A Time Consciousness of Young Japanese Media Artists : "MA" and the Moving Image of ITO Akihito's *Code of the River*

Title A Time Consciousness of Young Japanese Media Artists

Subtitle "MA" and the Moving Image of ITO Akihito's *Code of the River*

Lead-in / Abstract This paper will discuss the work of a young Japanese media artist, ITO Akihito's *code of the river*, in order to introduce a relationship between time consciousness based on the moving image and Japanese traditional time consciousness in the new media age.

Participants and speakers MOTOYAMA, Kiyofumi (JP)

Mizuno, Masanori (JP)

Short biography of participants

MIZUNO Masanori
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MOTOYAMA Kiyofumi
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Full text

Introduction

MEDIASELECT2003 was a project organized by a young scholar and a number of media artists who had participated in ISEA2002 NAGOYA [Orai]. Held between November 21-25 2003 at the Warehouse, the same place ISEA2002, the project comprised an exhibition and discussion about media art. I participated in this project, engaging in discussion with young Japanese media artists. I wanted to know how the technologies of moving image and new media affect a Japanese traditional consciousness in the new media age. In this paper, I would like to pick up one work from this exhibition, ITO Akihito's *code of the river*. I want to analyze his work to compare a Japanese traditional time consciousness, "MA", with that derived from moving image technology in the new media age.

ITO Akihito *code of the river* (2003)

ITO Akihito was born in 1976. Since 1999 he has produced mainly video works. He participated in ISEA2002, and was accepted the 3rd Seoul Indie Video Festival. ITO's *code of the river* is a short video loop made up of the image of 30 river patterns. He sets two rules for making it, which he describes as follows:

"Rule no.1: With the screen of the work (comprised of 24fps) divided into twenty-four squares, each frame per square is designed to produce precisely one second time lag than the others, showing its image in its own time frame (1 second is the smallest unit for an image).

Rule no.2: Each of the river images repeats a fade in to fade out sequence every second. They are organized using the method of separating image into 24 parts as specified above."[1]

In ITO's statement, I focus on the way in which he uses the rules and technique of cinema; 24 frame per second and fade in and fade out. Based on these rules, ITO makes some precise rhythm units, fade in and fade out, black and pattern. We could assume that he sets up two rules for making a precise rhythm.

Next, I would like to consider meaning of "black" on his work. I quote his statement again.

"According to Christian METZ since fade out is a movement towards black, the color that expresses the absence of sensory perception, it is visually silent. Here, a movement towards nothing brings about some kind of pattern on the screen by shifting and manipulating the time axis."[2]

ITO refers to METZ to explain the use of "black" in making transitions from one river pattern to another. In 1970's writing on the semiotics of cinema, METZ stated that fade out is just a punctuation, a moment in which nothing going on. However, ITO considers that fade out is a meaning pause. He aims to express the deepest feeling with "black", therefore, he makes patterns on the screen towards nothing

and from nothing. And furthermore, ITO's regard of fade out as a meaning pause, not just an interval or punctuation but a pause filled with the deepest feeling between two things, is enough, I will go on to show, to invoke MA, a Japanese traditional consciousness of time and space.

The *code of the river* has two faces; one is ticking a precise rhythm and the other is "black" with deepest feeling, in spite of its reproduction according to a precise rhythm unit like a metronome. To explore the relationship between these two aspects, I will briefly introduce two different models of time consciousness: that based on the moving image and the Japanese traditional time consciousness from the view point of MA. Finally, I want to make clear why those are not discrete conceptions and then return to an analysis ITO's work.

Time consciousness derived from the moving image

In considering a conception of time consciousness based on the moving image, I want to start for this question, what did the birth of moving images mean?

Henri BERGSON, in attempting to characterise the mechanisms involved in the perception of "becoming", wrote that "Whether we would think becoming, or express it, or even perceive it, we hardly do anything else than set going a kind of cinematograph inside us. We may therefore sum up what have been saying in the conclusion that the *mechanism of our ordinary knowledge is of a cinematographical kind*. "[3]

Even though BERGSON criticized the mechanism of the cinematograph for deceiving people into thinking of time as space, he admitted a great influence of cinematograph for our perception.

How does the mechanism of cinema influence our time consciousness? Media theorist, Siegfried ZIELINSKI points out that:

"The steel core of the recording and projection equipment is nothing more than an adapted clock... At least sixteen times per second, the perforated strip is precisely transported a little further, stopped, then pushed forward again..."[4]

In his statement, he connect cinema with clock. The clock brought people abstract and punctual time. Here, the need of cinema to replace frames precisely must be emphasized. To do so, film technology had to cooperate with automatic chronometers. This mechanism is premised upon a conception that "now" is a point and that punctual, successive points (now) generate the moving image.

The Japanese traditional time consciousness

Next I focus on MA, a conception of Japanese traditional consciousness to analyze the time consciousness of young Japanese media artists. Etymologist SHIRAKAWA Shizuka gives a definition of MA as:

"The space between things. This word means not only a spatial relationship but also an interval of time. MA shows a process in contrast to the term TOKI (time), which indicates a particular point."[5]

NAKAI Shoichi, a Japanese aesthetician active from the 1930s to 50s, focused on the time aspect of MA. NAKAI paid attention to technology, especially cinema, to examine Japanese traditional beauty and to ask what might be the role of aesthetics in the machine age. NAKAI suggested we could perceive MA as cut out from the flow of time:

"We usually think time is continuous like a string, but time is cut out and we feel that we become something new. This is MA, the time of Japanese art. "[6]

This alludes to the idea that MA has some duration and that this is not simply a point located on a precise rhythm. Moreover, we give birth to something new; MA is an interval cut out from the flow of time, a void filled with information and a wholeness from which anything might emerge.

Next, I want to introduce a relationship between MA and now. In Japanese, now is IMA. Is MA etymologically related to IMA (now)?

"IMA: Now, at present. 'I' is prefix of emphasis. 'MA' might mean 'MA'."[7]

SHIRAKAWA says that IMA is decomposed into "I" and "MA", and "I" emphasises "MA." It is crucial that IMA is derives from MA and, as the result of stressing MA, is almost always used to show time. In consequence, we could consider that IMA emphasises a time aspect of MA. To reflect upon NAKAI's discussion of MA, "now" in Japan might be thought of in terms of a face cut out from time flow.

Crossover of two time consciousnesses

Then, I can say that there is a difference between the consciousness of time derived from the moving image and the Japanese traditional time consciousness in the case of perceiving "now".

The former is to grasp "now" as a point in punctual rhythm.
The latter is to grasp "now" as a face cut out from time flow.

I want to look into a relationship between those two types of time consciousness in the new media age. Moving image technology began to divide time into small pieces. In the case of moving film, for example, 24fps means that one second is divided into 24 frames. The advent of the computer which produces a minute, punctual rhythm has changed the operation of dividing "now".

In "New Philosophy for New Media", Mark HANSEN tries to rethink the consciousness of "now". He considers the work of artist Bill VIOLA to analyze the consciousness of "now." VIOLA shot high-speed film (384 fps) and played this back at the customary 30 fps. As a result, he created extreme slow motion that was seamless and steady. HANSEN says that his work enlarges an interval between two frames to make us re-consider the consciousness of "now" in the new media age.

"Viola's work thus installs the technical supplement smack in the heart of the present itself: as a techno-functional extension of protention, new media technology operates entirely within the interval of the now, as the supplement of protention that, by oversaturating the now with information, enlarges it, and by enlarging it, catalyzes the self-affection of consciousness that is constitutive of time-consciousness."[8]

VIOLA enlarges 'the interval of the now' with extreme slow motion to stress what "now" is. Even though this may have been evident from the birth of moving image technology, new media technology accentuates that "now" is not a point but a matrix of time. "Now" could be enlarged; a matrix shaped by minute moments. Moving image technology fuses with new media technology in the information age and, I would suggest, has influenced the consciousness of "now."

If the essence of "now" is changing as we are able to manipulate the infinitesimal "now" with new technology, then we must rethink the meaning of MA. In manipulating the infinitesimal "now", a living face of time which composes MA is decomposed into a matrix of small moments. The conception of MA is in transition from a void filled with meaning to a matrix of small moments located on a punctual rhythm.

To sum up, I can say that "now" is enlarged and MA is eroded by the infinitesimal punctual rhythm. I suggest therefore that in sharing a matrix of small moments, the two time consciousnesses crossover.

A time consicousness of young Japanese media artists

Based on the argument so far, I want to analyze ITO's *code of the river* again. At first, ITO divides the screen of his work into 24 squares to make a matrix of small moments using a rule of 24fps. According to the rhythm of 24fps, he rhythmically fills each cell of the matrix with a river scene and a pattern appears. Moreover, the black and pattern compose the rhythm unit. In this, the black just appears and disappears; next the pattern appears and disappears ... more than anything else, ITO plays the rhythm of 24fps to compose his work.

Furthermore, *code of the river* invokes the notion of MA strongly. Why? The reason is that the "black" connects nothing and being. One pattern, which is a movement toward nothing, goes to the black. The other pattern shows a river scene completely born from the black. Consequently, ITO uses the black scene with fade in and fade out to confront the rhythm of 24fps, which can bear something new. To do so, ITO cuts out a duration of meaning from the punctual rhythm. In short, there is MA on the matrix of infinitesimal moments.

NAKAI pointed out that to grasp "now" as a face cut out from time flow was an essence of MA. However, after fifty years, it is difficult to find the Japanese traditional consciousness directly in the work of young Japanese media artists. They are living surrounded by many moving images, like movies, television, video games and Internet. Therefore, first of all, they are influenced by the moving image technology and familiar with the punctual rhythm, which that technology generates. The punctual rhythm, like 24fps, is basic time consciousness. They just play it.

However, the infinitesimal punctual rhythm machine, the computer has emerged in the information age. This means that we have an apparent increasingly flexibility in manipulating time, and time becomes more clearly conceived of as having an artificial nature. In this artificial nature, the time consciousness derived from the moving image technology and the Japanese traditional time consciousness are mixed.

In conclusion, I suggest that young Japanese media artists become aware of Japanese traditional time consciousness under a basic condition of technological time consciousness. This paper suggests that a further investigation of the works of young Japanese media artists, in terms of conception of time consciousness, would be worthwhile.

- 1. ITO Akihito, "MEDIASELECT2003 DOCUMENTS", MEDIASELECT, 2004, 20
- 2. ITO Akihito, 2004, 20
- 3. Henri BERGSON, "Creative Evolution", transl Arthur MITCHELL, University Press of America, 1983, 306
- 4. Siegfried ZIELINSKI, 'Backwards to the Future', In Jeffrey SHAW and Peter WEIBEL "Future Cinema", MIT Press, 2003, 566
- 5. SHIRAKAWA Shizuka, "JIKUN", Heibonsha, 1987, 685
- 6. NAKAI SHOICH, 'Introduction to aesthetics', "The complete works of NAKAI Shoichi vol.3", Bijyutusyuppansya, 1981, 35
- 7. SHIRAKAWA Shizuka, 1987, 130
- 8. Mark HANSEN, "New Philosophy for New Media", MIT Press, 2004, 266-267

Aboriginal Imagination : Ngulliyangi

Title	Aboriginal Imagination
Subtitle	Ngulliyangi
Lead-in / Abstract	Not provided.
Participants and speakers	Davidson, Jason (AU)

Short biography of participants

Full text

My name is Jason Davidson, I am from the Northern Territory, Australia. I am of Aboriginal descent my family country starting with grandfathers side is located near Ngalakarn, Mara & my grandmothers country is know as Gurindji country both located in the northern territory. I have been developing my artistic skills in new media for the past six years. I believe there is an enormous amount of new possibilities followed by many great opportunities that new media can bring to Aboriginal people and remote communities.

I have just completed masters in cross cultural communication breakdown in Aboriginal health (combined with new media, Aboriginal knowledge & western knowledge of the anatomy of human biology) at the Northern Territory University. I have focused on the way health education has been delivered to the Aboriginal community (kidney failure & disease). Kidney failure has now reached epidemic

proportions in Aboriginal Australia.

Against Friendly Interface : Aesthetics of "Trammelized Interaction".

Title	Against Friendly Interface
Subtitle	Aesthetics of "Trammelized Interaction".
Lead-in / Abstract	The presentation questions the meaning of the interface by analysing works in which, instead of using so called "friendly" interface for making interaction easy and intuitive, artists create "trammelized" interfaces to initiate a critical discourse on the nature of interactive art.
Participants and speakers	Ozog, Maciej (PL / PL)
Short biography of participants	Maciej Ozog, PhD, is a university teacher and artists. In 2002 he received PhD from the University of Lodz for a dissertation on American avant-garde film of the 1950s and 1960s. He has published numerous articles concerning avant-garde film, video art, interactive art and experimental music. Between 1997 and 2001 he taught film theory and history and aesthetics of avant-garde film at the University of Lodz. Since 2001 he has been a researcher and lecturer at the Academy of Humanities and Economics in Lodz. His research interests include multimedia arts, cyberculture and theory of contemporary art. In 1994 he started a multimedia project called Spear. Spear has released 5 Cds, taken part in a number of collaborative enterprises, and participated in various experimental music and digital art festivals in Poland and abroad. Since 1999 has been running a label called Ignis for various kinds of experimental music.
Full text	Please see RTF-file. The full text is available as an attachment. Please download it here.

Amnesia International : Early Computer Art Within the Tendencies Network [1961 - 1973] and Bit International Magazine [1968 - 1973]

Title	Amnesia International
Subtitle	Early Computer Art Within the Tendencies Network [1961 - 1973] and Bit International Magazine [1968 - 1973]
Lead-in / Abstract	Tendencies 4 exhibition [1968 - 69] presenting international [both East and West!] computer art and Bit International magazine [1968 - 1973] on media theory, both form Zagreb, Croatia are wiped out of media art history.
Participants and speakers	Fritz, Darko (HR / NL)
Short biography of participants	Darko Fritz is a multimedia artist, curator, media archeologist and graphic designer. He studied architecture at Zagreb University and completed post-graduate studies at the Rijksakademie van Beeldende Kunsten in Amsterdam (media art department). His work filling the gap between contemporary art practices and media art culture. Fritz was a founding member of the artist collectives Cathedral (1988), The Imitation of Life Studio (1987 - 1990), Young Croatian Electronic Films (1991) and The Future State of Balkania (1998). He organized following exhibitions: "Graphic Design Culture in The Netherlands" (1999), "I am Still Alive" (international Internet art and pioneer computer art of the 1960s; 2000), CLUB.NL (Dutch contemporary art; 2000), "Lights from Zagreb" (interactive light installations; 2001) and <dis.location> (2003). Since 2002 he works as editor in the field of media art on the virtual portal of Croatian culture, Culturenet.
Full text	*... Technology progresses. Art changes. It never progresses. …* *Statement of the collective Anonima in May 1968, catalogue 'Tendencies 4' (1968 - 69), Zagreb, 1970*. Media archaeology research on early computer art can help us to reflect upon the roots of networked [collective] produced art, art networks itself, interactive art, technology and communication mediated art and socially active role of the art in information society. Those subjects remind us of keywords in recent media art production and media culture and were both discussed in depth and made in art practice in particular [last?] avantgarde art movements in the 1960's. Its turbulent history in the 1960's reminds us of the history of net.art and its filtraton and recent position in mainstream art system. Does history repeat?

In the 1961-1973 period, the then Contemporary Art Gallery (today's Museum of Contemporary Art, Zagreb), organized five international exhibitions under the name of **New Tendencies**. The first, inauguratory exhibition (1961) was characterized by a wide variety of the topics treated. The painting was tautological and monochromatic, or oriented towards objects (Almir Mavignier, 'Zero' /Oto Piene, Heinz Mack/ and the 'Azimuth' /Enrico Castellani, Piero Manzoni/). Nevertheless, the works prevailed that were oriented towards systematical research (François Morellet, Karl Gerstner), and optical research of the object structure and surface (Marc Adrian, Julio Le Parc, Günther Uecker, Ivan Picelj, Gruppo "N" – Biasi, Massironi, Chiggio, Costa, Landi).

One might also recognize the beginnings of programmed and kinetic art, whose characteristic language would be marking New Tendencies as a movement already starting from the following exhibition (1963). It acts as kind of 'umbrella network' for many artists and critics and as well (Franch GRAV – Groupe de Recherche d'Art Visuel, Spanish Equipo 57, Italian Gruppo N, Gruppo T, MID, Gruppo 63, Operativo R, Azimuth, Zero (Germany), Anonima (USA), Dvizenije (USSR) etc). Requirements for providing a scientific dimension of art shall give preference to experiments on visual perception based on Gestalt theory.

Already the following, third exhibition of *New Tendencies* (1965) examined relations between cybernetics and art (Abraham Moles). At the same time, the Tendencies movement faced its inside crisis caused by different approaches to social angagement througout art practice. Julio Le Parc from the GRAV, won the award at the 23rd Vennice Biennale in 1966 to which many Tendencies members had a highly critical approach critisizing Le Parc because of his individual but not group presentation as well. The Responsive Eye exhibition organized by the Museum of Modern Art, New York, in 1965 presented 123 works by 28 authors with many of the Tendencies authors taking part. The exhibition triggered dramatic discussions alongside Tendencies members because this exhibition excluded any social dimension of the represented works and focused on formal visual and retinal effects only (inaugurating market oriented 'op art').

The fourth *Tendencies* exhibition (1968/69) was marked by a further penetration of the idea of a theory of information and exact aesthetics. The artistic use of computers was a 'last try' of the Tendencies movement to synchronize its goals as the 'scientification of art' and 'bettering the society' and historical movement of 1968. The exhibition presented a broad spectrum of computer art only, hosting the participants from both cold war blocks. Computer sculptures, choreographies, objects and prints were exhibited. Four international colloquia were organized in 1968 and 1969, treating the topic of *Computers & Visual Research*. In 1968 the Contemporary Art Gallery launched the **Bit international** magazine, as a bulletin of the said orientation (no. 1-9/1968-1972).

At the *Tendencies 5* exhibition in 1973 were presented both sections of computer visual research and the conceptual art practice. At the time, those two art disciplines differed a lot especially because of their almost diagonal opposition in dealing with power stuctures in both terms of physical work production and approaches to the 'individuality vs. society' in the light of the 1968 revolution after-effects. Wathever of that gap between the contemporary art world and media art is, or is not, still existing, at least we are facing today the possibility of those two practices going hand in hand with each other.

Exhibition I am Still Alive

Curator: Darko Fritz; Mi2 and HDLU; Zagreb, 2000. Exhibition presented early computer art and net.art next to each other.

Here are excerpts from the correspondence of curator Darko Fritz and net artist Vuk Cosic, February 2000.

Vuk Cosic: The aspect I'm interested in regarding the bind between the New Low Tech Media and this project is the curator's (and artist's) *decision*, in the age of high tech, to deal with (and exhibit) low tech. I'm interested in the politics behind such a gesture that – in my little interpretation – grounds on the *refusal* to take the technological progress for a given. Increasingly I receive the impression that the new media art is moving in the backwash of the canonical aesthetic and methodological values, and that the New Low Tech Media is one of better ways to confront this (and still not to become a Unabomber). Research in the genesis of technology, and the genesis of the rapport between technology and art seems to

me as the ineluctable first step …

Darko Fritz: I'm interested in juxtaposing several valuational and temporal elements, and actually in seeing on the spot the degree of interaction of these works, what will happened … the media archaeology is interesting because of these principal questions of goals and means, *how and why* does the media art come about; how do art and technology relate to each other and, taken together, to society; question of strategies employed in a given period in the production, distribution and meaning of media art works (here exclusively those created using a computer). It seems interesting to me that in the years 1968-69, amidst the Cold war, it was possible to bring together, under the title "Computers and Visual Research", the authors and theoreticians from both blocks (USA, USSR, Argentina, West and East Europe). Back then files probably did not occupy more than 1Mb, yet graphics, films, objects, sculptures modelled in 3D, music, choreography were present… Bonacic placed a large object *on permanent display* on the frontispiece of a department store in Zagreb. It seems to me that nowadays the possibility of choice and movement is incomparably greater … yet it is interesting to see the results … in the period 1968-72 nine thematic issues of the media art publication 'bit international' were published.
Unfortunately, or rather fortunately, progressive art has always been predominantly a low budget enterprise … 30 years ago computer art pieces were mostly created on a then high tech equipment in a low tech manifestation. The high tech equipment was mostly owned by scientific institutions, because at that time it was there that computers could be found (presumably in the army as well, and still later in the education, since there were no PCs back then). They were mostly created, regardless of the production location and the ideology, within the scientific establishment, prevailingly in spare time and due to individual enthusiasm.

… at the conference "A new space for culture and society, new ideas in science and art", organised by the Council of Europe in 1996 in Prague, Mandelbrot recounted that once, as a young scientist, he was able only in an almost unofficial manner, at night, to upload his program for necessary processing on a then supercomputer … smuggling …

Excerpts from the Bit Internattional magazine [no. 1-9 / 1968-1972] and Tendencies 4 exhibiton catalogue [1968/69]

Published in Zagreb by Gallery of Contemporary Art, Zagreb.

… According to H.W. Franke the total informational capacity of the consciousness is 160 bits. This value is deduced from the fact that an information that has entered the consciousness has 16 bits and remains in it for ten seconds. An information theory finding decisive for the learning processes, as well as for the transfer of the aesthetic information patterns, is that only around 0,7 bit can be converted from consciousness into memory. ...
Herbert W. Franke: Cybernetic foundations of programmed art, Bit international no. 2: Computers and visual research, Zagreb, 1968.

... and that in future the development of messages and means of communication, messages between human and machines, between machines and human, between machines and machines, is going to play an increasingly important role.
N. Wiener: Human use of human beings, 1954.; an introductory quote in the catalogue 'tendencije 4' (1968/69), Zagreb, 1970.

... pure technology is always more interesting and more beautiful than the art amalgamated with technology. …
Statement by the collective Anonima in May 1968, catalogue 'tendencije 4' (1968/69), Zagreb, 1970.

… But the machines already approached the man, faster than the man approached the machines. …
Abraham A. Moles, introductory speech at the conference Computers and Visual Research, Zagreb, 1968. Bit International no. 2, 1968.

… However, while the analogous computer works on the constantly variable values of a system analogous to the problem, a digital computer autonomously computes in accordance with the set program. It is the discovery of digital computer that unfolds the most significant field of computer art to date. … Objects created by Vladimir Bonacic exclude the chance by means of a pseudo-random polynomial

exhibited on a 36 meter long series of 18 objects placed on the facade of the NAMA department store in Zagreb. Finally, this exhibition should not be understood as a domination of technology, but rather as an effort to overcome the new technology and use it to achieve new results in the field of visual.
Boris Kelemen: Computer and visual research, catalogue 'tendencije 4' (1968 - 69), Zagreb, 1970.

... We concede that the next twenty years could be spent by artists in exploring and assimilating the potential of existing computers and their peripherals. ... A great deal of computer art embodies the limitation of existing techniques. The aesthetic demands of artists necessarily lead them to seek an alliance with the most advanced research in natural and artificial intelligence.
Gordon Hyde, Jonathan Benthall, Gustav Metzger: Zagreb Manifesto, 1969,
Bit International: Dijalog sa strojem, 1971.

… if the households are going to be connected through the television screens with the central computer units, as it is nowadays the case with the phones, then nothing will stand in the way of the possibility to present computer graphics by means of a screen. That possibility seems today utopian.
Herbert W. Franke: Drustveni aspekti kompjutorske umjetnosti [Social aspects of computer art], 1969, Bit International: Dalogue with the machine, 1971.

… the first award winners in the now annual computer art contest organised by the 'Computers and Automation' were the member of the U.S ballistic team. There is no doubt that in the computer art the real avant-garde was army. … Sculpture is the utilization of existing forces. That is clearly seen in Egyptian monument sculpture. In the project 'Five Screens with Computer' I am concerned with tremendous power allied to the most delicate control; this, you will agree, is a distinguishing mark of much of today's techniques. ... The sculpture should be sited as a central concourse between three very large blocks of flats ... The sculpture is to be regarded as a focal point of the community. From the windows of the flats, people will get views of the screens, and their elements in flight. ... The computer used to run the sculpture can also be used for various tasks connected with functioning of the flats. By means of telephone connections, it can be used as the local reference library by the inhabitants of the flats. ...
Gustav Metzger, exposition at the conference Computers and Visual Research, Zagreb, 1969, Bit International: Dijalog sa strojem, 1971.

... T.V. will be overshadowed by a C.V. (Computer vision) system combining and extending the present features of both computer and television systems removing the barrier of non-participation by the public. With increased free time, greater interest and activity we will be able to enjoy, and development of the arts and new tendencies should be in that direction.
Petar Milojevc: xxx, Bit International: Dalogue with the machine, 1971.

... Shouldn't the information aesthetics be able to use certain modelling techniques? The information it should model is the aesthetic information, such as it appears in nature and art. However, the dependency of aesthetic information on processes should be modelled as well, while conceiving the processes themselves as temporarily dependent information. ...
Georg Nees: Computer graphics and visual art, Bit International no. 2: Computers and Visual Research, Zagreb, 1968.

Related internet addresses

http://darkofritz.net
http://darkofritz.net/curator/alive/eng/index.htm

Animated Textiles

Title

Animated Textiles

Subtitle

Not provided.

Lead-in / Abstract

Barbara Layne combines electronic and material approaches to the production of animated textiles by weaving programmable LEDs into the structures of fabrics. These changing surfaces suggest a new narrative space in which to examine the fluidity of political and cultural boundaries.

Participants and speakers

Layne, Barbara (US / CA)

Short biography of participants

Barbara Layne is an Associate Professor of Studio Arts at Concordia University in Montreal, Quebec and a founding member of Hexagram: the Institute for Research and Creation in Media Arts and Technologies. She is the Principal Investigator of a major infrastructure grant from the Canadian Foundation for Innovation. Her work has been supported by the Canada Council for the Arts and the Conseil des arts du

Quebec.

Layne's main research interest is the development of intelligent cloth structures for the creation of artistic, performative and functional textiles. These fabrics incorporate microcomputers and sensors to create surfaces that are receptive and responsive to external stimuli. Recent explorations feature an array of Light Emitting Diodes that present changing patterns and texts through the structure of cloth. Wireless transmission systems are also being developed to support real time communication.

Full text

Barbara Layne's project, *Animated Textiles*, combines a creative approach to the textile arts with technological innovations in circuitry and wireless transmissions. The purpose is to explore ubiquitous computing, mobility and interactivity through the introduction of electronic devices into handwoven cloth.

Dynamic textiles are constructed by integrating Light Emitting Diodes (LEDs) and electronic circuitry into the structure of handmade fabrics. The warp and weft produce a natural set of x-y coordinates, forming a substrate for circuitry. The array of LEDs present changing patterns and scrolling texts, as in an electronic message board. Borrowing from traditional weaving patterns and in combination with contemporary images, these textiles exist as a carrier of (shifting, fluid) culture. Issues of identity can be addressed within this transitional, hybrid space. Through the insertion of the narrative, textiles are invigorated into new patterns of discovery. Undergoing many levels of translation, meaning is imparted through both material and electronic languages.

An interdisciplinary team of artist and scientists are collaborating to examine this research from a variety of ideological stances, including aesthetic, technical and cultural perspectives. Three intersecting streams of research are being developed:

- Animated Textiles for visual arts and wearable performance;

- 2-Fold, an investigation of related research with the Digital Studios at Goldsmith's College in London, in collaboration with **Janis Jefferies** and **Robert Zimmer**;

- Wearable Wireless Systems, for artistic and commercial applications. An internal wireless communications system is being developed in **Reza Soleymani's** engineering lab to allow mobility and facilitate remote interactions.

This project is supported by Hexagram, the Institute for Research and Creation in Media Arts and Technologies, in Montreal. Graduate students, In keeping with the goals of the Institute, **Diane Morin** and **Jake Moore**, have been an essential part of the research, experimentation and production. The resulting artworks address the nature of communications through the production of expressive fabrics and the use of smart textiles in environmental installations.

Related internet addresses

http://www.xslabs.net/
http://www.hexagram.org

Architecture as a Time-Based Art : Iannis Xenakis' Polytopes

Title

Architecture as a Time-Based Art

Subtitle

Iannis Xenakis' Polytopes

Lead-in / Abstract

This paper deals with the 'Polytopes', a series of large-scale multimedia environments conceived by the composer and architect Iannis Xenakis during the 1960s and 1970s. It is argued that these cybernetic installations offer challenging examples of a time-based and dematerialized architecture where the very notions of space and place become an expressive medium in itself. Doing so, the Polytopes bring a new element in the discussion on what role is left for architecture in the era of multimedia and Virtual Reality.

Participants and speakers

Sterken, Sven (BE)

Short biography of participants

Sven Sterken (°1975) is an engineer-architect and researcher, affiliated with the University of Ghent (BE) and the Jan Van Eyck Academy in Maastricht (NL). In 2004, he obtained a PhD in architectural history with a dissertation on the architecture and multimedia work of Iannis Xenakis (1922-2001).

Full text

I. Introduction

Polytopes is the collective name of a series of large light and sound spectacles

conceived by the composer **Iannis Xenakis** (1922-2001) during the 1960s and 1970s [1]. The word *Polytope* is Greek and has to be interpreted literally: *poly* means 'a lot, several', while *topos* means 'place'. Furthermore, every Polytope bears the name of the site or the city where it was installed (e.g. *Polytope of Montréal*, *Polytope of Cluny*, …). The name of these automated spectacles thus already indicates that here, we are dealing with an art that not only integrates different media, but that is equally concerned with the notions of 'space' and 'place'. Xenakis's attention to space is not surprising, since for a period of 12 years (1947-59) he worked as an engineer and architect in **Le Corbusier**'s office in Paris. Amongst other projects, he participated in the legendary Philips Pavilion and the *Poème Electronique* (the multimedia show that was projected inside the Philips Pavilion) at the 1958 Brussels World Fair[2]. His collaboration in this project would provide the blueprint for the future *Polytopes*.

This essay deals briefly with the notion of virtuality in both the *Polytopes* and the *Poème Electronique*. Virtuality is understood here as "an imagined or simulated immersive space that does not exist in reality" [3]. More specifically, the question will be raised what role architecture is able to play in the creation of such immersive experiences. It will be argued that Xenakis's *Polytopes* bring forward some original ideas about the possible relationships between physical and virtual space. More specifically, these automated spectacles introduce an innovative conception of space as a dynamic system and of architecture as a time-based art.

II. From the Philips Pavilion to the H²O Pavilion

Keeping in mind the predominance of commerce and technology in our contemporary society, it is not a coincidence that the Philips Pavilion, one of the icons of twentieth-century avant-garde architecture, is a temporary multimedia exhibition pavilion. Commissioned to Le Corbusier by the Dutch company Philips for the 1958 World Fair in Brussels, the Philips Pavilion was to illustrate the superior quality of Philips's products in the field of light and sound equipment by means of an overwhelming multimedia show. In this respect, the Philips Pavilion perfectly illustrates a fundamental conceptual shift in the World Fairs of the post-war era. In stead of displays of products for the education of the public, most exhibition pavilions became machines generating sensory experiences, thus reflecting the transformation from an industrial to an information and leisure society. From the Brussels World Fair on, the principal vector in most of the pavilions' designs was no longer structure, but the spatial implementation of media. This search for the creation of 'augmented spaces' reached its climax at *Expo 70*, the 1970 World Fair in Osaka, where a veritable blurring occurred between real and virtual spaces: most displays aimed at immersing the visitor in a certain atmosphere by means of projections, colored lights, music and even smoke, so as to make him forget the outside world and to weaken his sense of reality.

Happy to experiment with Philips's state of the arts equipment, Le Corbusier felt that the architecture of the corresponding pavilion would have to be no more than an inverted projection screen. Indeed, a darkened space was all he needed for his *Poème Electronique*, a collage of moving images, color projections and spatialized sound, each component developing independently over time[4]. In seven stages, it reflected the old master's vision on the history of mankind and its often perverse relation to technology. Le Corbusier asked Xenakis to design a temporary pavilion that would give expression to the futurist character of the show inside. Given total freedom in this task, the young assistant proposed a design consisting only of hyperbolic concrete shells[5]. In this architecture of continuity, the notions of depth and perspective disappear: floor, ceiling and walls all become part of one single and continuous spatial fold. In the impossibility to take a step backwards from the giant and moving images and the travelling sounds it was exposed to, the audience lost all sense of orientation. In this respect, the Philips Pavilion functioned as a machine that manipulates perception through overloading the senses with stimuli, which create a sense of disembodiment in the audience. Over a million people lined up to get into the pavilion, knowing (but undoubtedly not fully realizing) that their visit to the pavilion would change their perception of contemporary society.

To a large extent, the expressive effect of the *Poème Electronique* is based on the idea of discontinuity of space. By isolating a fragment of the environment and shutting it off from its surroundings, the architecture of the Philips Pavilion creates an opposition between an inside virtual world and an outside, 'real' world. To reinforce the effect of immersion and illusion, continuity or interference between these two levels of reality is avoided. The architect's role is reduced here to providing a curved projection screen that envelopes a darkened room where an alternative, virtual space is installed by means of media. The immersive strategy deployed in the Philips Pavilion does not largely differ from the way virtual reality is

still often evoked today: the special glasses and headsets that are nowadays used to create a virtual reality, have the same function as the pavilion's shell. In this respect, the Philips Pavilion puts into evidence how in the era of multimedia, Internet and virtual reality, spatial illusions can easily be created without calling upon the classical tectonic elements of architecture (windows, columns, walls, …). In other words, in a context of immersive multimedia, architecture somehow seems to become obsolete. Xenakis has clearly understood this; by reducing the pavilion's concrete shell to the absolute minimum of 5 cm, he seems to even want to abolish the very last characteristic of architecture in this project: its materiality.

A more recent example of such a crossover of media and architecture, the H^2O-Pavilion by the Dutch architects Lars Spuybroeck and Kas Oosterhuis, raises similar questions[6]. This pavilion, conceived as a continuous fold in space, contains an interactive and pedagogic exhibition on different aspects of water. A sense of immersion is created here by establishing an interactivity between the visitor and the architectural environment. Contrary to the Philips Pavilion, the physical presence of the architecture is reinforced here: the visitor follows a trajectory determined by spouting fountains, projections and mobile or tilted parts in the floor. Based principally on their bodily reflexes, the audience's reactions are highly predictable. This causes the interaction to remain a closed and isolated system. Again, just like in the Philips Pavilion, architecture is called upon here to sustain the opposition between reality and virtuality; there is no interference.

From the two previous examples, we can conclude the following: when multimedia takes possession of space, it is as if the role of architecture is reduced to that of *shelter* (blacking out the surroundings), *sign* (to attract the audience) or pure *structure* (as support for the technical equipment). The organization of the interior space however is left to all sorts of media, whose aim it is to produce an impression of infinity, as if the interior space had no 'outside'. In other words, what we are dealing with here is a dissociation between the form of the interior space and its perception. This tension between 'hard architectural form' and 'soft media content' signifies a quantum leap in architectural design: no longer the laws of force, mass and weight are the governing factors in the design, but the laws of perception[7]. This raises two questions: is it possible to think about virtuality as an *extension* of reality (and thus not as a *substitute*), and is architecture able to intervene in the creation of such 'augmented spaces' without disappearing[8]?

III. The Polytopes

Xenakis's *Polytopes* add a new element to this discussion. As their name suggests, in these multimedia installations, several spaces of light, sound and color overlap continuously to create a multidimensional, dynamic and differentiated spatial impression. Contrary to Le Corbusier's *Poème Electronique*, where artificial light is used as a carrier of content in a mimetic context (thus following the logic of projection and screen), in the *Polytopes*, Xenakis is interested in the physical qualities of light and sound. Although inspired by natural and cosmic phenomena, the visual imagery of the *Polytopes* is fully abstract and based on the axiomatic entities of Euclidian geometry, namely points and lines. These elements are materialized by means of flashlights and laser beams respectively. In fact, light is treated here as if it were music for the eyes – the same stochastical compositional principles (a compositional procedure based on probability theory), rules the light and sound events.

Contrary to a great deal of contemporary multimedia art, Xenakis' goal is not to find or create correspondences in and between the different ways of artistic expression; nor does he want to confuse the spectator by playing around with his corporality or to hypnotize him with sequences of familiar images. On the contrary, Xenakis' aim is to integrate as much differentiation and variation as possible, and to stimulate the spectator by playing with the *diversity* of the senses. The global formal logic of the *Polytopes* allows to dissociate fully the different layers of the spectacle and to develop color, rhythm and movement independently over time. In this respect, the spectator has to contribute actively to these art works, by making a personal synthesis of the poly-temporality of the proposed spectacle. Or, as Xenakis has put it: « The link (between the visual and aural dimension of the *Polytopes*, ss) is not *between* them but *beyond* or *behind* them. Because beyond there is nothing but the human brain – my brain. We are capable of speaking two languages at the same time. One is addressed to the eyes, the other to the ears »[9].

Just like sound is able to move through the air or to fill a space, Xenakis's idea in the *Polytopes* is to occupy a given site with clouds of light. To this end, hundreds of flashlights are attached to a light steel structure, designed by himself. In the *Polytopes*, the projection screen explodes thus into innumerable dots of light. The

first *Polytope* for instance, the *Polytope de Montreal*, includes 1200 flashlights (800 white, 400 colored), attached to a set of steel cables. Suspended in the central void of the French pavilion at the 1967 World Fair, these steel cables act as the regulating lines of several large hyperbolic surfaces. Together, they form a transparent volume, six storeys high. Once every hour, during six minutes, Xenakis's music occupies the entire pavilion, whilst abstract lighting patterns, changing with a neck-breaking speed of 25 times per second, move feverishly through the central void. Beyond this limit, the human eye interprets change as a continuous movement. During the show, the audience can freely change its viewpoint from the balconies by moving around on the different floors. After these six minutes, the pavilion returns to its original state, only an abstract sculpture remains visible.

In the *Polytope de Cluny* (1972), installed in the Roman thermal baths of the Cluny Museum in Paris, Xenakis goes a step further; he draws a Cartesian grid, folded alongside the vaults of the existing space. Just like in the previous *Polytope*, this steel structure aids in creating a spatial experience, however without imposing itself. The main difference resides in the fact that the audience is now *in* the spectacle, witness of the temporary transformation of this historical site into a violent cataclysm.

Progressively, the mastering of the performance space becomes more and more important in the *Polytopes*[10]. For the last *Polytope*, commissioned for the opening of the Centre Pompidou in Paris in 1977, Xenakis designs the space of the show himself: the *Diatope*, a nomadic pavilion with a tensile canvas. This project actually closes a circle, since it is here that Le Corbusier's initial idea for the Philips Pavilion (i.e. to construct a simple scaffolding with a tensile covering) is finally realized[11]. The *Diatope* houses a multimedia show composed by Xenakis (*La Légende d'Eer*) and is conceived to travel around the world as a kind of cultural ambassador for the Centre Pompidou. Its covering is composed of two layers: an external, semi-transparent canvas of red fabric and an inner metal net to which the light and sound sources are attached. Enveloping the audience, the latter can be considered as a 3-dimensional screen with the 1600 flashlights as its pixels. The translucent floor, composed of glass tiles, reinforces the impression of immersion; the audience seems to be suspended in the pavilion's interior.

The *Diatope*'s double-layered skin (the 'façade') is not merely a projection screen; just like the steel cables of the *Polytope de Montreal* and the Cartesian structure of the *Polytope de Cluny*, it is a dematerialized architecture that functions both as the spatial enclosure of the spectacle and as its technical interface. Acting as a three-dimensional matrix, it transforms a given site into an isotropic space where each point can be articulated separately by means of light and sound. Thus, temporary modulations of the given site are made possible. This aspect reveals a fundamental difference between Le Corbusier and Xenakis regarding their understanding of the relationship between architecture, space and media: if in the Philips Pavilion, architectural spaces are replaced by cinematographically created illusionary spaces, in the *Polytopes*, the immaterial qualities that constitute the *topos* of a given site or space become expressive media in themselves. In other words, in the hands of Xenakis, new media become new tectonic tools in stead of avatars of architecture. Contrary to the Philips Pavilion, where all technical devices were hidden and the architecture almost disappeared during the spectacle, in the *Polytopes*, the architecture *is* the spectacle.

The *Diatope*'s textile covering does not really delimit an interior space: given the poor acoustic and thermic isolation and the lack of visual opacity of its shell, light, sound and cold enter from the outside. The change in prefix in this *Polytope*'s name already announces this: *dia* signifies 'through'. This is also expressed by Xenakis in his sketch of the pavilion: the *Diatope* is open to the energetic waves that circulate in its environment. While the Philips Pavilion's concrete shells serve to mark off the limits of an interior space and shut out the surroundings, the double-layered membrane of the *Diatope* acts as a filter, delimiting a zone in the environment of a higher energetic intensity than its surroundings. As Xenakis suggests in his sketch, more than a building, his *Diatope* is to be considered as "an intensification of a continuous, borderless space" [12]. Rather than creating a material boundary, Xenakis's architecture acts as a space modulator, establishing a dynamic equilibrium between the inside and the outside. As a consequence, inner and outer spaces melt into one another.

This fusion of spaces causes an imperfection in the virtuality Xenakis want to evoke inside the *Diatope*. During the 46 minutes of the spectacle, information from outside 'leaks' into the pavilion; one is constantly aware of what is going on outside. In other words: in the *Diatope*, there is no strict division between the virtual experience and the real world; there is continuous interference. This conscious 'imperfection' marks a fundamental difference between the *Diatope* and the two multimedia pavilions that have been discussed before. Indeed, rather than

opposed, to a certain extent, in the *Diatope*, reality and virtuality become amalgamated. As a result, the visitor is forced to be aware of the *simultaneity* of these situations. Xenakis takes thus advantage of new media not only to propose new and dynamic relationships between spaces, he also shows how in the era of media, Internet and virtual reality, the challenge for the architect is to learn how to combine different levels of reality.

IV. Conclusion

As the *Polytopes* show, in Xenakis's conception the boundaries of space are ill-defined; it is an open, variable system, composed of numerous dynamic sensory spaces that address the senses independently. In such a relativist conception of space, there is no longer unity of place, time and body; space is considered a dynamic system, in a state of permanent becoming. For this reason, the architectural component of the *Polytopes* does not impose formal boundaries; it functions rather as a dematerialized interface that allows to control the different dimensions of space independently. In this manner, Xenakis is able to dissolve a given site into a complex of asynchronically interwoven sonic, temporal and spatial parameters. Time becomes thus a fourth spatial dimension. In this respect, the *Polytopes* announce a new role for the architect: in the beginning of the twenty-first century, he is no longer solely a creator of spaces, but also the choreographer of the time-behaviour and the interaction between these spaces. The architect is thus no longer solely called upon to design static formal enclosures, but to define and control the principles that govern their aspect over time. In such a perception-based architecture, space is measured in terms of durations and plans are substituted by scores. As a consequence, architecture, once the most durable of the arts, becomes a true art of time.

Endnotes

■ 1 _ This paper resumes the argument of a chapter devoted to the *Polytopes* in my doctoral dissertation, which deals with the architecture and the multimedia work of Iannis Xenakis (*Iannis Xenakis architecte. Analyse thématique de l'œuvre, suivie d'un inventaire critique de la collaboration avec Le Corbusier, des projets réalisés en tant qu'architecte indépendant et des Polytopes.* Ghent University, Department of Architecture and Urban Planning, 2004). I would like to thank Katleen Craenen for revising the English manuscript of this paper.

■ 2 _ From 1956 on, after their succesful collaboration on the Monastery of La Tourette, Xenakis had become one of Le Corbusier's closest collaborators. He was the project architect for the Philips Pavilion (1958), the Youth Center in Firminy (1956-65) and the Olympic Stadium in Baghdad (only partially realized in the early 1980s). For a general survey of Xenakis's architectural work, see my article 'Une invitation à jouer l'espace. L'itinéraire architectural de Iannis Xenakis', in François-Bernard Mâche, *Portrait(s) de Iannis Xenakis.* Paris, Bibliothèque nationale de France, 2001, pp. 185-195. Also published on http://www.iannis-xenakis.org.

■ 3 _ Katie Mondloch, 'A Symphony of Sensations in the Spectator: Le Corbusier's *Poème Electronique* and the Historicization of New Media Arts', *Leonardo*, vol. 37, n° 1, 2004, p. 57. As Mondloch points out, the concept of virtuality is often written about as a phenomenon specific to computer-reliant technologies. Nevertheless, the complete immersion of the observer into virtual surroundings has a rich history ranging from Baroque Chapels over Wagners concept of the Gesamtkunstwerk to 1960s experiments in expanded cinema.

■ 4 _ The *Poème Electronique* consisted of three parts, each developing independently over time. The main component was a slideshow with black & white images. Projected on the curved walls of the pavilion, the images seemed to be folded around the audience. Independent from these images, a succession of 'ambiances', colored light projections, filled the entire pavilion with red, blue, green, orange or combinations of these colors. This established a link between the projections on the walls and the audience, reinforcing the effect of immersion. The third component of the *Poème Electronique* was a musical score by Varèse, based on recorded and transformed sounds (bells, voices, sirens, etc.). This music was spatialized throughout the pavilion by more than 300 loudspeakers, allowing the sound to travel alongside the walls.

■ 5 _ Even though hyperbolic paraboloids in concrete were a common feature in 1950s architecture, the Philips Pavilion is one of the only buildings ever to be composed with *only* this kind of surfaces. Apart from his participation as an

architect, Xenakis also composed also a 2-minute interlude, called *Concrète-PH*.

■ 6 _ This interactive multimedia pavilion, opened in 1998, has been commissioned by the Dutch government to celebrate the achievement of the important water works in the South of the country, one of the biggest public works ever in European history. On the link between this pavilion and the Philips Pavilion, see Bart Lootsma, 'En Route to a New Tectonics', *Daidalos* 68, 1998, pp. 35-47.

■ 7 _ I dwell here upon an idea developed by Martin Pawley in his survey of Expo '70. See his article 'Architecture vs. the Movies', *Architectural Design*, June 1970, pp. 289-293.

