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Winfried Bergmeyer, Berlin**

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Germany may be the second largest market for videogames in Europe after Britain, but its recognition of the cultural impact of computer games is rather unique. The first videogame museum in the world, the Computerspiele museum in Berlin is thriving on the German state's support of non-profit initiatives dedicated to develop digital media literacy. Since the museum's founding in 1997, its activities have been steadily branching out from the initial goal of providing an educational venue focused on computer game culture. At its cramped office space in the Marchlewskistr. 27, the museum hosts Europe's largest collection of entertainment software and hardware. The archives also contain a collection of publications. Its exhibitions range in scope with of late a focus on exhibiting the work of artists using videogames as an artistic medium. The museum is also involved in research related to digital media archiving and preservation. My visit took place on the eve of the upcoming move to larger quarters that presume a permanent exhibition, a public library, and facilities for academic research.

How does one become a curator of a videogame museum?

ANDREAS LANGE: I am not a technician or an educated art historian. My educational background is in religion, but I am also not a theologian. I studied religion from a comparative perspective. I completed my degree in 1994. I went on to help set up the museum in 1996 and we opened the permanent exhibition in 1997. We were commissioned by a non-profit organization, the "Foerderverein fuer Jugend und Sozialarbeit e.V." (Association of Social Work Service for Juveniles), in Berlin, which was founded in the early nineties. The initiative for this project came from East Berlin, shortly after unification. I was the first West Berliner joining the project in 1994. I came in contact with this organization because of my thesis work. The title of the thesis is rather long: "The Stories of Computer Games Analyzed as Myth." My academic work was an early attempt at approaching computer games from a perspective other than in terms of an educational focus. Up until then academics had been considering videogames in relation to questions about the educational value of these tools: do computer games have any educational value? are they safe for children? etc.; I wanted to examine computer games before posing these questions. I treated them as cultural artifacts. I think that my thesis is the first academic work doing so. My claim was that computer games are modern myths. The professor I was working with accepted this claim. Though he could not help me with the videogame research, he was willing to advise me on methodology. I compared computer games

to ancient Greek myth as a foil to point out the differences. The overall question that I posed was: what can we learn about ourselves and our contemporary state by looking at videogames? I assumed that if they are popular they must mean something. My assumption resonated with people working for the city government in Berlin as I mentioned. I joined a project by the FJS, which was concerned with pursuing models other than restriction – its goal was to sensitize parents and teachers about the educational value of computer games. We published a brochure that consisted of a selection of twenty to forty games with a short description to guide parents buying games for children. At the time the German rating system was also in the process of being established and experts were in demand. I started as an independent expert advising the rating board for computer games (USK, Unterhaltungssoftware Selbstkontrolle) and worked as such for three years and then was asked to set up the museum. I had to stop my advisory work because I was not considered an independent scholar anymore. I am happy to have worked with youth protection services as I was able to get an idea how such systems work, but my involvement with the computergame museum project is much more stimulating. I see the museum as an extension of my thesis research and the FJS sees it as a continuation of the project pertaining to the publication of the small brochure about videogames. Given that the production of such pedagogic projects is an important aim of youth protection programs, the museum was desirable as a venue for education- related activities.

The main function of the museum is the coordination of pedagogical projects?

ANDREAS LANGE: The museum has several functions. It contains a software and a hardware archive, as well as a magazine and book archive. As of yet, we do not have a regular lending service, so it is on demand. Anybody can call the library and make an appointment or request games and magazines or whatever we may provide. The provision of a regular service is a future aim.

Does the museum initiate publications?

ANDREAS LANGE: Our publications are bound to projects such as exhibitions. For instance we have an online and a paper version of a exhibition catalogue of the exhibit “Spiel Machines” organized in 2002, and we have recently posted a videogame history time line online, on our website.

Your work also pertains to schools and youth related projects?

