The Introduction of Computer and Video Games in Museums – Experiences and Possibilities

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Abstract. Computers and other digital devices have been used for gaming since the 1940s. However, the growth in popularity of commercial videogames has only recently been witnessed in museums. This paper creates an overview of how digital gaming devices have been introduced in museum exhibitions over the last fifteen years. The following discussion will give examples of exhibitions from different countries and provide answers to the following questions: Can digital games and gaming devices be used as promotional gimmicks for attracting new audiences to museums? How can mainframe computers be taken into account in digital game related exhibitions? How has the difference between cultural-historical and art museum contexts affected the methods for introducing digital games? Is there still room for general exhibitions of digital games or should one focus more on special theme exhibitions? How are museum professionals, researchers and computer hobbyists able to collaborate in exhibition projects?

Keywords: Digital games, museums, exhibitions

1 Introduction – Pulling in with Digital Games

The popularity of digital games has increased during the last few decades. The playing of games plays an important role in many people's lives, and the average age of players is, in many countries, almost 40 years-old. In Finland, for example, the average age of the digital game player was 37 years-old in 2011, while a total of 73 % of Finns played digital games. Further, a total of 54% of the Finnish population reported playing digital games at least once a month (48% of females and 60% of males) (Karvinen & Mäyrä 2011).

Players' earlier experiences in gaming affect the way in which they choose the games that they play, as well as how they experience these games. The playing of games has become a part of players' life histories. Games are linked to changes in players' social relationships, as well as the uses of media and technologies, and their consumption of forms of popular culture. Thus, digital games work as mediators between many different and important sectors of contemporary cultures. Little by little, people are becoming more and more aware of these connections.

When people recollect their game histories and articulate these recollections, they often express feelings that can be interpreted in the context of nostalgia. At least in certain cases, they long for older games or situations related to the playing of games (Suominen 2008). Even though this nostalgic interpretation and explanation might be

quite obvious and even self-evident, it nonetheless provides possibilities, not only for introducing retro or game and historical related consumer products to the market, but also possibly to museums. One way to take advantage of these sentiments is to create types of exhibitions that deal with questions of digital games, such as computer and video games, and consider different gamer generations as target audiences, which would like to replay and re-experience classic games, potentially introduce those games to their children, or without earlier experiences, get to know the history of a phenomenon that is important in their current lives.

A possible starting point for the creation of such an exhibition is the notion that game-related (positive) feelings are often collective, social and personal, as well as being individual at the same time (Suominen 2011a. and also Suominen & Ala-Luopa 2012.). Many players and non-players recognize some game cultural icons such as Pac-Man, Super Mario and other game characters or individual game products. Likewise, they also recognize gaming platforms and technologies such as the Commodore 64 and Sinclair Spectrum home computers, coin-fed machines and home consoles. They might place these gaming icons into a section of a particular era and way of life, and then associate them with a certain phase of their own lives. At the same time, the experiences with an iconic digital character or other forms of game cultures are very personal because people situate the experiences with some particular moments and memories of their own lives. The sociologist Fred Davis (1979, 122–123) has thus divided nostalgia into collective and private.

Even though the collective importance of digital games and their history has emerged somewhere from "the below", from everyday experiences and digital game hobbyists' interest, there is a growing tendency towards institutionalizing their importance. One reason for this is the fact that gamer generations are employed in the workforce and in such positions, they are able to institutionalize something that is important for them. Games and their historical value have indeed been noticed on an institutional level. This can be seen in a growing number of game exhibitions and an interest in games. (Barwick, Dearnley & Muir 2011, 378–380; Saarikoski 2010, 132) Because of popularity, nostalgia and the fact that researchers and heritage institutions have gradually started to take notice games as a part of cultural heritage, it is tempting to use them in exhibition attractions and at least drawing cards, as a means for attracting new visitors to the museums. Even though since the late 1990s some specialised game museums have been established (such as in Berlin, 1997), digital games have more commonly been presented in temporary and, in some cases, traveling exhibitions.