■ 8 _ On the notion of 'augmented space', see Lev Manovich, 'The Poetics of Augmented Space: Learning from Prada'(http://www.manovich.net/DOCS/augmented_space.doc).
As Manovich explains, the term 'augmented space' is derived from an older and already established term 'augmented reality' (AR). Coined around 1990, the concept of 'augmented reality' is opposed to 'virtual reality' (VR). In VR all the work is done in a virtual space; physical space becomes 'unnecessary'. By contrast, AR helps the user to do the work in a physical space by augmenting this space with additional information. This can be achieved for instance by overlaying information over the user's visual field.

■ 9 _ Xenakis, in Andras Balint Varga, *Conversations with Xenakis*, London, Faber & Faber, 1996, p. 114.

■ 10 _ Xenakis has also proposed several outdoor *Polytopes*. Conceived as abstract outdoor choreographies, these can be considered as musical land art pieces. Staged in the ancient ruins of Persepolis in Iran (1971) and Mycenae (1978), these *Polytopes* manipulate all perceptual parameters by means of laser beams, electro-acoustic music, huge camp fires, children choirs bearing torches, animals and giant anti-aircraft light projectors. This highly expressive confrontation between technology and archaism followed a precise scenario, written by Xenakis and guided by himself during the show with the help of only a simple walky-talky.

■ 11 _ Le Corbusier's words when accepting the commission from Philips have become famous: "I will note make a façade for Philips, but an electronic poem. Everything will happen inside: sound, light, color, rhythm. Perhaps a scaffolding will be the pavilion's only exterior aspect." (Le Corbusier, *Le Poème Electronique*, Paris, Editions de Minuit, 1958, p. 23).

■ 12 _ Philipp Oswalt, *An Architecture of Densities*, in Makis Solomos (ed.), *Actes du Colloque "Présences de Iannis Xenakis"*. Paris, Centre de documentation de musique contemporaine, 2001, pp. 213

Art After New Media

Title	Art After New Media
Subtitle	Not provided.
Lead-in / Abstract	Forming an introduction to the panel. Drawing on experience from the Walker Art Center, touring exhibitions and festivals, this presentation gives an overview of the issues for curating across the boundaries of educational, online, and physical contexts. It addresses (some of) the challenges for curating new media: classification, ghettoization, medium specificity, expectations, infrastructure, legal bugs, presentation, moving targets, participation, platforms, collaboration, collecting, popular culture.
Participants and speakers	Dietz, Steve (US)
Short biography of participants	Steve Dietz is the founding director and former curator of new media at the Walker Art Center, where he curated the online Gallery 9 (http://gallery9.walkerart.org). He has curated more than 10 exhibitions of online and onsite digital artworks, including "Beyond Interface" (http://www.yproductions.com/beyondinterface/), Art Entertainment Network (http://aen.walkerart.org),

Telematic Connections (http://telematic.walkerart.org),
and Translocations (http://translocations.walkerart.org)
and has written extensively on new media art.

Full text

Art After New Media

Since I first wrote on curating new media, *Curating (On) the Web* in 1997[1], I have written and presented a number of times on the topic. I think it would be fair to say that I have consistently - some might say repetitively - based my thinking on two core tenets:

Curating new media is just like curating any contemporary art, only different. The most interesting potential for curating new media is how it might change the practice of curating.[2]

Regarding the first tenet, computational, interactive, networked media present specific challenges for the curator and presenting organization. **Beryl**, and **Sarah's** and **Caitlin's** papers all testify to how much better we understand these challenges of curating new media on both a pragmatic and philosophical level. What I would like to highlight, however, is how each presentation is either predicated, as with Caitlin's paper, on new media as a non-exclusive category, equally applicable **Dan Flavin's**[3] **Jodi's**[4]; Beryl's paper is shot through with examples of work, such as **Janet Cardiff's**[5], which would not normally be identified as new media; and even Sarah's paper makes the case, I would argue, for thinking about network-based art as sharing elements of historical discourses around site-specific, installation and performative art.

Leider (Artforum) to Baigell re Csuri

Indeed, as we shall see, curating new media art is just like any other curating only different. Or, to phrase it in terms of my second tenet, curating new media art has led to a richer understanding of curating other contemporary art.

So what does it mean to be discussing curating new media art in 2004?

I want to revisit a statement by the editor of Artforum[6] **Philip Leider**, to art historian Matthew Baigell in a letter dated On October 30, 1967.

"Thanks for the enclosed manuscript on *CHuck CsuriI*[7] cant [sic] imagine ARTFORUM ever doing a special issue on electronics or computers in art, but one never knows."

In fact, we do know that festivals such as Ars Electronica[7] SIGGRAPH[8], and ISEA[9] itself have been doing "special issues" on computers in art for the past 25 years and more.

Where has it gotten us? For one thing it has gotten us the knowledge of how to curate and present new media art based on a great deal of experience, aspects of which my colleagues outline in their papers.

For another thing, these festivals have been sites of experimentation that have literally sustained a broad and varied international artistic practice that we now understand as a set of rich histories of exemplary works and practices.

But has this made any difference in the contemporary art world in general or the general public for that matter?

One could make the case that with the Walker Art Center[10] dismantling its curatorial new media efforts, with SFMOMA[11] losing its new media-savvy curator, with this year's Whitney Biennial[12] not having a new media program per se, with **Steve Kurtzof**[13] Critical Art Ensemble in court that the United States, at least, is regressing. On the other hand, with so many media festivals in Europe and the rest of the world that it seems like the well-heeled attendee could be on the road every week of the year[14] with the Arts Council of England acquiring new media art for its collection[15], with a kind of giddy interest in locative media[16] and pervasive computing[17] that is reminiscent of the heyday of net art, with the rise of amazing

new institutions such as Sarai[18] one could make the case that new media art is alive and flourishing.

It is difficult to know which of these metrics to use to assess the issue, but wandering around SIGGRAPH[19] last week and ISEA[20] this week, it has been notable to me the number of committed curators, theorists, and artists who have been nonplussed; not just by the work in front of them but by much of the work they have seen presented recently in general. And even when there is work they admire and champion, many will admit, as one prominent curator put it to me recently, that there does not seem to be a public for it. "Our institution can't get by just on digital art," this curator argued.

I hesitate to chalk up this attitude up to any one issue, but there is surprising unanimity on one point by artists, curators, and theorists alike. Whether accurate or not, many remain convinced that there is too much emphasis on what is often referred to as "techno-formalism." I should emphasize that **Tapio Makela** organized ISEA2004 as a set of networked, wearable, and wireless experiences specifically to counter "techno fetishist approaches where technologies themselves are seen as the center of attention."[21]

Why? Why after more than 30+ years of experience and such explicit rhetoric against techno formalism, does there remain, even among specialists, the perception of too much emphasis on techno-formalism?

It's a bit of a straw-question, of course. One person's techno-formalism is another person's profound exploration of the intersection of technology and society. More importantly, there is probably in these sentiments a conflation of techno-formalism and medium-specificity, which needs to be unpacked with greater nuance. And perhaps it is a kind of professional boredom of having seen it all before, somewhere else. But I think it is more than that. It remains of note to me how many of my colleagues, both artists and curators, feel a certain sense of desperation - to use too strong a word. Even as we seem to understand so much better what we are curating and how we are doing it, we are surprised by the ignorance and indifference expressed particularly by mainstream institutions but also by the general public, more than we would care to acknowledge.

In general, I have argued against the siren call of new media legitimation through inclusion in generic contemporary art shows. That was the old way, letting the few into the temple of art and holding them up as paragons of "real artists," who just happened to use computers. Now I would argue that any contemporary art show that does not include a new media work of art is probably just lazy, at best; nevertheless token inclusion remains an uninteresting goal.

And I continue to believe that new media works bring to the table new ways of experiencing art, which I do not want to sublimate to the larger category of "just art." As with photography, as with video, there are histories and modes of creation and presentation that are worth remembering and sustaining and promoting.

At the same time, as we develop our histories and alternative histories, it is increasingly clear what we have always known: new media art is not Pallas Athena from the head of Zeus. It has antecedents; it relates to many other contemporary works that may not be new media-based. The question is what is the future of new media art.

In the film *Sleeper*[22], the past from which the character played by Woody Allen awakens is just as inscrutable to his captors as their futuristic society is unbelievable to him. They have lost the context for the most "obvious" of artifacts, whether a portrait of**Richard Nixon** or a household vacuum cleaner. Perhaps at some not too unimaginable point in the future, a young curator of contemporary art may find the issues of the present day regarding what is sometimes referred to as "new media" and its curation equally opaque.

To promote this future vision, I propose that rather than continuing to almost exclusively present new media artwork in almost exclusively new media art contexts; rather than hoping mainstream institutions pay more attention to new media art; we assume a new moment of art after new media.

What would art after new media look like? I think it would look like the locative media works that Sarah discusses and include **Robert Smithson's** *Spiral Jettyl*[23]. It would look like the variable media[24] the Caitlin describes; where new media has art has been the impetus to understand better and in a more generalized way all of contemporary art. And it would look like the interactive works that Beryl discusses, including both **Rafael Lozano-Hemmer**[25], a seminal new media artist, and **Rikrit**

Tiravangia[26], who has probably never been described as a new media artist.

In other words, new media has won. It is the only way we can adequately describe and understand contemporary art.

I just want to emphasize that this call for a curatorial practice of art after new media is not an either/or option. It does NOT mean that festivals such as ISEA and Ars Electronica or exhibitions of new media art should not exist - although I do not believe an expansion of the artists involved would be a bad thing - nor does it mean that mainstream art institutions should be given a pass. To the contrary, they need to take new media art as seriously, both philosophically and pragmatically, as any contemporary art they curate, present, and collect.

New media art is dead. Long live new media art.

- 1. http://www.archimuse.com/mw98/papers/dietz/dietz_curatingtheweb.html
- 2. For example, http://www.yproductions.com/writing/archives/000037.html Curating New Media International Curatorial Summit Banff New Media Institute August 25, 2000
- 3. http://www.guggenheimcollection.org/site/artist_works_46_0.html
- 4. http://www.jodi.org
- 5. http://www.abbeymedia.com/Janweb/artwork.html
- 6. http://www.artnet.com/Magazine/index/mccormick/mccormick1-8-3.asp
- 7. http://www.siggraph.org/artdesign/profile/csuri/
- 8. http://www.aec.at/en/festival/index.asp?nocache=46706
- 9. http://www.siggraph.org/s2004/cfp/art/index.php?pageID=cfp
- 10. http://www.isea-web.org/eng/sympos.html
- 11. http://www.mteww.com/walker_letter/halbreich_letter.html
- 12. http://www.sfmoma.org/info/mushist_overview.asp
- 13. http://www.whitney.org/biennial/
- 14. http://www.caedefensefund.org/
- 15. http://rhizome.org/opportunities/index.php
- 16. http://www.hayward.org.uk/exhibitions/acc/txtacq.html
- 17. http://locative.net/
- 18. http://ubicomp.org/ubicomp2004/
- 19. http://www.sarai.net
- 20.

http://www.siggraph.org/s2004/conference/art/index.php?pageID=conference

- 21. http://www.isea2004.net/
- 22. Tapio Makela, "Tracing Histories of the New: Waytpoints on the ISEA2004 Logbook," in ISEA2004 12th International Symposium on Electronic Art.
- 23. http://www.imdb.com/title/tt0070707/
- 24. http://www.spiraljetty.org/
- 25. http://variablemedia.net/
- 26. http://www.fundacion.telefonica.com/at/rlh/eprlh.html
- 27. http://adaweb.com/context/artists/tiravanija/rtbio.html

The full text is available as an attachment. Please download it here.

Related internet addresses

http://www.variablemedia.net/
http://www.yproductions.com
http://www.newmedia.sunderland.ac.uk/crumb/

Audio-visual hybrids : -- between immersion and detachment

Title	Audio-visual hybrids
Subtitle	-- between immersion and detachment
Lead-in / Abstract	Not provided.
Participants and speakers	Fabo, Sabine (DE)
Short biography of participants	...
Full text	Please see RTF-file. The full text is available as an attachment. Please download it here.

a[d]dress.mov

Title	a[d]dress.mov
Subtitle	Not provided.
Lead-in / Abstract	a[d]dress.mov is a work-in-progress - a wearable screen for musicians. It is conceived to be a platform responsive to past and present environments - where the use of video projection, sampling technology and interactivity widens the performative range available to any artist who wears it.
Participants and speakers	Hope, cat (AU) Walton, Anne (AU)
Short biography of participants	**cAVity** is an audio visual duo consisting of **Anne Walton and Cat Hope** from Perth, Western Australia. They are pursuing alternatives to the convention of the flat, vertically oriented, rectilinear screen whilst also playing with the usual relationship between sound and video.
Full text	Inspired by film soundtracks and performance art, a[d]dress.mov was originally devised to enhance electronic sound performance and to create a more meaningful connection to screening video. To date, the skirt has featured remote video switching, wireless spy cameras, MAX/DSP patching and multiple speakers, but never all used at the same time. The longer-term goal for a[d]dress.mov is the integration of all these elements into one wearable instrument.

a[d]dress.mov forms the second part of a projected trilogy of skirt works.1 The first is called The Other Velvet and is a voluminous velvet skirt worn by a musician performing with a dancer secreted inside the garment. The third skirt is yet to be developed.

This presentation/paper will expand on the concept of the skirt trilogy, trace the emergence of the audio-visual duo cAVity, and discuss and demonstrate the approaches taken and the results achieved in the research and development of a[d]dress.mov since the original prototype was developed in 2002. It will include video and audio footage of various performances and research environments in which the prototype has been presented or tested.

1. Other artists using the skirt form in their work (Regina Frank http://www.regina-frank.de and Janine Antoni: Momme 1995) will provide reference points.

Big Brotherhood Browser, CellSpace Flux, The Tactical Cartography Command Centre : Futuristic (but, perhaps, not so utopian) interface prototypes for location-aware online participant interaction

Title

Big Brotherhood Browser, CellSpace Flux, The Tactical Cartography Command Centre

Subtitle

Futuristic (but, perhaps, not so utopian) interface prototypes for location-aware online participant interaction

Lead-in / Abstract

Several artistic works – recent and ongoing – will be presented. Projects are ranging from interface concepts to immersive 3D VR installations, utilizing data accumulated by "location aware" contributors. Common theme: layering of shared space, juxtaposition of contextual perspectives.

Participants and speakers

Garancs, Jaanis (LV)

Short biography of participants

Artist and developer, working in areas of interactive multi-media installations and performances, Virtual Reality, Internet and cultural network projects. His work has been showcased at events and venues such as Ars Electronica Festival (1997,1998,2002); Banff New Media Institute (2004); SAT, Montreal(2003); EXPO 2000 Hanover; Art+Communication, Riga (2003,2004). He is member of Riga-based RIXC Lab.
http://www.garancs.net

Full text

Uncovering the "hidden mechanisms" behind things and processes – making it "visible" and "hearable" probably has been one of my largest passions ever.

In the recent years I am increasingly using immersive projection, to create intensive cinematic experiences and "enhance awareness" of "subtle" processes. Some of my work themes derive from the observation, that we increasingly rely on the mediated or "telematic versions" of the physical world, that sometimes even overlap.

Big Brotherhood Browser **(initially presented at the 5th International Browserday competition finals):**

Fictional scenario about country, where all of its citizens carry implant personal identity chips and are continuously monitored by multiple databases. Through peer-to-peer networks individuals can share and exchange the services of their private mobile devices cameras, microphones, sensors and replicate (or trade) many of their private senses to external (re-) transmission services with individual partners in global community.

CellSpace Flux **(initially presented at the 6th International Browserday competition finals):**

Various network nodes: mobile devices, carried by people, or installed on moving

and non-moving objects are parts of parallel, multiple cell interaction. Agent-like hybrid devices and data protocols facilitate communication among the cells themselves. Similarly to the biological world, cells with their digital 'membranes' sense and 'talk' to each other, enhancing data exchange and service robustness. Human and virtual users are surrounded by private 'species' of micro cells, which live in symbiosis with the host and surrounding ambience. Urban and rural areas are characterized by maps of ambient cell(ular) 'life form' presence.

The Tactical Cartography Command Centre and *GeoMemetic Landscapes*: artwork series for *Trans-European Cultural Mapping* event series:

Interactive installation using immersive (stereoscopic 3D) projection and sound uses various mapping metaphors, rendering complex, multi-layered artificial landscape, that is composed from "interpolated" fragments of representation: stereoscopic images and video sequences, sounds, comments as tempo-spatial "meta-reconstruction" of places and events, adding more context dimensions afterwards, creating virtual viewpoints. It is an effort (or experiment) "augmenting" reality buildings (e.g. in the street) with additional "walls" of "alternative representations" or opening "holes" in space through the "lenses" of meta-information. I confess, that I have difficulty to describe various aspects of the visual experiences I am offering to the viewer through the stereoscopic scenes, that is impossible to capture on printed pictures or even on normal video.

The presented artworks often use multi-relational database structures as "mapping tool", juxtapose and scales and complexity of representation, involve metaphors such as "tissues of cellspace", "meta-sponge", "solid atmosphere", and "Déjà Vu Register" as interface element, among others. The "Tactical Cartography Command Centre" installation (in much simplified version at the Kiasma Museum during the ISEA conference) will give visitors an insight to the above-mentioned works.

Project URLs:
http:/cellulae.x-i.net/bbb

http://cellulae.x-i.net/flux

http://cellulae.x-i.net/memescapes

Related internet addresses

http://www.gpster.net/whitepaper.html
http://www.locative.net
http://locative.x-i.net/ccc

Caesura in <i>Marina's Garden<i> : Interactive Narrative as a Drama of Responsibility and Interruption

Title Caesura in <i>Marina's Garden<i>

Subtitle Interactive Narrative as a Drama of Responsibility and Interruption

Lead-in / Abstract Not provided.

Participants and speakers Pelo, Riikka (FI)

Short biography of participants

Pelo is a digital media screenwriter and a researcher working on the poetics of interactive narrativity in the Medialab, University of Art and Design Helsinki, currently working with her interactive installation Marina's Garden. The screen writer in a virtual tv production and in the documentary on media arts. Her collaborative artistic work consists of interactive installations, cyberpoetry and hypertexts, narrative experiments with virtual communities, chatterbots and chat-environments, radiophonic poems and poetic short films .The collaborative works of her, recently the installation Game of Imaginary Beings, were shown in the Salon de Arte Digital in Cuba, Cambridge University Moving Image Studio, England, Participatory Design Conference in Sweden, in Lume-keskus, Finland and in the Interactive Frictions, University of Southern California, USA. Published articles are in the Digital Creativity (becoming), Avek, Mediumi and Arttu. Contributed in the Practice-based Research -symposium in the Cambridge University (2003), in the Preceedings of the Participatory Design Conference in Malmö (2002) and in the Cultural Usability Conference in the University of Art and Design Helsinki (2001). Will present a paper in the Research Symposium of Mind Trek 2003, Tampere. Has

a background in literature in the University of Helsinki, where she now teaches digital narrativity. The manuscript of her first novel won two literature competitions during 2002 and will be published in the near future.

Full text

In my presentation, an interactive installation, *Marina's Garden*, which is currently in its development phase, is studied as an example of research-based practice -case focusing on narrative, poetic and dramatic aspects of interactive design. *Marina's Garden* is a multilayered narrative space, physical as well as virtual, following an associative poetic structure. The work challenges the participant viewer to become a subject of responsibility in an intimate relationship with the poet, Marina. In my presentation **Emmanuel Levinas's** thoughts on dialogue and responsibility and poetic notions on caesura are looked at as conceptual background for creating the conditions for an intimate narrative experience in the art work. With my presentation I want to emphasize, that in the interactive drama the role of the participator should be considered as a position enabling such an agency, which can lead the person to become aware of his or her responsibility for the development of the narrative and its characters rather than just creating a sense of heroic freedom in a fictive world.

1. Introduction

"When somebody dreams of us together, then we will meet". Russian emigrant poet **Marina Tsvetaeva** wrote this sentence to **Rainer Maria Rilke**, the German poet, in the summer of 1926 [1]. These two poets never met in the reality but they wrote to each others deeply emotional and spiritual letters during six months. In the end of the same year the correspondece was interrupted by death of Rilke. This correspondence, which resisted any third party, even the fellow poet **Boris Pasternak**, suggests, anyhow, that a very special encounter took place - in another time and place – in the poetic time, infinite time of the souls, in poetic imagining.

My story, *Marina's Garden* is about the encounter that never happened in reality. It is about imagining and about all those things that prevent from it. It is a story about a poet, a mother and an emigrant, a woman who starts her poems on high c. It is about writing a poem out of loss.

As a writer and a storyteller in the digital interactive media my aim has been to find the right form for the story I wanted to tell. The reason for mediating the story with means of interactive media and as an installation in a physical space, was demanded by the story itself: I was not only narrating the story of the poet but narrating the space for the reading and for the reader, dramatizing the encounter in the scene of poetic imagining. The story about the poet is about the relationship between the reader and the poet. It is about writing a poem with the poet, in dialogue.

After several phases of scriptwriting *Marina's Garden* it became clear, that the story of the lover's who will only meet when somebody will dream their encounter, can't be told by means of conventional cinematic narration of linear cause and effect. The narrative has to be built on an intimate and affective play between hiding and revealing, hearing and whispering, presence and absence, the dreamer of the dream and Poet of the dream. For me the interactive media 's claim for presence and the agency of the viewer gives possibility to sculpt time to be able to work with what seems non-representable, but is in the reach of experience – loss, absence and trauma,

In addition, through the physical structure of my story I wanted to make visible the media, which were also part of the space imagining in the summer of 1926, when sending and getting letters was a slow and complicated political process. By bringing the history of poets's correspondence and relationship, which developed through them so intensively, into a certain space and symbolic media environment I have wanted to challenge the viewers so used the fastness and realtimeness of our mediaculture to experience very different temporal communion and the miracle of imagining.

2. Agency and responsibility

The early critical context for the development of *Marina's Garde*n was offered by those theories of interactive narrativity which emphasize the designing of the role and the experience of the interactor as a meaningful element of the narrative world.

Well known writings of **Janet H. Murray** and **Brenda Laurel**, offer a primary basis

for dramaturgical practices in the field of digital media, both focusing on the questions of agency in the symbolic worlds of digital media and basing their ideas on the traditions of literature and drama. Anyhow, there is still room for critical questiong and rethinking of their theories. I will refer here to Murray's notions [2] concerning the dramatic agency in digital narrative environments as a basis for my own arguments developed through the studying philosphical writings of Emmanuel Levinas[3] and my own experience of writing for the interactive media.

Murray explains in her book *Hamlet on the Holodeck* [4] that in the digital interactive environments users, for example players of computer games, gain sense of agency through the meaningful actions they are allowed to make through the interface of the game. Consequently, through this power to take action in the representational worlds of computer the interactor symbolically becomes an agent, the actor, a character even. Murray challenges digital media artists that by empowering the sense of agency and participation, the power to take action in digital narrative environments, it is possible to develop as strong first person narrative experiences as its is to experience in games. In the computer game genres the sense of agency is very often challenged as the sense freedom, ability to move and act as a hero of the game, or in its most dramatic mode, as sense of fear and suspense: "moving through a space can therefore feel like Gary Coopers's striding through the town in High Noon", Murray writes. To fulfill the narrative pleasures of the participators," she continues ,"we need to find ways of drawing the player so deeply into the situated point of view of a character that a change in position will raise important moral questions" .

As its best interactive art creates dialogical and dramatic, morally and ethically puzzling situtations between the work of art and participant viewer by dramatizing her role and position as an experiental or even a physical subject. Finnish media-artist **Heidi Tikka's** installations' are a very special examples of this. In Her installation *Mother, Child* [5] dramatic situation is created between the visitor and the virtual child, in the need of nourishing and caressing. When the visitor fills the empty space of a parent, mother or a father on the stage, she becomes aware of her responsibility for the development of the scene and the wellbeing of the baby in very affectionate way. As is **Margaret Morse's** early writings on the videoinstallation art [6], *Mother Child* challenges interactive narrativity and subjectivity by emphasizing the bodily, not cognitive or moral, presence of the interactor. As a physical part of the installation the visitor becomes responsible for the video image as it were a real human being. She performs the piece in her body, not by identification but as it its experiental subject. What I think is most important, in Tikka's work is that it dramatizes for the visitor an intimate ethical experience, not just a personal satisfaction of a winning game and solving a problem.

3. Ethical encounter in *Marina's Garden*

For me as scriptwriter the main question in the development of *Marina's Garden* has been, how to conceptualize a dramatic interface, which would enable an affective relationship between the poet, the character in the story and the participator of the interactive work. How to set up an ethical interface and to create a dramatic encounter, a moment of dialogue, a relationship revealing a secret embedded in dozen of letters.

Very often when I have talked about the ethical interface of *Marina's Garden*, I have been asked if I am working with a moral simulator game, or with a narrative game where the participator has to do choices between good and bad, virtue and evil, light and darkness for the main caharacter. This is not what I am doing in my story, when I talk about as being ethical, and having an ethical interface.

The purpose of the interactive work is not to ask the visitor to jugde Marina, but to come face to face with her even in he moments of her senselessness, selfishness even evilness. The interactive narrative of *Marina's Garden* is not for defining the the morals of poets lofe but creating a possibility for her reader of becoming aware her own responsibility face to face with Marina.

Marina Tsvetaeva wrote about morals and ethics in art in her essay *Art in the light of conscience* saying that "artistic creation is in some cases a sort of atrophy of conscience – more than that: a necessary atrophy of conscience, the moral flaw without which art cannot exist. in order to be good (not to lead into temptation the little ones of this world, art would have to renounce a fair half of its whole self. the only way for art to be wittingly good is – not to be. it will end with the life in the planet." [7]

In *Marina's Garden* I also want to make visible the artistic creation, writing a poem,

which is never just series of moral choices, but much more ambivalent process.

The narrative structure of the story is built up as an dynamically functioning installation in physical space. It consists of the poets writing desk with a touch screen interface animated, reactive fragments of letters and poems flowing on it, four speakers and two white sheets with videoprojections. The visitor enters an intimate space of the poet, Marina, in her moment of loss and oblivion -- after death of her lover. Marina addresses her words to the person sitting by her desk begging her to help her to get back her lost words and memories of her loved ones. In participating Marina's "memory work" by her desolated writing desk the reader can follow the whispers of her loved ones creating an interactive radiophonic play activating the memory images and cryptonymies in the landscape of oblivion. Gradually, in the dialogue with Marina, in restructuring her inner landscape, she will also become part of the poetic work -- creation of a poetic image. The deeper she follows the sound of her poetry, she will become the subject of dreaming, fullfilling Marina's wish: "When sombody dreams of us..."

The research question which has given me a certain experimental direction for writing *Marina's Garden* and considering the agency of it's reader, dreamer, arose originally in the context of Emmanuel Levinas's philosophy [8]. In Levinasian ethical phenomenology being and language are defined as relationships between the subject and its Other, between two human beings. Levinas defines ethics as an "encounter" with the Other. This moment of encounter is a relationship which cannot be reduced to a symmetrical "relationship"between the two. This encounter is always an interruption in the rhythm of linear time of the Same. The condition of time lies in the relationship between humans. Time can be thought as a dynamic relationship towards "the irreducible other. What interests me also is that, Levinasian phenomenology emphasizes a concept of pre-cognitive and non-intetional subject where as the techno-social subject, for example in Brenda Laurel's writings on agency in interactive environments [9], in her aristotelian dramturgy for interaction is mostly defined as cognitive and intentional.

In *Marina's Garden*, interactor will take active part in poet Marina's task of creating a poetic image by helping her to remember what she has forgotten by giving back her lost, fragmented words. Trough this dialogue in the letters the participant viewer becomes responsible for Marina, her time and her development as a poet, mother, emigrant and lover trough her dramatized actions. By wandering through the Garden, the layers of time, the interactor will bring the past, the present and the dream together -- into a poem and into a narrative experience. In this spatial and temporal relationship with the poet the participator also becomes responsible for what Marina will remember or what she will dream -- of her poetic imagining in the fictive time of the installation.

With this setting I have wanted to emphasize, that in the interactive drama the role of the participator, should be considered as a position enabling such an agency, which leads the person to become aware of his or her responsibility for the development of the narrative and its characters rather than just creating a sense of freedom and agency in the fictive world.

In writing interactive narrative the task of sculpting time is not just about emplotment, developing the continuity of plot as mimesis as in our conventional understanding of narrative. The games with the time in interactive realms are about dramatic encounters: how to design the temporal and personal relationships between the interactor and the main characters of the narrative. Consequently, it is necessary to consider how to design the temporal experience of the interactor, the presence and the present time of the interactor in the narrative world -- the narrative experience.

4. Poetics of interruption

But how to participate in Other's time, In her loss, In the Time of Fiction and in the time of Poetry and in the Time of Corresponcence resisting the any third party?

Another Russian poet, **Joseph Brodsky** describes in his essay *Footnote to a Poem* , exellent rhytmic and metrical patterns of Tsvetaeva's poetry, especially in her poem *New Year's Letter* , a poem written after Rilke's death and for Rilke. Maximum range of Tsevateva's diction in *Novogodnee* , *New Year's Letter* , takes her much further than the mere experience of loss could. It is hard to find another poet who has made such skillfull and abundant use of caesuras, Brodsky claims. [10]

The notion of cesura turned out to be the dramaturgical key for the non-aristotelian

poetic structure of *Marina's Garden*. I was listening to the gaps, breaks, interruptions, silences and losses in Tsvetaeva's writing. In the terms of poetics -- I started to listen to the caesuras -- the significant pauses between the rhymes. With *Marina's Garden* my attempt is to create a cesura – a time of interruption, an empty space for dealing with absence and loss, a break in the linear time, the space for the other's time.

In the poetics of tragedy, especially considered in **Friedrich Hölderlin's** writings on **Sophocles's** plays, the caesura not only marks the disruptions in the rhythm of a tragedy but also the moments of subversive interruptions from the realm of the dead and the Gods in the time and the space of a drama. Caesura is a thematic interruption and pure presence the linear time and rhythm of tragedy. [11] For the German cultural theorist **Walter Benjamin** caesura is a point when "the past and the present moment flash into a constellation" -- in the experience of trauma. This moment interrupts history and opens up another possibility of history, one that spaces time and temporalises space. [12]

In *Marina's Garden* the visitor is the interruption. She will open up the experience of time and experiences resisting meaning and representation, bringing two conflictual, repressed images together. By inhabiting Marina's space of memories and bringing up what Marina can not remember and what is repressed in her dreams and wishes she also sets it into motion and conflict. The visitor of the New Year's Eve in the Garden the sculpts poet's time and the time of her loved ones, the dead, bringing to it its rhythm and motion. Without her the installation is just a cesura, a gap between two impossible images, two sentences, between a dream and repression.

Notes:

- 1. Pasternak Boris, Tsvetaeyva, Marina, Rilke, Rainer Maria (2001): *Letters: Summer 1926* . Ed Yevgeny Pasternak, Yelena Pasternak ja Konstantin M. Azadovsky. Foreword Susan Sontag. Trans. Margaret Wettlin, Walter Arendt, Jamey Gambrell. New York Review Books. New York.

- 2. Murray, Janet H. (1997): *Hamlet on the Holodeck: Future Narrative in Cyberspace.* The Free Press. New York.

- 3. Levinas, Emmanuel (1979): *Totality and Infinity. An Essay on Exteriority.* Trans. Alphonso Lingis. Martinus Nijhoff. The Hague.

- 4. Murray (1997)

- 5. Tikka, Heidi (2000): *Mother, Child.* Installation. F2F.

- 6. Margaret Morse (1990): "Video Installation Art: The Body, the Image and the Space-in-Between," in *Illuminating Video: An Essential Guide to Video Art* edited by Doug Hall and Sally Jo Fifer. Aperature. New York.

- 7. Tsvetaeva, Marina (1992): *Art in the Light of Conscience. Eight Essays on Poetry.* Trans. Angela Livingstone. Harvard University Press. Cambridge, Massachusetts.

- 8. Levinas (1979).

- 9. Laurel, Brenda (1991): *Computers as Theater*Addison Wesley Publishing Company. Massachusetts.

- 10. Brodsky, Joseph (1987): "Footnote to a Poem," in *Less Than One*. Farrar, Straus and Giroux. New York.

- 11. Hölderlin, Friedrich (2001): *Huomautuksia Sofokleen kääntämisestä*. "Anmerkungen zum Oidipus" (1804). Translation into Finnish: Esa Kirkkopelto. Loki-Kustannus. Helsinki.

- 12. As referred to in Lacoue-Labarthe, Philippe (1990): *Heidegger, Art and Politics. The Fiction of the Political.* Blackwell. Cambridge, Massachusettes.

Related internet addresses

http://www.m-cult.net/mediumi/
http://mlab.uiah.fi/culturalusability/excursions.html
http://mlab.uiah.fi/culturalusability/papers.html

Collaborative Aesthetics

Title	Collaborative Aesthetics
Subtitle	Not provided.
Lead-in / Abstract	Not provided.
Participants and speakers	Diamond, Sara (?) *this person is also part of the following presentation(s)* ■ **What are the Aesthetics of Collaboration?**: Time and Presence in the Spaces of Collaboration
Short biography of participants	The Banff Centre is a multi-disciplinary international artists' residency centre in Canada. The Banff New Media Institute supports dialogue, research and production of new and convergent media projects.
Full text	See the PDF-file. The full text is available as an attachment. Please download it here.
Related internet addresses	http://www.banffcentre.ca/bnmi

Computer Couture? : Or, Queer Eye for the Cy

Title	Computer Couture?
Subtitle	Or, Queer Eye for the Cy
Lead-in / Abstract	The paper represents research analysis of emerging varieties of wearable technologies as cultural expression; and, as such, compares and contrasts wearable technology and fashion.
Participants and speakers	Ryan, Susan (US)
Short biography of participants	Associate Professor of Art History specializing in contemporary art including new media and theory and art. Member of the Steering Committee for L-CAT(Lab for Creative Arts and Technologies), an initiative for multidisciplinary research in innovative arts and technologies and part of CCT (Center for Creative Technologies) at at LSU. I am currently developing an arts and computation interdisciplinary working group at LSU. I have published books on contemporaray art with MIT and Yale University presses but the current paper reflects a new research direction and a larger project I have pursued for about a year.
Full text	Wearable technology is an umbrella term that, on the one hand, has some specific connotations, like futurism, functionality, and logic. On the other hand, it covers a broad range of emerging phenomena, from fetishistic cyborgian costuming incorporating sensing and virtual reality devices, to sartorial wireless systems that seek to merge (or so it would seem) with the body's epidermis. This paper argues that whatever form wearable technology takes--and whatever tasks it seeks to accomplish--it is already doing something that its developers may or may not always intend or grasp. It already comprises a language or languages (à la Barthes's "garment system"). With many voices it generates meanings that are never psychologically neutral nor always easily controlled. But what kinds of things are the new technological body coverings, prostheses, and mergers--that still constitute attire--saying? Applying semiotic analysis to categories of wearable systems (or, more properly, representative selections from these categories) turns up some messages that are worth considering. For example, fetishistic "modes" engage with a rich history of erotic attire that has been addressed by some cultural analysts. Other approaches morph technology with our skin or attire. Sill others appear like uniforms suggesting messages of militaristic withdrawal (Lucy Orta's refuge wear) or defense, (eHolster's personal electronic concealment system looks like a weapon, and Whiton and Nugent's's No-Contact Jacket is one), and other regimentations of the body that evoke bunker garb for a culture under attack. Other examples seem built on attire and culture of outdoor sports (cycling, skate boarding), and yet other creations focus on technological essentials, like wearable computer models that display naked hardware, a "plain clothes" practicality that nevertheless suggests an "open source" politics and emits utopian messages concerning imaginatively enhanced lifestyles.

All these bear cultural, literary, and psychological meanings that we can ascertain. But are these technological wearables capable of generating sophisticated nuances of discourse (like pairing seduction with fragility --"life and death") that clothing by designers like Lagerfeld, Ford, or Galliano have developed in the couture idiom of traditional clothes? Humans tend to expand and complicate meaning in the process of communication. With this in mind, will the new wearable discourse, can it, reject the sophisticated poetry of garments that couture aspires to within its own elitist realm (from which, however, selected messages disseminate via ready-to-wear)? Is this level of discourse necessarily a bad thing? Can it happen only when the techno-wearables are contextualized within a wider market matrix, a situation with negative political connotations that many cyber-designers are trying to avoid?

Then we might ask, does much wearable technology currently tend toward the solipsistic? As it merges the body with networked communication does it elide "body language"? Much wearable technology seems to involve systems shrouding the self. As traditional fashion reflects the transitory, the fleetingness of life, do wearable technologies emit (false) messages of durability within their "wired off" realms? Do wearable forms of wireless internet access and sound systems distance wearers from phenomenological reality like some Baudrillardian bubble-wear, whereby wearable technology shuts down subtle levels of physical dependency and social contact? As we focus on our own zones of comfort and cybernetics, do we become a society that abjures expression based on visceral display, historical associations of style and culture, and phenomenological risk and response? This paper, which might also be a contribution to a panel, admittedly contains many questions that the final paper will seek to refine and illuminate.

Continuous Paper : Print interfaces and early computer writing

Title Continuous Paper

Subtitle Print interfaces and early computer writing

Lead-in / Abstract The computer is often equated with the screen, but CRTs were not widely used in early computing. Punch cards, teletypewriters, and print terminals were used in the development of the first computer gaming, art, and literary systems. The nature of these interfaces influenced this early work.

Participants and speakers Montfort, Nick (US)

Short biography of participants Nick Montfort, a new media author, critic, and theorist, is now studying for a Ph.D. in computer and information science at the University of Pennsylvania. He is author of Twisty Little Passages: An Approach to Interactive Fiction (MIT Press, 2003) and co-editor, with Noah Wardrip-Fruin, of The New Media Reader (MIT Press, 2003). He has written and programmed interactive fiction, including Ad Verbum (2000) and Winchester's Nightmare (1999). His collaborations with William Gillespie include The Ed Report and 2002: A Palindrome Story (Spineless Books, 2002), acknowledged by the Oulipo as the world's longest literary palindrome. Currently, he is writing the novel Implementation with Scott Rettberg. Montfort is a director of the Electronic Literature Organization. His site: http://nickm.com

Full text

The discussion of computer writing sometimes assumes that the screen is not just an important part of human-computer interface today, but an essential aspect of new media. The screen is relatively new on the scene, however. Early computer interaction with happened largely on paper: on paper tape, on punchcards, and on print terminals and teletypewriters, with their scroll-like supplies of continuous paper for printing output and input both.

There were a handful of early, influential, screen-based systems. These included *Spacewar,* the first modern video game, developed at MIT in 1962; **Ivan Sutherland**'s Sketchpad, also developed at MIT in 1962; **Doug Englebart**'s NLS (oNLine System), developed at SRI and shown in the "mother of all demos" in 1968; and Grail, developed at the RAND Corporation in 1969. But other people using more run-of-the-mill interfaces were also making contributions to electronic art and computer writing.

Three programs will focus this discussion of paper-based interfaces and early electronic writing: *Eliza/Doctor,* from 1966[1]; *Hunt the Wumpus,* from 1973[2]; and *Adventure,* from 1975[3].

Eliza / Doctor

The Eliza system was programmed by **Joseph Weizenbaum** in the mid-1960s. It was written in a language called MAD (Michigan Algorithm Decoder), using a package called SLIP (Symmetric LIst Processor) which Weizenbaum originally developed in 1963. Weizenbaum had an IBM 1050 in his office,[4] a print terminal which featured a Selectric typewriter ball. He programmed Eliza for the IBM 7094, running the Compatible Time-Sharing System that was developed at MIT's Project MAC, one of the first successful time-sharing systems.

The *Doctor* script became inextricably associated with the general-purpose Eliza. It allowed the system to impersonate a Rogerian psychotherapist. **Janet Murray** identifies <cite>Eliza/Doctor</cite> as the "moment in the history of the computer that demonstrated its representational and narrative power with the same startling immediacy as the Lumières' train did for the motion picture camera," and she names Weizenbaum "the earliest, and still perhaps the premier, literary artist in the computer medium."[5]

Sherry Turkle offered an important discussion of the phenomenon of *Eliza/Doctor* in *Life on the Screen,* but, typically, overlooked the material, non-screen-based experice of the system. Turkle states that the all-uppercase output of the program was an attempt to imitate a Teletype,[6] when, in fact, people initially interacted with Eliza using Teletypes and other print terminals. **Tom Van Vleck,** who was at MIT with Weizenbaum when he programmed Eliza, wrote: "I think mixed case output was seen as a 'decoration' in those days ... I think it would have actually detracted from the point Joe was trying to make about computer interaction."

Many people have interacted with *Eliza/Doctor* on screens. But early output being printed more or less permanently on paper, rather than transiently appearing on the screen, influences how we understand the system as literary and as psychotherepeutic. When interacting on a slow-moving Teletype, it also was possible to read the beginning of Eliza's statement and still have time to guess what the conclusion of that utterance would be, as is the case in human conversation.[7]

Hunt the Wumpus

Gregory Yob, who resided in Palo Alto, California, wrote of how he came to program a famous early BASIC game, *Hunt the Wumpus:* "[In 1973] I happened by People's Computer Company (PCC) and saw some of their computer games such as Hurkle, Snark, and Mugwump. My reaction was: 'EECH!!' Each of these games was based on a 10 x 10 grid ..." It's rather striking that these three early computer games were named after entities in literary works by **Theodore Sturgeon, Lewis Carroll,** and **William S. Burroughs,** but their frameworks were actually rather similar. The Cartesian grid would work well enough for Microsoft's Minesweeper almost 20 years later, but Yob decided that creative computer users working on print terminals back in 1973 should have a more interesting sort of grid. He chose the dodecahedron, he explained, "simply because it's my favorite Platonic solid and once, ages ago, I made a kite shaped like one."[8]

Just as the creators of modern online games might expect you to search for information on the Web as you play them, since you're online anyway, Yob expected that *Hunt the Wumpus* players would use paper, the output medium for the program, to create maps of the cave. Indeed, they did. Yob wrote that about a month after writing the game, "I went to the Synergy conference at Stanford ... To my vast surprise, all of the [PCC] terminals were running Wumpus and scraps of paper on the floor with scrawled numbers and lines testified that much dedicated Wumpus-hunting was in progress."[9]

It seems significant that *Hunt the Wumpus* was developed, before the era of home computing, in BASIC, an unstructured language that was approachable and easy to hack in. As the 1968 book *Game Playing with Computers* explains, "BASIC was developed at Dartmouth College for a GE-225 computer system and is similar to the FORTRAN language. It is a user-oriented language that may be learned in a few hours."[10] BASIC was created specifically for use on time-sharing systems, in interactive sessions, and it was made freely available. Anyone who wanted to was allowed to implement it--even **Bill Gates, Paul Allen,** and **Monte Davidoff,** who used a teletype to punch an implementation of BASIC, the first commercial product for Microsoft, onto paper tape more than a decade later.

Some of the standard games in the time-sharing library of the mid-1960s GE-265 system were written in BASIC; others were written in ALGOL. That system included

Blackjack, Tic-Tac-Toe, Battle of Numbers, Slot Machine, and *Craps.*[11] Even those early grid-based games of the PCC were, therefore, innovations, hinting at the possibility of new sorts of imaginative spaces. Yob's *Hunt the Wumpus* took the next step. By thinking outside the rectilinear grid, Yob--even before he used a screen--became an early liquid architect of cyberspace.

Adventure

A less regular cave environment was introduced a few years later by **Will Crowther,** who programmed *Adventure* in FORTRAN on Bolt, Beranek, and Newman's Cambridge-based DEC PDP-10, probably in 1975. The version of *Adventure* that became widely known was an expanded and modified version of this original, released by **Don Woods** at Stanford in April 1976.[12] The result was a simulated cave with rooms connected in a pattern that was anything but regular, forming, for instance, two mazes of twisty little passages. The regularity of the overall, governing system was also broken in *Adventure.* There were numerous different opponents and obstacles to overcome, areas to map, and pieces to fit together. *Adventure* showed that reading and of puzzle-solving could be integrated, and that textual output could do more than display instructions and pure status information. This would later lead to the interactive fiction works that functioned like literary riddles, combining strange systematic workings with a lattice of evocative language.

By 1975, screens were becoming more common, at least at companies like BBN and universities like MIT, where, a few years later, the programmers of *Zork* would have access to powerful Imlac terminals, screens included. But Crowther apparently programmed *Adventure* from home, using an ASR-33 Teletype--a rather old apparatus, even at the time.[13] It was written in FORTRAN, all in uppercase, and Crowther probably went through printouts to debug it.

Players also used paper in their adventuring, just as they did in their Wumpus-hunting. **Tracy Kidder** noted that one *Adventure* player's desk held "roughly drawn maps. They consisted of circles, inside of which were scrawled names such as Dirty Passage, Hall of Mists, Hall of the Mountain King ... Webs of lines connected the circles, and each line was labeled, some with points of the compass, some with the words up and down. Here and there on the maps were notations--'water here,' 'oil here,' and 'damn that pirate!'"[14]

The experience of interactive fiction as a continuous series of textual exchanges, and the requirement that the interactor look back carefully over the text to puzzle out how to proceed, is certainly consistent with the more permanent and uninterrupted printed output that early terminals produced, if not simply a product of this interface. Even the later commercial games of Infocom--which popularized the term "interactive fiction" and made up some of the best-selling entertainment software of the 1980s--included a "transcript" command that would allow players to print out the input and output text as the game progressed, just as if they were using a print terminal to play.

Other Early Excursions

Other early excursions into artistic and literary computing were also conducted without a screen. **Brion Gysin** and **Ian Sommerville** did a computer collaboration around 1960, which involved Sommerville programming a computer to produce every permutation of the phrase "I AM THAT I AM." Programming interactively a at that time was an extravagance that was "not favoured"; a paper-based, offile interface would have been the only option for Sommerville.[15] **Italo Calvino** was invited by IBM to write a story using a computer in 1973, but according to Calvino's wife, the limited computer access in Paris meant that Calvino had an even more paper-intensive experience; he worked by "carrying out all the operations the computer was supposed to do himself."[16] Finally, print terminals were also the medium for two teleconferences about art and computing that took place on the PLANET and EIES systems, from 1978 through 1981.[17]

Conclusion

Clearly, significant computer creativity did happen by means of paper interfaces. Computer users have had a "life on the screen" in recent times, but the "life on the scroll" that the users of print terminals had--as recently as the early 1980s--is also worth study, particularly as we hurtle past the flat panel into a life of mobile phones and hypertext-enabled MP3 players, while, at the same time, we continue to send more and more plain text emails, sometimes even printing these emails out--just as, originally, emails were printed out, rather than being displayed on a screen. Neither our office nor our literary and artistic future are likely to become paperless, and work of both sorts will continue to be shaped by the way print-based interfaces were used, not so long ago.