ANDREAS LANGE: Working with schools is another aim of the museum. We have a project running, which is funded by the city of Berlin, that involves children from a district mainly composed of immigrants. We designed a class plan that is part of their curriculum for the academic year. The students were asked to think about videogames. The children involved are between thirteen and fourteen years old. The project aimed at giving gamers a chance to speak because in Germany we are faced with a broad discussion about videogames that is dominated by mass media channels. Gamers are not part of these discussions, which are oftentimes very judgmental – experts talking about computer games over the heads of the kids. We wanted to create occasions to talk to kids, adults, professionals, and teachers, and approach these discussions from different directions. We have two artists working on

this project. Artists working with games are definitely part of the concept of our permanent exhibition in Berlin. We are keen to show game art because our experiences with artists are great so far. *Painstation*¹ was part of our shows, for instance in 2006 during the “Pong Mythos” exhibit and then shown at the Museum of Modern Art in New York.

Where the Painstation installation was cordoned off by the show curators because of safety concerns?

ANDREAS LANGE: Really? I did not know that. In our shows *Painstation* is powered and is always the hit of the show (Figure 1). It is unbelievable how players go on playing until they bleed. As you see in the catalogue for the planned permanent exhibition that we also have more conceptual pieces like "Mensch ärgere dich nicht" (originally a card game similar to Parcheesi). The game is played by four computers and projected so that viewers can follow how they [the machines] draw the figures. The game goes on until the last computer loses, and another round is started. The machines playing the game are actually old computers and that slows the game down. Because the public responds well to game art works we are interested in having such works in the permanent collection.



Figure 1: Painstation, in the 2006 “Pong Mythos” exhibition. Courtesy of the Computerspiele Museum, Berlin.

Are you in contact with other computer game archives?

ANDREAS LANGE: Yes; I have met with the curator of the British game archive [in collaboration with the University of Trent Nottingham located in at the National Media Museum in Bradford]. At the time that I met him they were in the process of collecting games. Also, I have met Carl Goodman, the Curator of Digital Media at the American

Museum of the Moving Image in New York. We are also in regular contact with the Computer History Museum in California because many of the images that we use for our exhibits are from their photo collection. Another very big collection of games and hardware is curated by Henry Lowood, the head of the Cabrinety Collection at Stanford University, whom I know personally. We are an usual museum with the exception that we do not have a permanent collection, though the need is there and we plan to have it next year. We ran a permanent exhibition from 1997 to 2000; and since then we have organized thirty exhibitions with the support of major companies. This work contributed to developing connections with other archives over the years.

The materials in the collection as I understand it are mostly from donations?

ANDREAS LANGE: Mainly donations, yes. This developed from the start over the three years that we had a permanent exhibition. People would call us and offer to donate software and hardware. Of course that when we are planning an exhibition we have funding and a budget. Usually I buy on demand and when we need something. For the “Pong Mythos” exhibition we wanted an original atari, so I looked for it and found a machine in Canada, which I bought for the purpose of that show, but is now part of the collection, as well.

I assume that you are regularly in contact with computergame companies?

ANDREAS LANGE: Of course; our two questions when contacting a company in conjunction with a project are: whether they are interested in sponsoring the project and whether they have something old in their basements. This is something that they rarely have and if they do they do not have the staff on hand to go and look for it. The videogame industry has been a dynamic market from its inception and this is a problem for us – usually we are not able to find employees who work at a particular company for some years and are aware of its history. They are always short on time and they must sell, sell, sell. They do not have time to keep up historical records. Our problem in Germany is that if we want to talk to bigger companies we have to go by way of German departments of these companies, such as Activision and Electronica. These departments are staffed only with salesmen that have no control over the marketing budget. They are strictly dealing with the products that they get from headquarters and they have to meet set sales quotas, which are usually very high. The money they get for marketing purposes is spend toward meeting these demands. Of course that I have met with Nolan Bushnel and Ralph Baer, and others such as Chris Crawford. Their talks are very interesting , but these people are not active at an operational level.

