclair Spectrum (1982), Nintendo Game Boy (1989) and the Sony PlayStation (1994).

The development of home consoles is closely linked to five major manufacturers: Atari, Nintendo, Sega, Microsoft and Sony. Top Ten also reveals how these companies have shaped the industry.

3 Home Consoles & PC for Games



Console Sega Dreamcast (1998) Japan



Top Ten Consoles area



Console Commodore 64 (1984) USA

4 Game Genres



Genres instalation photo, (2011) OMSI Oregon Game, USA

Home video games did not just recreate the Arcade experience. By removing the necessity of 'pay-per-play', home video games were able to experiment with new forms of game play. While Arcades mainly offered shooting, fighting and racing games, home consoles and computers allowed developers to create and explore the possibilities of role playing, strategy, adventure, simulation, and puzzle games.

The number of genres of video games is still increasing and there is much disagreement on their definitions. In this section, **Game**On defines video games in three broad genres, following the classification of games genres devised by Le Diberder brothers in their book L'Univers des Jeux Vidéo.

Thought Games:

These existed before the arrival of electronic gaming and have their origins in traditional board games, card and dice games, and text adventure books. Games include: puzzle games, classic games, adventure games and role-playing games.

Action Games:

These include: reflex games, racing games, football games, shoot-'em-ups, fight games and platform games.

Simulation Games:

These include: military-strategy simulators, games of real world sports, flight simulators, and games that simulate a habitat or economic system.

4 Game Genres



Game Genres area



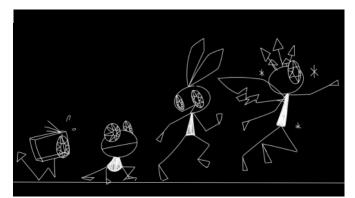
Video game Street Fighter IV (2008) Japan



Video game Super Monkey Ball (2001) Japan



Video game Super Mario Kart (1992) Japan



Video game Vib Ribbon (1999) Japan

5 Making & Marketing of Games



Making & Marketing of Games instalaltion photo, (2013) Ontario Science Centre, Toronto, Canada

From their origins in universities' computer science labs and hobbyists' bedrooms, video games have now become a multibillion-dollar entertainment business.

Budgets, production values, and the number of people involved in the development of a single game can equal that of a Hollywood movie. Some examples of the development process for a number of games are demonstrated here, from initial concept sketches and design documents to the marketing materials produced to entice consumers.

Games in this section have also been selected to show the regional differences in this process, with games from Europe, Japan, and North America.

5 Making & Marketing of Games



Making & Marketing of Games: PaRapper the Rapper table



Making & Marketing of Games: Pokémon area







Graphics panel Grand Theft Auto III (2001) USA

Above: Making & Marketing of Game: GTA area

Below: Original drawings Dragons Lair (1983) USA

6 World Games



World Games wall text

Surveying the global appeal of video games reveals that the types of games which are popular vary widely from country to country. 'First person shooter' style games, for example, have dominated western markets for a generation, but never garnered much interest in the East. Similarly, dating simulators produced in Japan do not find an audience in Europe and North America.

In this section we look at games developed around the world, from countries with a long history of producing video games such as the United Kingdom, France, North America and Japan to newcomers like South Korea, Russian Federation, Czech Republic, and India.

The expertise involved in making video games is no longer limited to regions where the industry began. Companies such as Electronic Arts and Ubisoft have studios all over the world. Ubisoft, for example, have studios in over 15 countries from Brazil to Bulgaria, Romania, Poland, Ukraine and China.

However, publishers are still based in established markets, and out of the top 20 selling games of all time, currently none have been developed outside of Japan, the United Kingdom or North America. Rapid development in the global economy could see this change very soon.

6 World Games



World Games exhibition section

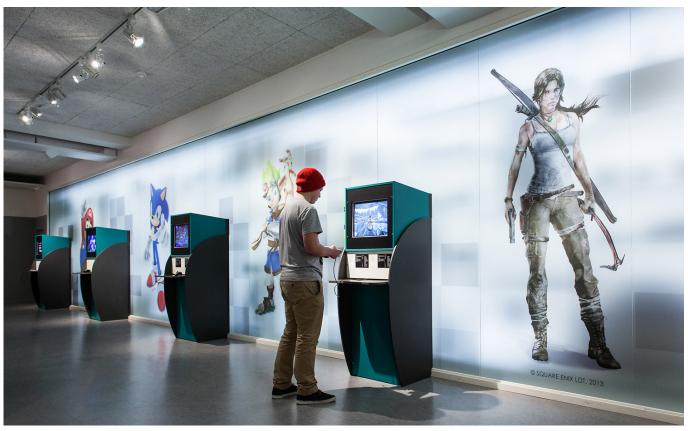


Games Culture: USA and Europe wall text



Video game simulation Tony Hawk (2005) USA

7 Characters



Characters installation shot (2014) Tekniska Museet, Stockholm, Sweden

It is easy to imagine that games have always featured strong characters, but this has not always been the case. In the early 1980s, two important character games were released in the arcades that had a dramatic impact on the world of gaming.