1) Joseph Weizenbaum, "ELIZA--A Computer Program for the Study of Natural Language Communication Between Man and Machine." *Communications of the ACM* 9(1), January 1966, pages 36-45.
2) Gregory Yob, "Hunt the Wumpus." *The Best of Creative Computing,* volume 1, edited by David Ahl, 1976, pages 247-250. Reprint of an article in *Creative Computing,* September/October 1975, pages 51-54.
3) Nick Montfort, *Twisty Little Passages: An Approach to Interactive Fiction,* Cambridge: The MIT Press, 2003, pages 85-93.
4) Tom Van Vleck, email to author, 27 February 2004.
5) Janet H. Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace,* New York: The Free Press, 1997, pages 68 and 72.
6) Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet,* 1st Touchstone edition, New York: Simon and Schuster, 1997, page 290, footnote 22.
7) This was pointed out to me by a woman during the question period after a presentation I made on 3 April 2004 at the e(X)literature conference at UC Santa Barbara.
8) Yob, "Hunt the Wumpus," page 247.
9) Yob, "Hunt the Wumpus," page 248.
10) Donald D. Spencer, *Game Playing with Computers,* New York: Spartan Books, 1968, page 334.
11) Spencer, *Game Playing,* page 337.
12) Montfort, *Twisty Little Passages,* page 89.
13) Montfort, *Twisty Little Passages,* page 85.
14) Tracy Kidder, *The Soul of a New Machine,* Boston: Little, Brown, and Company, 1981, page 86.
15) A. D. Booth, *Digital Computers in Action,* Oxford: Pergamon Press, 1965, page 20.
16) Italo Calvino, *Numbers in the Dark and Other Stories,* translated by Tim Parks, preface by Esther Calvino, New York: Pantheon Books, 1995, page 2.
17) Roy Skodnick, introduction to "Teleconferencing Computers and Art," *All Area* 2, Spring 1983, pages 66-70.

Related internet addresses

http://huminf.uib.no/~jill
http://grandtextauto.org

Control and Freedom: : On Interactivity as a Software Effect

Title	Control and Freedom:
Subtitle	On Interactivity as a Software Effect
Lead-in / Abstract	Not provided.
Participants and speakers	Hui Kyong Chun, Wendy (?)
Short biography of participants	Wendy Hui Kyong Chun is an assistant professor of Modern Culture and Media at Brown University. She has studied both Systems Design Engineering and English Literature, which she combines and mutates in her current work on digital media. She is currently completing a manuscript on the crisis of disciplinary and regulatory power brought about by high-speed telecommunications networks, entitled _Control and Freedom: Power and Paranoia in the Age of Fiber Optics (forthcoming MIT 2005); co-editing a collection with Thomas Keenan on the archaeology of multi-media, entitled _New Media, Old Media_ (forthcoming Routledge 2005); and starting a new project on the relationship between race and code. She has been a fellow at the Radcliffe Institute for Advanced Study and has been awarded a Henry Merritt Wriston fellowship at Brown.
Full text	Please see the PDF-file. The full text is available as an attachment. Please download it here.

Creative Evolution? : The quest for life (on Mars)

Title	Creative Evolution?
Subtitle	The quest for life (on Mars)
Lead-in / Abstract	This paper takes the question of the existence of life on mars as a pretext for a discussion of the quest for artificial/alien life and of the relation between evolution and becoming. It argues for the contingent association between artificial life and evolution, alien life and becoming and uses Bergson to distinguish between creative and conservative evolutionism in contemporary technoscientific art and science. The methodological, epistemological and ontological implications of an approach informed by mobility are drawn out, and finally the paper returns to the question: 'is there life on mars?', and answers it.
Participants and speakers	Kember, Sarah (GB)
Short biography of participants	Sarah Kember teaches in the Media and Communications department at Goldsmiths College. She is the author of Cyberfeminism and Artificial Life (Routledge 2003) and is co-editing a special issue of Theory, Culture and Society entitled 'Vital Processes: Ontology, Materiality, and Information' (forthcoming 2004). She is currently working across feminist technoscience and new media studies and across academic and creative writing.
Full text	Not provided. The full text is available as an attachment. Please download it here.

Crises of Representation

Title	Crises of Representation
Subtitle	Not provided.
Lead-in / Abstract	This paper examines implications of "the crisis of representation" for various kinds of images basing its conclusions on recent and old theories of media.
Participants and speakers	Fernandez, María (US)
Short biography of participants	María Fernández is an art historian whose interests center on electronic media art and theory, post-colonial studies, Latin American art and the intersections of these fields.
Full text	Please see RTF file. The full text is available as an attachment. Please download it here.

Cultural Softwares : Artistic Tools & DIY Networks

Title	Cultural Softwares
Subtitle	Artistic Tools & DIY Networks
Lead-in / Abstract	Not provided.
Participants and speakers	Paul, Christiane (DE / US)
Short biography of participants	Christiane Paul is the Adjunct Curator of New Media Arts at the Whitney Museum of American Art and the director of Intelligent Agent, a service organization and information resource dedicated to digital art. She has written extensively on new media arts and her book Digital Art (part of the World of Art Series by Thames & Hudson, UK) was published in July 2003. She teaches in the MFA computer arts department at the School of Visual Arts in New York and has lectured internationally on art and technology. At the Whitney Museum, she curated the show "Data Dynamics" (2001), the net art selection for the 2002 Whitney Biennial, as well as the online exhibition "CODeDOC" (2002) for artport, the Whitney Museum's online portal to Internet art for which she is responsible. Other curatorial work includes "Evident Traces" (Ciberarts Festival Bilbao, 2004); "eVolution -- the art of

living
systems" (Art Interactive, Boston, 2004); "CODeDOC II" (Ars Electronica,
2003); the New York Digital Salon's 10th anniversary exhibition (NYC, 2003); "Mapping Transitions" at the University of Boulder, Colorado (2002); "Re-Media" (Fotofest, Houston, Texas, 2002); and a net art selection for
"Evo1" (Gallery L, Moscow, October 2001).

Christiane Paul has participated in numerous panels on new media and presented at conferences worldwide. Her speaking engagements included the symposium "Media Art - Art Media," ZKM (Center for Culture and Media),
Karlsruhe, Germany; ARCO Forum 2004, Madrid, Spain; the Tate Museum, London; the Museum of Contemporary Arts (MACBA), Barcelona, Spain; the Boston Cyberarts Festival; the Royal Academy of Arts, Sweden; the annual College Art Association conference (New York); the International Summit on Multimedia and the Internet (Abu Dhabi, UAE); invenção thinking the next millennium (São Paulo, Brazil); consciousness reframed 2 (CAiiA, Wales, Newport, UK); and the Governor's Conference on the Arts (San Francisco).

Full text

Software has become a driving force of our societies in realms ranging from economics, entertainment, the military and art -- it is a creative tool that is culturally and politically 'encoded' and embedded in a commercial system. Software culture is considered a 'living substance' that to a large extent evolves on the Internet and stems from and permeates various cultural realms. Within the larger realm of software art, manipulations of existing software (cracks, patches, plug-ins); political and activist software (e.g. cease-and-desist-ware and software resistance); artistic tools, games, and social network architectures function as a critical reflection of software's cultural status and a rewriting of its encoded political or commercial agenda.

The interest in developing criteria for the study and criticism of 'cultural software' and software art has been growing, but the question remains what impact this software will have both in the field contemporary art and culture at large. The nurturing of software and programming literacy is essential when it comes to expanding the role of software in the broader context of cultural production. At this point in time, there still needs to be a much broader appreciation of software as art and cultural expression in order to reach a level where software is more than an off-the-shelf product that is judged mostly by its efficiency.

The roundtable brings together (artist) teams that are working on different forms of cultural software ranging from the creation of software literacy projects to structures for online broadcasting and social network architectures. Demonstrating their projects, the teams will discuss the role of software as cultural, critical and artistic process; development strategies and social network architectures.

Related internet addresses

http://www.criticalartware.net/lib/liken/
http://www.radioqualia.net
http://www.maryflanagan.com/rapunsel/team.htm

Dancing in the Light of an Information Overload

Title

Dancing in the Light of an Information Overload

Subtitle

Not provided.

Lead-in / Abstract

Looking at the speed of technological implementation, activation in the development of a new, positive, contemporary consciousness seems necessary if we ever want to step out of Alice’s ever-expanding Wonderland. One of the most important areas of today to focus on is the club scene, as it has always been the environment where youth culture gathers together most consistently and in its most significant numbers.

Participants and speakers

dekker, annet (NL)

Short biography of participants

Annet Dekker (NL, 1970) is a curator at the Netherlands Media Art Institute, Montevideo in Amsterdam, NL. She works in the area of new media: researched, published and curated media (art)exhibitions and debates. She presented at a.o. Siggraph 2004, Cosign2003, ISEA02, NGE2001, was part of the jury for CYNETArt Festival04 in Dresden and ACM Multimedia 2004 in New York and is co-curator for Impakt Online and the Netherlands Film Festival. Subjects of interest are the influence of new media and popular culture on art and vice versa. Her current research involves the VJ culture: a phenomenon in history, presentation and

preservation. She also initiated Visual Sensations, a website for and about VJ culture and a VJ contest that will be touring the Netherlands and Belgium in 2004 in cooperation with Paradiso-Melkweg Production House.

Full text

Looking at recent trends in VJ performances it would not be an understatement to say that VJ is a new form of synaesthetic performance, a form that might develop in interesting ways. At times it may be thought that history is merely repeating itself, the only difference being a new medium. But one thing has changed dramatically and calls for new research and interest in this area: the audience is not composed of a few insiders anymore, but the whole synaesthetic experience is massified. Already we see the influence of VJ performances in museums, galleries and daily life. Questions arise which call for further investigation: What is the influence of all this media circuitry on existing art disciplines, on the position of the performer and of the audience?
For now, I focus on oral history. The remarks made by VJs today come from existing interviews and panels written or organised by various others and interviews I have conducted myself over the past months. These form the beginning of understanding a new phenomenon in the history of the live image. They will also show the intertwining of social developments, technological improvements and artistic expansion that occur when talking about VJ. Another question that logically follows is how to document and preserve these synaesthetic VJ performances for future reference.

Old skool VJ-ing

VJ's are said to push to boundaries and concepts of show, attitude and art direction, beyond the predictable perimeters of the pop and rock worlds. To describe a phenomenon as VJ culture one could start as far back as a few centuries. Once a VJ commented that the he could see the Cavemen drumming in their cave in front of a fire, while one of them was playing with the shadows on the wall – Old Skool VJ-ing" [1]. I will not go that far and start my story at the beginning of the 1980s. Years after the successes of rock, punk and disco a new sound surfaced, which meant the breakthrough of the VJ as we know it now. The initial spirit of the House scene was one of togetherness, happiness: the gateway to collective community action and euphoria. The origins of the House movement lay in a belief, a belief in the self, as long term VJ **Peter Rubin** explains: "It was a personal liberating experience with a slow, primal beat and rhythm. 'My house is your house and your house is mine.' House culture was family." [2] This was both reflected in the name as well as in the staging of the events. Although the name 'House' was originally adopted from the legendary 'warehouse' in Chicago, the 'Spirit of House' developed in the '80s due to the more frequent use of private houses for parties.

Soon these House Parties turned into large gatherings of people who came to enjoy the music as one united group asserting their identity. Some people, like Dutch VJ **Micha Klein**, claim that the VJ came into play to give the parties a more profound look, a face or even an icon. But listening to others, it was much more a new element, an addition to a culture. Parties consisted of music, lights, paintings, live shows and many other things. As again Rubin describes: "At 'Die Macht Der Nacht' (1989/1992), we had hairdressers, still photographers, high wire artists performing over the dance floor while everyone danced below, fire artists – including fireworks artists!!!, theatre, black light artists, as well as other assorted goodies I'm sure I've forgotten. To say nothing of all the little stands selling various products made by the culture. All these elements were totally secondary to the main element of the evening – the PEOPLE getting together and communicating with each other". [3]

The House and Techno scene exploded as a social force throughout the world. It is important to realize the social situation at the time. In many ways the House parties of the late 80s and beginning of the 90s shared parallels with the rise of youth culture in the 60s. The starting years of club culture, coincided with the fall of the Berlin Wall and the Tianamen Square Student Protest; it also gave birth to the Love Parade, Mayday and Techno. The imagery of the VJs was mostly realistic, which engaged the clubbers into an involvement with life, and when it was abstract is was used as a means to give an alternative example to the processed MTV visualising of the day. The first VJs in the mid 80s did not conceive of their work as an extension from the world of music or art but, rather, they regarded their work as a form of progressive social communication. Their goal was to develop new theories and practices regarding visuals, music and social ideology. At the hard of these experiments was the presumption that the power and scope of sound and image in perfect balance could best meet the needs of these latest challenges. And a club was seen as an environment wherein one would not run away from reality but, rather, get the inspiration and renewed mindset to improve the conditions that exist within reality.

However, as culture became more and more commercialised, the social messaging which permeated the initial period of video mixing was replaced in great part by the flashings of the individual VJ. 1994-1995 marks the point were commercialism finally supersedes the idealism of the first generation. The new VJ was without politics. In the spirit of the House scene people in the mid 90s wanted to create beautiful images and create positive icons that were uplifting and would "give you a boost and a positive vibe for the whole day." [4] There was talk of a new age, about opening new doors of perception, but everywhere you went these were nothing more than vague notions.

The influence of technology

Looking at young VJ nowadays, one of their first influences most say, is Music television station MTV. Regardless of all that can and has been said about the advantages, disadvantages or meaning of MTV, the fact remains that it did lead to a stronger connection between music and visuals. And the video clips that are being broadcasted 24 hours on MTV have become symptomatic for the speed of the visual and auditory languages of our time. Unfortunately most VJ's start out just doing that same thing, trying to project as many and colourful images as possible, bouncing up and down the music. The computer made it this process even easier, you could show and move as many different colours and forms as possible. Some older VJs, like Rubin comment that the computer "has taken the soul out of visualisation". He continues: "95% of the stuff I see looks exactly like all the other stuff I see. It's all surface design with no deep human meaning. Everybody's doing computer animation because live imagery is just too cumbersome to handle. (…) What results is either animation only or countless short loops of live action - a slick, choppy sort of MTV bastardisation. I find that the vast majority of VJ's care much more about all the fancy new technological toys, tricks and techniques than trying to work out ways of communicating to their audiences in a deeply human manner. It's not that these artists have no souls. It's that the technology, itself, still in its infancy, is driving the forces of triviality and commercialism. Which is only conditioning the public to view such material with no expectations other than surface gimmickry." [5]

But there is also another side to the growing technological developments. First of all, if it weren't for the cheaper camera's, projectors, computers, mixers etc, hardly anyone would have been working as a VJ and only few people would have had the chance to experience the events. The scene might have died out as did most of the experiments of the expanded cinema in the 60s. There are many VJ's now whose work can only be made through the assistance of computers. Their goal is not first and foremost political change, but they try to set new agenda's and create new languages.
And even skepticists, like the before mentioned Rubin, see a positive side to the increased use of technology, as he says: "One of the most revolutionary aspects of House culture was that they were one of the first generations to truly begin to actively organize like-minded communities throughout the world via cyberspace. Up until 1989/1990, House culture looked at the computer freaks as weird nerds with big eyeglasses who did nothing but sit in front of their screens all day. The "nerds" thought of House culture as "druggies, dropouts and losers". Around the turn of the decade, the two finally joined together. Once these two subcultures began working cooperatively, an ever-increasing number of social experiments in cyberspace followed, which laid the foundation for any number of social directions which exist today (message list projects and events, blogging, coordination of international funding and support resources, recognition and communication with third world youth cultures, creating bridges between street culture and traditional art communities, etc. etc. In other words, the identification and coordination of the global House Nation movement." [6]

That this is indeed a future that we are living now is exemplified by a few VJ collectives. These collectives show that the VJ experience of today is not just a fusing of different disciplines, but it is also an expansion of technological and international borders. Through live streaming internet connections participating musicians and VJ's world wide are connected to a live stage. Their play is mixed with the music on the stage and the visual input is projected onto various screens. Special developed electronics make sure that everything is synchronised. To still be able to unravel the different cultures and to grasp the global effect they ask the participants to comment on specific topics, ranging from political statements to examples from their popular culture. The musical and visual battle is played out on stage and can also be followed live on the internet in the confinements of the living room or the public space of a club.

The VJ performance has become more than just another way to try to get people to move in another world. These are performances that make a physical and psychological connection with the public through the synthesizing of various media like sound, image, smoke, smell, etc. The synaesthetic performances can be seen as the first attempts to create a virtual reality outside the confinements of the CAVE or specially designed suits, in spaces in which the participation of the public is crucial to the success of a performance. And by using multiple screens and various ways of editing, new narratives are being told that have an important influence on other disciplines like film, video, television and life itself.

The future of wonderland

As performances become more and more advanced this poses again and again new questions regarding documentation, description and reflection. The computer is of some help as it makes it possible to save and record material that is used. But it also poses more problems, as to how to document live streams and performances that occur at different places in the world at the same time. Or even more difficult, how to describe the experience. One way to make sense of this Wonderland in clubs is, as English artist **Scanner** points out: "I rarely consider 'one' or the 'other', in terms of sounds and image. It's only in the secondary process of elaborating through texts, interviews and conversation that the process of choice emerges." [7] This is certainly a good way to start, but as these artistic activities are considered to be temporal events or projects and they often exist outside of the museum context, what does this say about the status of these events in the realm of the arts, and what does it mean for the preservation of such works? Although many artists themselves try to document as much information about their performance or installations as possible, when these valuable records are not centrally archived, they will probably not have a long live span. In the wider range of media art, an image in a catalogue is hardly sufficient to understand the working and meaning of the event. When it comes down to events that deal specifically with sensorial experiences, like many VJ performances, it becomes even more deficient. This leaves us with pressing questions: Which methods are emerging in order to open up the closed-circuit of the art system for discursive approaches? But also: should, and if so, how can these 'events' be presented and preserved for future generations to be experiences as part of our cultural heritage?

- 1 Kees Duyves, Pipslab in: Eveline Stoel, 'VJ's stelen de show', in: Rails 2002
- 2 Peter Rubin, 'Chromapark and Beyond', in: Localizer 1.0 The Techno House Book (Gestalten Verlag, Berlin, 1995)
- 3 Peter Rubin, 'A bit of the past, a bit of the future,' in: Localizer 1.0
- 4 Jim Cook, 'Shallow happiness never lasts', in: Flash Art, October 1999
- 5 Peter Rubin in Groove Magazine (forthcoming Summer 2004)
- 6 Peter Rubin in Groove Magazine (forthcoming Summer 2004)
- 7 janus, spring 2004

Dead or Alive

Title	Dead or Alive
Subtitle	Not provided.
Lead-in / Abstract	The perception of self, identity and a critical view on one's own person has to be reviewed in the context of computer games. Beyond "first person view" and "third person view" there is a schizophrenic "different views at the same time" which enhances the gaming experience.
Participants and speakers	Fuchs, Mathias (AT / GB)
Short biography of participants	Mathias Fuchs, 20/10/1956 Game Artist, Composer, Researcher and Lecturer in sound art, multimedia and creative games

1989 – 2001 Lecturer at University of Applied Arts in Vienna
2001 – 2002 Guest Professor at Sibelius Akatemia Helsinki
2002 – 2004 Programme Leader in Creative Technology at Salford University England

Numerous installations, sound art pieces, creative games (coll. Sylvia Eckermann)

Full text

"I'm dead now!" is obviously a statement, that contravenes the laws of classical logics. Either one is dead or one speaks of death: to do both simultaneously, as **Epicurus** once pointed out, is nonsense. Game addicts, in other words dyed-in-the-wool gamblers with symptoms of obsession, are usually unable to distinguish between the representation of their game figures on the screen and themselves. Consequently, they are no longer in a position to separate life from death. Game freaks and their fellow players find nothing odd about the claim to be dead when the game comes to a close. This is not the result of a lack of linguistic sensitivity, nor a lack of logic, but the result of the highly serviceable form of identity augmentation. The player's biological persona merges with the electronic stimulation of the active person. This construction is serviceable because it increases the intensity of the linguistic experience, and because it allows one to be both dead and alive at the same time. However, this augmentation of identity is problematical with respect to classical percepts of identity.

Certainty could emerge from identity at the latest with **Descartes'** attempt to see things "clare et distincte". Descartes' intellectual experiment was to conceive sensuous experience as the deception of a being (where "I" is merely conjured before me) that dissolves the moment that Descartes construed himself as a thinking being. It is only with the aid of this construct that Descartes could dispel the doubts that he was being deceived by a god. In this way Descartes eliminated possible intermediaries (media) between himself and the world and creates the basis for the continuity of a personal "I", that everyone possesses and that everyone makes answerable for their deeds and thoughts. It was through Descartes' trick that ethics and a system of law related to individual people become imaginable. Clear guidelines to identity, however, are the price paid for the those rights, which bars the schizophrenics, the dreamers, the intellectually weak, the gamblers and the procrastinators. Some of these possess too much identity, the others too little - a luxury in one case, a defect in another. But one way or another an anomaly, that destroys the concept of a single identity. The non-identical threathens to undermine the enlightened, reasonable, non-Cartesian world and the gamblers – the game presents the concept of identity with a dangerous challenge. In the game the borders between the person and its environment dissolve. Roles, history, gender, ethnical identity and geograpy also blur in the game. This begins with "Cowboys and Indians" and ends with the Unreal Tournament, Quake or Final Fantasy.

Bombproof Identity

It seems to be that play and a bombproof certainty of identity are incompatible principles. The spoilsport is of course the one who rather mundanely points out "but you're not a Red Indian" (which is true in the majority of cases), or the fellow player that pronounces "you're not dead, you're just pretending!". Of course the player is dead in the sense of an electro-biological personal union constituted by the act of playing. Thus, the course of the game, especially the narration of the game, becomes the spring of a construction process of an extended identity, that should not be seen an act of consciousness, but the result of a game set-up. **Richard Rorty** refers to the mediating instruments that create mental representations from a reflection of reality as a vocabulary. In the "Mirror of Nature" and subsequently in "Contingency, Irony and Solidarity", Rorty attempts to rehabilitate the narration as opposed to the explanation and claims: "this new vocabulary makes a formulation of the objective possible. It is the tool for a job that one could not have imagined before the development of a special range of descriptions – descriptions that it helps even in producing." Rorty draws the inference that someone who argues on the basis of another vocabulary could not be persuaded with reasons. One could at the most persuade them to accept one's own vocabulary. Just as **Rüdiger Zill** rightly pointed out in "Broken Rays, Shattered Mirror" this task of persuasion cannot be assigned to philosophy. Zill regards "other agencies … literature, cinema, television" as being suitable. For a number of reasons one should also add computer games to the list of instruments of persuasion: one of these being the high degree of popularity of computer games enjoy in the presentday entertainment industry; another is that computer games seem to be emerging as a leading technology that the previously dominant sectors of film and music will now have to follow: finally, computer games are still - but not for much longer - the first technology to be used by teenagers and also one that is being adopted by the over twenty year olds. The persuasiveness of game narrations can be seen to be based

on the factor that helps to construct mental representations. One cannot blame Rorty as a writer that his terminology consistently aims at linguistic mechanisms, it appears to me with reference to computer games to be more fruitful to aim at the most suggestive elements of the game: the texture and sound libraries, the effects, the game play. Let us replace Rorty's "vocabulary" with the texture library, "linguistic" with audiovisual and the narration with the story.

Are there any visual elements that differentiate games from films or television and simultaneously act as catalysts for new forms of consciousness? I would like to submit the suggestion that the game mirror should be examined as an element that could be effective in constructing identity. Naturally, mirrors play an important role in cinematic history, but the mirror in the cinema remains constantly in the medium and does not divert the gaze to the viewer of the film. Computer games are more innovative in so far as the viewpoint of the viewer must not necessarily be predetermined by the medium. A game mirror is not identical to a film mirror.

In early computer games one was tied to a third person view (Pacman, Super Mario) or first person view (Doom). More recent games on the other hand allow a choice of either of these two forms of presentation. Players report that they tend to identify more strongly with the game figures in third person shooters. The gaze from the eyes of the game figures prompts one's consciousness to a degree of identification and an intensity of identification that is different to a perspective that views the game terrain god-like from above. I maintain that the installation of feedback views, as can be found in mirrors and closed-circuit cameras in games, can introduce a further increase in complexity. Important steps in this direction were already implemented by video art and early computer art. However, I will try to prove later that video art was bound to reach a limit that computer games are now in a position to overcome.

Self-Celebration

Computer work involving feedback setups such as those where **Myron Krueger** showed the viewer in the monitor and added reactive agencies. Works like these characterized what **Mario Perniola** referred to as "self-celebration" with video art in mind. Computer and video art do not intend to be television and separated themselves from the latter through a different geometry of viewing. Instead of gazing into the distance, proximity and what is hidden were to be made visible, freed of idealization, phoney authenticity and banal reference to the seemingly factual. Video and computer art were seen as egalitarian, immediate communication with respect to a social utopia, that always retained a moment of feedback and critical gaze in the mirror. Perniola called video culture a culture of the mirror and in adaption of a well-known aphorism of **McLuhan**, one could characterize the media work of the period quite well by saying that: "the medium was the mirror".

In his study of the functions of interactive artworks the Canadian **David Rokeby** finally arrived by way of metaphors of navigation and discovery to the mirror. Media that - in contrast to the mirror of glass - do not reflect anything in their path in indentical form, would have to be called "transforming mirrors" in David Rokeby's terminology. In contrast to proverbial wisdom of "just as you shout into the forest, so will it echo back", the transforming mirror changes the form and figure of the mirrored. Rockeby found transforming mirrors in interactive technical processes and in interactive art. Rockeby differentiated between the usage of transforming mirrors from that of flat ones, by the fact that in the first case the "interactor" does not recognise his movements as being purely distorted, displaced or compacted but medially. Thus, the active recipient experiences himself as the subject experiences itself during dream work, the media assume the role that Freud assigned to the dream. "The interactor sees some representation of himself or herself like a mirror image or shadow, transformed by the potential with which the artist has endowed the space.."

Rokeby cites his own work "Very Nervous System" as an example of a transforming mirror. In "Very Nervous System" a camera digitalizes the image of the interactors and transforms this pictorial information in a matrix of grey tones and then transfers the data to pattern recognition algorithm that produces sounds from the movements of the interactor. The transforming operation of the "mirror" in this case of this installation lies in the quantification of the image, its translation into grey tones and the medial translation into the area of sound.

Rokeby describes the objective and function of interactive art as follows: By providing us with mirrors, artificial media, points of view and automata, interactive artworks offer us tools for constructing identities - our sense of ourselves in relation to the artworks and, by implication, in relation to the world". While Rokeby wants to

present us in his installation with a (even if transforming) mirror, other artists are less willing to supply us with the mirror as a functionally efficient tool.

Autonomous Mirror

"Tumbling Man" by **Chico MacMurtrie** and **Rick W. Sayre** represents a robot that uses the elbow and knee movements of the interactor and transfers these to the shaky motoricity of the machine. The robot may mirror here the intent of movement but fails with respect to the movement itself. The robot trips, trys to get up again, and cramps up continually. The active user can recognise himself in the robot, but his mirror image remains distorted. Movement guided by intention becomes a caricature of failed implementation. While one can use the mirror for reassurance in everyday life, the medial mirror represented by the robot serves on the contrary for insecurity. Similarly, **Christian Möller's** installation "Autonomous Mirror" is designed to present a programmed non-conformity contrasting with real-time mirroring. For a time the figure generated by the computer behaves like the viewer of this figure. It imitates arm and leg movements, and assumes the same posture as the viewer. But the algorithm that guides the movements presupposes that the figure can also break the routine of reproduction and can surprise the viewer with seemingly autonomous movements. If **Lichtenberg** remarked "a book is a mirror: when an ape looks into it - well, an apostle cannot look out!" , so, too, one must reformulate this for the autonomous mirror of interactive art: "where apes look in, apostles can look out - and the other way round". Interactive installations are characterised by the fact that they not only distort formally and change, but that they can reinterprete contextually and reevaluate: an elegant movement can be turned into an awkward one, leisure can be turned into haste and obedience into rebellion. The Canadian pioneer of robotics **Norman White** is an artist who is especially interested in the dislocations caused by robot ensembles.

Deception and Trick Mirror

Norman White's "Helpless Robot" or the installation "Facing Out, Laying Low" reveal behavioural patterns of dictatorial presumption and bored rejection of the demand for mirroring. What the mirror image reflects back to the recipient in the form of the robot is less an image than an attitude. In his most recent work "Monster", White constructed a cybernetic object, that reacts as a submarine or robotic Nessie to the visitors of the reservoir, but also according to circumstance avoids and hides from them. The artificial intelligence that is behind this project should be seen as artificial emotional intelligence that might understand and be able to communicate this, but the objective of whose activity lies more in the development of autonomous gestures.

Mirror Things

In computer games of the most recent generation, we met a renewal and renaissance of the mirror, the surveillance camera and the distorting mirror that produces the impression that the now rather lame dynamics of the game culture of video and computer installations has been resurrected from a deep slumber in the garb of a new medium. But computer games present us not just with a remake, a nostalgic reminder of the media of the '80s. Armed with the cutting edge of the newest game engines, mirror games are turning up in the new computer games. In Max Payne, a new Finnish cult game, the player is continually egotistically and narcissistically concerned with himself, if he can jump, stumble or died particularly well. This self-infatuation with one's own death is celebrated through the fact that Max Payne can reincarnate himself as a pistol bullet that flies to the detriment of his second self, the figure of Max Payne. Just as the heart's blood of the dying Narcissus dyed red the floor and the petals of the flower of the same name, so too is Max Payne surrounded by the colours of death. The Dooms, Unreals and Quakes do not spare any expense to serve the player with the grandiosity of post-mortal colour- and blood-letting. Mirroring and self-observation are intergrated into the game as an interactive operation. Analagous to first and third person games, one speaks of a bullet view as the unification of the player with the weapon that is about to kill him. The fact that this weapon does not actually kill him but merely a game figure is a formalist old-fashioned injunction that I have already attempted to invalidate. What sense would it make, after all, to identify with the pains of a figure,

if this figure was not that of the player himself?

Mirrors also surface as decoration, spatial elements and architectural features. The warp zones in Unreal, in which I can met myself as a player and the Camera Clients from UT2003 structure space as a manneristic self-referential mirror space that is turned in on itself and in which I can implosively fall in on myself. It seems to be that the interior spaces of the psyche and the indentities and to be, that seem to have a greater attractiveness for the games world at the moment than the extraterrestial colonies of the '80s.

The mirror spaces of the games are the visible gameplay articulation of an idea. The French author **Jaques Rigaut** (1899-1929) called that type of object whose single objective is to mirror, mirror things:
"Mirror things are models of a type of beauty, that we refer to as elegance. Mirror things are suitable for a perfection fully independent of the individual. Mirror things are not to be found in nature but are rather a product of the disciples of superficiality - that is, in that which appears before the mirror. The compliance to these uncomprimising adherents of the superficial transforms external reality into an essentially different and elegant something, in a bright and unique beauty".

Ultra-Dandyism

Perniola suggests that this point of view should be called "ultra-dandyism" and that it characterized Rigaut's attitude as a challenge to the world, to transform every object and every event into a thing of beauty, a perfect beauty that emerges from an inner mimesis.

One can call the spatial objects of these new games mirror things and contrast their mimetic perfection with the cold stimulation of architecture, bodies and physics that had so enthralled us in past decades. It could be that one reason for the search for mirror images might lie in a dissillusionment with the unmirrored, constructed reality. It could be that we see self-fabricated reality as being not elegant and beautiful enough, and for this reason look for mirror reflections and the view inwards - even in games.

One could even cynically claim that an industry that is continually avidly seeking innovation is presenting us with the mirror as a topical and trendy form of binoculars. Hence, with reference to this technology one would have to concur with **Hegel** when he stated: "Technology appears on the scene, when necessity arises".

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Digital Crustaceans : Homesteading and Hand Me Downs on the World Wide Web

Title	Digital Crustaceans
Subtitle	Homesteading and Hand Me Downs on the World Wide Web
Lead-in / Abstract	Hermit crabs are families of crustaceans that make their homes in the unused or abandoned gastropod shells of snails and mollusks. They live in the discarded shells of other crustaceans. In this unique quality of being by nature 'unhomed' or 'undressed', they provide an apt metaphor for the 20th and 21st century phenomenon of the migrant, the refugee, and the exile.
Participants and speakers	Bachmann, Ingrid (CA)
Short biography of participants	Ingrid Bachmann is an interdisciplinary artist whose work spans a range of practices and media. She is interested in the complicated relationship between the material and virtual realms. This interest is expressed through a studio practice, writing, lecturing, and organizing events and exhibitions. She uses redundant, as well as new technologies, to create generative and interactive artworks, many of which are site-specific. She is presently Associate Professor in Studio Arts at Concordia University in Montreal, Quebec and is the co-editor of Material Matters, a critical anthology. She is also a founding member of the Interactive Textiles and Wearable Computing Lab of HEXAGRAM: Institute for Research and Creation in the Media

Arts.

Full text

Dress, in addition to protecting us from the elements, is a unique form of cultural expression that reveals identity, social class and political affinities. In the project, *Digital Crustaceans*, a very slow, very ancient crab, in a hand me down shell, explores the high speed world of the internet.

The project involves both a live hermit crab and its avatar, that explores the World Wide Web. The hermit crab has two homes - a large glass terrarium and a 'home' page on the Web. The movements of the real crab within its terrarium are tracked by a motion capture system and animate a mechanical plotter that traces its movements onto a wall surface. The project also involves a web site, one that functions not only as a 'home' page but as a record to track the movements of the digital hermit crab, as it maps its itinerary and journey across the structures and sites of the World Wide Web.

Through these journeys and mappings, reflections emerge on notions of adaptability, contingency and choice.

Related internet addresses

http://www.xslabs.net/
http://www.hexagram.org

Documenting Art, Science and Technology : The Daniel Langlois Foundation approach

Title

Documenting Art, Science and Technology

Subtitle

The Daniel Langlois Foundation approach

Lead-in / Abstract

The Daniel Langlois Foundation's Centre for Research and Documentation (CR+D)'s collections and tools constitute a major resource for researchers, students, scholars and of course, the "historians of the new", who need an access to documentation that is rapidly growing old and that have suffered from a lack of care and concern. Indeed, in the last forty years or so, the development of artistic and cultural activities using or related to science and technology occurred mainly outside the so called mainstream art world. Because of this, a large amount of these activities have not been well documented and even when it has, this documentation has not been well preserved or has not been made accessible to the public.

Documenting new media art remains problematic, even in our days. Two factors are responsible for this situation. First, the fact that many new media art practices are extremely ephemeral and unstable. The second factor is more subtle: it is linked to the fact that many individuals and organizations are doing self archiving. The activity itself is far from being a bad thing, but too many people believe that the mere fact of keeping everything and putting it on a Web site will be enough to ensure its survival.

It is with that situation in mind that we started developing the CR+D five years ago. We conceived the center so that it not only documents the present day new media art scene but also we wanted it to put this field in a historical perspective and contextualization.

We believe that the CR+D's resources are quite unique. While there is some excellent online and/or physical resources dealing with new media documentation and history, they are often limited to a very narrow domain or medium. Other are just not accessible for the public, or poorly organized or indexed. The fact that we have a long term preservation mandate and a high level of sustainability is also quite unique.

Participants and speakers

Depocas, Alain (CA)

Short biography of participants

Alain Depocas
Head of the Centre for Research and Documentation (CR+D) of The Daniel Langlois Foundation since September 1999, Alain Depocas has been named Director of the CR+D in March 2003. In this capacity, he is in charge of a documentary collection covering the history, works and practices associated with the media, electronic and digital arts. He has also set up a database for managing the collection and information on CR+D's areas of interest.

Full text

The Daniel Langlois Foundation's Centre for Research and Documentation (CR+D)'s collections and tools constitute a major resource for researchers, students, scholars and of course, the "historians of the new", who need an access to documentation that is rapidly growing old and that have suffered from a lack of care and concern.

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CR+D'S ARCHIVAL FONDS AND DOCUMENTATION COLLECTIONS

Soon in the development of the CR+D, we decided to never neglect the importance of the "physical" documents. Even if more and more document are digital, and even if more and more older documentation is being digitized, the physical documentation remain an extremely important resource. Of course we already started digitizing many older documents but for us, digitization is a tool for dissemination more than preservation.

A large part of our collection is made of usual types of documentation such as catalogues, books, periodical, invitations, programs and other types of paper documents like manuscripts and technical drawings. Of course the collection also include videos, CD-ROMs and, more and more, digital documentation from various sources. Amongst the main CR+D's collections and archives are the following:

The Steina and Woody Vasulka fonds.
Electronic and digital art pioneers, Woody and Steina Vasulka have played a vital role in developing a formal vocabulary specific to electronic and digital images. The fonds contains documents pertaining to their technical research and to the development of the works they created. Furthermore, the fonds includes documents relating to video artists, instrument designers and other collaborators together with exhibition catalogues and theoretical essays on video and electronic art.

Collection of Documents Published by Experiments in Art and Technology (E.A.T.).
This collection features over 500 documents that explore the activities of Experiments in Art and Technology (E.A.T.) from 1965 to 1981.

The *Images du futur* Collection.
This collection, which runs from the mid-eighties to the mid-nineties, brings together international documentation corresponding to the 10-year history of the *Images du futur* event organized, from 1985 to 1996 in Montréal.

The *9 Evenings of Theater and Engineering* fonds
9 Evenings was organized by Billy Klüver and Robert Rauschenberg in New York in 1966. It was an interdisciplinary project blending avant-garde theatre, dance, performance, music, and new technologies.
These archives include in particular 35 and 16 mm films, sound recordings, videotapes, photographs, manuscripts, correspondence, technical drawings, and various artefacts used as performance props.

DESCRIPTION OF THE CR+D'S RESSOURCES AND TOOLS

CR+D's Database

At the centre of the CR+D's resources is the CR+D's Database which link many levels of information through indexation. Far from being only a library catalogue, the database is composed of specialized modules design to manage information about seven main types of information:

- Documents (books, catalogues, CD-ROM, articles in periodicals, texts in catalogues, Web sites, etc.)
- Individuals (artists, critics, theoreticians, curators, etc.)
- Organizations (museums, galleries, cultural organizations, research centre, publishers, etc.)
- Events (exhibitions, festivals, performances, conferences)
- Artworks
- Instruments / Machines / Softwares
- Terminology: for indexing, keywords, mediums, categories, etc.

The researchers are able to perform queries in all of these modules from the Web site. It is possible to obtain many types of result through cross indexation like a list of events in which an artist has participated or in which an artwork has been showed, a list of documents about an event or about an individual, a list of documents about a topic, etc. To achieve this, we have to index and describe documents at a very high or precise level. Even archives material is often processed at the item level, instead of only the series level.

Web site

The Daniel Langlois foundation's Web site provides a lot of high quality information about all funded projects. It also gives access to the CR+D's database through a very powerful search engine. Digital dissemination of archival documents is also part of the goal of the Web site. Every text, image and audio-visual document is presented with the relevant metadata and many search options are offered at the presentation layer.

For example, for the Vasulka Archives many types of resource are offered:
- An illustrated timeline (*The Instrumental Video*)
- A finding aid that follow standard rules of archival description
- A list of content (items) for series and files

Another good example of dissemination of historically important documentation is the famous *Radical Software* magazine from the early 70's. Through a partnership with the editor of Radical Software, the Daniel Langlois foundation uses the CR+D's database to index the complete collection of articles (more than six hundreds) giving the possibility for researcher to query the magazine's content and to access it online. (http://www.radicalsoftware.org)

Research and preservation issues

The preservation issue is without a doubt a very complex one. We are involved in a partnership with the Guggenheim Museum called the Variable media Network. Without going to far in the description of the concept and the partnership goals, let us say that it is dealing with the description of non-traditional artworks using its behaviours instead of its physical component. This description, obtained from the creator of the work, will certainly be of extreme importance when it will be time to take action to preserve it. Amongst other, the strategy of emulation is proposed and recently an emulation test case has been conducted on Grahame Weinbren and Roberta Friedman's *The Erl King*, a 1982-85 interactive video installation. (http://www.variablemedia.net)

Grants for Researcher in residence

The goal of this program is to invite researchers to use our documentation collection for research on specific topics. In this context Mona Jimenez, who is teaching film,

video and new media preservation at New York University, came to Montreal to work on the development of a documentation structure for instruments and machines used and developed by artists. The Vasulka archives contains many documents on such instruments like Dan Sandin's Image Processor and the Rutt/Etra Scan processor.

Conclusion

We hope having demonstrate that the CR+D's activities and resources not only are worth being discovered and used by any researcher interested in the new media arts and their historical context, but also offers a fertile ground for discussions around topics such as preservation, dissemination and contextualization.

Related internet addresses

http://www.fondation-langlois.org/e/collection/vasulka/archives/index.html
http://www.fondation-langlois.org/e/CRD/index.html
http://www.fondation-langlois.org/e/index.html

Drift

Title

Drift

Subtitle

Not provided.

Lead-in / Abstract

Drift is the third in a series of large-scale GPS-based interactive installations made since 1996. In this work, the sounds themselves move with dramatic rhythm of the tides of the Wadden Sea in Cuxhaven Germany.

Participants and speakers

Rueb, Teri (US)

Short biography of participants

Rueb's large-scale responsive spaces and location-aware installations explore issues of architecture and urbanism, landscape and the body, and sonic and acoustic space.

Full text

The ubiquity of GPS (global positioning satellite) and other tracking technologies suggests that "being lost" may itself be an experience that is being lost. However, simply knowing one's geographical location as expressed in longitude and latitude coordinates has little bearing on one's personal sense of place or direction. *Drift* poses the age-old question "Where am I and where am I going?" in a contemporary moment in which geographic information systems provide evermore precise, yet limited, answers to this question.

The installation embraces the flow of wandering, the pleasure of disorientation, and the playful unpredictability of drifting as it relates to movement and translation. Sounds blend ambient textures with spoken word in different languages. Spoken word passages are drawn from poetry and literature dealing with the theme of wandering, being lost, and drifting -**Rousseau, Joyce, Mann, Dante**, and **Woolf** among others.

In the first iteration, the Watten Sea becomes a metaphor for hertzian space as visitors are invited to wander among layered currents of sand, sea and interactive sounds that drift with the tides. The sounds move with the tide such that at low tide all the sounds are out on the Watt, at high tide they flood the town. Sounds play automatically as visitors wander through these interactive zones carrying pocket PCs in a backpack.

Related internet addresses

http://www.terirueb.net/drift

E.motional Perturbations

Title

E.motional Perturbations

Subtitle

Not provided.

Lead-in / Abstract

As digital culture and media develop and re/shape experience, they also colour e.motions. The aim of this paper is to explore e.motions in media(ted) experiences of digital culture. Emotion, or e.motion, can be understood as the movement of embodied affect-- within and between bodies-- as feelings that are in bodies and that move bodies. We jump with joy, we recoil with fear and when sadness weighs down our hearts, our limbs turn to lead. E.motions also move between bodies and machines and relay through networks, perturbing everyday life. We will engage with these perturbations through two or three case studies of electronic and new

media artwork, including our own work in the 'pataphysical new media art project, The Perpetual E.motions Project. In this project, we have set up a fictive institute -- the Institute for the Study of Perpetual E.motion. The Perpetual E.motions Project involves both a networked performance and an internet art work, which take as their starting point an understanding of e.motions as physical as well as cultural. We are also interested in the way recent neurobiological attention to emotion is reminiscent of an earlier concern with measurement of motion –in particular the work of Etienne-Jules Marey. Many of the e.motional machines in the internet work are Marey machines– that re-map the e.motions which were left out of Marey's original motion studies. The Perpetual E.motions Project also involves a networked performance, Séa.nce, which focuses on emotions in networked relay. Séances and ouija boards, which historically were popular 'parlour games,' can also be understood as 'networked' events (networking across the ether between the living and the dead). In the discussion of The Perpetual E.motions Project we will focus on the ways that networking and media(tion) perturb and are perturbed by the relays of e.motion.

Participants and speakers

Neumark, Norie ("Doktor Rumor") (AU)

Short biography of participants

Maria Miranda (aka Max) is a visual/new media artist. Recently she completed her MVA at Sydney College of the Arts. She has worked as a graphic designer, been involved in community radio and drawn comix. In 1989 she co-edited Drawing Away: an australian women's comic book. For the last ten years Maria has collaborated with Norie Neumark, as Out-of-Sync, making CD-Roms, installations, and internet art works, which have been exhibited internationally. Out-of-Sync has an artist studio on Turbulence.org (http://turbulence.org/studios/rumor/)

Norie Neumark is a sound/radio and new media artist. Her radiophonic works have been commissioned and broadcast by the Listening Room, ABC Classic FM in Australia and broadcast by New Radio and the Performing Arts in the US. Norie is Associate Professor in Media Arts and Production at the University of Technology, Sydney. She co-edited At a Distance: precursors to internet art and activism. (forthcoming MIT Press, 2005). For the last ten years Norie has collaborated with Maria Miranda, as Out-of-Sync, making CD-Roms, installations, and internet art works, which have been exhibited internationally. Out-of-Sync has an artist studio on Turbulence.org (http://turbulence.org/studios/rumor/)

Full text

This paper is in two parts. The first half discusses some theoretical ideas about emotions and new media art. In the second half, we present our own 'pataphysical work, which explores networked emotions.

Part 1: E.motion perturbs media art

Emotion is a well-known part of art -- the desire by artists to make the audience experience emotion -- the desire by the audience to be moved. Emotion in this sense may be understood as feeling that is experienced as bodily -- feelings that are in bodies and that move bodies. Our take on e.motions is to stress the kinetic aspect -- e.motions as motion, jumping for joy etc, and that this motion of emotion is not just within individual bodies but also **relays** between bodies and machines.[1]

In thinking about emotion in new media art, one of the things we want to explore here, as in our work, is the issue of *instrumentality* -- To think of how emotion can work in perturbing ways rather than as 'added value.' To do this, we'll start by taking apart the concept New Media Art, which seamlessly puts together three terms with very different trajectories.