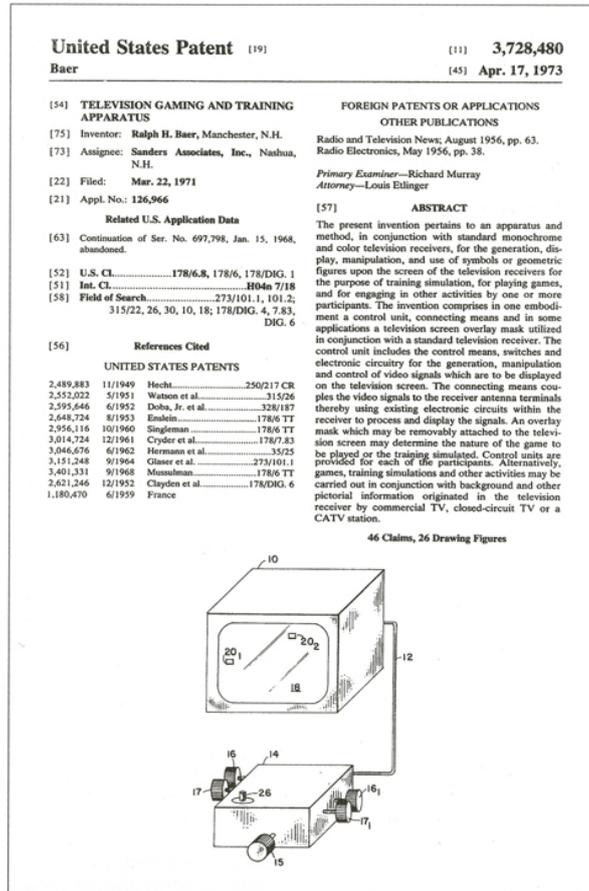
Though they must have something in their basements?

ANDREAS LANGE: Well, yes, and I am very happy to have the opportunity to know the founders of the industry. That is something that I really enjoy in my job – that I am dealing with a subject that is pretty new and I am able to speak with the inventors of the medium. This would not be the case if I was to run a museum about cars or something like that since the people who invented cars are not alive anymore. One of the results is the videogame timeline that we published online. This project was made possible because of Ralph Baer’s donation of his documents. He gave us the documents pertaining to his “Odyssey” (Figure 2). He also asked us to implement his

personal archive into a timeline, and make it accessible to a broader public. We were very honored to comply.

Ralph Baer's original documents are in the museum's archive?

ANDREAS LANGE: The originals are in the Smithsonian. He gave us digital copies.



Baers '480 Patent „Television Gaming and Training Apparatus“

Figure 2: Copy of Ralph Baer's Patent. Courtesy of the Computerspiele Museum, Berlin.

Would you comment on the role of the museum archive as an academic resource?

ANDREAS LANGE: I been invited to many universities as a lecturer and researchers are coming to us. This is happening more and more. There is a big demand for an archive where researchers can access videogames legally. One of the biggest problems is that one can find a lot of old games online, but these are usually not legal sources. Research opportunities to access these computer games in a legal manner are needed.

What is your relationship with the art world?