Pac-Man, designed by Toru Iwatani, was a simple yellow character shaped like a pizza with a slice missing. The aim of the game was to clear dots from a maze and avoid four ghosts who chased you. Iwatani wanted to create a game that would reach out to younger gamers and particularly to women. The colourful and non-violent nature of the game gave it a very broad appeal. With over 100,000 machines in arcades, the game became a

worldwide craze. Pac-Man was the first successful video game character, producing merchandise from bed linen to lunchboxes. Fever pitch was reached with the release of Buckner and Garcia's song Pac-Man Fever.

Donkey Kong, designed by Shigeru Miyamoto of Nintendo, was a major hit in 1981. It launched the career of Mario, the Italian plumber, who is the hero of the game. Mario is one of the best known of all game characters and has appeared in a variety of Nintendo games over the last 20 years. The game launched the career of Miyamoto, who went on to design Super Mario Bros and The Legend of Zelda.

7 Characters



Shigeru Miyamoto Mario (2002) Japan pencil on paper



 $Characters\ installation\ shot\ (detail)$



Sonic, the Hedgehog wall panel



Shigeru Miyamoto Donkey Kong (2002) Japan pencil on paper

8 Children's Games



Children's Games exhibition section (2013) Ontario Science Centre, Toronto, Canada

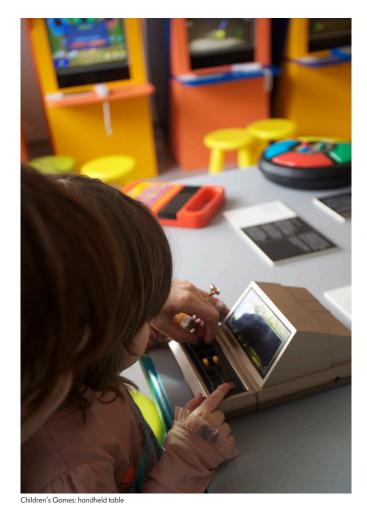
Although video games were originally a pursuit of computer scientists, during their commercial development they became more attuned to the interests of adolescents and those even younger.

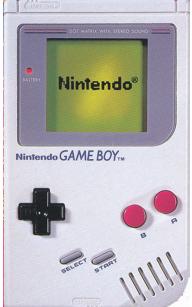
As early as the Atari VCS home console, games were conceived for children as young as three or four.

Like many activities for this age group, games were developed with an educational element. Games of this style are described as Edutainment.

Many of these games, including those in this section, are designed to be played by child and parent together, and utilise learning structures common to this age group such as colour and shape recognition, counting and numbers, as well as learning the alphabet and spelling of simple words.

8 Children's Games





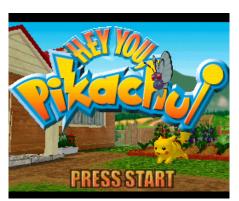
Handheld console Game Boy Classic (1989) Japan



Handheld electonic game Simon (1978) USA



Video game Viva Piñata (2006) UK



Video game Hey you, Pikachu! (1998) Japan



Video game Lego Star Wars (2009) UK

9 Sound



Sound installation shot (2007) Science Museum, London, UK

The artistic and technological progression of video games is most easily traced through the ability to create an ever-closer facsimile of the real world. The audio incorporated into a game is as important as the graphical elements in rendering an immersive experience. Sound designers had to do much more with much less. While games' visuals improved from 2 to 12, then 512, and 32000 colours by 1990, audio was still limited to 4 channels on most consoles. Yet, within those constraints, composers created music as iconic as any character of the era. A fragment of the *Mario Bros* theme tune melody will transport players back to land 1-1.