New. New is reminiscent of futurology, with its endless pursuit and valorization of the next new thing, the latest technology. Must new media art always/only work with the newness of new technologies? Is its destiny to be a beta testing domain for the military industrial complex? Does 'new' mean that cultural content is irrelevant? Does it necessarily demand costly high technology driven work or can there be a place for low tech and conceptual work?

Media. Media recalls communication with a listening and viewing audience. As a communication work, must new media art pursue **clarity of communication** with its audience? Does the audience demand a **transparent** documentary window onto reality from its media? Or might media remind us of the complexity of **screens** and the ways in which screenal reality has become as real as 'reality' for a popular (en) culturated audience?

Art. Art brings to mind a long history and weighty set of traditions -- including often a focus on the expressive needs of the artist or the formal needs of the medium.

However, art also offers a discourse, even if not singular -- indeed thankfully not singular --, which can help, find a space outside of the even heavier instrumental imperatives of global capitalism. And 'art' is also a reminder that new media *art* might work with intensities and affects.

Our interest in emotions has spanned 4/5 years and a number of new media art projects. In an earlier paper[2], Norie Neumark developed four figures, *affection, oscillation, projection*, and *contamination*, to explore the literal, physical and metaphorical emotional connections between people, animals and machines.

Affection re(p)lays **psychological** factors or affects. Within cultural studies, affect suggests a "layering and constant mutual interruption of biological and machine models."[3] A particularly affecting robotic art work we'd like to show is **Louis-Philippe Demers** and **William Vorn's** *La Cour des Miracles* -- a sort of robot freak show from the 16th century, figured via a sordid post-industrial future.[4] Via sensors, e.motion relays back and forth through robots and audience, as they sense *your* movement and presence, and you sense their effect/affect:

The robotic assemblage trembled and vibrated with the irreducible intensity of affection, but its e.motion took them nowhere. A moving expression of non-utilitarianism.

Oscillation, a second analytical figure, provides a model for examining **physical** forces, relay and e.motion.[5] Oscillation resonates **Gilles Deleuze** and **Félix Guattari's** focus on forces and intensities rather than intentions or fixed meanings.[6] The next work we'd like to show you is **Kenneth Rinaldo's** 2000 installation, *Autopoesis*, which creates a multiplicity of moments of oscillation of emotion between and within the audience and the pieces that make up the installation.

Rinaldo's sensors transmit and amplify emotions between the audience and the multiple arms. As partial objects these arms -- pathetic reminders of war-torn and severed limb? -- have their own life and also somehow become our arms as the emotion oscillates between us/them. In both the works the oscillation of e.motion is a motion of becoming *within* and *between* rather than to a fixed destination.

The figure of **Projection** addresses **psychoanalytic** dimensions of the **cultural imaginary**: the movement of desires between persons, animals, and machines.[7] According to **Charles Grivel**, "A machine corresponds necessarily to a call of the imaginary" ... affirming the subject's "unthought, its unthinkable."[8] " We only invent machines that are bodies; we invent machines after our bodies; we recognize ourselves through them...Machine-mirrors....[9]

Projection also mirrors *doppelgangers*, strange yet familiar doubles, onto which emotions are projected.[10] Doubles are uncanny - they are threatening in being both so like us, but also different, according to Margaret Morse[11].

Contamination[12], the final figure, suggests movement through the air, and the airwaves. In the ether, ghosts and spirits are airborne contaminants. With the birth of the telephone, **sound** waves from the mechanized voice bounced through a ghost filled ether, where they were contaminated by emotional encounters with the spirits, according to **Avital Ronell**.[13] Today, it is the web, which is contaminated with the relay of networked e.motions[14] -- as we explored in *Séa.nce* a work shown on the ISEA2004 ferry.

Part 2 The *Perpetual Emotion Project*

Séa.nce is part of a larger internet work, the Perpetual E.motion Project, which we'll turn to next. The Internet is swamped by the needs of those using it for sales purposes -- their concerns increasingly define aesthetics and 'usability' in an instrumental way. We have here what Critical Art Ensemble call a 'profit machine.' In *The Perpetual Emotions Project* we are working in the space of non-instrumentality -- to experience e.motions as relays that are noisy, excessive and ambivalent.

Show *The Perpetual Emotions Project*
http://turbulence.org/studios/rumor/emotion/

The Perpetual Emotion Project is a fictive work, which establishes a research

institute, *The Institute for the Study of Perpetual E.motions* --under the direction of Dr Rumor (aka Norie Neumark) and Professore Rumore (aka Maria Miranda). (www.turbulence.org/studios/rumor/emotion) The Internet does seem to be the perfect place for fictive and 'pataphysical works. The term 'fictive' is borrowed from the literary theorist Wolfgang Iser. He outlines a theory of the fictionalising **act**, which can be thought of as 'the real, the fictive, and the imaginary.' Quoting from Iser "…the fictive becomes an act of boundary-crossing which, nonetheless, keeps in view what has been over-stepped."[15]

An inspiration for us here, as in other works, has been the 'pataphysics of Alfred Jarry. His neologism 'pataphysics was a play on metaphysics, the science of being and ontology.[16] Jarry's 'Pataphysics sits **beside** science playing with and against its truth effects. It revels in the fragmentary and the exception, in non-sense and the anomalous.[17]

We began the Project for the internet by making a series of small machines, e.motion machines. These are play with the 19th century motion machines of **Etienne-Jules Marey**, in order to re-map the **e.motions** that were left out of his famous motion studies. In the beginning our urge (as **new** media artists!) was to find new e.motions emerging in digital culture as people merged in a moment of *affection* with their machines. We did this by interviewing subjects about incidents in relations with machines and then putting their material through our specially constructed Marey machines.

Demo Research: Subjects A and B

As the project developed, we became more interested in developing 'pataphysical theories of emotions. For instance, we mathematically modelled e.motions using String Theory, which posits that on a subatomic level matter and force are vibrational strings. (Vibration *oscillates* at the heart of string theory and of course, for a sound artist, vibration is always a very sympathetic figure.) Through this model, we can now understand the way that previously unnoticed e.motions, which are at a lower level of complexity, are different from familiar emotions, which operate at a higher level of complexity. We wanted to make these lower level emotions visible or audible.

Research: string theories

We were also interested in what was happening in the world of neuroscience, where the focus on emotions reverts to the brain, in an often blatant ignoring of cultural difference, indeed of culture in any sense.

Research: the walks.

Sotto voce: You'll notice the sound here is a variation on one sound, which is a play with the reductive nature of these scientific theories, the loss of cultural difference and of singularity.[18]

People: Doktor Rumor and Professore Rumore

We spoke earlier about *projection* and Doubles. During the work, our doubles took on a life of their own, crawling through the web, looking for other identities to contaminate their own. The project became a baroque folding of these identities as their detail multiplied and the borders between their multiple realities leaked together.

People: Doktor Rumor and Professore Rumore -> Moscow state school.

During the process of making the work, the idea of relay on the net took on ever-greater meaning for us. PhP *contaminated* our lives. As we struggled with it (not being programmers) it gave rise to a moment of software art.

People: Doktor Rumor -> software art

Which then provoked hardware art

People: Professore Rumore -> hardware art

Finally, we'd like to discuss *Séa.nce*, which is part of the project that we made together with **Greg Turner** (assisted by **Alastair Weakley**) for the ISEA Ferry.

Séa.nce:
Séa.nce is a 'pataphysical experiment to demonstrate the relays of perpetual emotion on the internet. It is a multi-user performance event, which takes place

simultaneously in a site-dependant location and on the Internet. Our concern with *Séa.nce* was to have a networked performance where local and remote players communicated with each other through a medium and a media, so that the e.motions in the network could manifest. Again Marey was an inspiration. In the 19th century, he, **Henri Bergson**, and **Marie Curie** met to investigate "'the manifestations of yet undefined forces'" through scientific investigations, using Marey's graphing instruments -- they studied telepathy and levitation etc and, of course, held seances.

Sea.nce, following these earlier experiments, is based on the Ouija Board a popular 19th century parlour game for lovers, which was an early 'networked' event (across the ether between the living and the dead). The original Ouija Board was also known as the Talking Board or the Message Board where one would search for answers from the spirit world.

As we were working on *Séa.nce*, looking at historical 'talking boards', the need to make the board talk became inevitable. But what language would it speak? As English has now become the preferred language of international networked communication, it seemed inviting to let loose many of the other alphabetic sounds that lie hidden behind this linguafranca, that have in a way become virtual. There are more than 20 different languages used in the current version of *Sea.nce*. Through a system, which relays the collective motion of the avatars, the planchette is moved around the board from letter to letter. When the planchette lands on a letter it responds with the sound of the spoken alphabets randomly chosen from these 20 languages. The result is a sort of networked glossalalia.

Glossalalia is an excess beyond interpretation, meaning, rationality. Following **Artaud** it is about force, not form[19]. It brings to mind (or should we say body) **Bataille's** idea of excess -- things which are not productive in the capitalist sense. So the glossalalic is the excess that has refused sublimation into language (narrative, meaning). It is also a theatrical performance that does not subordinate the theatrical to narrative logic. Glossalalia in this non-sense is an expression of the *singular* self, which is not the bourgeois individual hero, constituted through mastery of the body and entry into the symbolic of language.

Glossalalia thus resonates with 'patahysically absurd theatricality. In *Séa.nce* there is not enough plot and too many characters. Each performance is shaped by the emotions of the players, which collectively determine the movement of the planchette. By this we don't mean collectively as in a team sport, but rather an uncanny collectivity that is outside any individual's control.

To finish, we'll just talk briefly about the process of making the work. The process happened collaboratively across the network, with **Greg Turner** in Sydney and us located in Paris, it shaped the work. Séancing together, in the morning for us, and at night for him, we found ourselves expressing our emotions and developing our ideas through the Message Box (a live chat box): so the Message Box became a larger part of the work than initially planned. The Message Box became a performative part of the networked event. The next part of the process… is to be continued… we want to develop the work further in response to the emotional relays that took place on the ferry thanks to the generous and delightful participation of ISEA players. Thank you.

Acknowledgements:

Parts of this paper appeared in Maria Miranda's *Museum of Rumour: Fictive Art in New Media*, Unpublished MVA, Sydney College of the Arts, 2003.
Other parts appeared in Norie Neumark, "E/motional Machines: Esprit de Corps," Affective Encounters: rethinking embodiment in feminist media studies, Turku, September 2001 (Anu Koivunen and Susanna Paasonen, eds. *Conference Proceedings*, downloadable from
http://www.utu.fi/hum/mediatutkimus/affective/proceedings.html

- 1. By machines we are referring to objects -- from tools to vehicles to media instruments -- as well as Deleuzian (literal) *assemblages* of the organic and the mechanical.

- 2. Norie Neumark, "E/motional Machines: Esprit de Corps," Affective Encounters:

rethinking embodiment in feminist media studies, Turku, September 2001 (Anu Koivunen and Susanna Paasonen, eds. *Conference Proceedings*, downloadable from http://www.utu.fi/hum/mediatutkimus/affective/proceedings.html

■ 3. Eve Sedgwick and Adam Frank (eds.) "Shame in the Cybernetic Fold: Reading Silvan Tomkins," p.15.

■ 4. The work seems to be figured via post-apocalyptic films such as *Bladerunner* and Terminator that help shape this work's sensory imaginary. Apropos of *Bladerunner,* by the way, it's interesting how affective encounters between humans and machines... and animals...are the central and starting point of the book which inspired the movie, **Philip K. Dick's** *Do Androids Dream of Electric Sheep*, yet these seminal and powerful episodes are absent from the movie.
Philip K. Dick, Do Androids Dream of Electric Sheep, New York: Ballantine Books, 1968.

■ 5. Electromagnetism and its oscillations have attracted interest throughout the 19th and 20th centuries from scientists and artists trying to understand the connections between people and machines.

■ 6. They expressed their concern with "movement and rest, slowness and speed," particularly as qualities of machinic assemblages ….The plane of consistency of Nature is like an immense Abstract Machine, abstract yet real and individual; its pieces are the various assemblages and individuals, each of which groups together an infinity of particles entering into an infinity of more or less interconnected relations. There is therefore a unity to the plane of nature which applies equally to the inanimate and the animate, the artificial and the natural…. It is a fixed plane, upon which things are distinguished from one another only by speed and slowness." Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia,* (transl. Brian Massumi) Minneapolis: University of Minnesota Press 1987, 254.

■ 7. Rather than the understanding of such desire as, say, perverse or neurotic, we want to go with this emotional flow of desire, as everyday and contributing to the aesthetic and sensual meaning people make of themselves and their worlds. The organisation of perception and the senses have changed radically and obviously in the post-industrial, information era. Yet what of the less perceptible changes to emotions? And what is happening to the connection between aesthetics and emotions through the body, which is affected and effected by sensations? As Terry Eagleton points out, "Aesthetics is born as a discourse of the body" referring "to the whole region of human perception and sensation". Terry Eagleton, *The Ideology of the Aesthetic*, Oxford: Blackwell, 1990, p 13.

■ 8. Charles Grivel, "The Phonograph's Horned Mouth", transl Stephen Sartarelli, in Douglas Kahn and Gregory Whitehead (eds.), *Wireless Imagination: sound, radio and the avant-garde*, Cambridge MA: The MIT Press, 1992, p. 35; 58.

■ 9. Ibid., 31.

■ 10. For Friedrich Kittler, the Double's body comes to light through projection. According to Kittler, the double is a figure that arose with reading, as a means to identification. He describes a subsequent connection between film, mechanization, trains, doubles and psychoanalysis. He argues that this came to light in Freud's work, though Freud himself failed to see it. Friedrich A Kittler, *Literature, media, information systems: essays*, Amsterdam: OPA, 1997, p. 92. For Kittler, "[c]inematic Doubles demonstrate what happens to people who get caught in the way of mechanical media's firing line. Their mechanized likeness roams the data banks that store bodies." Ibid p. 96.

■ 11. Margaret Morse, "Gort! Klaatu Barada Nikto on Alien Intelligence", in Erkki Huhtamo (ed.), Alien Intelligence, Catalogue Helsinki: Kiasma, Museum of Contemporary Art, 2000, p. 35.

■ 12. Contamination recalls William Burroughs (of 'language is a virus' fame) and is useful for thinking the flows between the borders of people, animals and machines, especially through language, speech and voice. These encounters recall the becoming, including becoming animal, which Deleuze and Guattari figured as movements by contagion, movements that are "not about pity or identification, nor analogy or imitation." "Becoming is to emit particles that take on certain relations of movement and rest because they enter a particular zone of proximity. Or it is to emit particles that enter that zone because they take on those relations." A Thousand Plateaus pp. 258, 272. –273.

■ 13. "The telephone grew out of a mysterious coupling of art and occult," in a

relay of uncanny contaminations, she argues. Avital Ronell, *The Telephone Book: Technology-Schizophrenia-Electric Speech*, Lincoln and London: University of Nebraska Press, 1989, p.366.

■ 14. It is little wonder that telepaths and psychics are having a major comeback on the electronic airwaves -- phone lines, television, on the web -- where psychic energy is 'constantly exchanging with electronic energy' in the words, and work of electronic artist Julia Scher, maker of numerous 'Dirty Data' works. Julia Scher speaking in Norie Neumark's, *Separation Anxiety*, The Listening Room, ABC Classic FM, 1996.

■ 15. Iser Wolfgang, *The Fictive and the Imaginary: Charting Literary Anthropology*, Baltimore: Johns Hopkins University Press, 1993.

■ 16. Jarry, Alfred "Exploits and Opinions of Dr Faustroll: a Neo –Scientific Novel" in Roger Shattuck and Simon Watson Taylor, ed. <U>Selected Works of Alfred Jarry. London: Eyre Methuen Ltd, 1980, p. 192.

■ 17. This discussion of the fictive and the `pataphysical is elaborated in Maria Miranda, *Museum of Rumour: Fictive Art in New Media*, Unpublished MVA, Sydney College of the Arts, 2003.

■ 18. "In the hyperindustrial age, the singularity of sensibilities represents an obstacle to the unlimited circulation of goods, which is why the singular sensible, as the object of an aesthetic experience of singularity consisting in a broadening of meaning, must be replaced by an archaic, regressive condition of sensibility, which is a form of anesthesia." p. 45 importance of singularity of sensibilities [and emotions] as obstacle to unlimited circulation of goods…. Georges Collins et Bernard Stiegler, "la grande misère symbolique", *artpress* 301 mai 2004 pp.44-48.

■ 19. Antonin Artaud, *The Theater and Its Double*, New York: Grove Press, 1966; Edward Scheer, "Sketches of the jet: Artaud's abreaction of the system of Fine Arts" in his (ed.), 100 Years of Cruelty: Essays on Artaud (Sydney: Power Publications and Artspace, 2000).

Empyre : Structure and diversity

Title	Empyre
Subtitle	Structure and diversity
Lead-in / Abstract	*–empyre-* sprang into life in 2002 to fill a void on the net. It presents diverse topics with guests discussing aspects of networked culture in a non-hierarchical constantly refreshing monthly format, and is moderated to maintain thematic integrity.
Participants and speakers	Rackham, Melinda (AU / GB)
Short biography of participants	*–empyre-* www.subtle.net/empyre was instigated in 2002 by **Melinda Rackham** a network artist, theorist and curator based in Sydney. It is currently facilitated with transmedia artist **Christina McPhee** of naxsmash.net who lives in California; visual, sound and net.artist **Michael Arnold Mages** who teaches at the University of Denver; programmer-artist **Jim Andrews** from the University of Victoria, Canada and vispo.com; and **Felix Sattler**, new-media theorist and cultural producer based in Weimar, Germany. u:sun at ueda.nu designed the interface and **Nigel Kersten** at 4trak.net keeps the server running.
Full text	About 3 years ago, when I was thinking of starting the *–empyre-* discussion list, **Jordan Crandall** told me that running a good list was like hosting a good dinner party. This was the best piece of advice I've ever been given as it extrapolated on my experience as the author of the 3D multi-user virtual space, empyrean, in that you can a build a space and just leave it there for something to happen randomly, or you can assist in developing that community. Setting up the list for me involved providing an environment conducive to social interaction, strategically inviting interesting and diverse people to join and introducing them to each other, ensuring they feel comfortable and safe, enthusing them with juicy theoretical, emotional aesthetic and critical topics. So *–empyre-* is a piece of considered virtual social engineering, designed as a platform to present a range of works, texts and concepts in a friendly research environment. Guests range from people who do interesting and challenging work which isn't always well know; well established and well represented practitioners and writers, those who are just emerging, to those who are brilliant but only recognised in their specific niche. *–empyre-* seeks to be inclusive of those whose first language isn't English, and has a policy of incorporating guests and issues from

outside the US-European media Arts Axis. –*empyre*- endeavours to not build hierarchies of any one form of media over another, or the opinion of any one poster or group over another by moving to a fresh topic monthly. Within this structural container a cohesive functional networked social life-form has been born, attracting many new members, and true to AI principles, –*empyre*- 's whole is greater than the sum of its parts.

As the instigator, I could not maintain the workload for the growing baby list and –*empyre*- is now facilitated with Christina McPhee and Michael Arnold Mages (US), Jim Andrews (Canada) and Felix Sattler (Germany), all of whom contribute an abundance of knowledge and skill. I believe we have a responsibility when creating a public space, and inviting people into that space to see that etiquette, ethics, structure and lack of hierarchy are maintained, and on this panel I am interested in pursuing some self-reflexivity on my own role as facilitator.

I did not want to use text, or the voice of the facilitator or list administration as a way to steer or regulate discussion. For a while I invented another persona from which to ask questions, pose provocations, put forward contradictory or humorous positions, or say something very politically incorrect which a facilitator could never get away with. But I kept forgetting the personas password and eventually gave it up, opting to just post from my own "melinda" address. I m not quiet comfortable with this as I think having multiple roles and multiple functions doesn't always work. I guess its the same dilemma faced by those in the class room of assuming a role to draw a diversity of opinion from people who are otherwise quiet.

I find now that I am often posting something as facilitator where I put forward a position that I personally would never hold, but its one that I think needs to be included into the dialogue. It feels weird that im playing devils advocate often, yet I continue to do it. Is it control or laziness? Should I stop imposing conflicting opinions onto the list and retreat again behind the anonymity of an assumed persona, rather than confuse the facilitator role and my personal identity? Perhaps I could abandon all interaction and just read from the sidelines? I'm not sure. This panel may make it clearer to me.

Related internet addresses

http://www.faces-l.org
http://www.fibreculture.org
http://www.subtle.net/empyre

Exhibitionists and Voyeurs : Human Communication Patterns and Their Impact on Locative Media

Title Exhibitionists and Voyeurs

Subtitle Human Communication Patterns and Their Impact on Locative Media

Lead-in / Abstract

Many locative services rely on mass participation and interaction between strangers. I posit that the majority are looking for traditional consumption models of voyeurism and vicariousness. Through this lens, I will present a brief history of locative media, and future trends in situated software.

Participants and speakers

Heathcote, Chris (FI / GB)

Short biography of participants ...

Full text

Locative media is not new; it is as old as human evolution. The recent attempts to digitize and socialise this media falls down when basic communication patterns are not respected.

People have always created public annotations, from cave paintings (designed to communicate actions, places and messages - where food is available), through Greek and Roman graffiti and flags (used to indicate ownership and conquest). In recent times, such public annotation has been quashed by private ownership of space.

This has led to modern graffiti, which indicates ownership of a place in a parallel mental construction to real land title. The most social version is the toilet wall, used to communicate and converse in itself, but also as a medium for organising real meetups (often of a sexual nature). As technology has advanced, so has public annotation, incorporating stickers, scratching and etching.

So, learning from the past, can we determine what future locative media will look like? [1]

Most current digital locative services either rely on just making technology available, or concentrate on unusual communication patterns - public speaking, talking to strangers, exhibitionism, and display of real identity to all. This is compounded by a move towards more voyeuristic media consumption, and display of the general public's banal lives as entertainment.

We cannot and should not expect digital media to be different. We need to build on the patterns of public anonymity, the population split between exhibitionists and voyeurs, and use of our identity to reinforce trust, gain respect and worth within small known private groups.

On the Internet, we have seen several examples of services where the few create for many. Most online communities work this way, with a small number of people creating the core of content, and tending and managing the community to ensure survival. **Marc Smith** of Microsoft Research quotes a figure of 2% taken from newsgroups. As long as 2% of the community care, and are willing to work (normally purely for credit and recognition), the community will survive.

Conversely, many online systems, especially file sharing, rely on much higher active participation rates. Those that just 'take' content get branded as leechers. This goes against older warez communities, where a select few cracked software to prove and brag about their technical prowess. Locative media has also so far concentrated on mass active participation (citizen journalism, locative storytelling, geopositioned photography), and correspondingly the services have been designed for creators rather than consumers.

When designing social and locative software, we need to respect the distinction between exhibitionists and voyeurs, and create interfaces designed for consumption as well as creation.

Being digital, we have a distinct disadvantage over physical media: visibility. I cannot see digital slices of my current space. If I do interface with a digital representation, it is unlikely to be the same representation (media or service) that others have. This makes the basic need for creators (of exhibitionism, space and place ownership, community recognition) very hard to fulfill. You also lose the voyeurs, as they have nothing to look at.

This is a side effect of one of the advantages of being digital. We are not bounded by physical space, even though we can reference it and use it for contextualisation. Physical space is bound in three finite layers: physical geography, built environment and places, and physical augmentation. Digitally, we are constrained only by what we can visualise and how much information can be modelled mentally. This means that information visualisation and filtering become our most important needs (and therefore becomes the critical focus for interaction design in the future).

The other big advantage is that we can grant selective access to digital spaces. As well as public anonymous spaces, we can create many private layers, and even personal places for just ourselves. [2]

One way to create understandable, usable locative services is to place the service within a situation. Current online services suffer from trying to work everywhere (or at least over a large area, such as the US), for large groups of people. These are hard to use, especially when context such as location is needed, hard to write and manage, and do not scale.

Situated software [3] is a term used by **Clay Shirky** to describe services that are normally physically grounded in a particular place, and maybe for a particular user group, defined for a real-world situation.

These do not even have to be connected to the public Internet: wi-fi and LANs replicate the physicality defined by the design of the service. However, adding dislocated access for those part of the situation allows the place to become elastic.

An example of this is *Bass Station* [4], a project by ITP students at NYU in New York. This places a ghettoblaster in a student lounge. The ghettoblaster is fitted with a computer, MP3 player and wi-fi. Any student in the room can throw an MP3 at the device, which is either played immediately or queued. It is bound by its context - the people and place.

However, this idea could be extended by adding access via the Internet just for those who also regularly inhabit the lounge. This keeps the situation, but allows the place to become slightly virtual. Those outside the room cannot hear the music, or know who is there to hear it, but anyone who is there knows that someone from their peer group has put the music on (and has someone to complain to if Britney Spears is put on a continuous loop).

Airport Express incorporates some of the ideas, and I'm waiting for a hacker to create a software version of Bass Station. Suddenly this idea blooms from one situation to thousands.

Situating software can also make it easy to deploy and use. I created an experimental location based review service called *Gaslamp*, situated in downtown San Diego. The physical boundaries meant that location could be found easily, using street crossings: the context of San Diego was implied. As well as being easy to use and easy to design, I managed to code it in under 2 days, mainly because I didn't have to deal with larger context such as the whole of the US, or the world.

More services will be used at a sociable level. This means authentication can be carried out via human communication rather than more technical breakable solutions. Monitoring of the public Internet means that much activity will move to smaller hidden networks (or hinternets, defined by **Jo Walsh**, **Simon Wistow** [5] and **Simon Batistoni** [6] on the (void) mailing list - a place outside the "controlled web", the back alleys and the dark, unregulated bits of the Internet). With wi-fi, these can be created in seconds, and have physical understandable bounds (at least with 802.11b). File sharing will be carried out in pubs and bars, with the transaction agreed over a pint rather than the anonymity of the Internet. We're back to the sneakernets of the 80s and early 90s.

As shown, people have always appropriated place for their own ends. Digital places will be no different. People will hack, bend, shape and destroy service to meet their own ends, not those of the creators. A few examples - wi-fi SSID, a technical hook that lets computers see each other via wi-fi, has been used by people in a space to communicate. I saw this happen at a conference called DIS (which definitely falls into the idea of a situation), where several people could not figure out the correct SSID to get Internet access. This is the conversation I saw:

rate DIS so far -1 to 10
8-altogether, cool projects
this is the best talk ever
heh, i sense sarcasm
no sarcasm, this rocks!
actually, this is kindamything
naw DIS is the best conf ever
are you DISpleased?
DIS rocks!
don't DIS DIS
iamonline... type \"DIS2004\"
create network... \"DIS2004\"
aolIM - pobs09
DIS2004 didnt work
dis2004
still there?

and then it broke up, presumably as they found the proper SSID. This group (2 or 3) had no idea who they were conversing with, but shared a situation (and a need).

Another example of appropriation is the social networking site **Orkut**. The only way to access Orkut is to be invited by a current member. Well, one invitee was Brazilian, and they invited their friends, and they invited their friends. This would not have been noticed, apart from the fact that many conversations on the service switched from English to Portuguese. When appropriated, some incumbents tried to get the service to mandate English use; they felt their spaces had be appropriated. They failed, and presumably have either left the service and found another, or found a way to coexist.

Situation, more than context, allows us to create truly locative services. Understanding human communication, carried out both off and online, means that these services have real social value, and consequently gain and keep users. These users will start off consuming information, watching how others act and react. Some of these will turn out to be digital exhibitionists, creating content and becoming the soul of the service. Appropriation or change will happen, and it is up to the core users, not the owners, as to how the systems react.

- 1. Inspired by Hotel & Farm by Ben Katchor, McSweeney's Quarterly Concern #13, http://www.anti-mega.com/antimega/isea/iseahotel.gif

- 2. Diagram at http://www.anti-mega.com/antimega/isea/isealayers.png

- 3. http://www.shirky.com/writings/situated_software.html
- 4. http://www.bass-station.net
- 5. http://thegestalt.org/simon/cluetrain.html
- 6. http://husk.org/void/hitherto_hinternet.txt

Faces

Title Faces

Subtitle Not provided.

Lead-in / Abstract FACES is an international mailing list that connects women: activists, artists, critics, theoreticians, technicians, journalists, researchers, programmers, net workers, web designers and educators, all women who share an interest in the media and communication arts. FACES started informally, and has continued since 1997 as a voluntary list, using free services, and continues because of a real need for women to connect internationally. Many local lists have been inspired by FACES, and projects at festivals, exhibitions and symposia have been created by list subscribers.

Participants and speakers Huffman, Kathy Rae (GB / US)

Short biography of participants Kathy Rae Huffman is director of visual arts at Cornerhouse, Greater Manchester's centre of contemporary art and cinema, since 2002. She was formerly Director at Hull Time Based Arts, in East Yorkshire. Huffman is a curator and networker, and started FACES with a group of women around a dinner table in Vienna, in 1997.

Full text FACES is an international mailing list that connects women: activists, artists, critics, theoreticians, technicians, journalists, researchers, programmers, net workers, web designers and educators, all women who share an interest in the media and communication arts.

FACES is not a chat list, but a cyber-resource, a possibility for women to share their projects, exhibitions, critical opinions, and texts. Comments on important international issues, and subjects that all women encounter are posted. Requests for project participation, as well as deadlines for festivals, job opportunities, and funding are shared openly.
FACES underscores Cyberfeminism by providing a base for individuals and groups to encounter and examine the theory and practice of women working in the communication arts around the world.

The faces list began operation in the Spring of 1997, a pragmatic response to the needs of a small but growing number of women in media. Initiated after a series of discussions that took place on the margins of European media arts and media culture events, via email, and in the dimly lit corners of bars begged the question "Where are the women?" This constant question, and the desire to find out what women were doing with new media defined a gap in the existing structures and networks. Parallel to these discussions, the Face Settings project began to create informal settings that invited women to come to the table for a good meal and to discuss their work. It was the start to what would become an international network of women in media: artists, programmers, theorists, designers, curators, activists & djs, along with with an assortment of other digital workers.

In the Autumn of 1996, the simple solution of setting up a mailing list was introduced at a Face Settings dinner in Vienna. Even back then, it was hardly a novel or innovative approach to existing technology - but it did mark a profound shift in the practice of a small number of women. These women were already seeking out "the rest of us", researching and following up on leads, gathering contacts to women and information about their work. The faces list would provide a space for exchanging all of those details within the existing minor network and also allow that network to be more inclusive, open up to new women in the field of media. Through faces, and the network behind it, that gap in media culture has partly been filled, the need to locate the women and to know what they do has partly been met.

In the nearly seven years since its inception, through informal contacts and by word of mouth, the list has grown from 30 to 50 to nearly 400 women in 2002. The number is significant - not in terms of its mass, but in terms of its quality. The 300+ women represent an incredible body of work, knowledge and output in the field of media that is phenomenal. The faces list has grown into a potent network of women that work with all areas of new technology. While the list itself provides a certain frame, what takes place within that is up to the subscribers, who use it mainly as a channel to exchange information about projects, find collaborators, and discuss events. Perhaps the most beautiful and useful side effect is that it also works as an informal bed and breakfast for faces visiting different cities.

In keeping with the emphasis on network building, faces occasionally hosts informal get togethers, dinners, and open mic sessions parallel to various media events. These real life meetings offer a chance for some good old fashioned face to face, and generate a powerful female presence that highlights how many women actually do work in media. Meetings are often generated by list postings, of FACES travelling to new cities, of projects that require participation at festivals, exhibitions or academic symposia. Many long term working associations have been started by a simple email requesting information or assistance.

Of course, in the international context of media art and culture, the question remains "where are the women?" While faces can create a marginal platform for women, not much has changed in the main programs of most media arts and culture events in the past years - they still present very little of the work women do. For this, the events organized by several women's groups and networks in the broad "neighborhood" of media culture are deeply appreciated by many faces. Despite these positive steps, the kinds of questions that have inspired these many initiatives still beg to be asked. "What gaps remain unfilled?" "Where are the rest of the women?" "What are the issues that need to be addressed?" Perhaps most important question is what pragmatic response will fulfill the needs of a thriving community of interrelated networks of women actively working with media?

Since 2002 the Faces mailing list and website is hosted by servus.at, a non commercial cultural backbone in Linz, which was facilitated by Ushi Reiter. Vali Djordjevic, Kathy Rae Huffman, & Diana McCarty founded the list in 1997. Ushi Reiter joined the team in 2003.

In December 2003, thanks to a grant from the Austrian Bundeskanzleramt - Kunstsektion we are able to renew our website. We also formed an official Verein in Austria (a not for profit company) to allow us to fundraise and continue in a more organised manner.

At the moment we are working on the redesign - expect the new site sometime around April next year. During that time we will highlight some stuff that we find interesting in our new NEWS section. We took down the old pages as the link lists are terribly out of date, However if you still want to check something you can find them here. We are currently working with list subscribers to bring ideas forward for making the FACES list more useful and personal. In this spirit of community involvement, we hope to evolve a representative series of features that will be not only useful, but also easy to use for all. Feel free to contact us if you have ideas or suggestions at mods at faces-l.net

Related internet addresses

http://www.faces-l.org
http://www.fibreculture.org
http://www.subtle.net/empyre

Fashion, Mobility and the Tactical Imperative

Title

Fashion, Mobility and the Tactical Imperative

Subtitle

Not provided.

Lead-in / Abstract

Lead in: This paper examines fashion, networks, and the body, placing the wearable experience within a social, spatial, and temporal context. The projects presented are specific outcomes which examine public space and connectivity under the auspices of the "mundane" and the "everyday."

Participants and speakers

Doyle, Linda (IE)

Moriwaki, Katherine (US)

Short biography of participants

Katherine Moriwaki is an artist and researcher investigating wearables, fashion, and the experiential resonance of technologically mediated urban public space. Currently a Ph.D. Candidate at the University of Dublin, Trinity College,her work has appeared in IEEE Spectrum Magazine, and has appeard in numerous festivals and conferences including Siggraph (2000), numer.02 at Centre Georges Pompidou (2002), Break 2.2 (2003), Ubicomp (2003), e-culture fair (2003), Transmediale (2004), and CHI (2004). She is a 2004 recipient of the Araneum prize from the Spanish Ministry for Science and Technology and Fundación ARCO.
URL: www.kakirine.com

Full text

Introduction

As technological curves continue to extrapolate along expected estimation, concurrent dialogues surrounding the appropriate use and context of integrated computing in everyday life is gaining attention. While the size and obtrusiveness of the machinery might decrease, its influence on our lives seems to loom larger, promising radical changes to personal identity and self presentation. The "always on, anywhere, anytime," accessibility and the "seamless" increase in productivity pushed for by commercial manufacturers, while admirable, typically fails to critically engage the emerging infrastructures and communicative models created by new technology. Instead, a myopic vision for the future exists when perspectives are narrowly channeled into specified application domains, edging out alternative potentialities of the technologically mediated experience.

In many design scenarios the unpredictability inherent in the everyday is seen as an obstacle, something to overcome and conquer; while social relations become schematized, requiring formalized sets of interactions and prescribed types of use. It is against this backdrop that the research presented stands in stark contrast to most typical interpretations of the "wearable experience." The projects and design concepts discussed are proposals, prototypes, and specific outcomes of speculative research which examine public space and connectivity under the auspices of the "mundane" and the "everyday," using garments and accessories as the active conduit through which to create network relationships. The habitual patterns and daily activities associated with urban life serve as the context for each project, providing an alternative views and experiences of the public space. These projects employ disruption and subversion to create cognitive fissures where openings for tactical appropriation and misuse can emerge, providing catalytic moments of awareness for the wearer.

Personal technologies and irrational attachments

RECOIL was inspired by dense urban environments and the micro-spaces people occupy during daily travel. Accelerated living within urban zones often cause many people to close themselves off to unexpected encounters and minute details in the environment. The current intense proliferation of digitally encoded objects and personal data devices creates a rich unexplored territory for social interaction and tragedy. The seed of the idea for RECOIL began as a hyperbolic scenario involving current preoccupations in interaction design research with limiting or containing inconvenience and interruption. One such scenario includes a world where successful suppression of unwanted daily distractions through digital technologies creates an atmosphere of such pre-planned sterility that the reintroduction of inconvenience becomes a new fad game for urban indigents. In this fictive circumstance RECOIL plays a central role, with major players surreptitiously erasing and corrupting others' data while haplessly attaching themselves to passerby.

As fictional scenario RECOIL represents a example of situations where efficiency and regulated control backfire. As a design prototype, RECOIL asks for public participation and use. In the recoil garments small, powerful magnets are embedded into everyday clothing, causing unexpected and sometimes uncomfortable physical connections between people and objects, introducing an element of unpredictability that challenges the wearer's personal body space by making unsolicited connections in unexpected, unwanted, and possibly inappropriate ways. As powerful magnets potentially have the ability to erase data contained in many memory devices, the concept of a "Data Free Zone" is forcibly introduced to any who encounter RECOIL. This can be seen as a relief of burden to public citizens, mired in digital technology or in another light as "Data Terrorism." Either scenario suits the aims of the project, which is meant to provoke, not solve problems, highlighting frictions and drawing attention to technological paranoia.

Due to the attractive force of the magnets embedded into the clothes, the garments seemingly respond to the environment and people with their own agency. Rather than allowing individuals to retreat back into their own territorial space [4], RECOIL

asks the wearer to trust in the unpredictability of events one may encounter. When wearing the garments ordinary bodily movement is altered, creating a change in the physical self-perception of the wearer, resulting in the creation of a differentiated space, qualitatively changing and disrupting ordinary modes of interaction with the environment. While urban crowding causes the individual to withdraw, RECOIL forces involuntary engagement, creating a physical network of bodily configurations. It presents an estranged relationship [3] with the environment and with public spaces, relying on pathology and urban anxiety to pull the wearer out into the world.

Unstable economies and urban fluctuations

Whereas RECOIL uses disruption to interrupt personal body space, Urban Chameleon and Inside/Outside subverts the usage of everyday objects through using garments and accessories as the canvas for environmental data display.

The Urban Chameleon is comprised of three skirts which are based along the themes of social interconnection. "Touch" changes visual properties when handled, alluding to the packed density of city environments and the unavoidability of contact in the crowd. "Speak" reacts to urban noise, trembling when subjected to the panoply of city life, and "Breathe" visualizes pollution and urban exhaust as it travels through the garment. These simple sketches represented ways in which the body might display environmental data on the body, creating the context and groundwork for Inside/Outside.

Inside/Outside explores the role of clothing and accessories as catalysts in perceptions of public space and the urban economy. The project looks at an everyday accessory, the handbag as a metaphor for information storage and retrieval. Just as a "regular" bag contains physical objects, the Inside/Outside bags collect digital objects. In this case, air quality and noise pollution levels are monitored, through custom electronics, driving an ambient display on the surface of the bag. At the same time, a data diary stores the environmental exposure over time creating a mapping of the city space according to environmental exposure levels. Through proximity and incidental co-location, Inside/Outside bags share the environmental data of their wearers, creating a mobile sensor network which can create contextually relevant, and location aware mappings of the city. The size and reach of each individual's map is dependent on personal mobility and the number of people the wearer has passed throughout their daily travels. Inside/Outside questions how everyday objects can be used tactically, to provoke power shifts in perceptions of public space, and explores the relationship created between possibly anonymous individuals.

Both Urban Chameleon and Inside/Outside ask whether providing alternative sensing mechanisms on the body might create subtle changes in the perception of the wearer, eventually causing changes in urban commuting patterns. The desirability of certain urban real estate might change as the result of readings from garments such as the ones proposed. Furthermore, preconceptions surrounding appearance and fashion could undergo transformation. For example, handbags and women's clothing are currently seen as frivolous fashion, evidence of feminine "girlishness" and impracticality, while masculine equivalents (such as the briefcase and business suit) retain the weight of clear-sighted purposefulness. A "perruque" [2] or playful inversion of stereotypical connotations of women's clothing and accessories includes integrating a function of utmost seriousness (pollution monitoring) into adornments which have been much maligned as a narcissistic egocentric preserve. Historically, women's groups played an integral part in environmental monitoring, establishing community clean up initiatives and environmental monitoring groups. [5] Yet, when pollution monitoring is combined with flirty fashion, an entirely different image of "women's work" beings to emerge.

Socially fashioned networks: polyrythms and the city

While RECOIL explores the tactics of pathology, and Inside/Outside and Urban Chameleon focuses on re-appropriated garments and accessories, Umbrella.net introduces a poetic interlude into the public realm.

UMBRELLA.net is a developing platform for exploring the coincidence as the catalyst for network formation. The project consists of a wireless mobile ad-hoc network (MANET) which is deployed when multiple people individually open their umbrellas in the rain. The aggregate effect creates a visual footprint of activity in a public space. The aim of the project is to deconstruct accepted notions of how networks

function by making them visible and only operable based on certain circumstances, as well as integrating network connectivity into common accessories, thus investigating how augmenting ordinary objects can lead individuals into new social engagement. Since ad-hoc networks spontaneously form and dissipate according to the amount of nodes present, they provide an ideal context for examining relationships based on proximity and chance conditions, creating a "point of intersection" [1] for the multiple rhythms present in the city. Like Canetti's crowd [6] the disjointed flows of urban pedestrians become united for a brief and transitory moment into a single entity, which just as quickly disperses in a chimerical trace.

Conclusion

By situating the projects presented in the context of everyday life and habitual patterns, RECOIL, Urban Chameleon, Inside/Outside, and Umbrella.net seek to disrupt, engage, and question ordinary activity. While RECOIL creates experiential rupture, Inside/Outside seeks to integrate personally invested environmental data into the mental model of the city. Umbrella.net on the other hand takes an approach that creates both disruption, through spontaneous network formation, but also unity through illustrating an underlying and coincidental connection between individuals and the crowd. All of the projects take advantage of unpredictability and chance, turning perceived shortcomings of technology into key features in an application. In this way, the projects use the subversion and augmentation to suggest new perceptual modes for individual and social engagement.

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- 4. Hall, Edward T. The Hidden Dimension: Man's Use of Space in Public and Private. London: Bodley Head, 1969.
- 5. Hoy, S., Chasing Dirt : the American Pursuit of Cleanlines. New York ;London :Oxford University Press,1995
- 6. Lefebvre, H., Writings on Cities. Trans. Eleonore Kofman and Elizabeth Lebas. Oxford: Blackwell Publishers, 1996.

Related internet addresses

http://www.coin-operated.com/scrapyard
http://www.kakirine.com

Fibreculture : Internet: theory + criticism + research

Title Fibreculture

Subtitle Internet: theory + criticism + research

Lead-in / Abstract

fibreculture is about critical and speculative interventions in the debate and discussions concerning information technology, the policy that concerns it, the new media for(u)ms it supports and its sustainable deployment towards a more equitable Australia. fibreculture is a forum for the exchange of articles, ideas and arguments on Australian IT policy in a broad, cultural context. it concerns the philosophy and politics of

:: new media arts
:: information and creative industries
:: national strategies for innovation, research and development
:: education, and
:: media and culture

Participants and speakers

Bruns, Axel (AU)
this person is also part of the following presentation(s)

- **Stuff That Matters**: The Rise and Rise of Open News

Short biography of participants

fibreculture is a community of critical thinkers, Australasia-wide, engaged with new media and Internet theory and practice. The list (around 800 and growing) includes: theorists, critics, journalists, academics, artists, activists, and all sorts of media producers, designers and other information-workers. We are people who think, read and write about the applications and cultures of new technology.

Full text

Speaking for fibreculture, **Axel Bruns** will talk about crossovers between mailing-lists and other discussion/publishing fora. Fibreculture itself is now involved in a number of other projects (including the fc journal, various resources on the Website, a possible art gallery, and outside publishing projects online and in print). Axel is also general editor of M/C - Media and Culture (http://www.media-culture.org.au/)
with which fc has also collaborated, and will outline the developments occurring on this end, too.

Fibreculture defines itself as a space for critical and speculative interventions in the debate and discussions concerning information technology, the policy that concerns it, the new media for(u)ms it supports and its sustainable deployment towards a more equitable Australasia. It is a forum for the exchange of articles, ideas and arguments on Australasian IT policy in a broad, cultural context. It was founded by **Geert Lovink** and **David Teh** in 2001 and initially developed mainly around its mailing-list, but has developed well beyond that forum in recent times, especially also by organising annual conferences and publishing edited collections of articles in a print book and newspaper, and an online journal.

This should give us reason to shift the theme of this panel slightly. It is no longer appropriate - and most likely it never was - simply to look at mailing-lists in isolation. While they may have played a special role some years ago, when access to list culture was significantly easier than access to the means of building (collaborative) Website spaces, this is no longer the case: especially blogs, but also other collaborative publishing spaces (Slashdot- and Indymedia-style sites, Wikis) are increasingly infiltrating the 'market' for mailing-lists, and sometimes are able to better deliver on the promise of collaborative communities than mailing-lists themselves.

Of course these other forms do have some significantly different features (more permanence of publication, a mix of temporal and spatial structures of organisation as opposed to the purely temporal structure of mailing-lists) which makes one or the other form more appropriate for different uses - so perhaps there is a need to ask 'whither mailing-lists' here. (And then there is also a certain amount of blending between all of them: postings being forwarded and syndicated from one form to the other.) Another way to pose this question is to ask what a specific community is in fact aiming to achieve, and then to select the appropriate mix of communication forms (mailing-lists, blogs, Wikis, content management systems, streaming media, etc.) to suit those aims. Purists might be horrified, but in essence what is necessary here is market research into the needs and wants of prospective users in the community.

Thus, in this environment, operators of online publishing fora of whatever form - from free-form discussion through to refereed academic publications - need to be able to make choices of publishing technologies and philosophies which are appropriate to their own aims and intentions. To do so, they need to be aware of the full range of publishing models available to them, and choose not only one but a combination of technologies which is most effective for their publication. They need to be able to incorporate new models as they emerge (e.g. syndicating new articles using RSS feeds, or delivering mailing-list content via mobile devices), and most fundamentally should not hesitate to network with other publishers in the field.