ANDREAS LANGE: When we opened in 1997 I was aware of some of the early art game works. I played *Painstation* for the first time in 1999 or 2000 when the two artists were still students in Cologne. I met them at a conference where they were showing their first prototype. I knew about jodi; but I was not in contact with artists until 2005 when we began preparing for “Pong Mythos.” This exhibition was funded by the German Cultural Foundation, a federal funding body for art projects. We succeeded with our grant application based on the idea of focusing on “Pong,” which I realize was of importance for many art works. In addition to art works dealing with the idea of Pong, is the game’s importance for the founding of the industry. I wanted to relate the story of the foundation of the industry in conjunction with art works. In 2005 I came in closer contact with artists using games in their practice. Now I am not only an interested viewer but I am working as an art curator. “Public Play” and “Space Invaders”² were very interesting experiences for us and [Stanley] Douglas. In spite of the controversy, we are happy that it worked out the way it because the exhibition provided a platform for public discussions about videogames, art, and politics. During this experience I realized that I am one of the very few curators that is not part of the art world. My venue is the commercial context like the game fair in Leipzig. The event organizers commission us every year to design a show. For them this exhibit works in the commercial context of the trade fair as a eye catcher for media purposes, and we are able to show artworks and shift some of the money to the artists. Margaret Jahrman and Alexei Shulgin were two of the artists that demonstrated interest in participating in the 2007 show “Public Play” at Leipzig. They were interested in this venue because they were not feeling happy about the traditional art world. They are having problems selling their works and being perceived as artists. They are part of niche festivals like the Transmediale and a handful of other such venues. They keep meeting the same people there and they feel that they are stuck in that niche. There is a growing interest on the part of artists to break out and explore new terrains for their art practice and game art seems to offer an opportunity to explore these new areas located on the intersections of the commercial game world and the art world. Also because their art is about that – the mesh up of pop and art, which is common in contexts like the games convention. We can offer that because we are well connected to the commercial game world so we can serve as a bridge for artists like Alexei and Margarete. They took part in the press conference at the trade fair and were able to observe who are the driving forces of the industry, and gauge the motives to fund artists and people like us who are doing art exhibitions for them. This is also why the “Space Invaders” incident is interesting; because it is not that easy to show an art work in the context of a commercial venue like Leipzig when one is used to show in fine art museums. The artist has to be aware of what that shift means and that is what the “Invader” story is telling you. In the context of the fair, you are there confronted with a different audience. The notion of an art work means a different thing in this venue, which is new for artists. Some like this challenge.

Not so in the case of Douglas Stanley? He decide to stop the showing of his piece “Invaders” in Leipzig? What is your take on the situation?

ANDREAS LANGE: It was a most criticized decision. Many people could not understand it. His decision came after we had a crisis meeting with the organizers of the Leipzig show, after we received calls from all over the world; even from the headquarters of Namco Bandai in Japan. They were exhibitors at the same time in

the same place, in the neighboring hall. At one point someone from their booth came to us asking who was in charge. I told them I was. They said that they had gotten a phone call from headquarters in the United States, and that they were very concerned about the media reports about Douglas' work. The representatives demanded that it ["Invaders"] would be switched off because the company did not agree with the art work being shown in the venue. Then Japan called and the organizers of the Leipzig trade fair called me to join the meeting. During this time I was in contact with Douglas. The meeting went very well, given that the fair organizers were especially concerned with protecting the freedom of the artist. The decision was to not switch the art work off just because someone called; the strategy was to gain time. The trade show organizers asked the company for an official letter that would then be sent to the legal department, so that by the time this would transpire, the show would be over because the convention only lasts for four to five days. This happened Friday and the show is over on Sunday. We did not want to switch it off, but Douglas asked us to do so. He said that his decision was related to his family; in particular his wife was very concerned. His decision was also related to his situation as an American living in France. He did not seem happy about it. I think that he should have stood for his art work. I had done some research before the show and found that the company would have not been able to do anything. Legally the name of the game is trademarked, not the characters, nor the game play. Also, Douglas piece was entitled "Invaders" rather than "Space Invaders". I explained this to the trade fair organizers and they trusted me, but I could not convince Douglas.

He was scared given the death threats posted on his blog. Ultimately it was a issue between him, the bloggers, and elements of the mainstream media in the United States?

ANDREAS LANGE: Yes, I do think that it is the case. I do not know him well, nor did I kept in contact with him. My interest in showing the work was related to its theme.

You wanted to show "Invaders" because of its "9/11" theme?