Continuing our aim to profile some of the key individuals involved in making games, we highlight the work of two composers: Koichi Sugiyama, a Japanese composer who has worked on the Dragon Quest games series with the London Philharmonic Orchestra, and Richard Jacques, who has worked in Europe on many game soundtracks. His distinguished list of credits includes Daytona CCE, Sonic R, Jet Set Radio, Metropolis Street Racer and Headhunter.

This section also includes games where the gameplay is based around music such as *Guitar Hero*.

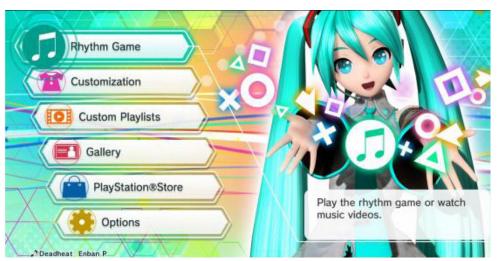
9 Sound







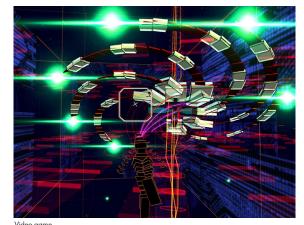
Video game Guitar Hero II (2006) USA



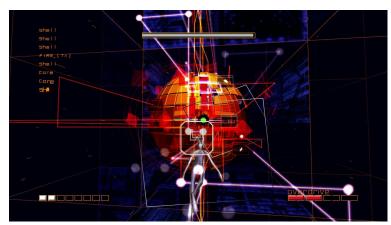
Video game Hatsune Miku (2009) Japan



Character Hatsune Miku

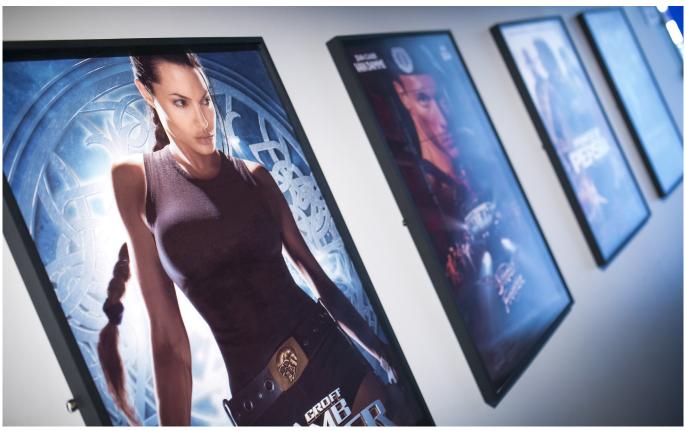


Video game Rez (2001) Japan



Video game Rez (2001) Japan

10 Cinema



Cinema posters installation shot

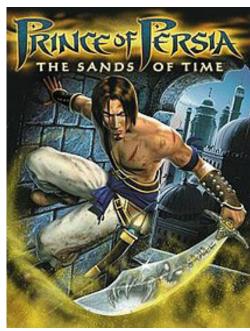
Cinema and videogames have had a reflexive relationship. Many videogames have been influenced by movies, such as Nintendo's Donkey Kong which is unmistakably inspired by King Kong. But Cinema has been equally fascinated with games, from Disney's iconic *Tron* to David Chronenberg's dystopic eXistenz.

Film posters from Super Mario Brothers, Final Fantasy, and Tomb Raider are shown here. Increasingly, videogames and movies share production methods. Motion capture studios record the performances of actors for both blockbuster films and the latest high budget photo realistic games.

10 Cinema



3D object Tom Raider BAFTA Award (2006)



Video game Prince of Persia: The Sands of Time (2003) France



Film poster Prince of Persia: The Sands of Time (2010) USA

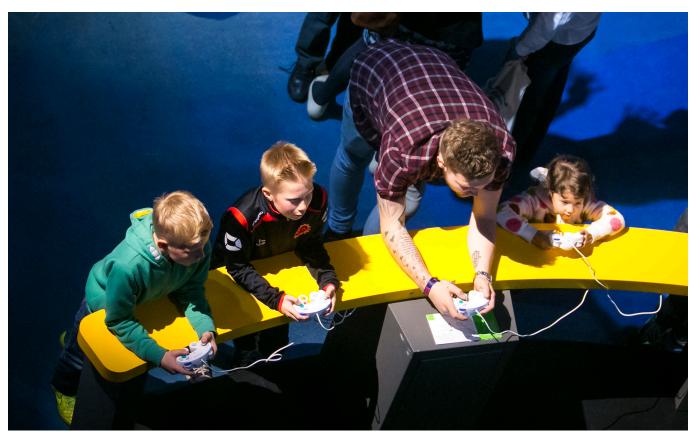


Film poster Resident Evil (2002) USA



Video game Golden Eye (2007) USA

11 Multiplayer Games



Multiplayer Games installation shot (2016) Life, Newscastle, UK

© Richard Kenworthy

Allowing competitive play between players was vital in early games such as *Spacewar* and *Pong* as computers were not yet smart enough to offer gamers a virtual opponent of believable intelligence.

