

New Media Spaces and New Media Objects

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Abstract – *The paper deals with three artistic examples of humanistic transposition of smart technologies that reshape our reality. Computer vision technology redefines the classical notions of space that we inhabit and repostulates Shakespear's verse "All the world is a stage." New media objects that simultaneously participate in our everyday life and in the "internet of things" pose new networked information on the state of their handling. The Forest of Arden, the metaphor used for the new mixed and smart reality, is neither a totality of paradise nor the Arcadia of easy living but a challenge for the scientists, artists and humanists alike. It is a semiotic forest, where the melancholic philosopher Jaques, confronted with people from all classes and with various problems, faces the given notions and tries to make new sense out of them.*

Keywords – computer vision, video installation, digital video, internet of things, virtual space

1. INTRODUCTION

The projects *If you look back, it won't be there any more* (2005-08), *IP Light* (2008) and *Presence* (2008) are joined in the exhibition entitled *Jaques* (Vžigalica Gallery, Ljubljana, February 2009) and through the artistic research carried out by Narvika Bovcon and Aleš Vaupotič in the post 2005 period. Following the reflection on the reconstruction of a logical unity from a world, that has disintegrated into a mass of bordering and permeated archives - on the level of an image, e.g. a computer interface - a new field of questions opened: how has the world that surrounds us changed?

At the overview exhibition entitled *Algorithmic Revolution* [1] Peter Weibel emphasised how all aspects of the world that surrounds us constantly change, and yet the world appears to remain as it had always been. The *Jaques* exhibition presents three different projects in a new and changed dimension of the world of reacting to spaces and within them layered meanings and objects that were through Manovichian cultural transcoding shown as something else then before they became subject to manipulation by algorithms. [2] A special factor of this change is included in the concept of the techno imagination (as perceived by Vilém Flusser), which deals with the acceleration of mankind's performance of procedures, e.g. in the form of computer algorithms. [3] For instance, the world appears in different dimensions when viewed through a Google search.

In opposition to the two dimensional image, the border represented by the planet Solaris and the film medium in *Solaris* by Andrei Tarkovsky (1972) – in numerous aspects similar to the 16th century Flemish painting and later to the video surface –, the theme of all three projects found in the *Jaques* exhibition is the entrance of man with his body and a politically

sharpened thought into a space that is not homogenous. The movements around it mean that movements on the level of numerous layers of meanings, desires and constraints have to be made. This space is inhabited by people and objects, both of which exist simultaneously in the real world as well as in cyber reality. The metaphor that we have chosen for this experience is Shakespeare's The Forest of Arden from the comedy *As You Like It*. One can enter it, escape into it, or even permanently live in it, just like the former nobleman Jaques, who exchanged the aristocratic material possessions for the openness of the abstract forest.

2. SMART SPACES, SMART OBJECTS

In the following sub-chapters special examples of smart spaces and smart objects as developed in the projects at the exhibition *Jaques* are presented.

2.1. Presence

The move from the everyday world into the changed reality of the *Jaques* exhibition can be found in the project *Presence* (programming by Damir Deželjin, Jurij Porenta and Andraž Sraka), in which the visitor of the computer video-installation is placed in the position of the person in audience with the king. The video material is taken from the digital animation *To Brecknock, while my fearful head is on* (2006) by Narvika Bovcon and Aleš Vaupotič, which depicts the height of dramatic action in Shakespeare's *Richard III*. Duke of Buckingham finds himself in the moment in which King Richard rejects his demand. There is only one way in which this can continue: a confrontation, which – for Shakespeare's characters outside the Forest of Arden – can only mean death.

In the project *Presence* Buckingham's position is taken over by the viewer, who is thus a substitute for the character in the play (in a fictitious situation) as well as the body of the actor on stage. The theatre is a mediator as the model of a new media smart space is being established. As encountered increasingly often through the everyday use of smart devices, in this installation - as an example of a smart space - the visitor finds himself in a gallery space and in a narrative reality at the same time. The king's presence becomes even more realistic, for the computer vision is capable of recognising what is happening in front of the projection which it then adjusts accordingly - thus fitting the viewer's behaviour: one should not look the king in the eyes and the installation does "not work" if we look at it, for the computer vision includes face detection. At this the double use of the computer vision is important for the installation. The first change is caused as the viewer enters the shot in the active field of the installation as a smudge. At this level it is merely a sensor, however as soon as the computer decides that it is looking at a human and not a faceless object, its vision becomes similar to human vision and thus the computer can play a role in the ideological field in front of the installation. *Presence* thus opens the complex issues on artificial intelligence that - with a high level of analysing activities - surpasses the mere recording of surveillance cameras and thus poses questions as to the ideological connotation of the supposedly unbiased view of the machine.