ANDREAS LANGE: I do google my art works (laughs). We like to show art works because artists are more able than anybody else to "break" perspectives and bring something new to the table that makes people think. Of course that I can write texts as a curator but artists can do it differently. They can do it more intuitively, and are more able to approach the senses of visitors, and that is something we like very much. We were aware that the "Invaders" piece was interesting because it could be controlled by body movements but also because of its subject matter, the events of 9/11. This is something we liked, and we wanted to show that the culture of videogames is not only bound to the entertainment industry. In the case of "Invader", also because the work is a metaphor for things that are not digital. It takes iconic images and translates them back from the digital to the physical, back to public space. These are connections that we wanted to bring up, and the main reason for us to show art works.

While working with school children, do you speak about computer games in terms of art?

ANDREAS LANGE: No. The project [“Local Players”] (Figure 3) is managed by two artists, but it does not run under the art label. The idea is to have the students talk freely about computer games and what the meaning of games is for their personal everyday life. One of the class projects is to design an avatar. The artists documented and exhibited the project in its entirety in the form of video interviews and drawings, which were exhibited in a small local gallery.



Figure 3. *Local Players Project, 2009. Courtesy of the Computerspiele Museum.*

In your view how is the european gaming context different from others like North America or Japan, for instance? What would you say is specific to German gaming culture? You spoke before about the attention paid by the German State to youth culture. What are the legal issues specific to Germany in terms of regulation in relation to videogames? Is it just a question of monitoring neo-Nazi content in computer games?

ANDREAS LANGE: That is one of the main legal differences. Nazi symbols are not permitted in Germany, except in the documentary context. Because computer games are not perceived as documentaries, all swastikas must be blacked out. It does not matter if the player is “fighting” against the Nazis. In Germany we have an elaborated youth protection law for minors – actually a legal code that is the most elaborate world wide. There are two independent institutional structures that deal with this. We report to the Unterhaltungssoftware Selbstkontrolle (German Self-Monitoring of Entertainment Software), USK. USK is responsible for monitoring every computergame published here in Germany, as well as all data carriers, but not online games, and this is a problem. USK has been rating on a legal basis since 2003. Before that date their ratings functioned on honorary terms. A shooting in a German school carried out by a student changed this because the computer game *Counterstrike* was associated with it in the press. The rating is geared toward minors under 18 years old. The advisory labels include one meant for everybody, then 18 years old follows, 16, and 12 years old. The USK is an advisory body that falls under

the Federal Family Ministry. This body in turn is also responsible for indexing or banning other media, such as online games, films, etc.. This is a very elaborated bureaucracy, which I think is specific to Germany. These institutions were formed after the second World War in order to prevent Nazi propaganda again, and to control depictions of sexuality, another main reason for the existence of regulatory bodies (laughs). On the other hand in the U.S. the debate about potential damage to minors in terms of computer games emerged for the first time around *Deathrace*, an arcade game from 1976. The premises of these debates are in comparison not very different. We are more tolerant about sexuality, which I think is a typical European trait. Germans are more so than the italians, I would say. Germany's attitude about sexual content in media is another difference with the U.S.. Also computer games are more and more perceived as cultural artifacts in Germany. We now have a computer game cultural award, which interestingly states that computer games have cultural significance to our nation. This was the first year that the award was given and the idea is to award it every year. It consists of 6,000 euros meant to be spent on German developers. This is a major recognition, which I am not sure is going to be replicated in the U.S. because it is public founding of videogame production.

We do have America's Army, a free online game run by the military and paid for by public funds— tax payer funds. In any case, the award you mention is different from that type of funding in that it allows for greater flexibility in its attribution. But Germany is not unique in this; for instance, the cultural significance of videogames is also being promoted in France by government entities? Laboral in Spain, an institution sponsored by the Zapatero government is also expanding its exhibition space, and including "game art" in its collection?