Multiplayer games have vastly diversified today, both in scale and scope. The Internet gives the opportunity to thousands of people to play together in games such as World of Warcraft or Eve Online in persistent worlds that last for years.

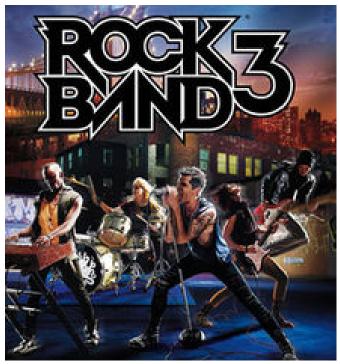
Games that require communal space have not lost their appeal as a social activity. Wii Sports and Just Dance multiplayer modes and simple interfaces allowed a generation of gamers to gently introduce their non-gaming friends and family to the medium.

Being successful in competitive gaming is now also a profession: several games such as *Street Fighter* and *Starcraft* organise professional tournaments with prize money, watched by thousands of enraptured spectators.

11 Multiplayer Games









Video game Rock Band 3 (2010) USA



Video game Just Dance (2009) France



Video game Super Smash Brothers Wii U (2014) Japan

12 Magazines



Magazines installation shot (2010) Queen Victoria Museum & Art Gallery, Launceston, Tasmania

The first magazine dedicated to video games was published in the UK in November 1981. Titled Computer and Video Games, the magazine offered reviews of games, computers and consoles as well as tips, cheats, and competitions. All the popular home computers of the day were covered.

In Japan, the best known games magazine is *Famitsu*, a weekly publication that spans over 200 pages with extensive game previews, reviews, articles, and Manga.

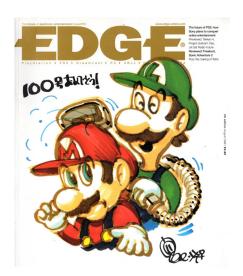
Over the last 30 years magazines have typically been devoted to a single format like Official PlayStation Magazine and Nintendo Power, or multiformat like Edge or Electronic Gaming Monthly.

As with the rest of print journalism, the Internet has radically disrupted the industry and caused great declines in readership. Those readers who have moved to the web have found much more varied comment on video games, from the long-form journalism of Gamespite to the constantly updated blogs like Kotaku, providing news up to the minute, or Digital Foundry, which investigates the technical qualities of games and hardware in exacting detail.

12 Magazines



Magazine Edge, issue 1 (October 1993)



Magazine Edge, issue 100 (August 2001)



Magazine Famitshu, issue 700 (17 October 2002)



Magazine Crash, issue 1 (February 1984)



Magazine Sinclair User, issue 1 (April 1982)



Magazine Electronic Gaming Monthly, issue 1 (May-June 1989)

13 Future Technology



PlayStation VR Worlds, installation shot (2016) Miraikan, Tokyo, Japan

All video games could be considered some form of virtual reality: they all simulate the presence of the player in a computer-simulated environment and provide a level of immersion in that digital simulation. The term is more readily applied to technologies that fully immerse an individual's senses, head-mounted displays being the most iconic example.

During the early 1990s, companies invested heavily in Virtual Reality Systems and many of them were successfully developed for military training. However, these systems were very expensive and despite the attempt of companies such as Atari, Nintendo and Sega to create cheaper systems for consumers, the technology's cost proved too prohibitive to bring to market.

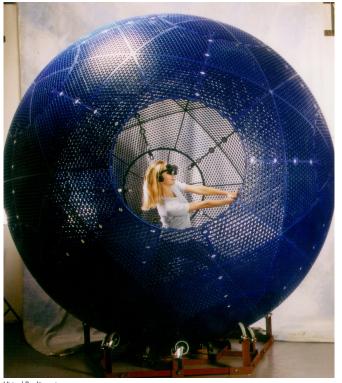
Adapting many of the technologies used in mobile phones, head mounted displays providing immersive 360 degree environments are finally becoming a reality. In this section **Game On** showcases some the recent developments in the field, exploring how this technology has been applied to videogames.