The aim of this paper is to provide an idea about the variety of possibilities for exhibiting digital games in museums. We cannot comprehensively cover every museum exhibition in the world that is related to digital games, but we will nonetheless present examples from different countries and different types of museums. In addition to the review of past exhibitions, we introduce some possibilities for future exhibitions and briefly consider the question of collaboration between different actors for creating better game exhibition experiences.



Fig. 1: Examples of two different museum exhibitions of games: one from the Berlin computer game museum in 2012. Photo: Tiia Naskali

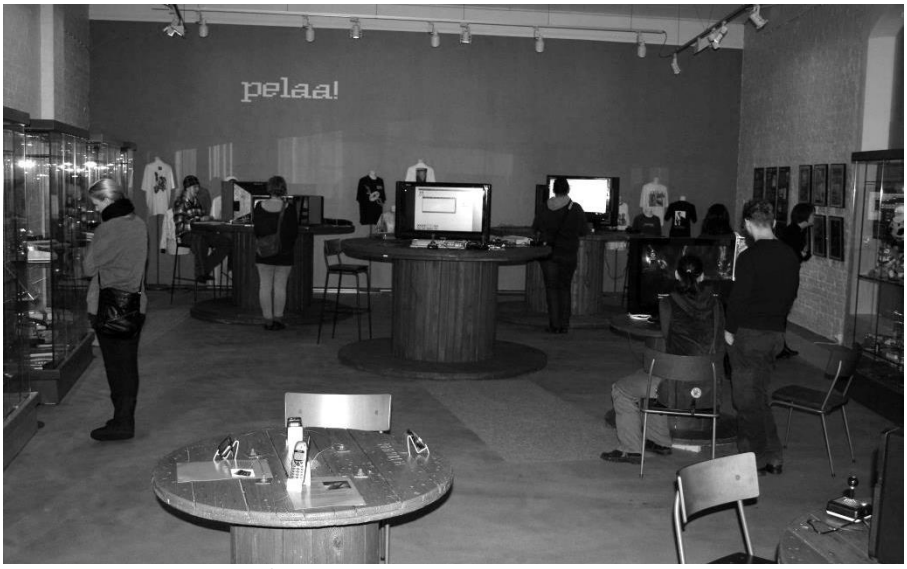


Fig. 2: And one from Salo Art Museum in 2009. Photo: Petri Saarikoski

2 The Variety of Game Exhibitions

Digital games have been exhibited in various types of museums, such as in cultural historical museums, art museums and galleries, museums of photography and moving image, and museums of media and communication. (See the table 1)

Table 1: Some examples of game exhibitions from the 1990s to the present

Exhibition	**Time**	**Museum**	**Permanent/ Temporary/ Traveling**	**Approach**
Videotopia	1996–2011	traveling exhibition (worldwide)	traveling	art/ science/ cultural history
Game On	2002–	traveling exhibition (worldwide)	traveling	cultural history/ art
Level X	4.12.2003–8.2.2004	Tokyo Metropolitan Museum of Photography, Tokyo, Japan	temporary	one company/ art/ cultural history, focused on the history of Nintendo Famicom console
I am 8-bit	18.4.–19.5.2005	Gallery Nineteen Eighty Eight, Los Angeles, United States	temporary	art
C:/DOS/RUN – Remembering the 80s Computer	25.8.–9.10.2005	The Film Archive, Wellington, New Zealand	temporary	art
READY – Commodoren kulta-aika [The Golden Age of Commodore]	9.3.–28.5.2006	Rupriikki Media Museum, Tampere, Finland	temporary	cultural history/ one platform
Mikrokerhoista koteihin. Satakuntalaisen tietokoneharrastamisen juurilla [From Computer Clubs to Homes]	27.9.–12.11.2006	Satakunta Museum, Pori, Finland	temporary	cultural history