ANDREAS LANGE: Yes, there is a tradition of public funding of film productions, which is very established here in Europe. It was set up mainly in response to the cultural dominance of Hollywood and to give the national industry a chance to survive; to allow artists the opportunity to make films that are more specific to our culture. The same rationale is now applied to the production of computer games. The government wants to stimulate special German productions that relate to German culture. Because of Hollywood (and what it stands for) the idea to fund the creative industries is not that common in the U.S.; this is another difference. We also profit from this tendency since our claim is that computer games are more than toys – they are also part of media competency. All the systems that used to protect minors from "damage" come from a time when one could control access to media because people had to buy it. Now one can download it. How do you handle this situation? What are the systems that should be implemented? The idea is to enable the consumer to decide, this is called media competency. This idea is becoming more and more central as part of the school curriculum and the private sector catering to schools. Also, the public can be educated through exhibitions, which are part of a the same strategy (which is politically supported). So we are confident that we will have a permanent exhibition because of this; this is one of the waves that we are surfing.

Being here in Berlin during the commemorations of the twentieth anniversary of the fall of the Berlin wall, I must ask you to comment on the differences between the computer games produced in West German versus those from the former East Germany? Also on that note have you been in contact with the

founders of the Museum of Soviet Arcade Games recently established in Moscow?

ANDREAS LANGE: As soon I saw the newspaper articles I sent them an e-mail and actually got feedback. The responder wrote that he is not able to write in English and that I should come to see it whenever I was in the neighborhood. (laughs) Of course we have East German games in our collection. We have “Polyplay”, an East German machine running eight games, and also two other cassettes with games programmed by amateurs. “Polyplay” was an official product. The perception of computer games in Eastern Germany was very different from that of Western Germany. The reason why is because everything related to computers and IT was identified by the East German government as crucial for the development of the country’s economy. For them it was important to find people who were good programmers and engineers. They did this in other areas as well. They set very early on to find these people and for them computer games was a tool toward this goal. They would start by attracting very small children to computers in order to tease out the talented people. Contrary to West Germany, East Germany viewed computers as a very important area to develop. Of course we had no problems buying everything from the West; for us there was no embargo. On the other hand the GDR was subject to the conditions stipulated in the CoCom (Coordinating Committee for Multilateral Export Controls), an embargo led by the U.S.A. to prevent technology related to the military complex (as well as engineers) to fall in the hands of the eastern block – that is, Russia and its satellite countries. Nonetheless they were able to purchase a few computers from IBM. This was very complicated and was done by the Stasi, the secret service or national intelligence (laughs) (The Ministry for State Security, or Ministerium für Staatssicherheit). The Stasi agents did find embargo breakers like Toshiba and Siemens. Officially Western companies aligned with North America would agree to join the embargo but they would not always adhere to it. In any case, Eastern Germans had to pay a lot of money, which was a problem because they had a shortage of dollars, so there was a great need for the GDR to build and invent computer technologies. The difference with Western Germany was then that computer games were here seen as toys, nothing serious. We prided ourselves on being a country that was capable of building silos, power plants, and trains. Though there were a few kids in the eighties applying for loans to start up a videogame company, they were ultimately unable to proceed because banks would refuse to lend them money. This because computer games were not seen as something relevant or serious. This history makes us different from East Germany and the U.S., but also from England, where videogames were acknowledged for their economic importance, and France, where the cultural significance of computer games was more readily recognized. This is also the reason why we have so few German developers, though they are starting to become more noted internationally as is the case of Crytech. They are the only German company that is producing computer games for an international market. We also do not have a known international publisher and this is a problem because America or Japanese publishers are not used to commission German developers. The reasons are historical, but there are also other reasons. German publishers would not have such high barriers to commission a German developer to produce German games. We do have one medium size publisher, Koch Media, but this is the only national member of the German media association called BIO, which consists of thirteen members; the other twelve are departments of foreign publishers. Today’s scenario relates to the

situation in Germany in the early eighties: East Germans were not capable to build something reasonable because they always had problems getting parts and build computers and because of shortages of hardware; the people who had access to computers were mainly children of high-ranking parents. Ordinary East Germans were not allowed to buy a computer; one had to apply to buy a computer. Children of government officials and academics would be the most likely candidates to gain access to computers. They would play Western computer games at fun fairs in Poland at the Baltic sea, on vacation. There they could sometimes find old western arcades offering Pacman and other now considered classic arcade games. They would remember what they played and reprogram it on their computer such that some of the games made for the Polyplay arcade are identical to *Pacman*. The East German version is called *hazen und wulf* (“rabbit and wolf”), after two well known Russian comic characters.³

These characters are based on old Russian fables also?