Indeed, this is where online community culture and marketing approaches still diverge to some extent: even though time is scarce in the 'attention economy', and different discussion and publishing fora are competing for users, nonetheless at least in the community field they still continue to network and cooperate without a fear to lose users to their collaborators. While commercial sites continue to uphold a policy of 'no outside links', major community publishers like Slashdot and Indymedia as well as most mailing-lists provide links to external resources extensively; as Slashdot editor Jeff Bates puts it, for him "driving readers away [through linking] is a myth - if your content is good, they will always come back" (email interview, 2001).

But what becomes difficult amongst this flexibility and interconnection, then (and especially so for mailing-lists without the visual recognisability of Websites), is to

maintain a strong individual identity for any one publication. Where content is increasingly being shared between various Websites and discussion fora, where users move promiscuously between individual sites, and where contributors are active in any number of lists and Websites, what makes one forum distinct from the other? Answers vary, from the technological (the publishing systems used) to the organisational (the extent of moderation and other interventions) to the social (the sense of community which exists around a particular group).

Prospective site or list operators would do well to assess the market in their field, then - there is no need to replicate what is already out there unless significant shortcomings exist, while at the same time in the mix of media forms for an one topic of interest, geographic or other community, gaps may still wait to be filled.

The fibreculture-M/C Journal collaboration makes for a useful case study here: M/C Journal has been a well-known refereed academic publication (with the aim of providing material of interest to a wider, more general audience) in the field of media and cultural studies since 1998, and M/C also runs M/C Reviews, an ongoing series of reviews of events in culture and the media. Its own mailing-list efforts were never significant, however, and except for guest editors its administration remains centred around Brisbane. Fibreculture, on the other hand, spans Australia and New Zealand, and also includes some overseas contributors, but (at the time of the collaboration between both entities) remained mainly focussed on its mailing-list and face-to-face conferences.

Collaboration between the two (by publishing a 'fibre' issue in M/C Journal which was edited by fc members) enabled M/C Journal to tap into fibreculture's pool of subscribers as content contributors and editors, while allowing fibreculture to develop some of the thoughts expressed on the list into fully formed, reviewed and published articles. Both sides profitted without losing their own identity or subscribers. Subsequently, either forum has also continued to expand its own range of offerings - fibreculture has published the first two issues of its own fibreculture journal, while M/C will launch its M/Cyclopedia of New Media in a Wiki format at the end of the year.

Finally, then, it should be noted that of course there is nothing wrong with running only a Website or only a mailing-list. However, as operators of such fora we should be aware that our users are now highly unlikely to spend their time exclusively in our forum, however valuable our information or engaging our discussion. Users and information move quickly now - interesting postings are forwarded from one list to the other (and to Websites), links to articles on one site are featured on another and in postings in mailing-lists. The emergence of RSS syndication, GoogleNews-style news aggregators, and mobile access to email and Websites only speeds up this content exchange further. No one site can capture and hold its audience any more - it is only through maintaining good quality at home and collaborating effectively with the sites next door that we can manage to remain relevant.

Related internet addresses

http://www.faces-l.org
http://www.fibreculture.org
http://www.subtle.net/empyre

fm01 : film machine

Title fm01

Subtitle film machine

Lead-in / Abstract Not provided.

Participants and speakers howse, martin (?)

kemp, jonathan (?)

Short biography of participants

ap
(martin howse jonathan kemp)

ap investigates the future development of technological-systems-art using new descriptive means + functions in software + hardware
ap is active in the creation of open physical digital systems + is involved in the free software movement + peer-to-peer networking technologies

the ap project is primarily concerned with the expansion + contraction of the notion of an operating system within technology + the social
ap aims towards the liberation of data generation from an imposed model +

architecture (or any fixed operating system in its widest sense)

mh

artist programmer theorist + film-maker
founded ap 1998
mh has performed + collaborated worldwide using custom software + hardware modules for data/code processing + generation
currently writes regularly for GNU/Linux/free software
publications + has participated in related conferences + workshops.

jk

collaborated across various fields in art, theory, design, + science
exhibited + performed in uk usa + europe
open source + sci-art residencies (germany + spain
collectivised actions + exhibitions (uk + spain)
since 2001 collaborating with MH as ap

Full text

Film-machine (fm01)

fm transposes non-metaphoric systems and grammar theory (of computer languages, abstraction and data containers) to the realm of expanded cinema.

the base proposal concerns the development of a scripting language, data structures, and suitable filesystem for the automated production and grammatical expression of endless cinema.

visual and syntactical analysis software will form a large part of the fm engine.

fm is a large-scale project which builds on previous ap research and process to push the envelope of what can be achieved in terms of computer languages and data visualisation; re-thinking hard-wired notions of input and output.
the base proposal concerns the development of a scripting language, data structures, and suitable filesystem for the automated production and grammatical expression of endless cinema.

a relational, nodal language of connection will be formulated to descend through levels of scene, shot and frame (stored and to be shot).

visual and syntactical analysis software will form a large part of the fm engine.

however, fm is not totally automated and in parallel with ap03 forms a mechanism of personal insertion into systematics.

a filesystem will be devised to deal with such fragments in terms of these markers (as language and as data), allowing rapid self-programmed, structural retrieval and re-assembly of material.

fm is not conceived as an engine for the manipulation of generic clips (an expanding database of all possible scenes categorised according to a huge number of elements and relations, although it does have some elements in common with this strategy) but is rather an enmeshing within script, a writing of script-now already filmed; a script written and to come via this now-empty machinery.

fm is a large-scale project which builds on previous ap research and process to push the envelope of what can be achieved in terms of computer languages and data visualisation; re-thinking hard-wired notions of input and output.

Related internet addresses

http://www.druh.co.uk/residencies.html
http://www.1010.co.uk
http://fm01.druh.co.uk

From uncertainty to innovation : Web-design and its quest for grammar

Title From uncertainty to innovation

Subtitle Web-design and its quest for grammar

Lead-in / Abstract

This presentation explores the possible theoretic perspectives of two disciplines of semiotics – social semiotics and the cultural semiotics – on the issues of conventionalisation of new media forms and synthesizes them with the outcome of the empiric research - series of interviews I conducted among the new media designers in Estonia and Norway.

Participants and speakers

Ibrus, Indrek (EE)

Short biography of participants

Indrek Ibrus (23.10.1974) was born and grew up in Tallinn, Estonia. After graduating from highschool he first started to study sociology in the Estonian Institute of Humanities in Tallinn. But his job as a TV-entertainer and his interesest towards audio-visual arts made him two years later to start his studies on the field of TV-journalism in the University of Tartu. Later he specialized on the issues of postmodern television and while studying temporarily in the University of Helsinki also on the issues new media media. After graduation he worked as the head of the online-department of the second-biggest Estonian daily Eesti Päevaleht. Soon he anyway decided to continue his academic career and went to study new media to the University of Oslo where he received his MPhil with the thesis about multimedia rhetorics. Later he has been lecturing on new media in the International University Concordia Audentes in Tallinn and worked as a state executive on the field of technological innovation.

Full text

Every now and then we have all got lost in the Internet. It is quite common that when surfing, we face the situations, when we feel like sailing on the open see without no navigation device. As **Ibsen**[1] claims such shortcomings of the Web as information resource are due to the design decisions of those who put the data online. As there is no coherent approach as to how to present or structure the data for public use, the result is a cognitive overload in the design.

About this kind of situations, where codes have changed and people are therefore trying to interpret the new kind of texts, **Umberto Eco** suggests, that the necessity of continuous *undercoding* is imposed. He defines it as the operation by means of which in the absence of reliable pre-established rules, certain macroscopic portions of certain texts are provisionally assumed to be pertinent units of a code in formation[2]. Eco argues, that in this kind of situations the term 'interpretation' has not been employed in the sense of 'decoding'. Instead it rather refers to process of understanding, which is based on some previous decoding and the general sense of a vast portion of discourse. In terms of logic this kind of interpretation is similar to inference and its specific type that **Charles S. Peirce** called *abduction*.

According to Wirth any kind of surfing in web relies on the principles of abductive inference as the user of the Internet is in the constant state of guessing. In situations, when such guessing appears to be productive, there is a chance, that the abduction once performed becomes a customary social reflex. "Only if the abductive link turns out to be pragmatically relevant is it more than playful 'associative jumping' and can count as a frozen 'shortcut of thinking'."[3] This is the reason, why abduction represents the first step of an operation destined to enrich a code. A consistently interpreted ambiguous uncoded context gives rise, if accepted by a society, to a convention. Therefore, in the name of successful use of some hypermedia product and for developing this way the new 'language' of the medium, designers know, that they have to give people strong cues for learning by using. Such cues would connect the particular text, the 'surprising fact' with the 'larger system of facts' in Peirce's sense and help to make hypothesis, how to approach, use and interpret the particular text.

Two years ago I started a research in the form of a series of interviews with new media designers from two Northern-Europe countries – Estonia and Norway. First thing that came apparent from all these interviews, was that the main tendencies how the designers tend to act and think doesn't depend so much on location or nationality of the designer. The main problems and factors that influence their work tend to be quite the same at least in these two countries. The first example of such factors is how the designers take into account the competency of the users of their work. Lets take as an example the comment of a young AD of the major Tallinn-based digital media agency: "You count on such elements as for instance the underlined links. You can feel sure about them because they are trusted, it is a firm standard. You presume that people know that and if not, then they just can't manage in the Internet. /-/ Here, in our company we produce sites, which are targeted to rather wide audiences and hence we have to take into account that these sites are visited by people, who doesn't spend 24 hours a day in the Internet and for whom it is still quite a new thing. You have to make it very simple and an underlined link is exactly that."

Many other designers, who work for bigger agencies replied similarly that they have to work inside the boundaries of the existing conventions and not to experiment too

much. Others, those working for smaller enterprises or various independent designers tend to be again more broad-minded in this matter. "People get used to everything. If you want to make something that definitely works, then you should make it as simple as possible. But the competence changes enormously and in this medium it changes so fast that one site can get old within half a year. So there is no need to think about the users's competence too much. There's always going to be someone who is not able to use. Some pensioner, who has finally found a way to the computer – she can't do there anything at first anyway, but the experienced user finds everything, as she has already her certain customs and impatience," argued another multimedia and game-designer from Tallinn.

What we should deduce from such comments is that although these represent rather opposite perspectives to the issue of how and to what extent should designers take into account users' incompetence, they anyway have to deal daily with the similar issues of helping user in their constant struggle for undercoding the alien codes.

About that Eco[4] has argued that undercoding is the essential quality of modern society where communicational patterns are ruled by mass-media – it proposes increasingly undercoded texts, freely interpretable patterns of public behaviour and permissive models. In this context Eco borrows **Yuri Lotman's** theory about the difference between grammatically oriented and textually oriented cultures and argues that modern media-behaviour should be characterised as textually oriented. This means that our modern society directly generates texts, which constitute macro-units from which rules could eventually be inferred. In case of the second possibility, in the grammatically oriented cultures texts are generated by combinations of discrete units and are judged correct or incorrect according to their conformity to the grammatical rules of the particular system. For Eco it is not by chance that Lotman describes a grammar-oriented culture depending metaphorically on 'handbooks' while a text-oriented culture depends on 'The Book'. "A handbook is in fact a code that permits further messages and texts, whereas a book is a text, generated by an as yet unknown rule which, once duly analyzed and reduced to a handbook-like form, can suggest new ways of producing further texts." [5]

In a way **Gunther Kress** and **Theo Van Leeuwen** have a theory quite similar to this one elaborated by Lotman and Eco. They in turn distinguish between the 'lexically' and 'grammatically' organised semiotic resources. In the first instance the particular semiotic mode is in practice approached as a certain paradigm, a loose collection of signs, which functions as more or less unordered storehouse of ideas and resources where one can browse and 'shop' for ideas. "Grammars, on the other hand, use very broad, abstract classes of items, but provide fairly definite rules for combining them into an infinite number of possible utterances. They are decontextualised and abstract, but also powerful in what can be done with them. Perhaps it is no wonder that grammatically organised modes have tended to be the most powerful modes." [6]

Following Eco I suggest here that in the context of the development of hypermedia language and its conventionalisation we are still for the most part in the 'text-oriented' phase in Lotman's sense. Or in terms of Kress and Van Leeuwen: the multimodal communicative means of hypermedia are still mostly approached as lexically organised.

Miriam Rivett has explicitly shown[7], how Web has evolved as certain collection of different codes and conventions from very different media. Already in the very beginning the web-sites produced with early html were pretty hybrid forms - although hypertextual they incorporated conventions drawn from print layout. Today we could argue that the similar behaviour has been continuing all over the first decade of Web's existence – in the absence of any 'grammar' the producers of hypermedia have had to turn to 'macroscopic units of earlier texts', which have then functioned as models for creating new ones.

This takes us to Kress and Van Leeuwen metaphoric explanation that textually oriented semiotic resources are approached as storehouses, where one can browse for ready-made elements. **Gunnar Liestøl**, while explaining his synthetic-analytic approach[8], uses the same metaphor and talks about tinkering in the media storehouse in search of appropriate solutions for hypermedia. According to him such strategy is the one of *bricolage*, that refers to looking for constructions which can serve various purposes in other constructions. *Bricolage* as a method for generating new texts is generic to textual cultures in Lotman's sense – instead of relying on some rule-systems for combining discrete entities, new texts are created by imitating and following certain earlier textual macro-units as models.

But what for Liestøl is a purposeful method for inventing new rhetorical means for

hypermedia, is for **Jay David Bolter** and **Richard Grusin** its spontaneous quality – while explaining their concept of remediation they argue that the representation of one medium in another is the defining characteristic of the new media. "...at this extended historical moment, all current media function as remediators."[9] They postulate that modern Web is eclectic and inclusive by the codes and conventions it takes into use and it clearly continues to borrow from almost any visual and verbal medium it is possible to think of.

Domain, where such spontaneous copying of existing media-texts and historic formats and techniques is rather explicit, is again the Web-design. One phenomenon that has become apparent through my interviews, was that copying each other's work and techniques used in older mediums is for some degree everyday practice in this field. For instance, two young self-taught web-designers from small Tallinn-based Web-development companies acknowledged that they learn just by surfing and watching other's sites and try to catch the trend this way for later using the same tricks and techniques also in their own work. Another young and self-taught designer from a major Web-development company in Tartu acknowledged that when he started, copying others was the main technique, which helped him through. But after a while he turned also to the 'grammar' of graphic design. "When young designers come out with their works, then these always copy other peoples stuff," he still postulated.

Another multimedia and game designer, who also studies multimedia as a postgraduate student, brought up another issue that pushes corporate designers to copy each other. She argued that because of Estonia being a little country nobody dears to come up with something new. The clients of designers just refer to some analogue and demand of copying that. And therefore the major trends in Web-design are always quite explicit, although they do change quite rapidly.
About the similar phenomenon one Oslo-based quite experienced designer argued that although it is hard to speak yet about any rule-based language of Web-design, there are clearly certain trends. "Trends in the organisation of the site - how to organise the menus and the structure of the site. It develops very fast and within one or two years you have a particular solution, which is in fashion and two years later it is again the complete opposite. And after one or two years you have the first solution back in a new style, but it has the same logic or the same organisation underneath. Especially when it comes to colour-schemes, menus on the left or stuff like that - you can see things come and go in very short intervals."

He and all the other interviewees, who had the schooling of graphic design, admitted that what concerns copying and using the rules and conventions of earlier media, then the cultural institution of graphic design has a determining role. "Usually I just sit down, take a load of design-journals and start browsing in them in search of solutions. Or again some design-books. Subconsciously we all do copy," the same multimedia and games designer from Tallinn acknowledged. "Web is just a little brother of the graphic design and its rules are also derived from the rules of printmedia," postulated in turn another young designer from Tartu.

Bolter and Grusin argue that their concept of remediation refers to genealogy of affiliations, not a linear history, and in this genealogy, older media can also remediate newer ones. This phenomenon got proof also in my interviews as for instance one young Web-designer from Tallinn suggested while discussing copying other media, that television is also clearly influenced by Web-aesthetics. "I noticed couple of years ago, when MTV changed their look and took new designs into use that in television are the same styles in fashion as in Internet. And in this sense there is not much difference whether you are in front of a monitor or a TV-screen, are you watching something in Flash or some commercial in TV. The trends in fashion are everywhere the same."
Such constant mutual interchange of codes and conventions takes us to Lotman's semiospheric approach. The culture as semiosphere is always marked by its heterogeneity. It is filled with various languages, which might be inherited from very different cultural traditions. As Lotman explains, in any given stage of culture's development many traditional structures continue to exist, some of them going back into antiquity, so that "everything contained in the actual memory of culture is directly or indirectly part of that culture's synchrony."[10] This applies for instance on all those different conventions of information organisation and presentation, such as 'page' or 'window'.

Lotman shows also, how different languages can circulate this way with different intervals: "...fashion in clothes changes at a speed which cannot be compared with the rate of change of the literary language."[11] In the same way we also saw, how the trends of Web-design spiral with rather hectic pace, while at the same time actual innovations of hypermedia language evolve with somewhat slower manner. If Bolter and Grusin also argued that modern media remediates each other also in the synchrony of our current culture, then Lotman explains[12] that at all stages of

development of a culture there are contacts with texts coming in from cultures which formerly lay beyond the boundaries of the given semiosphere. Here we should for instance think on the way, how the language of Kabuki-theatre influenced Eisenstein to develop his theory and technique of montage, or again how the television culture and its specific language of film-editing is about to invade the computer culture through the works of various current Flash-artists or modern 3D-games.

But from here we come to the question, how from the mere assemblages of different conventions, the 'new language of hypermedia' together with its grounding rule-base is about to evolve? One proof that this process has got started, are all those 'handbooks', which attempt to establish the rules and grammars for different applications of hypermedia. Lotman argues about such phenomenon that a language becomes a social reality after it has been described. "The highest form and final act of a semiotic system's structural organization is when it describes itself. This is the stage when grammars are written, customs and laws codified."[13]

In Lotman's terms the stage of self-description is a necessary response to the threat of too much diversity within the semiosphere: the system might lose its unity and definition, and disintegrate. In this sense the self-description of a semiotic-system and creation of its own 'grammar' is an essential and effective means for organising, integrating and this way also conventionalising the system. According to Lotman it does not matter whether we have in mind the language of some sort, political system or the hypermedia, the mechanism is always the same: one part of the semiosphere in the process of self-description (most frequently the one which is part of its nuclear structure) creates its own grammar and strives to extend these norms over the whole semiosphere and this way a partial grammar of one cultural dialect becomes the metalanguage of description for culture as such.

Such movement tends to be also one of the tendencies of current hypermedia development. If Kress and Van Leeuwen argued that today several multinational corporations constitute the core, which steers the development of hypermedia and extends its 'own grammar' over the whole semiosphere, then Rivett[14] tends to suggest that the emergent field of 'graphic design for interface media' pushes the commodification of web-sites. As Rivett explains, design is a practice and practices cannot normally survive for long without being sustained by institutions – so if designers are to secure contracts from the commercial sector, then they must be seen to provide a recognisable 'worthwile' product. "Part of this process of commodification is manifested in the drive (emanating from commercial web design) to legitimise and professionalise the design/construction of the web site. This is demonstrated in the work emerging from the area of web site design where there is evidence of the construction and imposition of frameworks for the design of on-line media, within which certain forms are represented as legitimate and others not, a process integral to the professionalism of this area of design."[15]

The above described process of legitimisation of grammar and profession is also the reason why, as **James Thompson** describes[16], those designers who came to the Web with the knowledge and the traditional training of graphic design, can on occasion, take offence to those who are doing it simply to express and enjoy themselves. This became apparent also when I made my interviews – many of those who had professional schooling or had studied the graphic design by themselves, were quite arrogant towards those who had no schooling or didn't show any respect to the main principles of graphic design. All of them worked for the various agencies for which the production of Web-sites or other hypermedia products where just another additional service in addition to more traditional advertising.

Rivett shows also, how the imposition of the traditional design discourses on the evolving hypermedia language and its grammars is evidenced by the circulation of 'handbooks', which combine the classification and analysis of web sites with the construction of site-design principles. Further these works contribute to the formation of systems of value according to which sites are defined being grammatically correct or not. For instance, when **Jakob Nielsen** regrets[17] the fact that "we don't have any established web design style guide that can dictate how designers should use their interface vocabulary to build sites that fit this whole," then it could be argued that such desire and all the attempts to generate such guides are the evidence of the formation of certain web-design movements, a process integral to the establishment of generally recognised grammars. What we should derive from that is the understanding that different commercial institutions and the discourse of graphic design as their instrument constitute the core of the particular semiosphere, which seek to establish their own norms as the general grammar of hypermedia communication.

Because of such tendencies indicate that web, rather than becoming the radical

freeform, is instead being increasingly shaped by a variety of dominant cultural forces whose aims are then echoed in the discourse of web design and its evolving grammars. But Lotman's theory still gives hope also to other possible design-principles as languages for new media and predicts the grammatical diversity also for the future of new media – this will happen because the core of the cultural space after becoming rigidly organised and self-regulating loses at the same time its dynamism. And having once exhausted their reserve of indeterminacy they became inflexible and incapable of further development. But on the periphery this ideal norm of a language will be in a contradiction with the semiotic reality lying 'underneath', and not a derivation from it. Hence the relationship between semiotic practice and the norms imposed on it becomes ever more strained. "Texts generated in accordance with these norms hang in the air, without any real semiotic context; while organic creations, born of the actual semiotic milieu, come into conflict with the artificial norms. This is the area of semiotic dynamism. This is the field of tension where new languages come into being."[18]

Or in other words, all the different subcultures and the egalitarian nature of the Web-publishing should be and are the agents, which should break the rules, innovate and this way secure the pluralism of grammars and languages of hypermedia and their dynamic development. On the modern Web, where the barriers to entry are so low as to be nonexistent, the latest visual metaphors can find their way into circulation for a tiny fraction of the cost, which means that more experimental forms, which are more interested in pushing the envelope than pleasing the masses, will naturally prosper in this environment – it is the hypermedia periphery, which lies everywhere and gives the chance for hypermedia avant-garde. **Steven Johnson**[19] suggests that all of this predicts a reasonable blueprint for the future of interface design: the subculture spins out the innovations, and the dominant culture appropriates the forms it thinks it can market to a mass audience. What we are talking here about is the 'maturing' of the peripheral centres, how the periphery is about to become the new core of the semiosphere and how the metalanguages are born, which in their turn claim to be universal metalanguages for the whole semiosphere.

But as we have seen above, such constant change brings along at the same time cognitive uncertainty to the user. And that's the reason, why conventionalisation, the quest for the grammar, is the unavoidable presumption for hypermedia for maturing and growing into fully functional communicational mean. As this presentation should have indicated, there are processes in the way, which are part of such movement.

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- 4. Eco, p. 139.
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- 6. Gunther Kress and Theo van Leeuwen, Multimodal Discource, Arnold 2001, p. 113.
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- 9. Jay David Bolter and Richard Grusin, Remediation: Understanding New Media, MIT Press 1999, p. 45.
- 10. Yuri Lotman, Universe of the mind: a semiotic theory of culture. Bloomington

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- 13. Lotman, p. 128.
- 14. Rivett , p. 43.
- 15. Ibid.
- 16. James Thompson, Introduction, in Chris Brock Inspiring Creative Web design: Past, Present, Future, AVA Publishing SA 2002, p. 8.
- 17. Jakob Nielsen, Designing Web Usability: The Practice of Simplicity, in New Rider 2000, p. 217.
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Genetic Engineering in Contemporary Art : Art in the Age of Technoscience

Title Genetic Engineering in Contemporary Art

Subtitle Art in the Age of Technoscience

Lead-in / Abstract

Contemporary approaches to art and biology, and in particular to digital art and genetic engineering, seem to reveal a new form of collaboration between art and science. In this article I will critically explore how new art forms which emerges form that kind of collaboration, both dramatically differs from artworks which explore art and genetics through the use of traditional media. In the center of the dispute are the works of artists who left the artists studio to work in a science laboratory instead. Central to these art works emerging from the laboratory is the relationship between art and the central scientific paradigm of the genetic code, as well as the reflection on the technology of molecular biology and bioinformatics. Some artists regard the usage of the technology of molecular biology just as another artistic tool to create works of art. In my view the relationship between art and science in the age of technosciences is much more complex. The laboratory is not an isolated research context, but a complex field where humans and non-humans (objects - models - metaphors) act with each other and intermingle. In this contribution I will focus on the powerful metaphors that are part of the discourse of molecular biology today and how these metaphors become part of the discourse of the art world today.

Participants and speakers Reichle, Ingeborg (?)

Short biography of participants Not provided.

Full text

1. Genetic Engineering in Contemporary Art

Today the pictorial representation of the human genome in the shape of a double helix and images of the twenty-three pairs of human chromosomes are no longer neutral descriptions of human genetic processes but rather have advanced to the status of ornaments and bearers of a mythological and religious meaning of 'life itself'. Already around 1900, early representatives of the young discipline of genetics exhibited a tendency to indulge in utopian rhetoric, conjuring up visions of a 'biological art of engineering' or a 'technology of living organisms', which did not confine itself to the shaping of plants and animals but aspired to setting new criterion for human coexistence and the organisation of human society. Then, as now, the heralds of this 'biological revolution' were predicting nothing less than a

second creation; this time, however, it would be an artificially created bioindustrial nature that would replace the original concept of evolution.

In contemporary art, many exhibitions in recent years have taken as their theme the effects of this 'biological revolution' on a person's self-image and on the multi-layered interrelations between art and genetics. However, in contrast to the first encounters between art and genetics, which began in the early twentieth century with art's visual and affirmative engagement with genetics, today these 'scientific' images are being decoded through the linking of art and the images of the life sciences, resulting in a new way of reading them. Artists are taking the terminology of the realm of art and applying it to the technically generated images of molecular biology or other life sciences, thereby questioning their claim to objectivity and truth and making them recognizable as a space where other fields of knowledge and areas of culture may also be inscribed. With the aid of an iconography of images from science, an attempt is being made to decipher the cultural codes that these images additionally transport.

But in contemporary art today, we also see approaches that reveal the complex relationship between art and science, especially in the use of controversial technologies such as genetic engineering. In the last two decades we have seen a number of artists leave the traditional artistic playground to work instead in scientific contexts such as the laboratories of molecular biologists. New art forms like 'Transgenic Art' and 'Bio-Art' have emerged. These new art forms differ dramatically from approaches which explore art and genetics through the use of traditional media. Central to this kind of contemporary art is the relationship between art and the central scientific paradigm of the genetic code, as well as reflections on the technology of molecular biology and bioinformatics. In the context of these art forms artists create new 'life forms', i.e. new organisms which are to a greater or lesser extent 'technofacts' rather than 'natural' organisms. In my contribution to this panel I will ask how the production of new organisms through art challenges the perception of what is art and what is nature. I will focus the theoretical background on the emergence of art from the laboratory. Many artists today use real, transgenic organisms in their works, addressing the perpetuation of evolution by humans through the creation of novel organisms according to aesthetic criteria, processes which the advent of recombinant DNA technology has now made possible.

2. Art in the Age of Technoscience

Today the scientific laboratory—as Bruno Latour once wrote—has expanded its walls to include nature and even the whole world. So it seems obvious that artists, too, would begin to expand the realm of art to include the laboratory. In the last few years we have seen artists making their artifacts within the context of the scientific lab and even beginning to produce genetically manipulated organisms. Some years ago the Paris-based art theorist Frank Popper introduced the term Techno-Science-Art to describe a form of art that is situated between art, science and technology [1]. This new term, which places 'technoscience' in the dominant position, seems, in my view, to be a suitable meta-term for describing these emerging, new art forms. The term technoscience was introduced by both Bruno Latour [2] and Donna Haraway to describe the effects of the enormous transformations in the production of knowledge in the life sciences since the beginning of the twentieth century. According to Latour and Haraway, these transformations in science will lead to a redefinition of nature and science and as a consequence the term natural sciences will no longer seem adequate and should be replaced by the term technoscience.

3. Artefacts and Technofacts

Artists turning today to the technical production of transgenic organisms, hybrids, and other technofacts, have apparently touched a raw nerve with the modern life sciences, and this is turning the transfer of technofacts from the scientific laboratory to the art world into a precarious ordeal. All the while, the laboratory methods used to manufacture these transgenic life forms are not in any way new. For three decades already, genetic engineering techniques from the field of molecular biology have made possible—thanks to the advancing mechanisation of the living—the technical reproduction or even new production of life at the molecular level. These organisms, until now non-existent in the natural human world, no longer resemble any natural evolutionary architecture and reinforce the transformation of biology lab organisms into epistemic objects. Molecular biology as well as other fields in the life sciences to a large extent construct and design the

objects of their research today themselves, thereby producing technological artefacts which owe their existence to the culture of experiment and the expanding technological systems of the laboratory. At the same time these organisms in the laboratory often now have an epistemological status in terms of knowledge models that merely serve as representational models. In this way the technofacts of the 'third nature' have, today, to a large extent replaced life forms of the first nature as the reference objects of the laboratory. Reports of experimental results as well as the discourse of research organisations are therefore primarily focussed on these manufactured, epistemic objects, whose modelling takes place within the immense science complex and the physical infrastructure of the laboratory. Such an implementation of model realities without a reference makes possible a controlled technical manipulation of the processes of life, which then leads to a denaturalisation or artificiality of the object under investigation.

The development in the 1970s of recombinant DNA technology led to a fundamental change in the way molecular structures and processes of living organisms could be made available for scientific experimentation. With the production of transgenic organisms, molecular biology moved beyond the current borders of species and subspecies that are a result of millions of years of evolutionary change, thereby shaking up the existing system of scientific classification.

From an epistemological perspective this new access to organisms represents a break with previous methods and approaches in molecular biology: Macromolecules themselves became manipulative tools of recombinant DNA technology and thus were transformed into technological entities. The nature of these is such that they are no longer distinguishable from the processes in which they intervene, and in the molecular biology lab they begin to resemble industrial production systems, becoming in effect molecular machines. As a consequence of this development the organism acquires the status of technological object; the organism or even the molecule itself becomes a laboratory. Thus molecular biology, as a central domain of biology and the life sciences, finds itself on the way to becoming a science that not only handles, dissects, processes, analyses, and modifies its subjects—life forms and the parts thereof—, but rather constructs these henceforth in a fundamentally new sense, as technofacts, which can no longer be described as biological objects of a 'natural nature'. This construction, however, does not correspond to an understanding of the production of matter as a form of 'creation' in the sense of the bringing forth or generation of life, but is rather to be seen as a process of transformation and conversion of matter.

4. Art Out of the Laboratory

In addition to exploring the methods and techniques of science, such as the adoption of scientific visualisations, texts, and instruments, model organisms of the biosciences are also being appropriated and brought into the artist's space. In this transfer, the tense dynamics within which the current technoscientific production of technofacts and the artistic creation of artefacts find themselves, become clear. With the production of transgenic organisms, hybrids, and recombinant DNA, artists have apparently arrived at a particularly painful point in the technosciences, the point at which the artefactness of nature (particularly in the context of the molecular biology lab) meets the artefactness of art, and there the relationship between art and nature—ever the deciding factor of art theory—seems to collapse.

The transfer of scientifically produced transgenic organisms from the laboratory into the artist's space in the last few years has led to passionate debates which tend to focus less on the status of such objects as works of art and much more on ethical debates about the limits of manipulation by the natural sciences of the unadulterated natural world and its economisation by business. At the same time there has been reoccuring criticism of the 'artistic' production of living organisms according to aesthetic criteria and without any considerations of use or purpose, as opposed to the work of scientists in fields such as molecular genetics or cell biology. Art was seen as transforming such life forms without legitimate purpose or reason into aesthetic artefacts, wanting thereby to rewrite the story of Creation for its own outrageous purposes. It thus became clear that the public is not yet ready to accept 'glowing dogs' and 'glowing rabbits', which are viewed as eerie and monstrous hybrid life forms not belonging—not permitted to belong—to the creature world, where their presence would lead to disarray within the traditional, ontological orders. With regards to the production of new hybrid forms in art, it seems to be less a debate about the acceptance of new art forms or shifting borders in the art world itself; much more significant are the negotiation processes of the forces shaping society, forces which can lead to the contruction of very specific life forms and worlds, thereby excluding others. Living things that are manipulated and modified in laboratories for specific scientific or economic purposes, will, to a certain extent, be accepted, but not, however, in day-to-day life. This all the more so since

in the course of the mechanisation of the living it is becoming ever more difficult to determine what is still 'nature' and what is already technology, what can be regarded as real and what is imaginary; the certainties of the daily world have already been severely shaken.

While more traditional epistemological viewpoints, focussed on the idea of the organic, continue to persist in the old 'humanistic' connotation of nature, regarding nature as static, abiding, and more or less endowed with inalienable properties, and while postmodern epistemology continues to concentrate on deconstructing the accompanying classical humanistic categories, the biosciences ceased operating with this humanistically understood idea of nature some time ago. Art Out of the Lab showes the world how precarious the category of 'nature' appears today and how great the fear is that the results obtained in the laboratory with artificially created technofacts and epistemic objects will, in the Age of Technoscience, as a rule, be applied to other organisms and eventually humans. These fears, in light of the tremendous speed with which the technosciences are developing, are well justified. Furthermore, on account of the increasing amalgamisation of technology, industry, and science today, one can barely distinguish between the technical, social, economic, and political factors that are responsible. The extent of the current ubiquitous 'scientification' and mechanisation leads furthermore to the situation that technology will become increasingly constitutive for social structures and processes—a situation which, according to recent scientific research, will lead to a fundamental transformation of the constitutive social structures.

The emergence of new technologies and their implementation in contemporary society is by no means a smooth process, but rather takes place within a complex and multilayered interplay of forces and interrelationships among science, technology, and society, and is accompanied by a constant process of social negotiation. In the course of these negotiations for the world of tomorrow, the life sciences in particular continue to develop new human models and are becoming increasingly involved in the social-political debates. Yet it was the emancipation of the natural sciences from such meaning-of-life questions that was one of the fundamental prerequisites for their advancement in the modern age and their increased effectiveness. The focus on answering purely analytical questions and the referral of enquiries into values, norms, and meaning to the areas of theology, philosophy, and other humanities and social science fields, formed the initial basis for—particularly in the context of economically useful results—the tremendous rise of the empirical sciences. The delegation of such questions of ethics to the humanities and social sciences in favour of the development of a purely pragmatic operating basis for the 'feasibility' and 'realisability' of theoretical approaches was one of the fundamental conditions for the powerful social position which the natural sciences have attained over the last two hundred years. For this reason as much as any, the resulting differentiation of the sciences and university disciplines led in the end to a final separation of the humanities and natural sciences as well as to an ever increasing fragmentation of a disenchanted world in which a comprehensively conceived concept of life and nature no longer seemed possible, and brought with it the splitting up of the concept of nature into numerous fragmentary aspects. In the course of this development, the concept of nature and the interpretations thereof being put forth by the natural sciences in the technological community in particular were increasingly granted an ever greater significance. In contrast to this, metaphysical ideas of nature were now disqualified as speculative, therefore non-scientific, and—above all—of no profitable use. In this manner, the history of natural research and the history of natural ideas came undone. Non-empirically structured ideas of nature became simply decorative, theory-oriented aspects of a general education in a culture otherwise shaped by the 'essential', result-oriented, intersubjectively operating natural sciences.

5. The Readability of the World

The deciphering of the genetic code brought with it an alarming unreadability of the world. The ethical and social implications, in particular, of the biosciences deserve guidance and critical review. That such guidance cannot be provided by means of classical arguments or even rhetorical discussions of morality is demonstrated by artists such as Eduardo Kac: The significance of a moral world, intended to supply a background to the life sciences, long ago gave way to a purely syntactical structure that places efficiency, feasibility, and useability at the center of natural science activities. In this process, it is particularly the mechanisms successfully implemented in this structure that seem to make an analogous, artistic treatment necessary. Indeed, artists today have ceded their motif of the deus artifex, the artist as divine creator, to the biosciences and biotechnology, whose practitioners have from the very beginning proclaimed it their goal to take evolution out of the hands of nature and shape it according to their own image; however it is exactly the syntactical mechanisms underlying this image that make it possible for artists

today to enter the dialogue on the objectives of the life sciences.

Consequently, the epistemological content of eminent artistic strategies, which provided a sharper look at the prematurely expressed plausibility and utilization ideologies of the natural sciences, were pursued time and again in the last decades by artists using traditional media. However, only with the artist's deployment of the actual laboratory methods and techniques of the life sciences does a certain potential open up for dialogue. In this context, the often criticised identification between artists and genetics technicians, between an art context and a science context, is therefore only at first glance a 'whatever that may be' form of identification: Only when artists utilise the same mechanisms and scientific methods are they able to counter the permanently busy and unreasonable demands of the biosciences with an equally-matched basis of action, such that artists' use of bioscience methods is specifically not seen as simply currying favour or merely imitating life science practices. It is rather a matter, only possible and acceptable in an art context, of a subversive affirmation of genetic engineering achievements, which only this way makes possible the called-for dialogue on the challenges and unreasonable demands of the biosciences. Only through art's ability to transfer epistemic objects of molecular biology into the artistic realm will the tense dynamics in which the technoscientific production of technofacts is happening, become clear. Therein appears to lie, ultimately, the reason for the apprehension that is constantly expressed by the critics of transgenic art. By bringing such artificial organisms and hybrids out of the laboratory, artists are showing the world that the 'natural' sciences in the Age of Technoscience had begun some time ago already to work with cybernetic concepts of nature, thus forcing a posthumanistic understanding of nature, the details of which, for most people, are only slowly becoming clear: the life sciences long ago opened Pandora's box, expanding the walls of their laboratories to include nature, and turning nature itself into an object for global experimentation.

■ 1. See Frank Popper: „Techno-Science-Art: the Next Step'. In: Leonardo 20.4 (1987), p. 301–302 and Itsuo Sakane: „The Historical Background of Science-Art and Its Potential Future Impact'. In: Christa Sommerer, Laurent Mignonneau (Hg.): Art@Science. New York: Springer-Verlag, 1998, p. 227.

■ 2. See Bruno Latour: Science in Action: How to Follow Scientists and Engineers Through Society. Cambridge/Mass.: Harvard University Press, 1987.

Geopolitics of urban landscape and technologisation

Title Geopolitics of urban landscape and technologisation

Subtitle Not provided.

Lead-in / Abstract Cultural, social, political and economic are folded into urban landscape. The critical geopolitical study of urban landscape is crucial to understand why and how the cultural, social, political and economic matter. To understand landscapes, **Don Mitchell** (2003) claims that we need both a theory of landscape and theories of capital circulation, of race and gender, and of geopolitics and power.

The circuits of capital flow in urban landscape from industry to housing and to technology, leisure and speculation. The future city is not anymore the place of escape, to get lost within and to step aside. In technologised urban landscape one is targeted to the "right" spatial performance in consumption, leisure and work via devices of information and communication technologies. Urban landscape is not regulated only through authoritarian CCTV surveillance and controllable electronic personified location-based databases but also with more subtle modes of attraction, inclusion and exclusion. The traditional ontologically neat geographical division vanishes between place and space / here and there.

Scale is crucial to understand the histories and geographies of particular places, landscapes and processes. In the presentation I use flexible 'scale-jumping' through critical geopolitics as an interpretative frame to indicate simultaneously present connections, flows and circuits in urban landscapes of Tallinn and of other places. The setting is presence but also deliberately post-postmodern when the cyborgs are "naturalised" through the everyday actor-networks between human beings, technology and urban landscape.

Participants and speakers Jauhianen, Jussi S. (FI)

Short biography of participants Jussi S. Jauhiainen is Professor of Geography and Regional Planning at the University of Oulu in Finland and Associate Professor of Urban Geography at the University of Tartu in Estonia. He has experienced urban life and landscapes in many countries and conducted research at several universities, including those of Helsinki, Turku, Milan, Saarland, Wales and Barcelona. His current research interests are urban and regional planning and policies, urban networks, Baltic Sea region, geopolitics of security and environment, and technology enterprises. He has over 150 academic publications in ten languages.

Full text Not provided.
The full text is available as an attachment. Please download it here.

Going Digital : Comics and the Internet era

Title Going Digital

Subtitle Comics and the Internet era

Lead-in / Abstract The main topic of my paper is the impact the virtual environment and the Internet have had on comics during the past 10 or so years. The aim is to show an aspect of how does a recently emerged medium relate to an already excisting art form.

Participants and speakers Laaniste, Mari (EE)

Short biography of participants Mari Laaniste (27) is a writer/art and film critic/comics scholar working in Tallinn, Estonia.

Full text

This paper addresses various aspects of the impact that the new technology is having on comics – Estonian comics in particular - some of which are positive, some that are not so positive and some that are just curious.

Comics as an art form has it's roots in the 19th century and it went through a phase of rapid development in the first couple of decades of the 20th century. Virtually all the expressive means particular to comics – "cutting" the story into single images and arranging them into reading order, emphasizing the visual elements essential to the story through various viewpoints (also known as using "frames" and "camera angles"), using different speech and thought bubbles and fonts to add extra information to the "spoken" words, using "sound effects" conveyed by purely visual means, etc. - were already fully formed by 1930, if not before that. Since then, comics have obviously changed, some might even say dramatically changed, but this process has in fact almost exclusively concerned the formal side, since the basic tools and vehicles of comics as a narrative-conveying medium have remained the same – albeit one might argue the artists are now making better use of them than most of the ones working in 1930 ever did.

Despite the changing looks one thing was always the same with comics – the paper. Comics were born on paper and spread all over the world on paper, either as comic strips in newspapers, in the shape of monthly comic books or magazines or softcover books. The whole existence of the art form was always tied to cheap, mass produced and widely accessible printed paper - up to about a decade ago, when something apparently even cheaper and even more accessible came along – the Internet. And with it came the speculations that sooner or later printing on paper would become obsolete, and everything so far read on paper would soon be read on computer screens.

Now, about a decade into the Internet era, this still mostly works in theory. Everything that was printed on paper 10 years ago is printed still, although nowadays newspapers have alternative online editions and some books can also be bought in digital versions that are meant to be read onscreen. The main problem that is stalling the move into the digital domain seems to be the financial one. People are obviously open to the idea of getting information and entertainment from the Internet, but it has proven difficult to make Internet surfers pay. They are used to getting things there for free – and if they come upon a website that demands payment for access to it's contents, they normally go to the millions of other websites out there and get something else that is available for free.

Paper as the traditional sellable option has therefore kept it's dominant position. This also applies for comics. Most comics with any commercial ambition only use the Internet for promotional purposes, for instance uploading a limited amount of samples onto a website, and continue doing real business on paper.

Thus, most of the full works that can be found on webpages are by aspiring comics authors, who are not yet selling much of their work "for real". They perceive the

option of taking their comics to the web as a cheap, accessible, albeit not totally satisfactory solution for reaching the audience without having to print their work on paper independently, which can be laborous and costly from the viewpoint of an individual, plus the results might prove difficult to distribute. In most cases, finding a real publisher and getting one's work into print someday nevertheless remains the true aim and non-profit web publishing is regarded only as a promo vehicle that serves this cause (despite the fact that it might never happen). This means that the form of most comics published on webpages remains totally traditional and this presents a whole problem in itself.

There is an obvious difference between the typical page from a comic book and the computer screen – they're both rectangular, but whereas the former is a vertical rectangle, the latter is usually horizontal. (So far only very few lucky people possess and use rotateable computer monitors.) This difference affects the reading process and thus, the overall experience the reader gets. Reading a comic on a computer screen is not the same as reading the same work in book from. I'll explain this using material from an Estonian independent comics website koomiks.ee (www.hot.ee/koomiks).

Fitting the whole vertical comics page onto the limits of the horizontal screen usually means that the image becomes too small for reading the text in the speech bubbles. So in order to make the text readable, the webpages normally use larger images. That means the reader is not getting the chance to appreciate the page as a whole and has to scroll it up and down instead, always only seeing a part of the whole image at a time. Thus, as the reader has trouble even viewing the full layout of a single page, the interaction between neighbouring pages, in particular so-called "splash" pages where a single large image covers two pages, cannot be appreciated at all. This seriously diminishes the artistic impact of the work. Besides that, the process of reading longer works this way, always downloading a new webpage for viewing the next page, can be rather tiresome.

Realizing that the traditional comics do not adapt to the computer screen very well has led some people among those who are taking their comics to the web, most notably the American comics artist and researcher Scott McCloud, see this as an opportunity, if not a forced need for comics to evolve into something that fits not only the screen, but the whole different logic of virtual environment better than the common page format of the traditional printed comics. The result of making do with the new environment are scrollable comics, read from top downwards on a single webpage. As you can see at www.scottmccloud.com, this concept seems to work rather well at least with McCloud's simple and cartoony style that is more reminiscent of a traditional newspaper gagstrip than ambitious and detailed large-scale artwork of European comics albums. This format would however never do justice to artists like Enki Bilal or Miguelanxo Prado. So it offers, at best, only a part of the solution.

Another problem with adapting to the new environment as Scott McCloud suggests is the question "why stop there?". Besides making comics web-friendly and scrollable, and developing ways to get the Internet surfers to pay for seeing them – for instance McCloud is using a sort of a "pay-per-view" system that bills the reader's credit card - there's plenty of possibilities for developing "compucomics" further. For instance, McCloud is toying with ideas of creating moving and even interactive comics, where the development of the storyline depends on the choices of the reader. This, however, brings up another question: how far can this development go before the works in question cease to be comics and turn into something else entirely? Since one of the defining features of comics is conveying movement through static images, it seems at least to me that any actual movement in images would be undermining the basic concept of comics as we know them. And the idea of readers actively controlling and developing the story seems to be conflicting with the whole idea of comics as a narrative, author-driven and author–controlled medium.

Although digital technology has so far proven not to be perfect for mediating comics, the art form as such has certainly benefitted from it. For instance, the possibilities of digital colouring have brought a never-before-seen richness of colour shades to the pages of comic books. However, there is a downside. A part of the charm of this art form used to be it's accessibility – all anybody needed to make comics were some paper and a few pencils and pens. But these days more and more of the comics' artists with any real ambition don't use pencils and paper for anything more than making preliminary sketches. But modern tools like Wacom tablets that enable digital drawing and software like Photoshop, not to mention computers one needs to use them with, literally cost thousands of times more than paper and pens ever did. Even the artists who do choose to continue working on paper need access to a decent scanner at the very least. Thus, the digital era has made comics as an art form less accessible to possible creators.