Videogame Nation	14.5.–20.9.2009 12.2.–5.9.2011	The Arts Centre Urbis, Manchester, UK Woodhorn Museum, Northumberland Archives, Ashington, UK	temporary, traveling	cultural history
WoW: Emergent Media Phenomenon	14.6.–4.10.2009	Laguna Art Museum, California, United States	temporary	art/ focused on cultural products based on World of Warcraft -game
Pelaa! – game and art exhibition [Play!]	20.11.2009–31.1.2010	Salo Art Museum, Salo, Finland	temporary	cultural history/ art
Game On 2.0	2010–	traveling exhibition (around the world)	traveling	cultural history/ art
Pongista Pleikkaan [From Pong to PlayStation]	from May 2010 to December 2011 24.4.2013–26.1.2014	Elektra Sähkömuseo [Museum of Electricity], Hämeenlinna, Finland Museum of Technology, Helsinki, Finland	temporary, traveling	cultural history
Computer Games – The evolution of a medium	21.1.2011–	Computerspiele Museum, Berlin, Germany	permanent	art/ cultural history
Pac-Man – vanhempi kuin Porin taidemuseo -project [Pac-Man - Older than Pori Art Museum]	14.5.2011	Pori Art Museum, Pori Finland	temporary	cultural history/ one game, focused on the Pac-Man -game
SUPER I am 8-bit	11.8.–10.9.2011	Iam8bit Headquarters, Los Angeles, United States	temporary	art

Game story – A history of video Games	10.11.2011–9.1.2012	Grand Palais Southeast Gallery, Paris, France	temporary	art/ cultural history
Finnish Games Then and Now	5.-10.6. 2012	Rupriikki Media Museum, Tampere, Finland	temporary	cultural history
The Art of Video Games	16.3.2012–	traveling exhibition (United States)	temporary, traveling	art
Game Masters	28.6.–28.10.2012 15.12.2012–28.4.2013	ACMI (Australian Center for the Moving Image), Melbourne, Australia Te Papa, Wellington, New Zealand	temporary, traveling	art/ cultural history
Spacewar! Video Games Blast Off	15.12.2012–3.3.2013	Museum of the Moving Image, New York, United States	temporary	cultural history/ one game, focused on the Spacewar! -game
Applied Design	2.3.2013–20.1.2014	The Museum of Modern Art, New York, United States	temporary	art

Digital games can be related to different kinds of contexts because of their above mentioned versatility. Games are audio-visual products that include music and other sounds, moving images and graphic design, different kinds of narrative and game genres, as well as various user interfaces and national specialities. Games are also closely attached to the hardware they are made for, which distinguish them from movies and many other audio-visual products, which can be copied and played more easily with different platforms. These tangible and intangible features provide multiple – and multimodal – ways for examining games and relating them to different kinds of exhibitions and museums. Games are easy to relate to art, movies, design, and technology and game development. Additionally, they are part of youth culture, popular culture and different kinds of subcultures. (Barwick, Dearnley & Muir 2011, 378–384.) Because of their versatility, it's important to contextualize and present them properly, because otherwise, exhibitions can merely feel like an arcade – both in the meaning of a game centre and their shopping mall-like setting.

Game exhibitions from around the world have attracted many players to see and play games in museums (Suominen 2011b). Interactivity, participation, the possibility

to handle objects and play games interests many visitors. It has often been noted that audiences want to do something other than just looking at and reading about things (Taivassalo & Levä 2012, 8 ; Taivassalo 2003, 9–11). In this sense, games are not used as the subjects of exhibitions, but they have in some cases, played an instrumental pedagogical role in museums. Games are hard to explain without the personal experience of playing, and this is the reason why game exhibitions usually provide the possibility to play games with an emulator or with another platform. In some cases, there are also possibilities for playing games on their original digital platforms, which makes the experience more real. (Saarikoski 2010.) However, James Newman (2012) has recently contested this argument and noted that the playing experience, quite obviously, always differs from the original – even if there has been any sort of original playing experience, because games have originally been released for many different platforms and they have been played with various user interfaces e.g. VDUs and so forth.