ANDREAS LANGE: Yes. In the game the wolf becomes the ghost and the rabbit becomes Pacman, but the game play is similar.

What about women and girl gamers in Germany? Are there any women involved in the German computergame industry?

ANDREAS LANGE: A videogame series for girls was produced by German games developers. The series was called “pony games” (“Reiterhof games”). Though in Germany this was not a particularly successful genre, the publisher sells these games internationally; mainly in Britain.

Thus “girl games” are not a niche market that the German developers are particularly looking to develop?

ANDREAS LANGE: Yes. I think this is related to the fact that women are not as interested as are boys to compete with each other. They are not typically attracted to competitive games such as *Counterstrike* or *Soccergame*, or the type of videogames that produce a winner at the end. I think that this is a “female” trait. Though I am cautious to say that cooperation relates to women’s nature, I do think that this is a difference between men and women. Men like to compete with each other and women do it in another way – not on the battlefield or the soccer-field. This might explain why more women are involved in playing videogames such as “World of Warcraft”, which is an example of a game in which one does not have to fight all the time. As a player you have to communicate with others and are able to do other things than just fighting. So online games are played by women more than single player games. I think that they relate to the ability to communicate with other players and this is more interesting to them than to play against a machine. I think that in that regard Germany is not much different than the States. I know that in the case of Japan girls and women form a large percentage of gamers. I never been in Japan, but I noticed that videogames are not part of [Japanese] academic research, which I find astonishing because computer games are so common there. Because of this I expected to find more investigation other than economic research but I was told that there is is not very much; academics researching games in Japan are usually economists. This is something that I would like to examine further in order to find out

why this is so, but as of now I am not very well informed about the Japanese gaming dynamics.

Last, the museum is also invested in pursuing research toward engaging the experience of game fans and online communities developing emulation platforms. What is your role as such?

ANDREAS LANGE: We are part of KEEP (Keeping Emulation Environments Portable) in collaboration with a number of partners. KEEP consists of a research project, which was recently awarded three million euros by the European Union. This project is also a milestone because it is for the first time that the technical achievements of the gamer community (dedicated to create emulators) were recognized. Emulators are seen as interesting tools that can be used for the preservation of not only video- and computer-games but also other digital media. Interest in this research brought us close to a number of other institutions that are not especially focused on videogames, but are becoming aware that if one can preserve computer games then one can preserve everything else digital. This given that computer games are the most difficult form of digital media to archive because they have to be preserved in an interactive state. To run these games in the future in real time is technically one of the biggest challenges, because the goal is to preserve the “look and feel” of these games. As such this type of research is one of the points of intersections with traditional museums and art historians who deal with digital art. I am thinking of Oliver Grau and others who I know quite well because they are also concerned not only with the preservation of code on one hand and on the other hand the preservation of the “look and feel” of digital works, which is something different. I act as a liaison between the gamer community and academics like Oliver Grau, the national libraries, and the KEEP project. This is the reason why we were invited to participate in the project. The initiators called and asked us to be involved, and this in itself shows a shift in the perception of computer games. This shows that the experiences of the gamer community working with emulators for a decade are now seen as very valuable. The status of computergames as cultural artifacts and their importance for thinking about issues related to the preservation of digital media is crucial because as the first digital mass product computer games have the longest history of facing the challenge of preservation. Because gamers were the first interested in archiving old games, they created elaborated programs and tools that can be used to develop archival techniques and tools.

I assume that the KEEP project was the main motive for engaging you in your capacity of art historian and archivist of the museum?