From the theoretical aspect of the medium the relations between avant-garde traditions of excluding the actor's bodily presence from the theatre - for instance with the superpuppet (Übermarionette) of Edward Gordon Craig [4] - and the photo-realistic procedures of digital animation are also important for this project. The notion of synthetic realism [5] could represent a bridge between the seemingly opposing sides: if modern theatre excluded the serendipity of meanings that the actor's never fully controllable body carries around (from the statement in the theatrical plural media language), the virtual computer worlds establish "realism" in parts, synthetically, and thus on a completely different level; the image of man carries merely those meanings that are coded within, for there are no remnants of the physical presence of the human body.

2.2. If you look back, it won't be there anymore

On the meta-level, the project *If you look back, it won't be there anymore* successfully materialises the dialog between two artistic starting points: the concept or the "script" of Barak Reiser and the execution of the virtual space in the context of research in virtual spaces by Narvika Bovcon and Aleš Vaupotič (programming by Igor Lautar). In

opposition to the search for unity as in *VideoSpace* (2003) and its installation in *Friedhof Laguna* (2003) [6], the project of the new virtual space - which through various interfaces entered the real space and turned it into an augmented reality or mixed reality - demanded to exit the closed scope of realistic elements and open up. The creators of the *Jaques* exhibition also saw the link to the project *Mouseion Serapeion* (2004-07) as important. This project finally opened up in *Mouseion Serapeion Wiki 2.1* (2006) [7] and tested the algorithm construction of the relations within one archive on the base of its use on the internet. The core of the project *If you look back, it won't be there anymore* is a three dimensional computer generated space *Data Dune*, in which the objects appear as a result of the user's manipulation and movement through space.

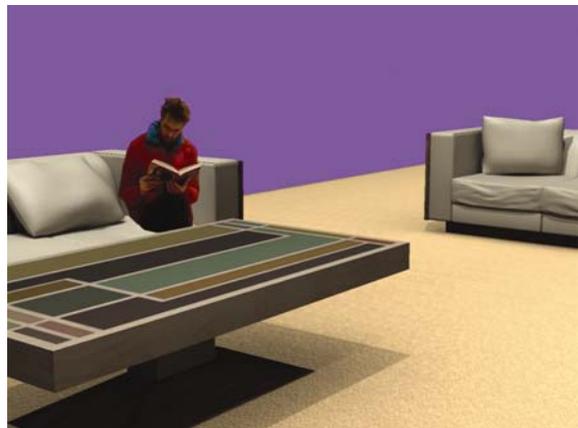


Fig. 1. Digital video *Lounge* is an example of composited mixed reality

The projects *Presence* and *If you look back, it won't be there anymore* activate the volume of the gallery space in different ways. The projection of the virtual - in real time - drawn space in *Data Dune* is on one hand linked back to the "media historical", into the direction of video and video-installations in which the viewer used his imagination in order to "see" the co-existence of two realities, and, in a negative way, it establishes a relation towards hardware interfaces such as CAVE, [8] EVE (by Jeffrey Shaw), [9] as well as the data helmet and similar. The project addresses the issue of video on two levels: first through the projection of the digital video *Lounge* (2008) shown in Fig. 1, in which the authors place themselves into the digital model of the installation by Anton Henning, [10] and secondly through the sole issue of the digital and at the same time high resolution video in the project *In illo tempore (hi-res data video)* (2005) [11] that is a part of the "rooms" of virtual reality. It consists of a ready-made video simulation of the creation of the universe (that could be executed only on super computers) and the recordings of the interview with a research cosmologist who explains the physical cosmology in his home kitchen, outside of the

scientific institution. With this the video explored the borders of the visible, i.e. the view at the beginning of time, space and matter. At the same time, to some extent unintentionally, it also explored the art and political border of video as an author's media manipulation of images, especially in the form of practices such as remixing and found footage.