Despite the fact that a majority of the population plays games, these game and technology related exhibitions have attracted young people, particularly male-visitors, who usually don't visit museums very often. This target group is noticed in museums that design game exhibitions, which has been one of the goals for many exhibitions, for example at *Game On* and the *Pelaa! – game and art* exhibition. (Saarikoski 2010, 136) Further, exhibitions about the Commodore 64, *READY – Commodoren kulta-aika* (2006) at the Rupriikki Media Museum, attracted first-time visitors to the museum, and in all likelihood, this example is not unique (Naskali 2012, 73, 89). It is for these reasons that games can be used as promotional or pull in products for attracting new audiences, particularly male-visitors.

Nevertheless, digital gaming and digital technologies have their own unique cultural history while at the same time, the cultural heritage of digital technology is constantly emerging (Suominen & Sivula 2013). Games themselves are important and that is why games should not be used only as promotional gimmicks. We claim that it is controversial to only use games as tools for attracting visitors to museums, because, then, the original idea of the exhibition can be neglected and be easily ignored.

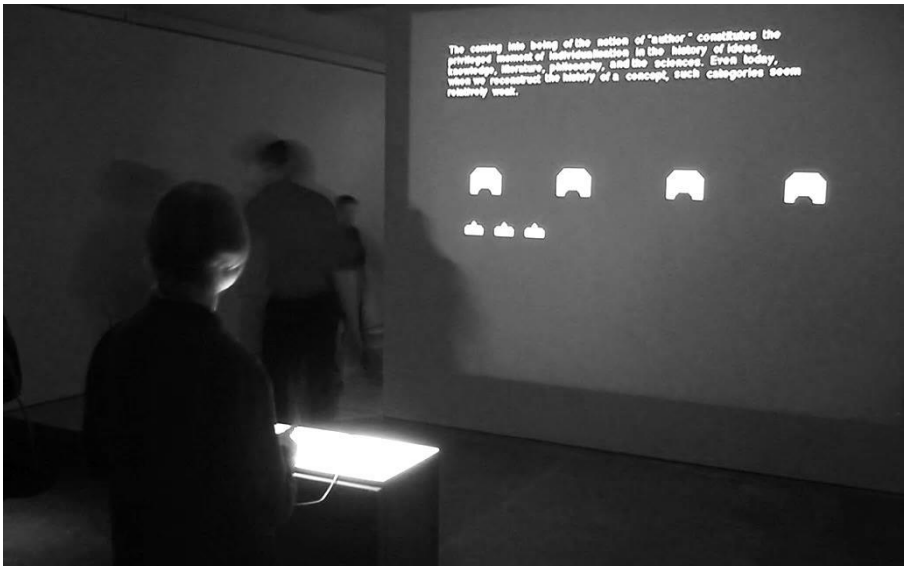


Fig. 3: A photo from the Game On! exhibition in 2003. Photo: Petri Saarikoski

3 From Micro to Mainframe and Vice Versa – How Older Computer Systems Can Be Taken into Account in Digital Game Related Exhibitions

Exhibitions range from object-oriented to concept-oriented. In object predominated displays, there is no interpretive information involved and the arrangement simply relies on the objects to speak for themselves. A concept-oriented display, on the other hand, relies solely on interpretive information, and there are no objects or, if there are, they are of only minimal importance. Nevertheless, a combination of both is usually the best solution because the exhibition doesn't then include too much text for the audience to read and objects are also properly selected and interpreted (Dean 1996, 3–5; Heinonen & Lahti 2001). An exhibition that combines digital games and mainframe computers can operate, for example, with the technological process of computers and its close relationship to game development. In addition, it can focus on specific computers and their purposes, significance and attitudes toward them. Further, these exhibitions are able to touch upon totally different aspects of society and culture.