WINFRIED BERGMEYER: Yes. I worked first for a project called NESTA, which deals with archives, libraries, and museums, in relation to developing strategies for long time preservation of digital materials. This is a big problem facing librarians, but the museum community is not very active about this issue. I remember our first meeting dealing with the preservation of digital games and art at the Kultur Forum, here in Berlin. I found it a very disappointing event; museum archivists taking part were at loss in terms of discussion digital archiving; they are comfortable with pictures and texts, but interactive media and media migration (converting one format from or to another) is a problem that they are not always keen to consider.

Digital archiving is an area of concentration for the museum?

WINFRIED BERGMEYER: Yes, digital archiving is an important focus of our activities since our involvement with KEEP .

And your interest in videogames?

WINFRIED BERGMEYER: I played them over the years. (laughs) I studied Art History and Architecture and worked at the Heritage in Dresden. I met someone there who was working with "Idamidas", a program that they used for digitalization purposes. They would add things to it, but really that was the extend of their research in terms of thinking about digitalization. I pursued additional education to learn about digital archive tools and worked for a company in Berlin, and then as a teacher teaching art historians how to integrate computers in their practice. It was a nice job. After that I got involved with NESTO, a project at the Institute for Museum Research at the Prussian Heritage. They work for all the museums in Germany and are especially interested in researching issues connected to digitization and archives. They are part of a consortium of European programs called "Europeana", which deals with digital libraries. That is in a nutshell my trajectory from Architecture to digital preservation.

What is the focus of the KEEP project? Is it on the development of emulators, or the preservation of hardware and computer games in the archive?

WINFRIED BERGMEYER: Even if we expect hardware (like the 664 here) to run for forty years this does not mean it will. In any case, thinking in terms of fifty years in terms of conversation is not a long time. We have to set up strategies that are independent from the hardware and these involve the emulators of course. If these platforms enable us to run the original code without the original hardware, then emulators are a logical choice.

ANDREAS LANGE: There is also the question of how artists want to present their pieces. There is a lot of time and effort involved in digital archiving. Oliver Grau is working in Austria, and is very interested in this. ZKM is also involved. This organization is very well funded and has a large number of people working on projects, which is not necessarily a good thing. As a small organization we are more flexible, and that is our strength.

Notes

¹ *Painstation* (2001) is an installation by German artists Volker Morawe and Tilman Reiff. The piece consists of a portable interface designed for two players facing each other over a game of *Pong*. The game is played by placing the right hand on a metal surface connected to the actions performed by players. Each time a player misses the the ball the surface area heats up, produces electrical shocks, or swipes the player's hand. Retracting hand contact with the interface breaks the circuit and causes the game to end.

- ² *Invaders* (2001-2008) by French American artist Stanley Douglas is an interactive installation and a modification of *Space Invaders* (Taito, 1978). The alien characters and laser canons of the original game are overlaid with the images of two towers. The goal is to defend the towers against the attacks of alien ships. The player controls the canons via body movements or light sources. True to the original, *Invaders* is particularly difficult to control, with the result that the towers will often collapse. The work has undergone various iterations as public art in the form of projections on buildings in France (e.g., the Trade Center building in Marseilles). At the Leipzig Trade show (the largest computergame trade fair in Europe), *Invaders* was shown on a large screen. An American blogger visiting the fair posted a rather negative commentary about the piece on Kotabu, a blog popular among “techie”. The post related the work to the 9/11 events in New York and denounced it as “insensitive”. Following this post, a New York Post reporter contacted members of the 9/11 families and published an article condemning the piece. Shortly after publication, the artist received a number of threatening anonymous posts on his blog. See the artist’s blog: (<http://www.abstractmachine.net/blog/30-years-of-invasions/#comments>).
- ³ The Russian equivalent of Bugs Bunny and Daffy Duck: Volk and Zayek (The Wolf and the Rabbit) also called "Nu Pogodi!" (Well justcha wait!). The wolf is an unscrupulous lazy and evil character and the rabbit is cute and clever.