Future technologies are always full of potential but might not all create compelling gaming experiences. As well as displaying the latest virtual reality technology, this section reviews older iterations of virtual reality and display technologies that are less well known today.

13 Future Technology



Headmounted display Oculus Rift DK2 (2016) USA



Virtual Reality system Virtusphere (2012) USA

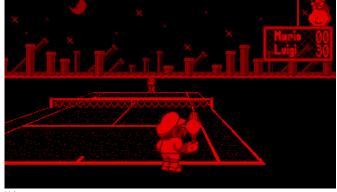


Future Trachnologies display case





Video game PlayStation VR Sea World (2016) Japan

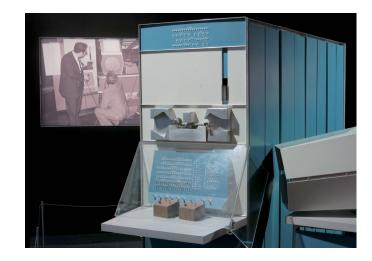


Video game Mario's Tennis Virtual Boy (1995) Japan

14 Highlights

Early games features a replica of the mainframe computer from MIT that was used to develop Space War! - one of the first videogames ever developed. The replica shows visitors the scale of computers and types of interface available in the mid-60s.

Replica PDP1 Mainframe Computer (1959) USA



Game On displays original cabinets from the first two arcade games developed by Nolan Bushnell - **Computer Space** and **Pong**. Both games are also playable on a Vectrex and TV Pong machine respectively.

Video game Pong (1972) USA



The **handheld table** showcases in playable form the history or portable gaming form original Simon units from the 1970s to today's lpads.

Handheld Table, Children's Games area



14 Highlights

Visitors can experience the height of the 90's arcade experience in the exhibition's twin **Daytona 2** cabinets.

Video game cabinet Daytona Twin (1994) USA



The largest simultaneous multiplayer game to operate form a single console, **Saturn Bomber Man** allows up to 10 participants in this hectic and very sociable multiplayer experience.

Video game Saturn Bomber Man (1996) Japan



Combined with a mixed reality headset, **Wizdish** allows visitors 360 degree movement in virtual environments, allowing visitors to walk in any direction through their low friction treadmill. This experiment technology give visitors a hint at the levels of digital immersion that will soon be possible.

Virtual Reality Omni Directional Treadmill Wizdish RoVR 2 (2017) UK



14 Highlights

The characters section of Game On features originals sketches of some of gaming most iconic characters, **Sonic**, **Mario**, and **Donkey Kong**. The Sonic sketch is an early concept sketch of the character and Mario and Donkey Kong were drawn specially for the exhibition by their creator and legendary designer Shigeru Miyamoto.

Original artwork Mario (2002) Japan



The Japanese Game section features **Steel Battalion**, a game with the most complex and ambitious controllers ever developed. With over 60 buttons, joysticks and foot pedals, **Steel Battalion** is an extreme in video game interface design.

Video Game and Controllers Steel Battalion (2002) Japan



15 Installation Shots - Game On









15 Installation Shots - Game On











15 Installation Shots - Game On







15 Installation Shots - Game On 2.0





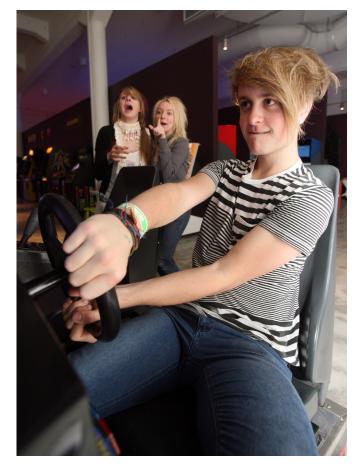




15 Installation Shots - Game On 2.0



© Richard Kenworth







© Dado Morett

15 Installation Shots - Game On 2.0





© Richard Kenworthy



16 Sample Marketing - Game On











16 Sample Marketing - Game On













Game On & Game On 2.0 Tour Pack

16 Sample Marketing - Game On



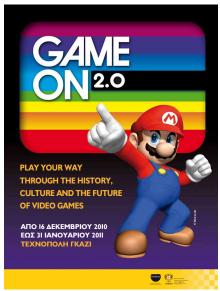






16 Sample Marketing - Game On 2.0











16 Sample Marketing - Game On 2.0









16 Sample Marketing - Game On 2.0