From a historical point of view, it is always intriguing to examine how games have been developed alongside technology; such as how mainframe machines have turned into smaller personal computers (PCs), game consoles and mobile devices at the same time in which digital games have extended from simple Tennis for Two and Pong types of games in different sorts of directions and forms. This process provides various possibilities for exhibition design. For instance, the exhibition *Spacewar! Video Games Blast Off* at the Museum of the Moving Image in New York (US) was

about the Spacewar video game and it included an ia. model of a PDP-1 mainframe computer with a playable simulation of Spacewar! – game (from 1961–62).



Fig. 4: Picture from a PDP-1 computer at the Game On! exhibition at the Helsinki City Art Museum 18.9.-14.12.2003. Photo: Petri Saarikoski.

Different purposes and attitudes towards computer games reveal social and cultural meanings that computers and gaming have had and still have nowadays. Digital games have been part of computers from the very beginning and they were first made for testing a computer's capacity and training people to use them. Therefore, 50 years ago digital games had, at least on some level, more serious meanings and serves the same purposes that they have now (Saarikoski & Suominen 2009, 18–19; Mäyrä 2008, 52–53).

Even though the above mentioned key figures of the history of modern digital games, such as Spacewar!, have already been recognized in museums, there are some more or less blind spots in the history of digital games that museum curators would be able to deal with in new exhibitions. For example, exhibitions could also display early experiences with several games and simulations such as chess, military strategy games, flight simulators or business simulators; and would be able to introduce these in various contexts, not only in relation to the history of gaming, but also in relation to business, transport and military history (on examples of these games in Finnish context, see Saarikoski & Suominen 2009).

Another noteworthy issue is the mainly forgotten double meaning of early computer games. For example, games such as NIM and its variants were used, on one hand, as experiments in the development of computer logics. On the other hand, the games introduced the vast potential of computers and popularized computing technology for public audiences in newspaper and magazine articles and public exhibitions in the 1950s and the 1960s (Paju 2003; Jorgensen 2009. Picture of the Nimrod machine for playing of NIM in the early 1950s, see: http://en.wikipedia.org

/wiki/File:Nimrod_in_Computerspielemuseum.jpg). Thus, the introduction of NIM machines in museums would function at the same time as an introduction to the history of computing technologies and games, as well as an introduction to the creation of the history of computing and games.

It is essential to provide the opportunity for the audience to use these objects. The playing of games makes the visit more interesting and experiential, and it further helps them to understand the subject, which might be otherwise hard to comprehend. (Newman 2012, 153). For instance, it would be of interest to compare different platforms and their capacity with the possibility to play games with them. That could be one way to make the meaning of mainframe computers in the evolution of computing concrete, when the visitors can themselves experience the difference. However, it's almost impossible to play games using the original objects, at least for the long-term, because there are probably only obsolete and fragile games and platforms available. The problem can be solved, however, on a certain level, with emulation. Emulation refers to the capability of a device or software to replicate the behaviour of a different device or software via backwards compatibility, which makes software or hardware able to interpret older versions of data. Another possibility is the migration of data to a new format, which unfortunately doesn't always include the interactive quality of playing game (Guttenbrunner, Becker & Rauber 2010; Barwick, Dearnley & Muir 2011, 382–384).

4 Different Museums, Different Contexts

The museum as an exhibition site makes the subject of the exhibition and displayed objects that are more significant and valuable, essentially because of the institution's primary function to preserve cultural heritage.[1] A digital game exhibition in a museum increases the appreciation and knowledge about games, gaming platforms and their meanings to our culture and society. However, there are obvious differences between museum contexts. An art museum, for example, offers an alternative way to introduce digital games in comparison to the cultural-historical context. Art as a point of view gives the exhibition design various opportunities to approach games and place the objects (and other exhibition material) (Turpeinen 2005, 147–148; Naskali 2012).