On the other hand it could be said that Internet has enabled comics to be more accessible to readers than ever before. But it seems that the "unlimited audience" offered by the web often proves to be little more than an illusion – almost certainly for those who are still seeking their fame. Obscure unpublished comics aren't really among the most popular phenomena on the web. (It should be mentioned that only a fraction of the people who read famous and popular comic strips in daily newspapers ever bother to look at them when reading the online versions of the same papers.) However, internationally famous and high-quality comics are sought after: although the official homepages at best offer a few free samples of the artist's work, it is not difficult to find and download good scans of whole albums and series from other people's computers, using the Internet's common file-sharing engines. This form of web piratism obviously does not make any publishers happy, but can please people from places with limited access to actual printed comics - one of such places happens to be Estonia, where there's hardly any other honest way to obtain comic books and graphic novels than buying them over the Internet from other countries. Thus, for someone with enough time and determination, the Internet is in fact a good place for satisfying one's interest in comics – the Internet shops give a chance to buy them legally and the file-sharing programs a chance to get them for free. Whether the latter option creates new fandom and growing readership, or in fact pushes even the so-far faithful paying comics customers into trying to get their treats for free, is a source for argument. Since the international industry's overall sales balance hasn't changed much in the recent years, it probably works both ways.

One field the option of publishing comics on the web has certainly helped are international contacts within the world's comics community. If you live in an obscure little country and make a webpage presenting your comics, it is quite likely that the people from other countries who bother to come and see have common interests with you. A good example of this is the Stripburger group from Ljubljana, Slovenia, who started out about a decade ago with little money but a lot of enthusiasm and ambition, relying heavily on their website, and have now evolved into a publishing house with the power to determine what the rest of the world knows about Eastern European comics. With the help of the Internet, Stripburek has built a network of contacts covering a huge area of previously uncharted comics territory from Estonia to Serbia to Kazakhstan, and has granted to the best comics artists from those countries a chance to get their works printed in book-shaped anthologies like Stripburek or Warburger, that are then distributed all over the world. The attention gained through those has for instance given two of the best Estonian comics artists, Veiko Tammjärv and Zildre (both of whose works you can see at the koomiks.ee website, run by Zildre) a chance to show their work on exhibitions in Paris and Berlin, and Zildre will soon be presenting his work at the 2004 Helsinki Sarjakuvafestivaali.

However, this too has a downside. In a country like Estonia where there's little tradition of printing local authors' comics in book form, and the little there was has literally died in the past decade, gaining professional success abroad via having a website gives the artists no particular reason to make an effort and try to get their work into print in their homeland – where hardly anybody is interested. In fact, the best artists now tend to focus on giving their work more chances to get understood abroad: either writing the texts in English or opting for "silent" comics, like Zildre's "Little Warm Hearted Guest" or Tammjärv's "Still Life" and "Connections" (all of those have been published abroad in different Stripburger group's books). So although the Internet has given Estonian comics artists a chance abroad, the situation at home hasn't improved at all. In fact it could be said that the Internet and the available option of having a website has prevented the Estonian comics artists from building a self-publishing tradition – because this would need more effort, it would cost more and why should one bother, if there's no audience interested in buying the results? If we would have had the chance to start building that tradition about a decade before the Internet became an option, like the Finnish did, then maybe we would now enjoy an audience interested in local comics and willing to buy them, and therefore publishers willing to print them just like the Finns do. But now it's too late. From the viewpoint of Estonian comics, the Internet works like an "iron lung" – a vehicle that keeps one from dying, but being forced to rely on it isn't much of a life either.

Related internet addresses

http://www.ljudmila.org/stripcore/warburger
http://www.scottmccloud.com
http://www.hot.ee/koomiks

Gulliver's Box

Title Gulliver's Box

Subtitle Not provided.

Lead-in / Abstract

The developments that have been brought together in this installation represent the effort to pursue new approaches to dealing with Mixed Reality content. The challenge at the core of this project was to position an innovative medium somewhere between theater,
film and installation. The result is an infrastructure that offers artists new opportunities to convey audiovisual information, and one that ought to encourage creatives in every discipline to work with these new approaches.

Participants and speakers

Lindinger, Christopher (?)

Short biography of participants

Not provided.

Full text

Gulliver's Box is a result of the Ars Electronica Futurelab's collaboration with Prof. **Adrian Cheok** (National University of Singapore) and Prof. **Hirokazu Kato** (Osaka University). With the Futurelab focusing increased attention over the last two years on Mixed Reality applications — including the technology to run them and their potential areas of utilization in artistic and scientific fields — an initial meeting with Cheok and Kato was held in conjunction with Pixelspaces 2002, where they presented their work at a symposium. Then as well, they offered visitors to the OpenLab Exhibition the opportunity to try out Mixed Reality applications they had developed. Visitors' positive experiences and reactions and the discussions triggered by their presentation ultimately gave rise to the idea of a joint project. The developments that have been brought together in this installation represent the effort to pursue new approaches to dealing with Mixed Reality content.

The challenge at the core of this project was to position an innovative medium somewhere between theater, film and installation. The result is an infrastructure that offers artists new opportunities to convey audiovisual information, and one that ought to encourage creatives in every discipline to work with these new approaches. Seen from this perspective, the platform that has been created in this way generates an experimental laboratory situation for a broad spectrum of forms of artistic expression. With it, performances by dancers, singers or actors can be recorded, transferred to avatars, and enhanced with any kind of computer animation.

The application on display in the Ars Electronica Center also provides visitors with the opportunity to customize recordings of their own actions and subsequently to undertake a very special process of self-reflection. This unique aspect arises from the perspective of the viewer—just like in the world of huge Brobdignagians and tiny Lilliputians in Gulliver's Travels, quantum dimensional leaps and the play of scale and relation are what shatter accustomed modes of seeing. Ultimately, the various approaches that go into Gulliver's Box seem just as fantastic and horizon-expanding as the visions in Jonathan Swift's novel.

The performances rendered by this medium and the recordings of the visitors themselves are an inviting chance for viewers to fundamentally change their points of view or to reconsider them for once. The possibility of observing and manipulating the mise-en-scène from any desired position external to the action goes beyond the Godmode of computer games and seems to be unique in a media context. Interaction with characters—either those captured live or animated ones—used to be necessarily bound to monitors or projection screens, but Mixed Reality technology now gives rise to forms of artistic expression and reception in an intimate—albeit likewise projected—situation involving protagonists and viewers.

In Gulliver's Box, the processes of creative design, display and perception are brought together in a single environment. Portions of the installation are, in turn, reminiscent of elements of the theater. These include a stage with a set, actors and a framework plot. The scene consists of animated characters, pre-produced footage and shots of the visitors that appear by means of head mounted displays on the stage—in this case, a table.

The shots are made possible by the "3DLive" system 1, developed by Cheok that computer-generates a 3-D sequence out of numerous video images. The recording process is an integral part of the installation, and, in the Recording Area, visitors are given an introduction to this extremely promising form of data preservation. Then, with the help of optical markers, the video and audio information recorded in this way can be positioned on the play level however the user desires and played back. The modular mode of scene construction allows the observer to intervene in the situation, modify it and determine the playback sequence. The tool to perform these manipulations is "MagicCup"2, a tangible interface that combines a number of features. The interface consists of a simple transparent cube whose position and movements are recognized and interpreted by an optical system. The user grasps the cube and places it on top of a virtual object being displayed in order to reposition it, move it to the foreground or background, copy it or delete it. Switching among the individual functional features is done by simply shaking the

cube. This ongoing project is testing a wide variety of procedures and seeking to identify the system's full capabilities. But it will only be the process of gaining experience with the interplay of spontaneous, live 3-D recordings, artistic performances and animated characters and the public's dealings in actual practice with the system's technical tools for manipulation and interaction that will deliver a clearer picture of the implications of this Mixed Reality approach for future applications.

Hardware and Meaning: Variable Media Preservation

Title	Hardware and Meaning: Variable Media Preservation
Subtitle	Not provided.
Lead-in / Abstract	An overview of challenges for conserving new media art, including the Variable Media initiative.
Participants and speakers	Jones, Caitlin (US)
Short biography of participants	Caitlin Jones is the Daniel Langlois Fellow in Variable Media Preservation at the Solomon R. Guggenheim Museum, New York and is an editor of the 2003 publication Permanence Through Change: The Variable Media Approach. New York: Guggenheim Museum. Also available from URL: < http://www.variablemedia.net/e/preserving/html/var_pub_index.html>.
Full text	See RTF file. The full text is available as an attachment. Please download it here.
Related internet addresses	http://www.variablemedia.net/ http://www.yproductions.com http://www.newmedia.sunderland.ac.uk/crumb/

HellHunt : - a paranoid webspider searching for the devil on the net

Title	HellHunt
Subtitle	- a paranoid webspider searching for the devil on the net
Lead-in / Abstract	Not provided.
Participants and speakers	Broomé, Thomas (SE)
Short biography of participants	**Thomas Broomé** *Thomas Broomé received an MFA in Fine Arts at Konstfack, Stockholm, Sweden in 1999. Since then he has worked part time as an artist/researcher at the Interactive Institute in the Smart Studio team that -among other things- developed the game "BrainBall". As an independent artist Thomas has done several critically acclaimed exhibitions in Sweden and internationally. He is also an appreciated lecturer / teacher within the field of media-art. And employed as teacher at the Valand Art academy in Gothenburg. Thomas has received the two prestigious Swedish grants: Maria Bonnier-Dahlin Foundation for young artists and Konstnärsnämndens arbetsstipendium.* *Exhibitions in selection:* *2003* *Centre de Pompidou, Paris, France (Smart Studio)* *Museu da Casa Brasileira, Sao Paulo, Brazil (Smart Studio)* *'Action Works', Biblioteksgatan 11, Stockholm* *'Thomas Broomé', Hlemmur Gallery, Reykjavik, Iceland* *'Locust' Subbau, Gothenburg* *'Aaargh' Edsvik konst och kultur, Stockholm* *Stockholm Art Fair (Maria Bonnier-Dahlin foundation)* *2002* *'Locust' SOC. Stockholm* *'Electrohype' Malmö konsthall, Malmoe* *'After-shopping' Kulturhuset, Stockholm* *2001* *'Lords of Legacy' Art Node, Stockholm* *'Ars Electronica' Linz, Austria (Smart Studio)* *'CRAC' Liljevalchs konsthall, Stockholm* *2000* *'n2Art', nordic internet exhibition*

'Electrohype' Malmoe
'Expo 2000' world exhibition, Hannover, Germany (Smart Studio)
'Viva Scanland' Belfast, Ireland
1999
'AptArt' Interaktiv CD-rom
'SamKonst' Landskrona Museum
1998
'STart -98' Stockholm Culture capital -98
'stuffit' Gallery Y1, Stockholm
'Sunny side up' Atlasmuren, Stockholm
1996
'Ekologipris -96' Royal Art Academy, Stockholm
'Den 53 staten' Gallery Norreport, Halmstad
'Vårsalongen' Liljevalchs konsthall, Stockholm
1995
'Space-Magic' Gallery Rotor, Gothenburg
'Fortune telling art-cookies' Kuvataideakatemias Gallery, Helsinki, Finland
'The 49 good angels' Gallery Rotor, Gothenburg
arbetsstipendium.

Full text

Hellhunt is an application based upon the use of so-called vision algorithms, a way of enabling computers to detect and distinguish geometrical configurations inside pictures. The active algorithm in this piece traces down the diabolic symbol of the reversed pentagram on images stored on the Internet.

When the program hits an image that corresponds with the algorithm, it draws the lines of the hidden pentagram on it. Furthermore, it saves the address of the page and sends an e-mail to it, kindly demanding the removal of the harmful image.

Combined with the growing paranoia surrounding the Internet the program puts forward important issues of censorship and the freedom of speech. The phrase: "The devil inherent in the picture", gets a new meaning.

Related internet addresses

http://smart.tii.se
http://www.thomasbroome.com

Home and Away

Title

Home and Away

Subtitle

Not provided.

Lead-in / Abstract

I will explore the idea of crossing borders in the course of my work as a documentarist and connect that to the kinds of crossings made by the subjects in *Home and Away* as well as by the viewers of the work.

Participants and speakers

Mishra, Samina (IN)

Short biography of participants

Samina Mishra is a documentary filmmaker and media practitioner based in New Delhi. Her work includes *Stories of Girlhood*, a series of three films on the Girl Child in India and *Hina in the Old City*, a non-fiction book on the Walled City of Delhi for children. She was the location sound recordist for the documentary film *Words on Water*. *Home and Away* is her first new media work.

Full text

I live in a suburb of Delhi and believe that I cross borders everyday. I cross a river, I negotiate different urban landscapes, I weave through a tangled web of differences. Everyday, I am both at home and away.

My work here at ISEA 2004 is an audio and visual document about children from some British Asian communities growing up in London. The work has evolved from a six week research fellowship. At the time, I did not know exactly what I intended to do. I had six weeks to spend in London and a vague notion of doing a book for children about their counterparts in the UK – an attempt at disbanding stereotypes about growing up in the West, something that would bring to urban middle class Indian children the "harsher realities" of life in the West. So, I went about the tasks that I had set for myself. I asked the children questions that others had asked before, I wandered the streets that many before me had wandered and perhaps, I experienced the same amazement as others before me at the presence of typically Asian objects – from jhatka chicken tikkas to Fair and Lovely cream. I guess I didn't really stumble upon a new idea. It was all about ideas of belonging, communities and the lines drawn around them – the stuff of everyday life in India.

Borders - Here & There

I work as a documentarist in India. A lot of the time, I walk into villages and poor urban settlements and engage people in conversations – sometimes with a recorder, sometimes a camera and sometimes just paper and pen. It doesn't really matter what I carry or what I wear. Each time, I'm the outsider - English speaking and city bred, privileged by class and circumstance. And each time, I encounter differences. Class, language, religious and cultural practice.

Fourteen year old Navdeep Singh Alg who lives in Wimbledon, London told me,

"In my first school, I kept getting lots and lots of questions. They kept asking why do you wear a turban, why do you do this… Why, why, why... It got tiring after a while. But you might as well say it because that's the only way they'll understand…"

When I go into a village deep in Uttar Pradesh, India, they ask me if I travel around like this unescorted. Before I got married, they used to ask me how come I wasn't married even at 30 ! I have a mixed name – my first name is one you find only amongst muslims in India and my surname is a Hindu caste name. So, it's fairly common in India for people to ask me how come I have this name when they first meet me. It used to irritate me in my adolescence. Lots and lots of questions, as Navdeep says. It got tiring after a while – for me as well. But he's right, you know – you might as well say it because that's the only way they'll understand. And so, I answer the questions because it's important to me to express that there are many different ways of being Indian, many different ways of being a woman, many different ways of being a Muslim. And that a border can be a line in your head, not just on the ground.

Hopstory : a location based narrative distributed in time and space

Title Hopstory

Subtitle a location based narrative distributed in time and space

Lead-in / Abstract A multi-perspective cinematic story recounts a day in the life of four fictional characters. Story bits are distributed in space according to the characters point of view and in time, as the action progresses. Collecting data at different locations and times, each person edits her own version of the story according to their passage through the space.

Participants and speakers nisi, valentina (IT / IE)

Short biography of participants Valentina is a researcher at MedialLabEurope with G.Davenport in the Storynetworks group, and Ph.D. candidate in the department of Computer Science of Trinity College Dublin (TCD) with Dr. M.Haahr,
Her fascination lies within the use of wireless, networked and mobile technologies for telling stories in new ways. She researches how to design interactive and distributed narrative experiences in public places merging the real space with the narrative experience.

Her current project is a distributed location based story about an old Dublin neighbourhood, incorporating the community feedback into the narrative database. The story is available to the public in form of media fragments wirelessly distributed

the GPS enabled mobile devices tof the wandering audience.

She holds an MSc in Multimedia Systems at TCD, First class Honour Fine Art Degree from the Albertine Academy of Fine Arts in Turin, and a Diploma in Classical Studies.

Her work has been presented and published in festivals and conferences in Dublin and abroad.

Full text

Hopstory

Extending research on location based cinematic narrative, HopStory, takes a digitally-enhanced story beyond the computational desktop and distributes it in a physical space. It transforms the physical navigation of the space into an editing process through which an audience member assembles her own version of the cinematic narrative. HopStory explores how story content can be linked to the setting in which the story is being experienced, allowing the space to express history and personality.

As Marie Laure Ryans in her book, Narrative as Virtual Reality, suggests three forms of involvment with narratives: spatial immersion or response to the setting; temporal immersion, response to the plot, and emotional immersion, response to the character. When considered within this framework Hopstory questions what influence the real physical space can exert on a story experience. As Ryan continues: "Spatial immersion is often the result of a madaleine effect… The taste and smell of a madeleine dipped into a cup of tea transported Proust instantly back to his childhood village". We suggest that stories linked to specific places can use their settings to trigger the "Madeleine effect"'. This synestesia, in the case of Hopstory due to the fact that the story is set and experienced in the same place, strengthens the spatial immersion of the audience in the content.

With this as our creative goal, we began to investigate the history of the building that would host the installation. This research informed the development of the perspective-based story, which focused on four character's different points of view on the same events, taking place during a single day of work in the installation building, originally a brewery. Access to the physical setting of the characters' lives provided a concrete starting point for research, visualization of scene descriptions, and conception of plot events. In the installation, the audience uses a keyring-sized device to collect story parts. Different segments are available at different times and locations. They can then view their clips in the order that they collected them at a designated playback station. Only in this moment of playback do the audience members fully experience their personally assembled story.

As David Rokeby points out in his essay, transforming Mirrors, story space can be conceived as a navigable structure or world: "The navigable structure can be thought of as an articulation of a space, real, virtual or conceptual. The author structures the space with a sort of architecture, and provides a method of navigation. Each position within the conceptual space provides a point-of view, defined and limited by the surrounding architectural structure. Exploring this structure presents the spectator with a series of views of the space and its contents. The sequence in which the spectator experiences these vistas forms a unique reading of that space". In the case of the HopStory the architectural metaphor can be taken literally.

HopStory is novel in the way in which it marries physical navigation through the installation with character point of view; furthermore, the story connects to the audience's sense of time. As the story progresses, the characters move through the building, living out their day in the early 1900s. Similarly, as the audience wanders through the same building, experiencing the installation, they encounter the four characters at different locations and times. Sculptures modelled after the brewery cat, the special character in the story, indicate the locations where the story content is available.

The Interaction

The audience uses a simple physical object, a portable metal button, for interacting with the sculptures collecting scenes. When a scene is collected, an audio segment from that scene is played. Essentially, through contact with a cat, a participant receives a new scene and briefly uncovers a character, who reveals part of his or her story. The instantaneous audio response may encourage audience members to seek out more scenes to add to their collection. Each audience member controls the

number of clips they collect but does not know what events they will witness before they make contact with a sculpture. Much like wandering through an actual building and choosing to eavesdrop on chance conversations, audience members edit their own movies by navigating the building space. However, rather than viewing each scene at the moment it is encountered, the audience saves up their collections for later viewing, as a public projection at the playback area. This viewing mechanism allows audience members to compare story paths and learn more about the character's different experiences during their day in the hopstore. Furthermore, it links back to the cinematic experience of narrative and reflects upon the differences between public screening as a collective experience, and the private and personalized navigation and editing of the story. At the playback area audience members are able to compare their assembled movie with those gathered by others

The Technology

The technology used in HopStory enables the audience to collect and play back their story scenes through physical contact with the cat sculptures. The contact occurs through iButtons, metal coins made by Dallas Semiconductor which store digital information. Small metal contact points, the iButton receptors, were embedded in the cats. Touching an iButton to a receptor establishes a connection down which digital information can be transferred. Each receptor was connected to a computer. The audience roamed the space with their iButtons and then, as convenient, touched the sculptures to collect data. Upon touch a short audio segment from the scene was played. At the same time data was uploaded to their iButton. Video clips associated with this data could then be retrieved and viewed at the playback station. Each story fragment was tagged with a two-digit ID number indicating the time slot and location. This was the information stored on the iButton and used to reference the video clips at the playback station using custom software written in Isis .

The Content and the Story Structure

Following the Aristotelian paradigm of a fictional story where the plot is a succession of incidents that develop the story from beginning through climax to resolution we designed the narrative starting from the classical elements of setting, characters and plot. We then applied these concepts to a physically distributed story structure where a real space coincides with the story setting and the story time is mapped to real time.

This story structure results in a two dimensional grid, where time is mapped to the X axis and space to the Y. Characters move around this grid according to the different locations they occupie at different times of the day. Within these constrains the plot progresses through its incidents, climax and conclusions, all perceived from the different characters perspectives. In the case where no character is present in a certain place at a given time, a special plot indipendent character, the brewery cat appears and relates an historically inspired anecdote. This does not progress the plot, but adds flavour and atmosphere to the story.

The story has been written and produced with the intention of providing the audience with a flavor of a day in the hopstore when it was an industrial building. Four fictional characters, a foreman , his daughter, a boy and a planner working for the Guinness Trust, bring the audience in four different journeys through the hop store during normal a day of work. The characters are informed by personal accounts of social conditions in the Liberties, the area surrounding the brewery, and the lifestyles of workers at the brewery in 1920. A cynical brewery cat character, inspired by a word of mouth anecdote about a cat that used to live in the building, was created to fill in scenes where the main characters were not featuring. Plot events center around an accident caused by a combination of arbitrary actions from each character, providing many causal threads from which the audience build connections. Each character enters the building, and the story, at a different point in the day. Ambient scenes supplement the narrative, providing background historical information during the story times in which no character is present. The narrative is composed of forty-eight story fragments that illustrate the lives of the four characters as they progress through their day.

The story is ultimately portrayed in the style of traditional cinema, through a linear movie. This final movie is assembled differently by each audience member who interacts with the system, and each movie will posses a different numbers and combination of scenes, characters, or plot events. Simple themes are referenced in multiple scenes to unify the character's stories. For example, a recurring theme is food. The foreman is very hungry throughout the whole story as he missed dinner

the previous evening and forgot his lunchbox for the day. This hunger is mentioned repeatedly throughout his story, influencing his actions during the day. To connect to this theme, the other characters often refer to food and meals during the day, creating a common theme among the story fragments narrated by the different protagonists. For example, the foreman's daughter starts her day by bringing a lunchbox to her father.

The character's days are very different from each other. The foreman attends to the machinery while the foreman's daughter simply wanders through the building. Sometimes they can be seen at the same time in the same location or dealing with the same event from a different perspective, giving the impression of a connected overall narrative. An example is the accident that happens in the hop store in the late afternoon. Each character experiences it in some form, even if just auditory. This technique is used to emphasize the differences in point of views of all the characters regarding the same incidents. The accident involves the boy falling on the ground and it can be experienced by the audience from each character's perspective: the boy falling from the stack; the foreman witnessing the accident and feeling guilty about having assigned the task to the boy; the foreman's daughter who is scared by the noise but curious about its source; and the surprised planner, who hears the noise and wonders what's happening on the other floors of the building.

The perception of the different story fragments as a whole is further facilitated by the presence of some characters in other character's scenes. For example, the boy arrives late into the hop store building. As he sneaks inside, he sees the foreman drinking a glass of beer with his men near a window. The viewer can see the men laughing from the boy's point of view. At the same time, the story experienced from the foreman's side does not mention the boy, because he cannot be seen. In another incident while hiding from the foreman behind a wall, the boy is spotted by the planner. From the planner's point of view the encounter is of minimal importance as he is completely absorbed in his work and barely notices the child. The boy would be just a shadow in the background for the planner, but from the boy's point of view, the incident is quite important. In the boy's scene, the planner walks by in front of him and stares at him for a second. The boy then puts a finger in front of his mouth asking the planner not to tell the other workers his whereabouts. We believe that this presentation of the characters from each other perspectives is an effective mechanism for bringing unity to the story and suggesting continuity of place and time.

With these techniques, we attempt to ensure that an audience member receives a coherent and meaningful narrative regardless of the number and order of the scenes collected and independently of the presence or absence of any specific scene.

The Guinness Hopstore Installation

Hopstory was showcased at "Extreme Interfaces" an exhibition and demonstration day held in 2001 in an old and historically significant Guinnes hostpore building. The Hopstory installation featured seven cat sculptures, which were embedded with iButton receptors. Six of the cats were spread through one floor of the building, and the seventh was seated on an armchair in a lounge area. The movie scenes collected by the participants were carried to the lounge area and projected onto the wall, for anyone nearby to view. Participants were given a key ring, which contained an iButton for storing clips, and a card with brief instructions for navigating the Hopstory. When a cat was located, a participant was able to connect his or her iButton to the receptor store a scene on the iButton. When participants were satisfied with the collection they had stored, they could touch the iButton to the cat at the projection area and watch the movie they had collected. The story lasted around one hour, with the scene advancing every few minutes within each cat.

Conclusions
HopStory succeeded in the marrying real physical locations to the story content, enhancing each audience member's spatial immersion in the narrative context. This synergy is in stark contrast to how three-dimensional VR environments propose virtual space as an immersive tool and serves to transport the audience deep into the story setting. Furthermore, HopStory presents a navigable structure that is traversed by interacting not in a virtual environment but in the real, tangible, physical world.

Related internet addresses

http://ic.media.mit.edu/
http://storynetworks.mle.ie/
http://www.mle.ie/~vnisi/hopstory/index.html

inIVA Digital Archive : Race Representation and the Digital Domain

Title	inIVA Digital Archive
Subtitle	Race Representation and the Digital Domain
Lead-in / Abstract	Through its Digital Archive project inIVA intends to engage in a process of re-examining digital media to see if there are particular multimodal and multisensory aspects of the digital environment and technology that afford us new perspectives and positions from which to interrogate and navigate the 'archive' in fresh and meaningful ways.
Participants and speakers	Stewart, Gary (GB)
Short biography of participants	inIVA creates exhibitions, publications, multimedia, education and research projects designed to bring the work of artists from culturally-diverse backgrounds to the attention of the widest possible public. Anchored in the diversity of contemporary British culture and society, inIVA engages with culturally-diverse practices and ideas, both local and global. inIVA invites artists and audiences to question assumptions about contemporary art and ideas. It acts as a catalyst for making these debates and artworks part of mainstream culture extending the intellectual, social and geographical boundaries of debate on contemporary visual art.
Full text	As part of our ongoing investigation and long term research into the 'Archive' inIVA has been looking at the archive and its relationship to culture, identity, digital media and technology. Most people have an archive of some description: photographs, letters, papers that record personal histories. Mining the archive and retrieving histories have increasingly become the mainstay of many museums and galleries. Contemporary art organisations, curators and critics are also delving deep into the archive of post-war contemporary culture to reclaim 'lost' artists and art histories. But reviving the past is full of pitfalls. It is easy to romanticise the past and gaze back through rose-tinted spectacles or to 'put a spin' on past episodes only to serve current political ends. Our view of the past is inevitably shaped by present concerns and perspectives but is it possible to re-shape the present by re-examining our histories? Can a search through the archive be more than a nostalgic rummage through historical events? Can looking back critically at past episodes make a difference to our future? For ISEA2004 we propose to present our findings from these questions through a re-examination of digital media to see if there are particular multimodal and multisensory aspects of the digital environment and technology that afford us new perspectives and positions from which to interrogate and navigate the 'archive' in fresh and meaningful ways. inIVA's Digital Archive brings together exhibitions, talks, film screenings and web projects which re-tell forgotten histories in a way that casts a different light not only on the past but equally on the present. They recount stories that are often incomplete, fragmentary or unfinished but which are tied together by a common theme of struggle. We intend to explore how digital technology reflects the archives ability to create a sense of media in transition where the traditionally established linear exploration of a collection of media collides with the emerging hypermedia processes of database driven systems. But its not only about technologies but also the process, uniquely inIVA as well as commissioning established new media artists continues to invite and commission artists from non digital fields of practice to play an active role in our digital projects as we believe that the field cannot be addressed other than combining, or synthesising knowledge's. The way our Digital Archive has developed reflects this approach and we would very much like to invite others to debate what we consider to be the fundamental 'virtues' of this approach with the participants of ISEA 2004.
Related internet addresses	http://www.iniva.org/archive/index

Intelligent Interfaces : Transformation of Self-expression, Communication and Fashion with Wearable Technologies

Title	Intelligent Interfaces

Subtitle

Transformation of Self-expression, Communication and Fashion with Wearable Technologies

Lead-in / Abstract

The aim of this paper is to discuss the change of communication via clothes with the emergence of wearable technologies. It focuses on how wearable technologies could change our experiences from the perspective of communication and self expression. This paper aims to contribute to the discussions in wearable technologies to form a theoretical background within the context of fashion and communication.

Participants and speakers

Mura, Gökhan (TR)

Short biography of participants

Gökhan Mura has a recently received his MA degree from the Department of Visual Communication Design at Istanbul Bilgi University, where he was awarded with full scholarship. He has a background in Industrial Design.(Middle East Technical University)He has studied on the transformation of fashion from early modernism to wearable technologies with its relations with visualization and communication technologies. He is interested in the relation of design and technology and the transformation of the language of design with the emergence and advance of new technologies.

Full text

Self-expression and communication through clothes and the dynamics of fashion system have been experiencing a transformation with the emergence of wearable technologies. Wearable Technologies change our daily experience with clothing especially from the perspective of communication by proposing different examples of interactive garments designed either for increasing the functional aspects of clothing or for producing dynamically changing clothes.

The various studies on wearable technologies propose different kinds of garments with both functional and aesthetic properties and expand the domain of fashion with the novel examples they introduce. The existing fashion theory requires redefinition of the conceptual framework of fashion according to the new abilities of clothing developed with wearable technologies.

The existing examples and the technologies used for realizing the examples of wearable technologies help us to foresee the possible future examples of the wearable technologies expected to be developed with the advance of material, power and computational technologies.

This paper contributes to the discussion on wearable technologies to form a theoretical background for the studies within the context of fashion and communication by trying to examine the existing examples and the virtual examples as the possible outcomes of the ongoing research on realization of the discussed concepts. The paper also aims to contribute to the efforts to introduce the concepts of wearable technologies to the system of fashion and make it a matter of daily experience as a new and talented way of communication.

Clothing as a way of Communication

Clothing is a mode of communication. It is widely acknowledged that clothing is a way of self-expression, a way of expressing the identity and personality of its wearer. That the clothes we wear make a statement is itself a statement that in an age of heightened self-consciousness has virtually become a cliché. (Davis, 1992) We dress up according to our personality, identity, status and mood and let clothes express our feelings and emotions via the visual composition we have made. We reveal our choices and emphasize our personality through our bodily appearance to give an impression about ourselves. Likewise, we interpret the visual statements constructed by the clothes of other people. We redefine our bodily appearance with clothing; with the garments we wear and with the accessories we use. We increase the expressive abilities of our bodies with clothing.

Clothing is also an essential element of social communication. A garment carries several meanings for its wearer and the observers - where the meaning has not to be the same for each individual. The meaning of clothing is variable according to the culture and visual traditions of the society where the garment is worn. The message of a garment is also dependent on the context of use and the identity of the wearer. Although communication through clothing is dependent on different cultural variables, clothing is an effective and strong way of self-expression. Within this definition, the word self has the stress on it. Besides all connotative activities of self-expression through consumption, clothing is the one literally related to the body. As clothing, after all, could be considered as the redefinition of the body, it could be said clothing is the strongest way of self-expression non-verbally.

The meaning or the power of a dress is derived from the visual composition formed through the fabrication and presentation of it. The meaning rises on the visual symbols that are the combinations of the cut, the drape, the texture of the fabric, the silhouette or the volume of the dress created through design process. Fashion designers produces so called new meanings by developing the vocabulary of clothing. The new compositions, new permutations or the repetition of retro styles open new spaces for individuals to express themselves through clothing.

Despite the numerous permutations of clothing made up from different pieces of garments and the repeating cycle of gimmicks to play with the visual composition of a garment, the message carried by clothing could be said to be static. The message of a garment or in other words the way of expressing the self cannot be changed unless the clothes are changed.

In today's fast paced, networked and wireless society the dynamics of the society and the advanced communication technology determines the ways of transmitting and receiving of messages and production of cultural meanings with increasing emphasize on customization, participation and interactivity. From this perspective, the static daily clothing could not satisfy the new social needs of its wearer shaped around the need to emphasize the changing identity and communicate the changing moods and emotions interactively. 'In an age where identity is increasingly fluid and multifaceted, the static clothing and unresponsive materials we wear are often insufficient means of expression' (Galbraith, 2003).

Communication via Wearable Technologies

Wearable technologies enhance the expressive abilities of clothing. Smart technologies embedded expand the capacity of the body and create a new relationship between the body, the garment and the environment. Clothing designers want to create systems of clothing that react, collect information, and enrich our interactions with spaces and people (Galbraith, 2003). New possibilities and modes of interaction between these systems improve the existing ability and introduce new ways of expressing the self in a wider context.

Besides the traditional ways of creating user defined clothes and personal products, the capabilities of advanced technology like miniaturized electronic components and smart materials are used to design pervasive wearable technologies with better possibilities for self- expression. Miner, Chan, and Campbell working on pervasive devices and digital jewelry underline the need to acknowledge and even enhance the users' abilities to address the everyday personal and social needs, in designing wearable technologies for everyday life. They believe that pervasive wearable devices will need to reflect our tastes and moods, and allow us to express our personalities, cultural beliefs and values (Miner, Chan, and Campbell 2001). Wearable technologies increase the expressive abilities of clothes and the accessories as they serve responsive components within the garment or the accessory for a better representation of social awareness, identity, personality and status.

Wearable technologies provide reconfigurable visualities that could be shaped by the wearer by determining the composition of expressive components. Expressive components of clothing such as rhythm, physical movement or visual texture could be created through computation and new examples of new types of clothing based on computing could provide modes of expressions unachievable with traditional garment techniques (Co, 2000).

Wearable technologies introduce the ability to visualize the expression dynamically and interactively. Different forms of wearable technologies, computational garments, digital accessories, and digital jewelry, in this sense could be used as an interface that reflects the responses of the wearer by ascribing meanings to the interactively changing compositions of expressive forms. The new ways to encode and decode messages to be transmitted evolves with the abilities of the communication technologies. The new means of visuality of clothing could be decoded in meaningful statements as they are created as the products of digital, interactive communication culture, where the visual vocabulary of communication is expanded and enhanced according to the change in the definitions of communication and social intercourse by the networks and wireless technologies. Computational processes convert the responses, reactions and messages into visual and tactile data and represent the intercourses and interactions among people and environment by the compositions being produced.

Wearable Technologies for Emotional Dialogue

A specific example of the enhancement of communication with wearable technologies could be using wearable technologies for emotional dialogue. Responsive clothing has the ability to refresh its appearance according to the input provided by the user, for example, as a representation of the physiological changes occurred during emotional experience. Planalp quotes Frijda to define physiological changes in the body produced by emotions such as the change in heart rate, blood pressure, blood flow, respiration, sweating, secretion, pupil dilation, trembling, brain waves and muscle tensions (Frijda, 1986 cited in Planalp, 1999).

Computational processes could convert senses into visual data and represent emotions with dynamically changing appearances. Digital technologies worn on the body could precisely detect physiological changes in the body when a change occurs in the emotional state of the user. All these changes could be detected and could be used as sources of input for computational response. Besides using physiological changes as input, the physical and social changes in the environmental conditions could be used as well.

Unlike the hard-to-control physiological responses to environmental or personal changes, the physical responses of the wearable technologies could be controlled and directed to express the emotion in a desired manner. Besides developing systems that visualize our physiological responses through using our clothes and accessories as media, we can develop clothes that could dynamically produce emotional expressions by user command in order to enrich our emotional dialogues. The emotional response of the wearer to any occasion could be amplified by presenting noticeable, exaggerated visual compositions such as changing colours or textures of garments; could be concealed by not showing any physical response although it is expected from you and your smart garments, when it is socially not appropriate; or just be speculated or faked by expressing empowered emotional responses to a situation where you socially have to react in that way. The interactive responses of clothing and accessories could be controlled, programmed, instantly changed, or reconfigured according to intentions and could be used to manage the social relations of the wearer.

Intelligent Interfaces

Wearable technologies create a new understanding of clothing that transform the static messages of classical garments into instantaneously refreshing, self generated messages that are open to any interference and change at any time. This transformation opens up wider spaces for self-expression as it provides a unique expression of a customized composition of individual presence. The appearance of the garment of any wearer is defined according to the context and interaction, thus provides a unique visuality for each individual.

Fashion gives a place for individual expression. Even within the very rigidly defined situations, individuals have been able to introduce original variations. (Davis, 1992) Except a little percentage of haute couture clothes, ready-to-wear clothes are the way for individuals to create variations from a universal set of designed pieces. In this sense, fashion designers present possibilities to consumers to select and bring clothes together for personal expression. With the emergence of wearable technologies this partly passive relation of the wearer with the process of building message of his or her clothes is also a subject of change. Wearable electronics provide a greater elasticity to a user to build a visual statement besides the brand new style of the outlook of the garments. A wearer could customize the dress he or she wears and could apply his or her own personal settings and preferences to a smart garment. The wearer even could develop his or her own software to be used by the garment and actively take part in the design process. This ability to reconfigure the systems embedded and the ability to intervene to the computational processes make wearable technologies a richer medium for self-expression.

Besides their own compositions build up with the smart textiles and the electronic components, wearable technologies have the capacity to represent the compositions of new media as interfaces. Technology allows the functional and artistic features of new media to be transferred on clothes. This new tool of representation, garment, enriches the possibilities of new media and more important, provide mobility to the applications of new media. This is something different than moving computers. The medium where the applications of new media are presented, is used by an intelligent, mobile and interactive organism; the wearer.

Besides the novel experiences the garment provides, the wearer could use the dynamic properties of the garment to direct the process of meaning production by visuality as he or she knows the possible outputs of the computational response that the garment could produce, and behave accordingly. The wearer could unify the expressive abilities of the body and the dynamic and responsive abilities of the garment to constitute a narration. Wearers to produce an intended visual output could also intentionally act out the intercourse among various bodies and garments that produce a certain interactive response. The previously irresponsive garment thus is being transformed into an intelligent interface.

Wearable technologies introduce a new medium of expression by unifying the expressive abilities of the wearer with the dynamic, programmable and controllable compositions served by the garment.

The performance of the wearer according to the stimuli of either natural or man made environment could effect especially the artistic applications of new media as the act of wearing allows mobile, interactive, intelligent and ever refreshing relation between the wearers and the environment. Vice versa, the new possibilities of wearable technologies gained with the increasing capacity of new media provide the wearer a complex ability for individual and artistic expression. The interaction of wearable technologies redefines the personal space of wearers as the garment could interact with the other wearers' garments and with the environment independent from the restriction o sharing the same physical location. The relation of the body with the others and within the space of performance is redefined with wearable technologies and this experience could signify new forms of visual narration.

Increased Awareness via Wearable Technologies

Wearable technologies providing continuous assistance and access to any kind of information that increases the sensory abilities of the user improves the perception and awareness of the user resulting in a heightened communication.
Being able to detect the changes in the environment, or being informed about changes in wearer's personal sphere by networks and wireless technologies, creates an augmented self and social awareness. The garment and the wearer become more sensitive and reactive to the context it is worn in, to the space or environment it is used in and to the other garments around and to the intercourse with other people it is included.

Wearable technologies visualize the personal or communal reactions and responses via clothing with serving responsive components that constitute an augmented, enhanced expression. The access to the information of the responses of other users via a system that is worn provides a new degree of social awareness and connectedness. The interactive clothing could be used to constitute a better representation of reactions with dynamically changing visualities, which increases the detection of reaction, both, by the other members of your community and by the spectators of the intelligent interfaces. A stronger sense of community could be achieved with wearable technologies where your membership to the community, your sharing the similar ideals, your awareness about similar concerns and your reactions and responses to these with your appearance become more visible, distinguishable, attractive and efficient without the restrictions of distance. Interactive clothing thus constitutes a common ground for different individuals for sharing similar expressions.

As a result of the advances in wearable technologies, the definition of the relation of the body with clothing turns into a more interactive relation. The new garment could be said to become a smart, movable interface that has the ability to respond to the input both from the wearer and the new environment. The ability to collect data and to process the data to form a visual output make the garment an intelligent interface that unifies the expressive abilities of the bodily expressions of its wearer with its interactive responses to create enhanced expressions and new forms of visuality that could also constitute a communal physical interactive visuality.

Fashion and Wearable Technologies

Wearable technologies propose a novel experience for fashion because the dynamically changing appearances changes the significance of the garment and an interactive garment could produce new and more complex meanings via its

visuality. Western European fashion is pivoted around the concept of "newness" or "nowness" (Fox-Genovese, quoted in Craik, 1994: 6) Consequently fashion is deemed to have no inherent meaning beyond serving as a mean to an end; namely the eternal preoccupation of the system of newness that depends on the desire to acquire each new mode. (Craik, 1994: 6)

Wearable Technologies could provide ever new visualities as the smart dress represents its own message produced as a consequence of an interaction or a computationally controlled process. The visuality of interactive clothing refreshes itself constantly. Interactive clothing or computational garments provide novel visualities according to the change in the input processed to produce the output. The change in the appearance of the dress could be kept constant and also be amplified or exaggerated, by changing the definition of the input and by experiencing an interaction.

Wearable technologies allow pervasive representation of changing visualities. So the appearance of these clothes refreshes their appearance pervasively that provides both newness and nowness.

The way of to perceive a garment, the meanings derived from its appearance is strongly connected to context of use and to the appearance of the other clothes, the style of clothing of the society and to the images of the clothes represented in mass media in that society. However, the way to perceive wearable technologies is also dependent to the existence of the "unseen" network of the other wearable technologies, and to the interactions between these elements. The visuality, thus the perception of the garments, thus the elements of fashion are defined and determined by the interactions.

The interactive clothes that "work" in accordance with the interactive environments would also change the definition of fashion designer while being included in the system of fashion. As the designers of the clothes that work with computational technologies have to consider the interaction and the user experience besides the physical form of the garment, a new "hybrid" definition of fashion designer would appear who uses the domains of clothing design, software and electronic system design. Also, as the software of computational processes is updateable, developing newer releases of the same wearable technologies would be a path for fashion to process. New releases, updating the old releases, downloading new software to the clothes would also require programmer-designers that could serve the technical service to satisfy the new needs occurred. Wearable technologies thus not only provide novel experiences for expression and communication to the wearers but also introduce new definitions of fashion and fashion designer and introduce new concepts to the business of fashion where they will exist and become commercialized.

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Interaction And Audience

Title Interaction And Audience

Subtitle	Not provided.
Lead-in / Abstract	Curatorial issues specific to physical new media are discussed. In particular, interaction, and audience are explored. Examples include SFMOMA's *010101* **Rafael Lozano-Hemmer**, **Harrell Fletcher, Miranda July,** and **Rirkrit Tiravanija**.
Participants and speakers	Graham, Beryl ("C. E. Graham") (GB)
Short biography of participants	Beryl Graham is currently Senior Research Fellow at the School of Art, Design, Media and Culture, University of Sunderland, is a writer, curator and educator, and is co-editor of CRUMB. She curated Serious Games for the Laing and Barbican art galleries. Her Ph.D. concerned audience relationships with interactive art in gallery settings, and she has written widely on the subject for books and periodicals including Leonardo, Art Monthly, and Switch. Her book Digital Media Art, was published by Heinemann in 2003, and she received an AHRB grant to conduct primary research at SFMOMA. Dr. Graham has presented papers at conferences including Navigating Intelligence (Banff), Museums and the Web (Seattle), and ISEA (Liverpool). < http://www.berylgraham.com>.
Full text	Please see attached RTF file. The full text is available as an attachment. Please download it here.
Related internet addresses	http://www.variablemedia.net/ http://www.yproductions.com http://www.newmedia.sunderland.ac.uk/crumb/

Interactionfield Public Space : Redefining Urban Public Space in the Digital Age

Title	Interactionfield Public Space
Subtitle	Redefining Urban Public Space in the Digital Age
Lead-in / Abstract	Public space is an open field, created and brought alive through various interactions. Interactive art with its life proximity, communicative issues and reflections on technologies should be linked with urban space. They contribute to its participatory reactivation and the rediscovery of the concept of the commons. www.interactionfield.de
Participants and speakers	Struppek, Mirjam (DE)
Short biography of participants	Mirjam Struppek works as freelance urban planner and researcher. Till 2002 she studied Urban and Environmental Planning in Kaiserslautern (D) and Nogoya (Jap.). In 2003 she worked at PLAY - gallery for still and motion pictures, Berlin and developed the platform interactionfield.de.
Full text	The formation of public sphere and livability develops through dayly exchange processes. The active participation of the inhabitants in these interactions is necessary to create a vivid local culture. In that context I want to point out on my online plattform „Interactionfield" how recently interactive art went consciously into city spaces. The analysis shows, how New Media can be alternatively used, to revive the public function of the urban space. A quest for a counter development to the further commercialisation and visual overloading of the city becomes apparent. We can find examples that function as catalysts for a fearless person to person interaction or that go into critical 'fear zones' and engage people in collective activities. In its new interactivity the space can become a kind of exchange medium supporting the social network and integration in the local neighbourhood. Playfully some projects ask, how can we activate to the codesigning and formation of the public space, promoting a more active urban lifestyle. Architecture becomes an open (art)work, trying to create new experiences, to bridge the gap between people and their city. With the increasing integration of new technologies into everydaylife I see an urgent need to promote this kind of socially critical use and open approach to future urban developments.
Related internet addresses	http://www.interactionfield.de

Japanese "Ketai Culture" as an Urban Phenomenon

Title	Japanese "Ketai Culture" as an Urban Phenomenon
Subtitle	Not provided.
Lead-in / Abstract	Not provided.
Participants and speakers	Kusahara, Machiko (JP)
Short biography of participants	Not provided.

Full text

Introduction

Japan is known for the wide use of mobile phone. The significance is not just in its wide spread use, but rather in the fact it is a social phenomenon. Mobile phone has become an important part of culture changing the way people communicate to each other. Its application penetrates into all aspects of daily life with all possible services being available, virtually realizing what are considered the goals of wearable and ubiquitous computer society. Another important feature is that the "explosion" of mobile phones took place within a short time in late 1990, led by young generation, initially by young women in particular. Today Japanese "mobile phone culture" or "Ketai Bunka" is often considered a likely model for the coming "mobile society" in other parts of the world, especially by the industry as well as researchers in the field. It will be worth examining the mobile phone culture in Japan from social and cultural aspects in order to identity general and universal elements in the phenomenon and more culture or society related elements in it.