As an installation the project *If you look back, it won't be there anymore* opens into the direction of digital objects, of which one is actually present in the gallery space – as an animated model in the video and at the same time in the form of a three dimensional print on the machine for rapid prototyping as the *Dragonfly* (2007), shown in Fig. 2. The digital image thus appeared without a stitch in reality, in which it can - as a piece of information - vaporise once more.



Fig. 2. Three-dimensional digital print Dragonfly is an example of how digital information can take shape in the material world

Two referential projects place the digital object context into a political perspective. *Trigger Happy* (2005) by Tim Stolzenburg consists of a file which includes information on how to make a model gun. At some point in the future this information could make any object available at any time with the use of the “printing” objects technology. The potential contradiction of the project is shown in Cameron's film *Terminator 2* (1991), when the good terminator (Schwarzenegger) says that the bad one cannot make guns from liquid metal because: “It doesn't work that way”. Maybe the various characteristics of materials such as metal springs, oils, etc. are still far from technical realisation through three dimensional prints, and Stolzenburg's gun is thus merely a metaphor that has proven to be of no interest for Jaques' political consideration of ideological values in the Forest of Arden.

Julius von Bismarck's *Image Fulgurator* (2007/08) - the emitter of flashes of light - seems more dangerous. This project was the last winner of

Ars Electronica in the field of interactive art. With the aid of reversing the technology in a photographic camera reality was subverted at a point where it was most vulnerable, in its media mediation: what is on a photograph is true, but with von Bismarck photographs lie.

2.3. IP Light

Finally, at the exhibition, the fictive Jaques finds a challenge in the new media object, i.e. a light that is at the same time in real space as well as a unique entity on the internet – it has its own IP address, in the same way as servers do (programming and hardware by Matevž Grbec, Marko Ilić and Samo Mahnič). The light provides for at least two practical uses: it can be used as a reading light, or it can transfer a message as it is turned on and off over the internet.

The project contemplates the so-called “internet of things”, where each of our possessions will be found in real space and cyber space at the same time. [12] This will result in the fact that these objects (and the people who are linked to them) will be easily traceable and their actions documented, as everything will be reflected in the changes of the positions and conditions of objects. *IP Light* [13] is merely one type of object that enters the cyber world and it is shown in Fig. 3; it is an electrical appliance to which we, without larger expenses, add some circuitry that manipulates it as an object that has a specific place and task in our world. At the same time the objects in the “internet of things” are accessible through computer manipulation, and this increases human capabilities to magical limits.

The second type of integrating objects into the “internet of things” is computer vision, whether in the form of standardised code for object recognition or through the analysis of models of the various states of visibility of individual objects. In fact any sort of sensor can pass on data to software, which, with a skilful analysis of various manipulations of an individual object – for instance a smart table that a person touches – forms a piece of information and offers an additional understanding of the situation to which one or the other object can respond with regular practice (if we borrow the term coined by Michel Foucault, which was of course coined for describing human operations). An important consequence arises from this: as we will regularly meet with for instance smart responsive walls, non-living matter will be given life. The feeling for materiality will change, for we will read it as an interface object in our dialogue with the environment.



Fig. 3. *IP Light* from the “internet of things”

3. CONCLUSION

The exhibition *Jaques* presented three different ways of how technology changes the living space of the contemporary man: *IP Light* is an object of the world as we knew it, but it includes something more; *If you look back, it won't be there anymore* is an example of mixed reality, used as an independent artistic medium, as a language for considering the reading of the world; *Presence* realises the two edges of the sword controlling the individual – in his novel *The First Circle* (1968) the Russian novelist Aleksandr Solzhenitsyn talks about photographic cameras, integrated into doors – and the fulfilment of the dream of artificial intelligence, which will grow as an archive of symbols from the detailed analysis of the regularity of the everyday world. In his book *Search* [14] John Battelle searches for an answer to this enigma, in the relation between the intention and the search. He turns to the debate with Danny Hillis, in which he stated that it is not hard to find something:

“My problem is understanding something.” That, he continues, can happen only if search engines understand what a person is really looking for, and then guide her toward understanding of that thing, much as experts do when mentoring a student. “Search,” he continues, “is an obvious place for intelligence to happen, and it is starting to happen.”

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