[1] ICOMs Museum definition: http://icom.museum/the-vision/museum-definition/.



Fig. 5: Three different examples of games in art context: one from Ljubljana in 2009. Photo: Jaakko Suominen



Fig. 6: Example of games in art context from Bratislava in 2009. Photo: Jaakko Suominen



Fig. 7: Example of games in art context from Finland in 2011. Photo: Petri Saarikoski

Digital games have inspired many artists and their artwork, and games can be considered as art itself. The relationship between art and digital games can be perceived from at least four different perspectives: 1) games as art, 2) artistic features in games, 3) game related subjects in art and 4) interactivity and other playable features in art. In one way or another, these approaches have been included in several temporary exhibitions such as *The Art of Video Games* (US, 2012-), *C:/DOS/RUN – Remembering the 80s Computer* (New Zealand 2005), *I am 8-bit* (US, exhibitions from 2005-), *Serious Games* (UK 1996-1997), and also in the *Applied Design* exhibition[2] (US, 2013-2014) that approach video games along with other designs from the interaction design point of view (Naskali 2012).

Because of their artistic features, games can inspire patrons to pay more attention to the visual appearance of the exhibition. Digital games, with their audio visual qualities and gameplay remind the visitor, in many ways, of more contemporary and media art because of the soundtracks, music, graphics and lights of the moving image. This can also affect the way in which they are presented in the museum environment. Games can be seen, for example, as artworks but such an approach requires that the exhibition design and object placement needs to support this. It would also be interesting to display the original game and the art piece influenced by the game alongside one another (Naskali 2012).

It is perhaps more straightforward to try alternative presentations in art museums, because of their visual and aesthetic function, and due to the fact that the audience is also used to seeing experimental pieces of art and presentations when they go there. For example, texts don't have to always be on the wall, like in a small *Pac-Man* -

[2] This exhibition is produced by The Museum of Modern Art (MoMA), which has started to collect games for their collection. http://www.moma.org/explore/inside_out/2012/11/29/video-games-14-in-the-collection-for-starters/

exhibition in Pori Art Museum (Finland 2011) where the text was printed in the cube[3]. This idea got its inspiration from an art exhibition design and the art museum that provided the environment without walls. Otherwise, in this case, the exhibition approach was mainly cultural-historical. Games could also elicit questions from the audience, for example about the artistic qualities of digital games, instead of placing information, that they have already interpreted, onto the wall (Turpeinen 2005, 189–191; Naskali 2012, 85).



Fig. 8: The Pac-Man cube in Pori Art Museum. Photo: Janne Karvinen

A game exhibition that introduces the subject from a cultural-historical point of view usually provides a history of platforms, games and gaming with their broader meanings and related phenomena. Exhibitions are usually about one or a few platforms and/or games, or it can provide a larger holistic story about digital games. (Saarikoski 2010, 134–136). It is very common, however, to combine both art and cultural historical approaches in game exhibitions like in the following exhibitions: *Computer Games – The evolution of a medium* in Computerspiele Museum (Germany, 2011-), *Game On* (traveling exhibition from 2002-, also *Game On 2.0* from 2010-), *Game Story – A History of Video Games* (France 2011-2012), and the smaller and first of this kind of exhibition in Finland, *Pelaa! – game and art exhibition* (Finland, 2009–2010).

The museum is able to provide frames for the temporary exhibition approach and display, but this can also be simply background information. That means that in the exhibition displays in art museums or cultural historical museums, the approaches do

[3] The audience was free to take the cube in their hands and to read the text in any order that they wanted. It also made it easier to notice all kinds of audiences because the cube was light and movable and it could be red from the distance that felt comfortable (Naskali 2012).

not have to be, and do not have to automatically be the same. Nevertheless, the museum type can still inspire the exhibition design on a new level and bring something new to the way of introducing games.