This essay is just a first part of the research meant for the goal described above.

Mobile Phone as a Computer

As is well known, Japanese language is different from European languages in many ways. One important issue is that the Japanese mix four different character systems - two types of Japanese alphabets, Chinese characters (Kanji), and alphanumeric system. Each of Japanese alphabet systems consists of nearly fifty characters. Numbers of Kanji is just numerous, often with different characters assigned to single pronunciation. To write a Japanese text with a computer we usually type in Western alphabets and the software automatically turns them into Japanese, showing candidates for applicable Kanji. (It is also possible to use Hiranaga, one of the Japanese alphabet systems for input.) Even one's own name has to be written in this manner. These days AI features of computers remember the most probable combination of Kanji for words often used (such as one's own names) and automatically translates into appropriate Kanji combinations. Writing a longer text is achieved in a similar manner. Therefore word processing software was the first serious application for personal computers in Japan. Writing with a computer could become a nightmare without an AI feature.

Because of such unique feature of Japanese language, a mobile phone had to have a word processing function in order to support text messaging or the use of address book. Different from the way people usually do with computers, Hiragana can be typed with the mobile phone keypads and turned into Kanji. An AI function also offers possible sentence to follow. With latest models composing a typical sentence may require only a few seconds. Also, number of strokes in Kanji required a higher resolution on the small screens. These are part of the reasons why the mobile phone in Japan became a computer with a high (relatively) resolution screen rather than just a digital telephone, and could be easily converted into a digital camera and a video.

An issue behind Japanese mobile phone culture is the love for gadgets and interests toward technology embedded in Japanese culture. This is one of my long term research themes and my papers on the theme can be found in other publications. The love for technology of the Japanese has a history that goes back to a few hundreds of years at least.

From "Ketitai Denwa" to "Ketai"

The changes in the role and nature of mobile phone, from a business tool to an intimate part(ner) of one's daily life and a part of Japanese popular culture, can be observed by the evolution of its name. [1]

"Keitai denwa" (ke-i-ta-i de-n-wa, meaning portable phone), a seven-syllable word written with four kanji letters (Chinese characters), is how it was called when the service was launched. The term still officially represents mobile phone.[2] As the younger generation started using it, the word turned into "keitai" (ke-i-ta-i), a four-syllable word. Now it is called "ketai" (ke-tai), with two syllables, written in katakana (Japanese alphabets for foreign or pop things). It cannot be any shorter.

Today the extensive use of mobile phone among the younger generation is seen in many countries, including Finland and Korea among others. The phenomenon seems to be quickly spreading over many regions. Those who observe the current situation may ask what is special with the Japanese mobile phone culture, if the phenomenon is more global than Japanese. [3]

While the increasing global nature of young people's life style is behind the phenomenon, there still are social, cultural and historical elements that play an important role. These elements interact with features of mobile phone in the process of being a part of the society. From this point of view it is undeniable that certain features in Japanese culture helped boosting the mobile phone use. Also, the spectacular success of Japanese mobile phone business, especially of NTT's Docomo, has been widely known and become a model for mobile phone marketing, making the mobile phone culture more worldwide. Hence discussing Japanese mobile phone culture would be useful in understanding the nature of mobile phone as a medium and its relationship to the society. This paper tries to analyze the current status and its background of Japanese mobile phone culture, or, "ketai culture", both from historical and contemporary aspects. The focus will be on the relationship between mobile phone, urban life, and popular culture in Japan. While there have been researches carried on the use of mobile phone among the younger generation, not much has been written on Japanese mobile phone culture from the above mentioned aspects. [4]

Launching of Mobile Phones

When mobile phone service was launched in Japan in 1987, it was meant to be a business tool in urban region. The service was expensive and the network coverage was limited to major cities, mostly downtowns. As the system, these mobile phones were owned by NTT, Japan's former national telephone & telegraph service, and rent to users. [5] Users pay deposit, monthly rental fee, basic fee and the connection fee in order to use mobile phones. The phones were heavy and bulky. In the beginning mobile phone contracts were most typically made by companies for the use by their VIPs, thus functioning in reality as a status symbol. Then wider range of employees such as sales people were given mobile phones, as the service became less expensive, phones being smaller and the coverage area gradually expanded. The timeline provided by Docomo (figure 1) is marked with the changes that took place during this time. [6]It became more easily accessible to private users when NTT changed its policy to allow purchase of phones in 1994.

When smaller and better looking phones appeared, young girls found them as substitutes for pagers, which were already quite popular among them.[7] By the end of 1996, shift from pagers to PHS, the inexpensive version of mobile phone, was clearly seen among the young generation after short messaging service (SMS) became available on PHS. (Figure 2) The acceptance of mobile phone among girls promoted its rapid evolution from a business tool to an enjoyable communication gadget. In Japan, popularity among young girls is considered a sign of great possibility on consumer market, as already known with consumer goods such as stationary or "fashionable" foods. Mobile phone operators and phone makers took the opportunity seriously to expand the market. Designing more "kawaii" (cute, lovely) or fashionable phones to meet their taste was important. Also, new features and services outside its original oral communication function were needed as major attractive elements. By 1998 number of mobile phones exceeded the number of household in Japan. By summer 2001, about half of the Japanese people possessed mobile phones and the rate was above 83% with senior high school students. Today, as of June 2004, approximately 70% of the whole population possesses mobile phones, creating a situation that "practically everyone has a mobile phone in Japan".[8]

The increasing social and cultural importance of mobile phone is supported by its massive use. Besides the role it plays in communication, mobile phone is becoming a major platform for entertainment, home security, welfare, shopping, among many other functions it already serves. The latest models of 3rd generation mobile phone are supposed to replace one's purse. Robotics, another major area in which technology and culture meet, goes along with mobile phone technologies. Home robots, which are to appear on the market by the end of 2004, will be remotely operated by the users' mobile phones.

Why such a rapid growth of mobile phone took place? Why people found it not only useful but also entertaining? Why it became practically an indispensable part of everyday life?

Japan as an Urban Society

The end of long lasted monopoly of NTT in telecommunication business and the rise of new telecommunication companies certainly led to the creation of new services and ideas. However, competition does not necessarily lead to a rapid and rich growth of market. In order to understand the rise of "ketai culture" in Japan we need to analyze why younger generation, especially girls living in major urban areas, played the leading role in popularizing mobile phone and changing its social function. There were both practical and cultural reasons why young girls, mostly those living with their parents, became a first leading party of new mobile phone users. Urban life style of the Japanese is behind the scene. Once mobile phone is adopted as a useful and fun tool in urban life, it started developing further to meet the then unfulfilled demand of many Japanese who live in big cities and around.

Japan is an urban society both physically and culturally. While Japan is already one of the most densely populated countries simply in terms of the ratio of population to land, the actual density is much higher due to its mountainous landscape and social structure. [9] Official statistics shows that altogether nearly 80% of Japanese people live in big or smaller cities, not in towns or villages. Half of the whole population is concentrated in just three major urban areas: Tokyo, Osaka (Kyoto and Kobe included) and Nagoya. [10] More than a quarter of Japan's whole population is centralized in Tokyo and its vicinity alone. [11]

These facts explain several issues that are related to social and psychological aspects of urban society. First, most of commercial activities such as advertisement are focused on city residents because that is the market. It also means that mobile phone services had enough number of possible users in major cities alone without countrywide network coverage.[12] Second, urban life style becomes the standard in general, even for people living in rural areas. The image of "city life" is felt familiar through TV, film, and other channels, as well as with frequent visits to nearby cities. For young people living in rural areas, to stay up-to-date with the latest trends is very important.[13] The image of "city life" includes an immediate accessibility to what they want -- commercial products, services, information -- represented by 24-hours open "convenience stores" (called "con-bi-ni" in a shorter term) that can be found anywhere in town.[14] The brightly lit store windows have become the symbol of city life and its "convenience". People often drop by at "conbini" mainly to get the feeling that things are available and people are there -- so that they are not alone. The sense of real time connectivity and convenience is behind the ketai culture.[15] Third, because of these situations most young people feel they need to live in big cities, Tokyo in particular. Since universities and companies are centralized in major urban areas, many of those who grow up in rural areas or minor cities would realize their idea after graduating from high schools.[16] It means many young people live in big cities away from home. They enjoy the sense of freedom, away from small communities where everyone knows each other. At the same time, they experience the sense of loneliness.

These issues are all related to the reasons why mobile phone achieved such a strong presence in Japanese society, especially among the young generation. There are also more direct reasons why mobile phones fit the urban life style in Japan.

Life on Train

Dense population means limited space availability and high cost for living in big

cities. In fact Tokyo is known as one of the most expensive cities in the world. Inevitably many people live in suburban area. Commuting takes usually at least an hour, easily two hours or even more, one way. Typically taking bus (or cycling) to the nearest station and changing to train and then change lines, often to subway, one spends a few hours a day for commuting. Because of heavy traffic and limited parking lots in central cities, driving is not practical. Instead, public transportation system has highly developed.

How people spend time on a crowded train, especially after a hard working day? Businessman reading comic magazines on the train has been a known phenomenon in Japan. Today mobile phone substituted comic magazines.[17] Light in weight and easily operated with just one hand, mobile phone offers an ideal pastime activities during commuting, either with offline games or emailing. It is also money saving, since offline games do not cost anything once they are downloaded and saved. Emailing also fits well to life on train. A user would prepare messages on a running train and send them when it stops. Earlier subway users used to complain about the limited accessibility to networks. Today signals seems to be caught almost anywhere on subway platforms. The rapid evolution of battery life, lightweight and compact battery chargers, and is behind the mobile phone use for pastime.[18]

As a result of increasing use of mobile phone while commuting, a new guideline of its usage on public transportation emerged from users' practice. By 2003, both in Tokyo and Osaka areas, public transportation companies came to an agreement about the use of mobile phone on train or bus, following the practice by users.[19] According to the new standard, use of mobile phone without speaking is allowed on all cars, and it is strongly recommended to switch to the silent mode (which is called "manner mode"), while it should be switched off near the priority seats to avoid interfering pacemakers. (Figure 3) Formerly companies had different policies, in many cases simply prohibiting the use of mobile phone itself on train in order to maintain silence. Being quiet at a public space has been traditionally considered important, and is well respected in Japan. As the non-audit applications became more common, however, users started using their phones according to their own criteria. After more than a year since the more reasonable "ketai manner on the train" was established by users, public transportation companies officially approved the new guideline.

Less Children, More Care

Besides the cost of life in general, education also costs. Providing a better opportunity for children has become a goal for many parents, which means spending money to send their children to better schools.[20] On the other hand the social support is far too inadequate for mothers to continue their career while single income earned by the husband might not be enough to maintain the level of life. These factors have lowered the average number of children per family to less than 1.3 by Spring 2004, significantly lower than the average among other highly developed countries. This means that the parents would spend more money per child, buying them fashionable clothes or gadgets such as mobile phone, and paying for a better education, as an investment for future. Even in the time of low economy parents still send their children to the costly after school classes to prepare for entrance examinations, or for English lessons, music lessons, or to costly private schools.

As the result, many teenagers take trains regularly, coming home after dark.[21] For parents who live in suburb, their children's safety -- especially of daughters' --- has been an important issue.[22] Mobile phone brought a best solution. Parents would buy a mobile phone for their daughter participating in after school activities, after she has convinced them how useful it is, and promised them that she would keep the telephone bill within a reasonable range. According to studies, many parents pay the basic fee for their children's phone and tell them not to go beyond the limit. Children pay the rest if they overuse. They learn how to use their phones efficiently, enjoy chatting with friends or downloading the latest hit songs without ending up paying the rest of the bill.

Girls as Leading Personal Users

It is not clear how use of mobile phone started among girls. Parents or elder brothers or sisters might have got the idea, as use of mobile phone became more commonplace at their work places. "Trendy dramas" on TV, which was extremely

popular among high school and university students, played a major role in widely spreading the image of mobile phone as an icon of trendy urban life. Once the availability of handy and light handsets is known, the information was spread among young women quickly. They immediately recognized how they could use mobile phone on their own way. Service providers and manufacturers of mobile phone recognized the phenomenon and realized its importance, as young women have been known as trend leaders in Japan.

Low teen to early twenties girls and young women are sensitive and curious to new products and ideas, often adventurous for new experiences, spend money for what they find interesting, and love to share the information or experiences with friends. They are particularly keen to find and own "kawaii" (cute, lovely) items such as stuffed animals, Hello Kitty goods, charms, or nicely designed stationary. Compared to them, young men are considered to be more conservative, have less money to spend, and communicate with friends much less.[23] Another important difference between young women and men is the nature of communication among friends. For girls, chatting or going out with friends is mostly for the sake of enjoying or maintaining communication itself rather than for serious or practical purposes. It also means that the nature of communication is subtle, to convey emotion rather than information and confirm the relationship.[24] This is clearly seen in a variety of mediated communication channels among girls from the traditional "diary exchange" to exchanging "purikura", of which feature and meanings are inherited to the attached photo from mobile phone cameras. Therefore it was important for them that mobile phone became not only affordable (for their parents, in many cases) but also smaller, nicer, and be owned, so that it could become a personal item to carry with. Rental system that NTT had offered would not have worked with them, since a rental phone could not be (psychologically) personalized, or felt as one's own. [25] The importance of ownership and personalization of mobile phone will be seen with the development of "designed" phones and "ketai strap" in early 2000s, which will be discussed later.

Mobile Phone as a New Medium

From the beginning, girls seemed to understand mobile phone as a medium essentially different from fixed-line phone, while adults still recognized it as "portable phone" ("keitai denwa"). The culture they developed along the use of SMS and other text messaging services or attached photo clearly shows such understanding, as well as with oral communication over mobile phone.

Especially in the early days of mobile phone, conversation had to be short because of battery life and communication cost. This was felt uncomfortable to many adult users who still tried to follow traditional formalities of conversation such as seasonal greetings, and felt ending a conversation short was almost rude.[26] However, young girls did not feel like that. Before mobile phone became accessible they had already achieved a new form of communication with pagers, enjoying short, quick messaging among friends. Typically messages were exchanged among friends who meet regularly. High school girls using pagers in classrooms became a widely known problem, triggering discussions among teachers and parents, and on newspapers. Adults had difficulties in understanding why girls exchange messages with their friends sitting in the same room, with whom they would be talking face to face during the break. Why can't they wait until the next break? The fact is that the importance was not in the content of a message itself but in the real-time-ness of the messaging, which creates the feeling of shared experiences among friends. Spontaneous, interactive, private, coded, mediated nature of messaging fascinated them.

Originally pager was not designed as a real-time interactive communication device but was meant to send a serial number (i.e. a contact number) to someone, who should then call back from a nearby payphone. However, young girls turned it into a more convenient communication tool by inventing a code system on it. Instead of sending phone numbers, they would compose certain combinations of numbers that mean "interesting", "boring", "nothing special", "talk to you later", etc. Clever combinations were spread by word of mouth or through various media, shared by many, adding richness to their coded language. Later models came with text/number encoding/decoding feature to follow the practice. There even appeared free software toward late 90s, to allow the Internet users to send short messages to pagers by encoding texts to corresponding numbers.

It also means that girls had already started making use and enjoying two different channels of communication simultaneously - conversation in real space and mediated conversation/communication through text, among the same group of

friends.

Such use of pagers for text messaging anticipated the situation around 2000 in which mobile phone became the major platform for email, Docomo being the largest "Internet provider" in Japan. Need and interest for email or other kinds of text messaging service on an inexpensive mobile communication platform was clearly visible. In fact, a breakthrough for mobile phone arrived when "short message service" on PHS became available in 1996.[27] At this stage personal computer communication including BBS (bulletin board systems) has become popular among computer users, but teenage girls were not part of it.[28] Computers, especially laptops, were still too expensive, and most of them were poorly designed both in terms of user interface and its outlook.[29] The Internet was not yet accessible for most Japanese.[30]

Regarding other possible platforms for exchanging messages, palmtops have never become quite popular in Japan, and those with the network connection were still a novelty even in the US in mid 90s. Under such circumstance the short message service on PHS not only succeeded pagers but also confirmed a new form of telecommunication among the young generation. As the service when it launched only allowed exchanging a few words among users on the same network, friends often coordinated in choosing their providers. This "girls' networking" was behind the rapid growth of PHS. To meet the necessity, standardization of short message protocols among major providers was realized. Long messaging services and email on mobile phones followed, making it possible to exchange email with users on any networks, including the personal computer users on the Internet.[31] Number of antennas in town, especially at stations, increased quickly.

Of course mobile phones are used as telephones as well. For the young generation living with their parents, portable and private mobile phones became extremely useful at home. As already mentioned, many families live in cities where space is limited and living cost is expensive. This means that even after graduating from school and started working, many young people live with parents mostly because of economical reasons. Keeping privacy is hard when other family members pick up phone calls from friends and the house is too small. It is similar at work where an office is traditionally shared with colleagues and bosses without screens. Private phone calls are difficult to make.
How about face-to-face communications? Life in big cities requires arrangements to meet others. The spread of mobile phone changed the way people meet. Instead of making a solid arrangement beforehand, appointments could be more flexible including booking seats at a restaurant from a street corner.[32] This tendency of having more spontaneous parties made mobile phone an indispensable tool in urban life for the young generation.

Thus it was natural that young people leading single life also started using mobile phone. In their case, there was another important and practical reason. For those who start living in big cities away from home, mobile phone became a low cost substitute for a fixed-line phone. While the initial cost for purchasing a mobile phone went down dramatically, house phone remained expensive, with a large amount of deposit (72000 yen = approx. 700 USD) as a one time payment required in order to get a new telephone line.[33] While fixed-line phones are still considered a part of an identity of being an adult citizen, students and young workers without a family had little need to respect such social code.[34] Even though a fixed-line phone could serve mostly as an answering machine with the urban nature of their life, spending most of time in town and on trains, there was no other option for them before the arrival of inexpensive mobile phone services.

Often young people who start their life in big cities suffer from a feeling of being detached from what one belongs to. The "solitude in living alone in a big city", has been a known psychological issue.[35] While long distance calls are costly on fixed-line or pay phone, distance does not matter or matters little in case of mobile phone because of its nature.[36] Thus mobile phone encourages more frequent communication between young generation in cities and their families in their hometowns. As parents become interested in buying mobile phones for their children, service providers launched a variety of family package services that promote the use of mobile phones on parents' end as well.[37] Even for those who don't want to be bothered by their parents too often, having a mobile phone was not a bad idea. Since receiving calls also costs, there was always a good reason to keep their conversation with parents short. Thus mobile phone helped forming a new type of relationship among family members. Connectivity, rather than being actually connected, has become the key issue of family bond.

This clearly reflects the urban nature of the Japanese society in which major social

and educational activities take place in big cities while parents and grand parents are often left behind in suburbs and rural areas. At the same time cultural activities on ketai are also growing on elderly generations as well. Increasing popularity of online HAIKU party is one of such examples. In many cases elderly people get their mobile phones as presents from their family so that they can be connected in case, and they eventually start finding other possibilities in using their mobile phones for themselves. Recent success of a sales campaign by Tu-ka with the "simplest ketai" for elderly citizens (which looks exactly like a traditional wireless headset for a house phone) is based on the growing interest to mobile phones in all generations - and the providers/makers need to sell more to the "silver market" to avoid the market saturation.

Conclusion: What Do We See in Near Future?

With the introduction of i-Mode in 1999, mobile phone has become not only a major platform for the Internet connection and email for the younger generation but also an important part of the social infrastructure. It is not even a telephone any more, but a major multi-purpose and wearable communication tool. As almost everyone active in the society is connected to the mobile phone networks, public services have been adopting mobile phone as a serious communication platform. Mobile phone applications in medical care, home security, social welfare, etc., have been supported and encouraged by the government in direct and indirect manners. As the ratio of the younger generation of the country is expected to drastically drop in near future, while the government and the society are reluctant in welcoming workers from abroad, the combination of mobile phone and robotics technology is felt as the key technology in the future of such social services. Behind the scene is the industry's intention to sell the product and technology to the world market.

Mobile phone has developed into a universal communication tool in Japan with the help of social and cultural elements as described here. At the same time mobile phone has been changing the society in many aspects. It is an interactive process. On the personal level it has been chancing the communication model among friends and families. At a more cognitive level it is changing the notion of space, time and reality, especially with the all-time connectivity coupled with its camera. This is a process that has already taken place with the development of urban nature in the Japanese society. Here again we observe the interactive nature of mobile phone being integrated in the society and culture. This is also related to the darker part of the mobile phone culture. Similar to what has been happening to the Internet world, all sorts of spams, cheating, dirty business, criminal issues have been taking place on the mobile phone networks.[38] Mobile phones are being used for crimes such as kidnapping, while there are cases in which people were saved from crimes and accidents with the use of mobile phones. It is not so simple, either mobile phone has been changing the society for better or for worse.

Still, according to inquiries I have made with many of my students, almost all of them believe mobile phones have changed their communication and life for better, while the "pressure for connectivity" is sometimes felt a little too heavy. The optimism toward the mobile phone culture could be interpreted in different ways. However, it seems clear to me that mobile phone has played an important role in solving at least some of the problems people have (or had) been facing as the urbanization of the society took place in a rather short period. The sense of time and space had already changed with the sprawl of the city, train system, centralization of population, telecommunication system, etc. Mobile phone filled the gap which the Internet could not have filled that easily, at least in Japan.

■ 1. It is a common practice in Japan that the increasing familiarity and frequency in usage results a word being shortened in conversation. For example, McDonald (the American fast food chain) became "mackku" in Tokyo area and "makudo" in Osaka area. The word "ketai" is a result of similar abbreviation among young people. However, the term now appears on newspapers and serious writings as well, reflecting its specific meaning, not just as a telephone one carries. In this essay the term "ketai" will be used to in relation to the Japanese concept of mobile phone after it has become a cultural phenomenon.

■ 2. There are two types of mobile phones: "keitai denwa" and PHS, based on different kinds of networks but offering similar services. In terms of technology, PHS is close to an extension of wireless telephone receiver of house phones. The cost is lower but the coverage of a transmitter is smaller. Thus PHS is useful in urban area, but not in rural area or for use while driving. As it will be mentioned later in more detail, less expensive PHS became the breakthrough for the use of

mobile phone among the young generation. It means that for many young users PHS was practical enough, since they live in urban area. In this essay, I include both types when using terms "mobile phone" and "ketai".

■ 3. Korean mobile phone culture shares many elements in common with the Japanese, which is not hard to understand considering similarities in social and cultural factors. In general, mobile phone uses in Asian youths seem to share certain features in common, but it is not the topic to be discussed in this essay. Mobile phone uses in Finland, where the service became popular among the young generation already in early stage, show both similarities and differences when compared to its Japanese parallel. The situation in the US is very different from the above mentioned countries, although the launching of "cell phone" and its wide spread among businessmen already took place at the earliest stage. These similarities and differences reflect social and cultural background in each society such as the role of younger generation as consumers, their relationship with the family and friends, life style, etc.

■ 4. Recent researches include the following:

■ 5. It was an extension of the system that used to be applied to fixed line telephones. Traditionally house phones were based on a rental system in order to fully maintain the control over the network. "Normal" house telephone receivers, a black standard model, were owned by NTT. Rental fee for the receiver is charged every month. The system still exists as an option. The basic idea was that NTT has the 100% control over the telecommunication network up to every receiver in a household so that no one is allowed to manipulate or make any modification on receivers or lines, since the devices do not belong to users. NTT could apply strict policies because it used to be a national institution that held its monopoly on telecommunication business for one hundred years, until it was finally privatized in April 1985.
Even today, basic infrastructure of telephone network is owned by NTT (officially the NTT Group, since it was divided into companies in 1999). Those who want to use DSL connections need to have a contract with NTT and pay the monthly fee even if they use Internet service providers such as YAHOO. Providers using CATV networks (via cable or satellite) offer connections without payment to NTT.

■ 6. By the end of 1988, IDO started telecommunication services as the first non-NTT company. The competition made the mobile phone business more active. Introduction of compact models in 1991 (NTT's Mova), spin-off of Docomo in 1992, and withdrawal of deposit money in 1993, helped the increase of users.

■ 7. Pager was named "pocket bell" in Japan, and was called "pokebel" among young people. They invented usage of their "pokebel" for exchanging coded messages, which was not a part of its original function. Detail will be explained later.

■ 8. Considering the population of very young and very old, this statement often seen on newspaper and other articles is not far from the reality. Japan's population is 127.6 million, out of which 85 million are between 15 and 64 years. The total number of mobile phones in use in Japan is 87.7 million, which is more than the above-mentioned number. (As some of the PHS are used as wireless PC cards, the total number of users should be slightly smaller than this. There is no statistics available for PHS PC cards.) Here are my own experiences at Waseda University. In 2003, there were some students in my class who did not have mobile phones in June, two months after they entered the university. In 2004, everyone had a mobile phone by early June. A few students wrote: " I was not planning to buy a ketai, but I had to. Friends complained that they couldn't contact me, and in fact I was missing gatherings."

■ 9. Japan is in fact a mountainous country. According to the official statistics, among the 370,000 km2 of the whole land only 18% is usable. Many mountains are too steep to be inhabited. This partly explains why Japanese population is concentrated in urban area. There is a historical background as well. Already in 18th Century, Edo (Tokyo) was probably the world largest city. There was a system to bring people from the countryside to Edo, which was already the political capital of Japan.

■ 10. Kyoto, Osaka and Kobe form a continuous large urban area along with satellite cities. Nagoya has satellite cities such as Toyohashi and Toyota.

■ 11. More precisely, out of 127.6 million people living in Japan, 34 million live in Tokyo and its vicinity, including cities such as Yokohama, Kawasaki, Funabashi and Saitama.

■ 12. In the beginning mobile phone services only covered the three major urban

areas.

■ 13. People go to cities for shopping, cultural activities, or just for "gathering information". Such situation has been comically illustrated in many films, including a recent film "Shimotsuma Monogatari" (Shimotsuma Story, 2003).

■ 14. In a residential area of Tokyo where I live, for example, there are five 24-hour open "conbini" on the way from the station to my place. It is only six minutes walk. In smaller cities and suburbs "combini" is usually found along a main route, for customers who arrive with their cars or motorcycles.

■ 15. Also "conbini" offers services such as ATM, payment, ticketing, DTP, copying, mailing, shipping, etc., playing the role of utility stations in urban life. In Japan we do not have ATM machines on street corners that are accessible 24 hours a day. It is only in the past few years that banks started installing their ATM machines in conbini. Since then money transaction became possible at any time of the day. Paying telephone, gas, and electricity bills at conbini has been possible for many years. Including some services offered by local government and libraries, use of conbini as a kind of community kiosk has been developing.

■ 16. Most high school students from Tokyo continue to universities or other schools in Greater Tokyo area, which also attract many students from Osaka and other cities. Thus percentage of students in Tokyo area is quite large. On the other hand, big companies send their employees to different regions, which is the major reason for people to move out from Tokyo.

■ 17. Sales of weekly comic magazines has significantly dropped in the past few years, while paperback comics sales is doing even better.

■ 18. Low cost antenna/signal enhancer kits are widely used at cafes, bars and restaurants on basement floors to secure their customers. (People naturally avoid places with poor connectivity for meetings or gatherings. A notice such as "mobile phone connectable here" is often seen at the entrance of such basement eating/drinking places.) Battery life of Japanese mobile phones has become quite long. According to a recent survey, most Japanese users recharge their phones once a day, typically after coming home, and feel batteries that last for several days are not needed because they may mess up their habit of regular recharging. Battery chargers became significantly small and light, easy to carry in a pocket. Portable battery chargers with normal electric cells are available at "conbini" stores or telephone supply shops. They are small and light, often fashionably designed to use as key chains or "ketai strap". Some "conbini" stores also offer coin-operated instant battery charging service.

■ 19. Public transportation system in urban areas consists of combined network of JR (former National Railroad), private railways, subway and bus operated by local government, private bus lines, among others.

■ 20. Traditionally graduating from a known university means getting a better job, although it has been changing since the recent economy crisis. Entrance exams for universities and better high schools (or, even certain elementary schools) are very tough, while graduating is rather easy. Typically young people are under pressure as high school students to prepare for the entrance examination, and enjoy life once they are accepted as university students. Situation regarding education in Japan has many similarities to those in Korea and Taiwan. Such life style is closely related to the use of mobile phone among them.

■ 21. According to the latest survey on university students' life and their background, cost for education has been high. It is practically mandatory to take special after-school classes to be able to pass examination for universities. Because of the insufficient level of education in public high schools, 70% of students who are accepted to national universities are graduates from private high schools. (http://dir.biglobe.ne.jp/col/finance/ikujimoney/closeup/CU20040828B/index.htm) Private high schools are known for hard-to-clear entrance examinations and rather expensive school fee. In Japan, after-school classes have practically become a part of education system. Many high school students join preparatory schools ("yobiko") to prepare for university entrance examination. Yobiko are usually located close to major stations. Typically children in urban area start joining private classes ("juku") at the age of ten or earlier. Smaller scale "juku" are found in each neighborhood and offer rather flexible timetable. More established and competitive juku, to prepare for high school entrance examination, are usually located near major stations, both in central city and in suburb. Classes take place in the evening, from 6 to 9pm or so, to allow children from remote area commute after school. Often parents pick up their children at the nearest station. Mobile phones made such arrangements easier and more reliable.

■ 22. Although Japan is still a relatively safe country, women have been targets of sexual offenses and less important crimes such as snatching bags. These often happen as they walk or cycle home after dark.

■ 23. Young women's role in consumer market has been widely known in Japan. Picking up what young women regard "kawaii" is considered a key to success in Japanese market for younger generation. Women over twenty and have jobs or rich parents may enjoy traveling abroad and buying "brand" bags or clothes. However, their appetite for nice things and exciting experiences is the other side of still limited role of women in the society. They understand that they could enjoy life fully only when they are young, and that they are allowed to do so because they are more or less outside of the social ladder. The phenomenon of young women becoming more active and adventurous has been reported widely inside and outside Japan since late 1990s. For example, recent BBC produced short documentary on young Japanese women's life style, broadcasted in Finland in September 2004, illustrated the gap between young women's points of view and yet conservative social system.

■ 24. It is also observed in the way Finnish young generation, especially girls, use mobile phones, such as exchanging mobile phone photos. Significance of exchanging "emotion" on mobile phone communication is studied in detail in "Mobile Image" written by Koskinen, Kurvinen and Lehtonen, IT Press, 2002.

■ 25. See note 5.

■ 26. An accident that happened to a businessman in late 90s is an interesting example how mobile phone functioned as an extension of one's office. The businessman was speaking to his client while waiting for a train on a platform, as a product he had sold had some problems. He lowered his head repeatedly in a typical Japanese manner as he apologized, without noticing that the train was approaching. Luckily he was not killed. The case was reported on newspapers with warnings to mobile phone users.

■ 27. See the graph.

■ 28. It was known that the male population was much higher than female on BBS. (Thus there were male users who disguised themselves as young women to attract attention.) BBS appeared in Japan by late 1980s. PC-VAN and Nifty-Serve were major providers but there were many independent BBS networks as well. Users connected using dial-up connections, either on analog lines or more expensive ISDN lines. It was rather expensive as telephone fee is based on both connecting time and distance, while connecting speed was slow and access point was often far. Although it was still expensive for many students, introduction of late-night discount rate by NTT in 1995 was quite a success. To avoid the dramatic network slowdown around midnight, caused by the service, users started connecting very late. It created a new social problem of young workers and students falling asleep during the daytime. As the Internet became accessible and www became popular, many BBS systems moved to the Internet by the end of 1990s.

■ 29. It changed when in late 1900s the stylish iMac became the first popular computer among young women for its "kawaii" (lovely, cute) design. Many of them bought their first computers to run "PostPet", an interesting and very "kawaii" communication software developed by the artist Kazuhiko Hachiya and Sony Communication Network (SCN). On the other hand, the price, size and weight of laptops remained as a problem for many Japanese for years. As most young people spend little time at home and their rooms are usually small, laptop computers could be a better option. However, laptops were bulky and heavy to carry as one commutes, taking train and changing lines up and down steps at stations. The main stream of laptops came from US where they are designed for those who drive.

■ 30. JUNET, launched in 1984 by Jun Murai, became the basis of the Internet in Japan. It developed into WIDE Project in 1988, which bridged major Japanese personal computer networks to NSFNET. This made possible to send email to other networks. Acquisition of IP address became possible in Japan in 1992 for corporate users, but it was still very costly to introduce the Internet. Around 1994 access to the Internet became available for personal users, but only limited people started using the Internet from their home computers. Many students got access to the Internet around 1996 when universities started introducing the Internet. Internet service providers added access points nationwide in late 1990s to snatch private users from personal computer networks. Broadband connection using DSN became available and rapidly increased since 2001. Under such circumstance mobile phone has been often a more practical solution for the Internet connection.

■ 31. The rapid progress in messaging services took place around 1998 to 1999.

■ 32. There are reasons behind the importance of arranging meetings. Because of the limited space, home parties are not common. Instead people get together at cafe or restaurants or karaoke places closer to their schools or working places. While Japanese life style does not allow much free time, the size of urban area makes it difficult for people to stay in downtown until late. Already at 10:30 pm people start leaving in order to catch the last train home.

■ 33. This deposit (officially called "right to join telephone network") was introduced after the Second World War, to help building the infrastructure. It has been kept since then even though the network is already established. The one-time payment is far higher than its equivalent in other countries, such as 60 dollars or so in NY or 45 Euros or so in Paris according to a survey carried by the government. In late 90s NTT introduced an option to distribute the payment over years ("Lite" option") instead of one-time payment. Currently abolishment of the charge has been discussed. Since a user has to buy a line from NTT for any DSL connection, the system has been an obstacle for young people for enjoying the Internet. (CATV-based connection is usually more expensive than DSL.) Recently dealers are selling the "right" at a discount set price with DSL connection. Because of its value, the "right" is sold or mortgaged for cash at dealers that can be found easily in big cities when a line is no longer needed or there is an urgent need for money. Although there is no statistics available, obviously quite a few young people sold their "right" and switched from house phone to mobile phones. The market value of the "right" has gone down.

■ 34. A house phone number -- not a mobile phone number -- is often required for legal or financial processes. Earlier, banks and many public services had phone numbers that could be accessed only from house/desktop phones or payphones. The situation has been changing rapidly in the past few years to meet the reality.

■ 35. There is a term "May disease". New academic year starts in April, and then there is a holiday season in early May, before new comers find friends and establish a network. Not a small number of freshmen experience a psychological crisis at this moment as they have no one to meet during the holiday season, and they are not rich enough to go home after spending much money to set up a new flat. Some of them already drop out from school after the holidays.

■ 36. It depends on the provider. With Vodafone a call is charged on duration regardless of distance. Docomo and au have different systems.

■ 37. Especially in early spring mobile phone campaigns focus on family packages, as students and graduates start preparing for new life. According to recent statistics students living away from home list their family members as people they speak most frequently over phone. Today, with a typical package family members get 25% to 30% discount on the basic fee. Additional discount is often available with connection to a pre-registered number. How "family" is considered and where bills go in each service offers an interesting insight on Japanese society. Until recently - March 2004- NTT's package only allowed a family who shares the same family name, and all the bills were sent to the "main user" which usually means the father. Au's package has been more democratic without any distinction between "main" and "sub" contracts, also allowing different family names within a package.

■ 38. Ketai has become the major medium for "Deai-kei" sites (literally meaning 'meeting place", equivalent to "single" ads or party lines), which have always existed with different media and caused problems. Out of 785 criminal cases followed after access to such sites from January to June 2004, half of them were related to juvenile prostitution. 96.9% of the users involved in these cases used ketai to access to these sites. 80.5% of 625 victims were under 18 years old.

Appendix: Mobile phone history of a girl (A former graduate student in science from the University of Tokyo)

1996 (18, 1st year university student, biology major): Pager. Purchased with other girls to enjoy communication. Boys did not have pagers but sent coded messages from pay phones. Internet was accessible at the university, but no one had email address.
1997 (19): Switched to PHS. SMS between PHS users.
1998 (20): J-Phone Ketai (purple, monochrome display, SMS between J-Phone users)
1999 (21): J-Phone, Toshiba, white, monochrome, 3 polyphony, SMS, email messages from PC can be received up to 256 letters
2000 (22, graduate student): J-Phone, Sharp, white, color, 4 polyphony, camera, message up to 3000 letters (send&receive)
2000 (22): Docomo in addition to J-Phone (wider coverage was needed for field

works outside Tokyo) , SMS up to 24 letters
2001(23): J-Phone. Sharp, pink, folding type, camera (110,000 pixels)
2003 (25): Vodafon, Toshiba, camera (310,000 pixels), 64 polyphony, memory card
2004(26): Her friends use video/TV phones. She is considering switching to au, for better offers and design.

List Loving?! : Language of new media, or new media nuissance

Title List Loving?!

Subtitle Language of new media, or new media nuissance

Lead-in / Abstract I wish to look at what the mailing list offers by way of an art historical tool, what adaptations we might incur in order to use such a tool efficiently, and why mailing lists aren't acknowledged for the new media language generator that the undoubtedly are.

Participants and speakers Frost, Charlotte (GB)

Short biography of participants Charlotte Frost is the editor of Furthertxt a website which contextualises net art practice in a variety of text-based analytical ways. She also regularly writes for Rhizome the online resource for net art and new media based at the New Museum, New York and has written for Mute magazine and Net Art Review as well as The Tube's Platform for Art. She has just produced a guest selection for Low-Fi on list-serve related artworks. She is also working on a PhD on the historicisation of Net Art at Birkbeck College, University of London, with Dr Charlie Gere. Her latest projects experimenting in the production of net art critique utilising net art technology will be launched later this year.

Full text New Media arts debates centre on its separation from the 'mainstream' establishment, and how the history of art is unable to deal with it in the way it might when faced with object-based media. Subsequently the concern is that there isn't an adequate language of New Media either, with which to deal with the fluctuating demands of a New Media culture and provide an archive in the absence of institutional support. However this focus on the shortfalls of existing systems means that new, evolving methods aren't being adequately analysed or acknowledged. Little is being discussed about areas where New Media is being historicised, and languages are forming and instead, institutions often prefer to start up entirely new historical initiatives.

The mailing list is one such area and it seems bizarre it isn't more recognised because it is the lifeblood of New Media arts communities, being likened to Left Bank coffee houses, facilitating close collaboration, helping artists work as though they have adjacent studios, recreating the art college 'crit' and helping put the 'network' in net art. The most critical New Media comments, quotes and articles appear on lists because of their wider editorial remit and lack of commercially powered publishing and without them, you wouldn't know much of the art was even there!

New Media often bills itself as anti-establishment, suggesting by default that entirely new models must be created to deal with its distinct characteristics. However it might rather be that adaptations and reworkings of existing models can be used just as well, if not better than whole new systems, after all, New Media isn't all new! Its main source of validation is the text, something less anti-establishment or 'new' than one might have though. In fact, text is everywhere for New Media as critique and direct marketing, it facilitates curation by explaining the conceptual links between works, in an absence of physical proximity, and in the form of code, text creates the works themselves. So how can we say there is no language of New Media when the building blocks for this language are right there, in abundance, all over the web? And why shouldn't the art gallery of the internet be its text?

Despite the fact text does provide such a key validation system, placing such disproportionate emphasis on it, over the gallery or institution, still constitutes a shift and might require additional adaptations more aligned to this textual allegiance. However whilst pre-existing methods of analysis and critique can be adapted, I am also aware that this adaptation is going on almost unaided. Some of the processes forming via community facilitating technologies, might actually be generating answers to the very problems they pose.

I look at this situation in terms of an archaeology to explain the idea that communities might naturally adapt to the digital domain, and that existing bodies, might have to adapt too. History of Art for example seems somewhat buried by the layers of textual silt that the list is amassing, but with assistance, it too can develop

the relevant tools to negotiate new terrain. Whilst list dynamics, hampered by inadequate search facilities, awkward informatic aesthetic and archaic gender divide require diligent digging!

What I am therefore concerned with is, trying to understand what answer the list provides to the question of a language of New Media, how the list might be used by researchers and how we might adapt this form of knowledge creation further to better suit our research processes and technological abilities and desires?

Related internet addresses

http://www.faces-l.org
http://www.fibreculture.org
http://www.subtle.net/empyre

Location Based Mobile Games : Blurring the Borders Between Physical and Virtual Spaces

Title

Location Based Mobile Games

Subtitle

Blurring the Borders Between Physical and Virtual Spaces

Lead-in / Abstract

This paper investigates how location-based mobile games, known as pervasive games, merge virtual and physical spaces, changing our perception of urban environments. Games like Botfighers, Supafly, and Geocaching are descendants from multiuser environments, which formerly took place online. Cell phones equipped with SMS and GPS are responsible for bringing these online communities out to physical space. How urban circulation spaces transform into places? What are the effects of role-playing games in physical spaces?

Participants and speakers

de Souza e Silva, Adriana (US / BR)

Short biography of participants

Adriana de Souza e Silva is a Senior Researcher at the Graduate School of Education and Information Studies (GSE&IS / CRESST) at UCLA. She holds a Ph.D on Communications and Culture at the School of Communications in the Federal University of Rio de Janeiro, Brazil. Adriana's research focuses on how communication interfaces change our relationship to space and create new social environments.

Full text

1. Pervasive games: merging games with life

During the last decade, it was common belief that the Internet could be the ideal (non) place for community building, as long as users assumed they could create new identities, travel around the world without moving physically, and have no need for face-to-face interaction. Mobile devices, like cell phones, are responsible for bringing these communities out to physical space. The use of cell phones to play games incorporates the ludic characteristic of traditional multiuser environments, also bringing the imagination related to these "places" into urban spaces.

This imaginary playful layer that lies on top of the physical space changes our perception of the city, merging the borders between reality and fantasy. As these games are multiplayer, they also promote new types of interaction among users.

Pervasive games broaden the game environment because they occur anytime, anywhere. Not only is the game played outside the borders of a board, or a computer screen, but it also happens unexpectedly. Many developers have been waiting for sophisticated technology to implement mobile games. However, Swedish company It's Alive showed that a fairly good result can be achieved merely with cell phones equipped with SMS (Short Message Service) and location awareness. These two features allow important aspects of game playing: communication among players, and territory mapping. The mobile interface also eliminates the need for a specific place to play the game.

Botfighters is a pervasive game because it is dynamic, it is simple, and it is always on (unless the player turns the cell phone off, or decides to be unavailable for the game). Moreover, it happens "in between," that is, the player can be doing ordinary activities in life, but she is always vulnerable to a wireless bullet that can come when she least expects it.

To play *Botfighters* one goes to the game Web site [1.] and creates a robot, which is the user's avatar. The player can then arm it with guns and shields and go out on the streets. Soon one starts receiving SMS messages with specific missions to kill other robots in the vicinity. The cell phone is the interface that connects players and

creates the game environment. The user can send a "search [bot nickname]" message that informs her of the distance and direction in relation to the other bot. If she is within 200 meters, there is a chance that she might hit the robot (with basic weaponry). "With the default weapon you basically have to be in the same block as your opponent, but if you upgrade to the Laser Rifle you can be a sniper and hit your target at a distance of almost a mile" (*It's Alive press release,* 15 Mar. 2001).
Sending the "shot [bot nickname]" command produces a reply that tells whether or not the shot was successful. Often the user who shoots can get shots back from the attacked robot. The one who has the better equipment wins, unless the weaker robot runs out of range. The winner gets credits in the form of "robucks" with which she can buy armor, radar, and weapons for her bot on the game Web site.

Tom Söderlund (*It's Alive press release,* 21 Nov. 2000), It's Alive co-founder, affirms that the community aspect of any game is important; however, it is even more important in location-based games, because there is the possibility of interacting with people who are distant as well as with peers who are in the same neighborhood. Cell phones as interfaces are powerful because they move along with the users, therefore establishing a connection among players, and between players and the game space. Nevertheless, as important as the creation of a social space is the promotion of new imaginary spaces. In this context, the key part of a pervasive game is something that many games do not cater to: imagination. "We put the adventure all around you," explains Sven Hålling, It's Alive CEO, but "most of the excitement is in your mind" (id.).

Although *Botfighters* can be considered a "mere" action game, it changes players' experience of the space in which they live. Players reported that they started to take trips to unknown parts of the city, just to play the game (*Herald Sun*, 23 Jul. 2001). Therefore, the game not only transforms the familiar city space into the strange, but also stimulates users to go and discover unknown places.

Furthermore, some players really incorporate the transformation of physical space into the game arena. There is a taxi driver in Stockholm known by the nickname of "Taxi31" who spends all his time between fares shooting people. He has four phones in his taxi and his bills go up to $4,000 U.S. (Stroud, 08 Feb. 2002). "He's crazy," says Hålling, "he even brags on the Web site that he's driven 30 kilometers outside the city to get in battles" (id.).

With the aim to also target the young feminine public, the same company is preparing to launch *Supafly*[2], the first location-based soap opera. *Supafly*does not have winners per se. Players rise up or down in the virtual environment depending on whether their deeds are good or bad. If their actions are cool or evil enough, they get a story written about them in the online newspaper. The ultimate goal of the game is to become famous and to appear on the news.

In order to play *Supafly*, the player also must create a character on the Web site, but instead of arming it with guns and shields, she must give the avatar good clothes and fancy shoes. Moreover, unlike *Botfighters*, users can take advantage of the mobile positioning to really meet friends in the physical environment, instead of only shooting.

Another example of a location-based mobile game is *Geocaching* [3]. *Geocaching* is not played with a cell phone; it uses GPS devices as the game interface. The goal of the game is finding hidden caches in weird and inaccessible places with the aid of a GPS device. The first step is going to the Web site and finding where caches are located. The Web site has each cache's coordinates which the player must download to the GPS device in order to find the hidden object's location. The coordinates give the exact location of the object on Earth. *Geocaching* rules are fairly simple, yet the game is interesting because it focuses on exploring physical spaces, connecting people who have the same interests.