Fig. 9: A Pac-Man in Flesh game performance in Pori Art Museum. Photo: Petri Saarikoski

5 From Generalism to Specialization

Although there is no established tradition for designing game exhibitions, partly because of their novelty in a museum environment, there are some features that seem to be part of many game exhibitions. According to Petri Saarikoski, who has participated in several game exhibition projects, like the *Pelaa!* -exhibition in Finland, these exhibitions usually consist of old and new games, part of which are set aside in vitrines and part of which are still playable. In addition, there are different kinds of by-products, like magazines, controllers and toys. There can also be a screen display on the wall that presents game aesthetics, gameplay, designer interviews, or a space where visitors can listen to game music or see documentations about games. The approach usually provides information about the history of games, game cultures and their meanings (from a wider or more detailed perspective, and the texts are thus placed on the walls). An exhibition usually provides lectures for the audience and game demonstrations. (Saarikoski 2010, 134) Even if there is nothing wrong with this type of display, it can be considered as “already seen”, if there are only small variations.



Fig. 10: An example of a national exhibition of games and game industry: Finnish games then and now, Tampere 2012. Photo: Taru Muhonen

It is challenging to design exhibitions on the history of games for different kinds of audiences and make the subject understandable and interesting. It is problematic, in many situations, to ignore the changes in the digital gaming and cultural and historical contexts, but it is further troublesome if these changes are presented mechanically and chronologically. General exhibitions are able to offer a great overview of games and game cultures and related phenomena, but they can also be too generic. (Saarikoski 2010, 137) Whereas special theme exhibitions, like for example the *Game Masters* exhibition in ACMI (Australian Centre for the Moving Image) and Te Papa (New Zealand's national museum), which is about the most influential game designers, can provide more details and a more inclusive experience to the audience than a general exhibition that provides, in the worst-case scenario, only a little information about this and that.

Special themes in exhibition design can inspire people to find and provide new approaches to the subject, such as interactivity in subcultures, like demoscene[4] and retrogaming[5], different types of combinations of art and games (as we mentioned in

[4] A demo is a short, most often non-interactive program that displays audio-visual content in real-time. Demoscene or the scene is a worldwide community of hobbyist interested in computer demos (Reunanen 2010,1).

[5] Retro gaming is very popular at the present. "Retrogamers" or hobbyists respect old game cultures and collect and play them with the original hardware, if possible, or with new hardware via emulators. Retrogaming, as a phenomenon, tells about how older game cultures have become part of today's game culture. It can be seen, for example, in remix versions of old game music and sounds, using old game aesthetics in different kind of products like toys and clothes, and in different phenomena. The phenomenon can inspire people to find interesting games, platforms, controllers and other material for the exhibition

the previously section), platform "wars" and user group rivalries, a comprehensive review of particular games or platforms or so forth. The history of games can be explored, for example, from art history, the software and hardware industry, technology, social history, knowledge and the historiography of games' point of view (Mäyrä 2008, 30–32). Although the possibility to play games is significant (in game exhibitions), because the audience can re-memorize and experience these games and have social interaction with other visitors and their experience (Saarikoski 2010, 136–137). Sociability is perhaps a more important point of view than some sort of nostalgic return to some type of authentic and original gaming experience.

It appears that the interest in general exhibitions has already started to decrease and more original and special theme exhibitions have become popular, particularly if we look at the game exhibitions that have been displayed lately. Many people have already seen the general version since game exhibitions have been increasingly displayed worldwide from the beginning of the 21st century. At the same time, people who design these exhibitions, are getting more experience and new ideas about how to display games. This will probably influence future game exhibition design approaches and the objects that they display. For example, at some point, it appears that the dominance of video games and games cultures of the 1970s, 1980s and the early 1990s is decreasing in exhibitions, while newer games and game cultures begin to interest the public more, in the process where retrogaming and nostalgic focus transfers on new devices, applications and phenomena. In addition, exhibition related happenings and events will probably become diverse and more interactive (Saarikoski 2010, 136–137; Naskali 2012, 87), They can consist of game design workshops, eSport events, artistic performances, game music concerts and workshops, as well as collector's markets etc.

6 Possibilities for Collaboration

It would be ideal if museum professionals, researchers and computer hobbyist and professionals would be able to collaborate in game exhibition projects. In many projects, like *Game On* and all exhibition projects in Finland, this have already been accomplished. This type of collaboration has many benefits. It brings about better exhibitions, increases value and information about collections, helps to maintain museum objects, produces wider historical awareness amongst computer professionals, hobbyists, users and so forth.

A simple museum object, without text, does not communicate with the general audience very well, except with professionals (cf. Hällström 2011, 82–83). An object requires interpretation that makes it part of the collection or exhibition theme (Heinonen & Lahti 2001, 152–153). Museum professionals have specialised knowledge about different audiences, museum environments and techniques, and they know how to execute functional and impressive exhibitions. They also have experience with preserving different kinds of objects (even if they are not necessary

design and approaches to the subject. Together with the fact that gaming has become part of our everyday life, retro gaming cultures provides one possible frame for exhibition design that operates with time (Suominen 2008; Saarikoski 2010).

that familiar with preserving digital content such as games). Researchers can bring along their knowledge on the history of games, different kinds of game cultures and digital cultures to the game exhibition creation process. Together with museum professionals, they are able to make the exhibition narrative, select topics and produce content for different audiences. That turns the exhibition into more than just a general display with a gaming room. That is what makes the exhibition relevant.



Fig. 11: A group of organizers of Pelaa! exhibition: Mikko Heinonen from Pelikonepeijoonit (The Arctic Computer and Console Museum), Leena Järvelä from Salo cultural museum, Juha Köönikkä, Petri Saarikoski and Jaakko Suominen from the University of Turku. Photo: Marjatta Hietanen

Hobbyists and game collectors are, in many ways, important partners in exhibition projects. In Finland for instance, they are the only ones who have, to date, preserved old games, gaming devices and other related objects. The most important group of hobbyists in Finland is Pelikonepeijoonit (The Arctic Computer and Console Museum), which serves game software and keeps games functional (Barwick, Dearnley, & Muir 2011, 375–376). They are enthusiastic, not only about the subject, but also about their memories, feelings and personal aspects, which can also be used in exhibition design, in addition to the collective perspective. That can make the subject more approachable (Newman & Simmons 2009, 1–6). Hobbyists are also able to organize various workshops and game demonstrations.

In addition, it would be important to collaborate more with game companies in exhibition projects, partly because of the legal issues present in many countries. Further, many old games are impossible to play nowadays. Emulation of the original hardware requires permission from the hardware manufacturer and transferring the game to different media platforms requires the approval of all rights-holders involved in the game. Another solution is to adapt copyright laws in order to make video game preservation easier (Guttenbrunner, Becker & Rauber 2010, 75; Naskali 2012, 83).

7 Conclusion

In this paper, we have provided an overview of some aspects of exhibiting digital games in museums. We have argued that due to games' general increased importance, they have to be taken into account more carefully in museums as well. Even though there has been a plethora of game exhibition projects, particularly over the last 15 years, the tendency in the future is to put more emphasis on permanent collections, as well as special thematic exhibitions instead of general overviews of digital games cultures.

One has to obviously, always consider several key aspects: what is the museum context for the exhibition (what type of museum: cultural historical museum, art museum, museum of science and technology, museum of communication, games, computers etc.), what is the role of game in its in entirety (main topic, supporting role, or an instrumental role in introducing something else), what is the context of the introduction of games (popular cultural, artistic, everyday life, certain era, military, technological, design, innovation process etc.), how to use freshly multimodal and interactive affordances of games, and naturally, ponder the question, who is the audience?

In this paper, we have also argued that the collaboration between museum professionals, academic researchers and computer professionals and hobbyists is one of the most important key factors for creating the best possible way for making an exhibit of digital games.

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Exhibitions

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