Nomadic technologies have a strong relationship to physical space, and the act of mapping space is extremely connected to mobility. *Geocaching* actually uses GPS devices to map territories and find "treasures," transforming the physical environment in which we live into an unexplored territory. The creation of imaginary spaces has been connected to the activity of travelers, who went to unknown places and mapped new territories. The well-known tale about finding hidden treasures in lost islands is particularly connected to this type of fantasy, in which one finds precious objects in unexplored spaces. The idea behind *Geocaching* traces back to travelers' movement through unfamiliar spaces. The geocacher also has to report back her discoveries on the game Web site (the center and known space of the game). *Geocaching* succeeds in using a nomadic technology in order to stimulate players to go to unknown places, map these spaces, and find hidden "treasures", much like old travelers did. The difference, however, is that *Geocaching* is played in the known environment. This movement of transforming the familiar

into the strange is what drives mobile games.

2. Games and imaginary spaces

The most important feature of pervasive games is blurring the borders between reality and the game. Pervasive games are massively multiplayer role-playing games (MMRPG) without the screen. They include characteristics from both traditional and online RPGs. Traditional RPGs are also played outside the screen. Like online multiuser environments, pervasive games connect people who do not share the same contiguous space. Like both traditional and online experiences, pervasive games use quite a bit of players' imagination. However, unlike earlier forms of RPGs, pervasive games happen while players are in movement.

As pervasive games do not strictly separate reality from imagination, they also deny some other common characteristics that belong to traditional games, like the time dedicated to **gameplay**. When playing a game, the player is entirely dedicated to this activity, disconnecting from other instances of life. Conversely, a pervasive game implies that it happens **simultaneously** to other activities in physical space. The game no longer has a playing time separated from the "serious life"; it happens **in between**.

MMORPG already offered some possibility to share the **gameplay** with life through multiple windows opened in the computer screen. However, nomadic technologies, when used as the game interface, are much more powerful in bringing the game into life, because users carry them wherever they go.

Although pervasive games do not immerse the player in a modeled digital world, like a traditional MMORPG, they are not completely played in the physical space. The imaginary layer that represents the game narrative, when overlaid onto urban spaces, creates a hybrid space through which the player can move, and which has the shape of the physical city but the mixed content of reality and imagination. Pervasive games are an example of how imaginary spaces can be created even within the known space, transforming the familiar into the strange.

Pervasive games always **take place** in public spaces. Using the cell phone, one can actually talk to people who are nearby, sharing the same physical environment. "Mobile phone technology can connect both a gamer with both other mobile phone users nearby through cellular positioning services (…), or with your friend that is halfway across the globe from you" (Sundgot, 05 Dec. 2000). Cell phones can therefore represent a new way of meeting people who live in the same environment, formerly just anonymous faces in the city space.

The unpredictability that belongs to these types of games also contributes to merge the borders between reality and the game. While in the city, one cannot foresee whom one is going to meet or what is going to happen. It is exactly this unpredictability contained in urban spaces that makes them so exciting as unexpected playful environments.

Games like *Geocaching*, *Botfighters*, and *Supafly* have the common characteristic of widening the game environment. The game arena is no longer confined to a board or to a computer screen. When the game board becomes the physical space which we inhabit, there is no longer the need for avatars or any sort of representation of the body, because users are already physically immersed in the game. These games are possible, among other reasons, because of the emergence of wireless interfaces, which allow players to keep in contact with others regardless of their locations, and help them to navigate physical space.

Many believe that games will be the "killer-app" for mobile devices. Henry Jenkins suggested that "games have been to the PC what NASA was to the mainframe – the thing that pushes forward innovation and experimentation." Cell phones, as more inexpensive and available technologies than PCs, promise to influence society and cultural activities even more. However, when creating content for mobile phones, it is wise to pay attention to the characteristics of the mobile interface, not merely transferring desktop PC activities to mobile devices. Understanding the mobile phone as a novel interface is the only way to embed it in society and to study its cultural influences.

Notes:

■ 1. Botfighters. (c) 2000-2004 It's Alive! < http://www.botfighters.com/>
(09 Oct. 2003).

■ 2. Supafly. (c) 2000-2004 It's Alive Mobile Games AB <
http://www.itsalive.com/supafly/demo>
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■ 3. Geocaching – The Official Global GPS Cache Hunt Site. Copyright ©
2000-2003 Groundspeak Inc. < http://www.geocaching.com>
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Dec. 2000. < http://www.infosyncworld.com/news/n/32.html>
(25 Jun. 2003).

Related internet addresses

http://www.geocaching.com/
http://www.botfighters.com
http://www.itsalive.com/

Locative Arts

Title	Locative Arts
Subtitle	Not provided.
Lead-in / Abstract	Not provided.
Participants and speakers	Hemment, Drew (GB)
Short biography of participants	...
Full text	Please see PDF file. The full text is available as an attachment. Please download it here.

Lust / Disgust : Online Pornography and Affect

Title	Lust/Disgust
Subtitle	Online Pornography and Affect
Lead-in / Abstract	For the past ten years, media researchers have focused on online erotica and cybersex, the possibilities of sexual self-expression, experimentation and play online ("e-rotics" and "cyborgasms"), while relatively little attention has been paid on the massive and highly profitable field of online pornography. Online porn,

varying from live shows to webcams, videos, photo and text galleries, is increasingly part of everyday Internet use, finding its way to inboxes as html spam, and forming the most popular search words on the WWW.

There is little doubt that pornography is both affective and effective, but there is less agreement over its meanings and implication. Porn relies on "gut reactions" in terms of arousal as well as disgust, and these reactions are inseparable from the workings of gender, class and race. This presentation, basing on analysis of 366 html porn spam messages, argues for the need to consider porn both in terms representation and affect in order to achieve a fuller understanding of the meanings of, and reactions towards pornography.

Participants and speakers

Paasonen, Susanna (FI)

Short biography of participants

Susanna Paasonen is an Academy of Finland Postdoctoral researcher at the Centre for Women's Studies, University of Turku, and docent of media culture at University of Tampere. She has authored and edited several books on Internet research, popular culture and women's studies, including Women and Everyday Uses of the Internet: Agency & Identity, 2002 (co-edited with Mia Consalvo), and the forthcoming Figures of Fantasy: Women, Internet and Cyberdiscourse (Peter Lang). Her current research focuses on issues of location in studies of the Internet.

Full text

Since the mid-1990s, Internet researchers have been interested in sex entertainment for women, possibilities for self-expression in web cam sites, or the subversive potential of role and identity play in erotic chats and other online exchanges. Cybersex applications, no matter how conceptual and sketchy, have been used to illustrate the novel possibilities for erotic computer-mediated explorations -- also within media arts, as in Stahl Stenslie's and Kirk Wolford's Cyber S/M, exhibited at Isea'94.

Studies of online pornography, not plentiful in amount, have focused on freedom of speech and censorship, child pornography, traffic in women, but also the possibilities provided by the Internet to redefine the gendered codes of porn and erotica.[1] Mainstream porn web sites and their ties to offline porn industry, again, have been left with relatively little scholarly attention.

Given that online pornography is the first profitable form of online content, that the porn industry distributes its products (from images to videos and live shows) increasingly online, and that the most popular key words for search engine searches have consistently to do with nudity and sex, the lack of scholarly studies on commercial online pornography is quite striking. To a degree, this can be understood through the branding of scholars doing research on pornography -- being labelled a porn scholar is not the most appealing of career profiles in a competitive academic market. More centrally, I believe that the lack of scholarly attention has to do with the tendency to emphasise novelty in studies of the Internet or "cyberculture" at large -- as is evident in the insistent tendency to consider the Internet as a "cyberspace" that is decidedly separate, and free from, the more corporeal lived realities, their norms and practices.

This selective focus on freedom and individual choice is well in line with the logic of capitalism[2]. **Zillah Eisenstein** has called identified it as cyberfantasy that emphasises freedom, choice and self-expression while disregarding the conditions, rules ands limitations involved in online communication, and issues of power in general. In her reading, such neo-liberal rhetoric feeds into the logic and practice of global capitalism, linking electronic media and the Internet in particular with promises of increased individual freedom, choice, and exciting futures[3]. Pornography may not fit in too well in such an optimistic scenario.

My current study on affect and representational conventions of online pornography aims to shift focus onto questions of normativity and power within and around Internet pornography. This study is part of a postdoctoral research project of both the Internet as a popular, commercial medium, and the interdisciplinary methods and questions that need to be posed in studies of the Internet. My approach to online porn concerns an interest to think about the power of representations through the notion of affect -- the power of images, texts and audiovisual materials to move us in very corporeal ways -- as well as the ways in which desires and preferences tie into systems of representation.

Slippery points of reference?

In terms of intellectual endeavour, pornography stubbornly escapes being pinned down, analysed and known: It is hardly breaking news that pornography does not address one's theoretical mind to the degree that it does one's libido. Pornography functions in the logic of attraction, spectacle and affect that do not fully translate into semantic models of explanation.

When thinking of reactions towards porn -- be they ones of arousal and excitement, guilt and shame, or disgust and anger -- it is quite impossible to bypass questions of affect. For pornography *is about affect*, gut reactions and sensory responses. Feminist scholars have paid attention to how class-specific notions of "good" and "bad" taste link to aversion towards pornography that fails to match middle-class norms of "proper" representation[4]. **Laura Kipnis** argues that the disgust exhibited by many feminists towards porn springs from a history of bourgeois desire to "remove the distasteful from the sight of society", which again links to a denial of the body, its orifices and desires[5]. While questions of taste and class are undoubtedly central here, I insist that feminist aversions have centrally to do with the *power relations* at the basis of pornographic representational conventions -- the lexicon of those who give and those who take, those who surrender and those who "take what is theirs". Which, of course, is not to say that the object of pornography would not be entangled with more affects than one.

In order to map this lexicon of mainstream heterosexual pornography, I carried out a detailed content analysis of 366 HTML porn spam messages sent to my personal university account between October 2002 and February 2004. My analysis included the characters, body parts and bodily forms represented in the images, the terminology used (of women, men, acts, genitalia), the ways in which the messages address their users and invite them "into the action".

While it is not viable to describe my analysis of spam here in any detail, the material clearly foregrounds male agency, pleasure and point of view -- both literally as point-of-view cameras, narrators and layout, and more generally as division into subjects and objects, bodies to be displayed and have things done to. Something is evident already in the terminology: women are described with a wider range of adjectives and nouns than men, the most popular ones including *girl, slut, babe and lesbian, while the selection of popular adjectives feature hot, teen, sexy and young. Women are described with nouns in 410 accounts, in comparison to which there are only 49 similar references to of men. Also their scale is narrower: men are named guys, men, studs, buddies and even brothers. As a rule, men are not defined with adjectives except when describing their penises (huge, big, thick, monstrous*) that tend to penetrate (*rip, tear, pound, split*) female genitalia (*tiny, tight, little*).

Pornographic terminology relies on a circulation of terms, settings and stock characters, and the basic vocabulary for describing heterosexual acts or desire illustrates the principles of heterosexual morphology, where female and male bodies -- the so-called "opposite sexes" -- are seen to complement each other all the way to their inter-connecting genitalia[6]. Genders are seen as mutually opposing, yet inter-connected by heterosexual desire. Faithful to this logic, pornography focuses on body parts marked as primary signifiers of gender difference: genitalia, breasts, buttocks, long hair and red painted lips[7].

When analysing a sample consisting of 366 examples, generic conventions, repeating terms and scenes become evident. This focus on repetition makes explicit the *scripts, stock materials, phrases and scenes* used in framing a scene as "a turn-on", and it also makes issues of address and power impossible to miss.

Repetition and scripts

Daily encounters with pornography on my computer disturb me as stylized displays of heterosex -- of ones who give and ones who are taken, ones who penetrate and ones whose faces are ejaculated upon -- that I *recognise* as a turn-on, but have failed to *experience* as such in my heterosexual relationships.

Pornography is disturbing, since it makes evident the degree to which our sense of things sexual is shaped by things seen and heard, in pornography as well as in the more respectable erotica, or romance for that matter. It makes visible how things felt as most personal (desire, excitement, fantasy) are also products of culture and society: we *learn* to recognise scenes and terminology as titillating, although these scenes might be far apart from that which we actually want to experience and experiment with.

This function of pornography as a reservoir of available moments, moves and lines can be thought of through the notion of *scripting*. Feminist studies of romance have pointed out the degree to which expressions of romantic feeling concern culturally available scripts of settings and situations, articulations of love, tenderness or passion, such as those drawn from media representations and negotiated in practices of courtship. One "writes oneself into love" by incorporating personal moments, events, emotions and experiences into such scripts -- like with romantic walks in the moonlight or passionate romantic-sexual encounters that cross the boundaries of "representation" and "lived experience".[8]

Similarly, the notion of *pornographic scripting* helps to map the blurred boundaries of the personal and the social/cultural: be it couples who "talk dirty" during their intimate moments, or people taking part in erotic chats who want to mediate sensations, expressions of arousal or climax. There is not necessarily a huge degree of variation involved in expressions of desire, or things recognised as a turn-on, but this is not to say that pornography as if "programmes" or simply conditions people to respond in a certain way, or to desire certain things.

Rather, the question concerns the legibility of intimate moments and acts: their representation is tied to cultural norms and institutions concerning gender and sexuality *in order to be legible to others as well as to oneself*. For example erotic chats, with their onomatopoetic expressions of seduction, pleasure, arousal and orgasm are hardly "free" expressions of an authentic, inner desire. Desire becomes narrated in relation to various scripts that again shape articulations of individual desires.

I find it important to insist on the politics of representation and the productivity of pornographic texts -- to make visible their limits, norms and scripts in an attempt to think differently about representations of sexuality that, in the context of pornography, are explicitly about power. Pornography is not synonymous with sexuality or sex, even if it easily read as such: porn produces representations of certain kinds of settings, acts and relations as a "turn on" and iconic to things sexual. Once its scripts and stock materials are recognized, however, it becomes easier to figure different kinds of ways of depicting sexual acts and "titillating" scenes without -- or so I hope -- the need to reproduce and reinforce male heterosexual control over female bodies or desires, or white hegemony and "Latin fantasies", not to mention the spectacle of "Black bros white hoes" (to use one of the sites advertised in my sample).

Porn and power

Pornographic images and texts do have some power to move me, and these encounters with pornography are disturbing and unsettling in the sense that they open up difficult questions concerning what we desire, what we think we desire and what other things may still move us in most bodily ways. In other words, attractions of pornography are also something quite out of one's intentional control.

The body and embodied practices have been seen as one of the rare arenas available for self-expression and self-definition in a postmodern culture controlled by the markets and mass production, but this hardly makes embodied practices an arena somehow outside things social, economic or political. While it is appealing to think of things private and affective as separate from the realm of media, business and representation, this is nothing but a bias in perspective, or even a form of denial that bases on individualistic belief on autonomous subject. Sexual self-expression, in its deviant and less deviant forms, and the desires articulated through them are crafted from the cultural fabrics and scripts available to us. Pornography provides templates for desire and its articulations, and the degree to which it does so is not necessary open to individual decision or control.

As pointed out by **Annette Kuhn**, porn has the affective capacity to "produce gut reactions -- of distaste, horror, sexual arousal, fear", which makes it particularly difficult to approach analytically[9]. Gut reactions bring pornography to the realm of the personal, the sensory and the embodied: we *feel* pornography in our bodies, but this is not to say that discussions on pornography, affect and interpretation should remain on the level of individual experience.

Personal experience and enjoyment of porn is often used to discredit feminist critiques of pornography from the 1970s, as well as critiques of pornography in general. This is especially the case with overviews on the meanings of pornography targeted at a wider readership: they tend to figure anti-pornography feminists as others that fails to address the multiplicities of desire and enjoyment involved with

porn. Women enjoying pornography are posed as evidence of the shortcomings of anti-pornography feminists, as are the experiences of men using pornography who claim not to enjoy scenes of female humiliation or non-consensual sex[10]. The argument is simple, even simplistic: if people insist that their preference for women in bondage or sex with dogs has little to do with gendered relations of power, then this must also the case[11]. Such an understanding of individual autonomy, desire and power is evidently shallow and de-contextualised. It presumes voluntary subjects capable of separating themselves from relations of power, as well as separating fantasy from lived reality. Unlike such a scenario would have it, personal enjoyment does not excuse -- or make disappear -- issues to do with power and politics would somehow disappear.

Individual fascinations, desires and fantasies are never isolated from representations of sexuality: rather than mere manifestations of some inner impulse they are *relations* between people, texts and artefacts. In this perspective, the question concerns the inter-connections between desire and power: the scenarios and imageries we find stimulating, and their connections to representations of sexuality, gender, race, age, class and nationality.

Brief conclusion

Porn is increasingly part and parcel of everyday media environment. In terms of affect, this has numerous consequences. As something encountered daily, pornography becomes something "not at all special", banal and everyday. And as pornographic imageries “penetrate” the fabric of everyday life, it becomes necessary to investigate what this means in terms of sexuality, media and power. This, again, necessitate analysis of actual pornographic texts, their scripts and norms, are we to gain fuller understanding of how they feed into representations of gender and sexuality in various arenas of media culture.

The notion of affect enables a discussion on the power of pornography that does not remain on the level of individual experience or fantasy, nor assume that pornography only evokes sexual arousal or curiosity. Rather, the focus shifts on different emotional investments, what we might find desirable and what else has the power to move us. Insistence on pornography as representation, again, raises the question of what implications these fascinations and dissatisfactions may have: the kinds of scenarios that we “buy into” when consuming porn. This, again, links to the political investments of insisting on the centrality of the material conditions of porn production and consumption (porn industry, performers and the kinds of acts they perform) that refuses to separate pornographic texts from their origins, and also makes consumers accountable for the scenes they consume.

■ 1. For these studies, see respectively Charles Ess, “Philosophical Approaches to Pornography, Free Speech, and CMC. Cyberspace as Plato's Republic: or, why this special issue?” *Computer-Mediated Communication Magazine* Vol. 3, No 1/1996 at http://www.december.com/cmc/mag/1996/jan/ed.html;
Chuck Kleinhans, Virtual Child Porn: The Law and the Semiotic of the Image. In Pamela Church Gibson (ed.), *More Dirty Looks: Gender, Pornography and Power*, 2nd edition. London: BFI 2004, 71-84; Donna Hughes, The Internet and Global Prostitution Industry. In Susan Hawthrone and Renate Klein (eds.) *CyberFeminism: Connectivity, Critique & Creativity*. Melbourne: Spinifex 1999, 185-121; Marjorie Kibby, Women and Sex Entertainment on the Internet:
Discourses of Gender and Power. *Mots Pluriels N:o 19/ 2001 at, http://www.arts.uwa.edu.au/MotsPluriels/MP1901mk.html;*
Marjorie Kibby and Brigid Costello, Between the Image and the Act: Interactive Sex Entertainment on the Internet. Sexualities: Studies in Culture and Society Vol. 4 Issue 3 2001: 353–369; Kate O'Riordan, Windows on the Web: The Female Body and the Web Camera. In Mia Consalvo and Susanna Paasonen (eds.), Women and Everyday Uses of the Internet: Agency & Identity. New York: Peter Lang 2002, 44-61; Amy Villarejo, Defycategory.com, or the Place of Categories in Intermedia. In More Dirty Looks, 85-91.

■ *2. Cf. Donna Haraway, How Like a Leaf: An Interview with Thyza Nichols Goodeve. New York: Routledge 2000, 53-54.*

■ *3. Zillah Eisenstein, Global Obscenities: Patriarchy, Capitalism, and the Lure of Cyberfantasy, New York: New York University Press 1998.*

■ *4. Annette Kuhn, The Power of the Image: Essays on Representation and Sexuality. London: Routledge 1985/1994, 20-21.*

■ *5. Laura Kipnis, Ecstasy Unlimited: On Sex, Capital, Gender, and Aesthetics. Minneapolis: University of Minnesota Press1993, 226.*

■ *6. Diane Richardson, Heterosexuality and Social Theory. In Diane Richardson (ed.), Theorising Heterosexuality: Telling it Straight. Buckingham: Open University Press 1996, 6-7.*

■ *7. See Kuhn 1994, 34-37.*

■ *8. Cf. Jean Duncombe and Dennis Marsden, "Can Men Love?": "Reading", "Staging" and "Resisting" the Romance. In Lynne Pearce & Jackie Stacey (eds.), Romance Revisited. London: Lawrence & Wishart 1995, 238–250; Jackie Stacey and Lynne Pearce, The Heart of the Matter: Feminists Revisit Romance. In Romance Revisited, 13-15; Lynne Pearce and Gina Wisker, Rescripting Romance: An Introduction. In Lynne Pearce and Gina Wisker (eds.), Fatal Attractions: Rescripting Romance in Contemporary Literature and Film. London: Pluto Press 1998, 1-19.*

■ *9. Kuhn 1994, 21.*

■ *10. Laurence O'Toole, Pornocopia: Porn, Sex, Technology and Desire. London: Serpent's Tail 1998.*
■ *11. David Loftus, Watching Sex: How Men Really Respond to Pornography. New York: Thunder's Mouth Press 2000.*

Me, Mycell and I : technology, mobility and social life

Title Me, Mycell and I

Subtitle technology, mobility and social life

Lead-in / Abstract Progressive privatization of modern individual has led to the new definitions of privatized public space. Social independence has led to communicational gaps which have promoted current TCIs, as well as dreams of mobility associated to them. The impact of those machines in social life is proportional to the effect of social life on machines.

Participants and speakers Marzo, Jorge Luis (ES)

Short biography of participants Independent curator and writer. Usually works on issues about culture, politics, art and technology. I've been recently working (for the last 3 years) on a show (Indivisuals) and on a book about relationships between portable technologies, mobility, individualism and the creation/suppresion of social spaces (Me, Mycell and I: Technology, Mobility and Social Life). In next Fall, a project on these matters will be developed at the University Pompeu Fabra along with engineers and designers in order to research on special features of portability. In January Arteleku Center in San Sebastian will host a special symposium on these issues carried out by sociologists, artists, philosophers and technology investigators. Last curatorial works are: Tour-isms (2004), Heart of Darkness (2003), In the side of TV (2003). Last on-line projects are: www.web-side.org (devoted to Interface), www.indivisuals.org (on technology and social life) and www.videoscopia.com (on surveillance)

Full text

Intervention (lecture) for the ISEA 2004 (Wearable experience)

By **Jorge Luis Marzo** (Barcelona, Spain)

The intervention proposed here is related to a host of questions arising from the verification of an epidemic, which by now is widespread: the celebration of the technological phenomenon as capitalism's maximum achievement and, conversely, the extolment of technology as the utmost social architect. Before expanding on this we need to determine, if at all possible, what technology we shall be referring to, and establish what social domain we are focussing on.

The forms of technology we shall be discussing here are those provided for public use, essentially concerning audio-vision and communication and which entail a radical transformation of their appearance (interfaces) in order to reach the great mass of potential audience (marketing), according to the modes of individualised interaction in a world where attention to detail makes all the difference and adds surplus value.

The social domain is none other than the triumphant definition of the individual in the second half of the twentieth century, invested with the power of privacy, freedom of movements and ethical dispersion. In this sense, we are not pointing out anything new but merely analysing the scope of the concept of the contemporary individual in the light of a renewed form of capitalism, legitimised by the force of individual decisions.

In this realm of work we already encounter two of the paths we wish to follow:
-Firstly, Can we establish that social, personal and micro-political relations in the West have changed as a result of the progressive introduction of personal individualised mechanisms of communication?
-Secondly, Does this only apply in the West? Is the fire of globalisation kindled by the impact of such intimate communication technology? Let's hear what the founder of Sony said in the sixties: "Radios, small enough so each individual will be able to carry them around for his new use, with power that will enable civilization to reach even those areas that have no electric power yet."

Could we also suggest that the situation of capitalist individuals, more and more removed from their social environment and potential capacity for socialisation, has given rise to the emergence of technology for individual use?

Could we say it is the isolation itself that has triggered the success of these forms of micro-technology, as a new opportunity to create communication channels while breaking the dynamics of isolationism so clearly established in recent years?

To what degree was Durkheim right to presume that "individual forms of consciousness, in themselves, are closed off from one another and can only communicate by means of signs that convey their interior states"? Is it symptomatic that Bell and other researchers studying the telephone should have hit upon the invention thanks to their interests in the art of teaching the deaf and dumb to speak?

The use we make of technology stems from social decisions that, intrinsically, reproduce the socio-political nature that initially shaped them. It thus becomes very interesting to heed the comments defining the archaeology of the links between technology and behaviour: "Videogames do not affect children. If they did and the Pacman had affected us when we were kids we would now be wandering through dark places, eating magic pills and listening to repetitive electronic rhythms", said Kristian Wilson, Spokesman for Nintendo Inc., in 1989.

These are the fundamental issues we shall be raising. It is not a matter of speculating on conspiratorial theories or mercantile intrigues (that we all know to proliferate), but of carefully observing processes and dynamics that must have indelibly marked the complex relations between technology increasingly given over to reason, and the desires of each individual. Of course we do ask ourselves what came first, the chicken or the egg; either modern isolated individuals in need of social connection as their work environment gradually closed in and their class struggle lost prestige while a fascinating media world opened up, or the achievements of a certain type of technology and companies that have remarkably transformed our social and relational habits.

The number of telephone calls made in Spain today has increased by 40% with regard to twelve years ago, exactly since the appearance of mobile phones. Why is this? Did people keep calls to themselves before mobiles appeared? Or do we now have more to say? And what could we spare saying? Many conversations nowadays entail a biographical account. A repeated question is, Where are you? This necessarily implies numerous and hitherto unforeseen interpretations and decisions. The biographical account seems to be confused with the need to convey experiences, particularly in the teenage sector, which is the prevailing model in current audiovisual discourse. As appears in a well-known television advertisement (has anything interesting happened to you this weekend?), what is stressed is the failure of common social experience and the success of narrative biography. Just as two people sitting in a bar share their life stories as if they were good friends.

What explains the success of the Walkman? Does technology create new necessities or is it the necessity that leads to the technology? In the fifties Akio Morita, founder of Sony, wrote: "We do not market a product that has not been developed already but develop a market for the product we make." And in 1964 Nobutoshi Kihara, creator of the first Sony video recorder, declared: "Technology does not abide by common sense. Our goal is to break down ideas people have come to accept as common sense."

Conversely, the technological discourse has had an indirect effect on the consideration of public space, understood as a place of both individual and group

socialisation. Many analysts have defined contemporary public space as a scenario in which a series of actors mill around, creating communications that audiences cannot codify: private actors assuming secret rôles on their mobiles, walkmans, bleepers, etc., rôles that alter the idea of a common libretto in which all can take part, a network of fluxes that favours communication between the actors at the cost of the disappearance of the work of art and its debate. "Disused public space is a reason, the most specific of reasons, for people to seek in the private sphere what they have been denied on a different level. Isolation in the midst of public visibility and emphasis placed on psychological transactions mutually complement one another", Richard Sennett said. But, is this statement still valid?

The de-socialisation of certain public spaces thanks to the introduction of technology has already been very well researched, although it would be unwise to paint a bleak picture of this situation. What is needed rather is an exercise in archaeology, an exercise that will provide us with sufficient distance to face the problem of technology from outside as well, or at least outside of the gadget of the moment.

The prophets who accuse technology of being dehumanising, both from left-wing and right-wing positions, do not acknowledge the existence of certain circumstances derived from its introduction, namely, that to a great extent the application of technology in rural areas helped to structure wider social circles; that before the advent of sound, silent film represented a wonderful opportunity for the social expression of the working classes and was subsequently adopted by the bourgeoisie, who pressed for silence in the theatres; that juke-boxes did much to favour the socialisation of a certain type of bar with a dance-floor, thus enabling people with low incomes to create their own recreation areas, away from the prohibitive dance-halls; that the installation of the cinetoscope in the Penny Arcades gave rise to new spaces of social communication; that the arcades with video games and consoles created very positive spaces of socialisation for the future arrival of youth culture based on games and interaction, and that while funfairs homogenised patterns of behaviour and perception, they also entailed a renewed space of social liberation outside of the realm of work, just as discotheques did in more recent periods.

On the other hand, the chief advocates of technology do not acknowledge a number of significant problems caused by its impact, namely, on the scope of women's labour (secretaries, typists, telephonists, etc.); on the scope of workers' social sanctions; on the obvious militarisation of everyday life, particularly on our ability to perceive at long distance and on present communication interfaces; on the talent of marketing for generating desires that are for the most foreign to people's true needs (electrical appliances, for instance).

The discourse of contemporary marketing addresses an individual who, not having found a social narrative to identify with, voluntarily chooses isolation. This faith in the individual who is answerable to himself and is therefore legally identifiable, would lead to the introduction of hire purchase for the increased growth of communication devices in the fifties, especially radio and television, giving rise to the big bang of marketing.

This discourse is also aimed at domesticity. Capitalism brings people together in their houses, at "home, sweet home", place of shelter from the social violence generated by capitalism. The introduction of domestic technology would give rise to huge changes in the private management of spaces by individuals. Thus, electricity, gas, sewers, etc., would transform homes, as the creation of bathrooms, separate bedrooms, etc., modifying our understanding of sex, leisure and intimacy. The transformations in the American homes of the fifties included the renovation of kids' bedroom at the time of the development of the wireless; bedrooms then went on to house a musical culture stimulated by radio manufacturers and broadcasting stations. In 1882 electricity also replaced gas in street lighting. The use of electric light in large city buildings enabled their interior spaces to become even more functional and independent from the windows looking on to streets. In the long term it would be possible to do away with windows completely in buildings equipped with uniform electric light. The new technology broke the necessary link between interior and exterior illumination existing in earlier constructions.

Marketing today addresses individuals and families. Moreover, when it addresses companies it stresses values such as security and secrecy, not so much in Cold War as in domestic terms. The mobile individual is now a worker 24 hours a day, while he/she is on-line. In fact, he/she doesn't know where work begins and leisure, or privacy rather, ends.

Reliable American sociologists have studied in depth how the Internet has made a fair amount of American teenagers, difficult to place within a specific social class, feel "productive". In some polls, seven out of ten of those under the age of

eighteen regard themselves "poorly treated" because they're not earning any money for the time they spend on the Internet. Steven Jobs cannot envisage his Apple empire without the impact of video games. "My skill with video games led me to devise something else." Is there much difference?

Capitalism addresses families. Yet all recent European sociological reports verify the disappearance of the family. 40% of British marriages end up in divorce. What family is it addressing?

Capitalism is defined nowadays by mobility. Raymond Williams argued that domestic technology needed to be understood in terms of a long historical process that he labelled "mobile privatisation": we have at once become more mobile more private. Means of transport, portable interfaces, the dissociation from the common symbols stemming from a past imposed by tradition, the growth of a strategic global liberalism that focuses on individuals fit for movement and punishes territories and people tending towards sedentary lifestyles.

All these issues are the background of this intervention. So, main arguments are:

1) Progressive privatization of modern individual has led to new definitions of public space: the privatized public space.
2) Social independence has led to communicational gaps which have promoted current Technologies of Communication and Information, as well as dreams of mobility associated to them.
3) The impact of those machines in social life is partly proportional to the effect of social life on machines. If so, can users decide about the course of some technologies?

This last question will allow us to convey all these matters. Given this background referred above, to what extent industries and designers do really know what they're doing? Is technology merely shaped by the industry just following a sort of granted and natural functions of machines? Or are technologies being modelled day by day by users in the context of their social practices? The history of many technologies seems to go in this last direction. PC, mobile phones, the walkman, screens or videogames and many other machines did not appear as fix as we think: they happened to be because users changed somehow the functions that those gadgets were designed for. Social practices and uses, depending on the their own contexts, have always had the strength of changing the real meanings of machines, and at the same time, have had the power of balancing the usual motivation of industries towards standards and global interfaces. Portability, wearability and mobility have to be observed in the crossroads of enormous tensions between different social practices and the main category of technology circulation: standardised interface.

Related internet addresses

http://www.web-side.org
http://www.indivisuals.org
http://www.videoscopia.com

Media Centre Lume

Title Media Centre Lume

Subtitle Not provided.

Lead-in / Abstract Not provided.

Participants and speakers Eskelinen, Elukka (FI)

Short biography of participants Not provided.

Full text Not provided.

Mediated Spaces : Prototyping Architecture-Engineering Media

Title Mediated Spaces

Subtitle Prototyping Architecture-Engineering Media

Lead-in / Abstract Mediated Spaces are architecture investigations by aether architecture in various collaborations. Focusing is on design research relating to spatialities both in actual and virtual environments with a driving force to create a valid architectural response to the rapidly changing social spaces of our society, where information has dramatically altered our perception and understanding of spaces.

Participants and speakers

Hudini, Peter (HU / ES)

Somlai-Fischer, Adam (HU / SE)

Short biography of participants

Aether architecture is an adventurous architecture practice and collaborative by Adam Somlai-Fischer, Peter Hudini and Anita Pozna.

Focusing is on design research relating to spatialities both in actual and virtual environments with a driving force to create a valid architectural response to the rapidly changing social spaces of our society.

Such new architectures are not yet present, so to test the new experiences, our investigations are carried out through the making of architecture prototypes, installations that embed both physical design and engineering as well as computer programming and graphics, etc to various degrees. Media design utilizes low-tech solutions by re-appropriating existing tools and technologies for new functionalities.

Presented here is our major research project, Indukció Ház, an umbrella for a set of installations, focusing on related issues. Conceptual, structural and software modules are developed an re-configured through different spatial and media setups.

For the installation at ISEA we were delighted to have Bengt Sjöjén, independent gaming technology researcher collaborating on the openGL+computer vision interaction.

Full text

Development process

Model of work is borrowed from complexity science - systems thinking. Several modules of concepts and constructions are produced, informing each other back and forth, developing as a whole system with no pre-set hierarchy. The conceptual structure develops and changes in relation of the building process. On the threshold of architecture, media design, engineering we try to talk about a new and different relationship between technology and design. The role and effect of technology reveals a more profound relation between design and design tools, and to quote Vilem Flusser here: we try to "turn the automatic apparatus against automation".

Malleable Space

One specific aspect in our work is that many interaction designers or researchers develop a very interesting interaction model, than apply it on a very generic form (screen, interface, furniture), not to take attention away from the interaction. We have a strong interest in developing new structures that carry digital information as low as in materiality or structural qualities.

In our interactive spaces, we are interested in sensing human traces on two levels (eyes of information without mouse or keyboard); through wearable electronic devices and their electronic traces, and through body movement and presence

Prototyping architecture – Engineering Media

To find new qualities we rely on experiments and testing on a 1 to 1 scale, rather than using the traditional methods for representation. Even if building installations has physical limits in scale, the hybrid experience becomes real.
The physical structure has mathematical and computational inner logic, it becomes generated and processed form. It has to function as physical structure as well as a projected structure.

The projection becomes volumetric, the physical structure is dissolved in the flux of interactive media, and media become actual and spatial. The interaction we create is symbolic, not really trying to function or process information, but to transform the physical entity in a non physical way.

Low Tech

Example: In the first two versions we used our own non-efficient technology, the Morse-mouse. Due to our limitations in programming and hardware skills, we use

Flash as a projection engine, and to interface this program to sensors, we use a computer mouse, and a small device that is clicking Morse code messages on the Mouse button, where flash is listening to those. A human protocol on a human interface.

Low tech and DIY technologies as a strategy can allow architectural scale visions, at least for a transitory state (http://www.aether.hu/outsidein.htm)
It started out as a necessity and became a choice for our technologies. Trough constant re-appropriation of existing technologies we create new interfaces that hold connotations towards their original use, so stay familiar, but misplaced in a new context. In the near future we hope to test some larger scale experiment with using such mass produced technology and change it for architectural purposes.

Factual data

about the previous Induction House V1 and V2 and V3 at ISEA2004

Induction House V1
Structure dimensions: 100 by 100 by 60 cm
Structure materials: Steel and textiles
Structure resolution: 20 stripes
Structure algorithm: a sliced flat plane unfolded, creating a 100% projectable continuous surface

Projected Media: 6 artificial agents
Sensors: electromagnetic field sensor (sensing mobile phone usage) and a set of light sensors (sensing shadows of hands)
Interaction: mobile phone calls change electronic weather - projected color temperature
visitors placing their hands into the structure attract artificial agents
Exhibited: 2003 October, Kunsthalle Budapest, "in-between", group exhibition on contemporary Hungarian architecture

Induction House V2 (distributed projection structure)
Structure dimensions: 600 by 300 by 170 cm
Structure materials: Steel and textiles
Structure resolution: 300 physical pixels
Structure algorithm: a matrix of pixels moved along the projectors light, creating a a 100% projectable volumetric structure

Projected Media: 3D flows
Sensors: ultrasonic sensors measuring visitors presence and distance
Interaction: spatial flows changed by approaching visitors

Exhibited: 2004 April, Kiasma, Helsinki, Pixelache audiovisual architecture festival
Induction House V3
Structure dimensions: ~ 800 by 400 by 200 cm
Structure materials: Carbon fiber, Steel, Plastic
Structure resolution: ~400 physical pixel-folds

Projected Media: 3D flows
Sensors: spatial computer vision
Interaction: spatial flows changed by approaching visitors, swirling as clouds or mist

Exhibited(upcoming): 2004 August 13-23, Galleri U, International Symposium in Electronic Arts, Helsinki and 2003 September 9-November 9 Venice Biennale of Architecture, Hungarian Pavilion

Related internet addresses

http://www.arch.kth.se/mediatedspaces
http://www.aether.hu/
http://www.aether.hu/inductionhouse

Memoires of a Testee : recorded recollections at Braintec

Title

Memoires of a Testee

Subtitle

recorded recollections at Braintec

Lead-in / Abstract

Braintec is an American technology company specialized in brain implants. On the website *Memoires of a Testee* – recorded recollections at Braintec, **Rosanne van Klaveren** and some other test subjects write diaries about their experiences in memory research. This way, Rosanne represents the oldest art of human history:

telling stories.

Participants and speakers van Klaveren, Rosanne (NL)

Short biography of participants

Educations:
1995-1999 - Artschool Arnhem, dept. Liberal Arts
1999-2001 - MFA Post-St Joost Photography, Breda

Earlier Braintec exhibitions:
- Digital Exposure #3, Den Haag, Netherlands
- Madrettor Festival, Rotterdam, Netherlands
- GRIP, Vleeshal and Nieuwe Vide, Haarlem, Netherlands
- Avecom REAL, Museum voor Moderne Kunst and Gele Rijder, Arnhem, Netherlands
- FILE2003, Sao Paulo, Brazil
- Ciberart, Bilbao, Spain

2002 - ISOC Award Internet and the Arts
2003 - Nomination International Media Art Award, ZKM, Karlsruhe

Full text

Braintec is an American technology company specialized in memory research. Rosanne van Klaveren is the first woman with a MESI-implant. On her site *Memoires of a Testee* – recorded recollections at Braintec, she and other imaginary visitors write down their experiences as test subjects. Every Friday Rosanne published the continuation of her stay at Braintec, together with the diary-fragments sent by the other participating test subjects. In this way an interactive story in serial form was created which could be read and also be influenced.

At the moment many artists are moving in between fact and fiction. What is for real and what is not? Personally I'm rather interested in the experience corresponding with this. When do we experience something as reality? And do we really experience a story so much differently as soon as we know it is fiction? I share the vision of **Roland Barthes**. "No culture on earth can survive without stories", he argued. "This juggling of facts from daily life is an essential part of identity of mankind." For ages human nature was in need of stories to survive in a reality which seemed too seriously. I wonder if we rather prefer a pseudo-reality above the truth.

Through films and books we form our opinion about ethical matters such as cloning and genetic manipulation. In general, culture and visual arts in particular, prepare us for what will happen in future. With Braintec I try to start discussions about the influence we have on our imaginary world. Furthermore I am in search for new, interactive ways of telling stories.

Related internet addresses

http://www.humanupload.com
http://www.braintec.info
http://www.proefpersonen.nl

Memory Rich Clothing : Wearable Technologies and Reactive Fashion

Title Memory Rich Clothing

Subtitle Wearable Technologies and Reactive Fashion

Lead-in / Abstract

As designers of wearable technologies, we need to step back and ask why we want our fabrics to be electronic. What kind of information processing do we want to carry out on our bodies? What kind of functionality do we want to enable inside our clothes? The clothing and electronic industries are looking for the killer application, the next big thing that will introduce wearable computing to a mass market. However, many research directions are misguided. The focus on health monitoring and surveillance technologies clearly reflects the military funding structures and fails to deliver appealing product ideas that respond to personal, social and cultural needs.

The killer app for wearable computing is to convey personal identity information. This is called fashion and it is mostly visual.

I will talk about one of my research projects called Memory Rich Clothing: Garments that Display their History of Use (or Second Skins that Communicate Physical Memory). This project deals with the fact that physical objects become worn over time and carry the evidence of our identity and our history. Digital technologies allow us to shape and edit that evidence to reflect more subtle, or more poetic, aspects of our identity and our

history. This work focuses on the research and development of reactive garments that display their history of use. We employ a variety of input and output methodologies to sense and display traces of physical memory on clothing. We will ask, how can an object have "memory"? How can an object be altered through interaction? What kind of interactions are appropriate to give physical memory to a wearable object? What is the difference between PASSIVE and ACTIVE interaction (manipulation versus sensing)? Who do we want to communicate with or to?

Participants and speakers Berzowska, Joanna ("joey") (PL / CA)

Short biography of participants Joanna Berzowska is an Assistant Professor of Design Art and Digital Image/Sound at Concordia University in Montreal. Her work and research deal primarily with "soft computation": electronic textiles, responsive clothing as wearable technology, reactive materials and squishy interfaces.

She is the cofounder of International Fashion Machines, where she developed the first electronic ink wearable animated display and Electric Plaid, an addressable color-change textile.

She received her Masters of Science from MIT for her work titled Computational Expressionism. She worked with the Tangible Media Group of the MIT Media Lab on research projects such as the musicBottles. She directed Interface Design at the Institute for Interactive Media at the University of Technology in Sydney. She holds a BA in Pure Mathematics and a BFA in Design Arts.

Her art and design work has been shown in the Cooper-Hewitt Design Museum in NYC, SIGGRAPH, Art Directors Club in NYC, Australian Museum in Sydney, NTT ICC in Tokyo and Ars Electronica Center in Linz among others. She has lectured about the intersections of art, design, technology and computation at SIGGRAPH, Banff New Media Institute in Canada and Interaction Design Institute Ivrea in Italy among others.

Full text Please see ISEA2004 Catalogue for full text.

http://www.isea2004.net/mainframe.php?id=proc_print

Related internet addresses
http://www.ifmachines.com/cooperhewitt.html
http://www.berzowska.com/lectures/isea/
http://hybrid.concordia.ca/~joey/research/fablic-display/index.html

Mobile phone music : Ring tone culture and the mobile phone in Sound Art

Title Mobile phone music

Subtitle Ring tone culture and the mobile phone in Sound Art

Lead-in / Abstract Mobile phone music requires a focus on sound as well as on mobile phones ? but it does not necessarily involve ring tones. A mobile phone is not only a telephone, but also a computer, able to transform any kind of data into sound. New data can be basis for artistic sound work. This development reflects current social change.

Participants and speakers Behrendt, Frauke (DE)

Short biography of participants Research on mobile phone music. She received the Digital Media Award from her university. Her work obtains international recognition and is published in 2004.

Full text

What is mobile phone music?

Ringing mobile phones are always the first association with the term mobile phone music, but ring tones are not necessarily part of sound art with mobile phones. In the art work *Tet.FM*, for eample, tet messages are transformed into a radio collage. [1] In **Wagenaar's** *Kadoum* heartbeats, transmitted via mobile phone, are the basis of a choral performance and an installation with murmuring water. [2] Thus, a minimal definition of mobile phone music requires a focus on two components: sound as well and mobile phones. Still, ring tones are the most striking sonic impact of mobile phones, and a lot of artists include them in their work. **Levin** played with the taboo of ringing mobiles in institutions of high culture by using the audiences' mobile phones as ensemble for his *Telesymphonie*. [3] But there eist diverse other possibilities of connecting the mobile phone with sound art. Mobile phones are not

only wireless telephones, but also computers, symbol-processing machines, that are able to transform any kind of data into sound. The combination of computer and landline had enabled new forms of music: net.music. Making music together with remote people or sharing files are only some of the possibilities. Furthermore new types of data were possible sources for music, like traffic data of a server, for eample. Now, with the mobile phone, both devices "computer and telephone" merged into one. This new device is mobile in addition And mobility delivers one of the new types of data, that may be basis for artistic work such as mobile phone music. By moving around in relation to the geographical as well as to the social surroundings contet-depending data is generated. Remiing a song by walking around in town at the same time as your friends do the same elsewhere in town, with the entire group listening to the real-time mied song on their headphones is the idea of **Tanaka's** prototype *malleable mobile music*. [4] Other types of data are produced because the mobile phone is used as gameboy, walkman, diary, watch or for teting. Private tet messages or pictures can be transformed into music or included into a public screen, foreample.

Tet.FM

I would like to give two eamples of mobile phone music. In the interactive installation *Tet.FM* by the British artists **Matthew Fuller** and **Graham Harwood**, SMS messages are transformed into a sound collage and broadcast on radio. The SMS messages are being sent to a phone number, which had been published in advance. According to additional information they are transformed into speech and broadcast via radio. The mobile phone, and more specifically its medium SMS forms the interface between the participants and a traditional radio station. The piece jutaposes the old and new mediums radio and SMS, emphasizing the tension between them. Among other places, the media system has been installed 2002 in Vienna to support a local media culture institution. There, one could listen to the radio in a big tent in the city. [1] Anybody who wanted to take part in *Tet.FM* sent SMS messages with any content to a phone number. In addition etra parameters relating to the form of the message could be added. These were then taken into consideration by the speech synthesis software. This information was added to the message with a code. Firstly, one could choose a language, for eample English or German. Secondly, one could choose the voice, and thirdly the type, height and speed of the voice, each on a scale from one to ten. A computer received these tet messages, recorded them and transformed them into speech with a speech synthesis software according to the given data.

The continuously incoming messages produced an endless voice carpet which was broadcast on radio. Thus, it was possible to listen to the messages that had been sent via SMS on the local free radio. One could also listen to this sound collage elsewhere, for eample in some selected pubs.

Tet.FM is dominated by the typical sound of a computer-generated speech. The piece is constantly changing, depending on how many people participate. When many people take part, the sequences of speech are weaving an infinite carpet of words. As a background, the artists choose the chirping of birds. Just as bird do, they intended to use urban teting to mark territory by sound. [5] During more quiet periods with less participation these bird's sounds were receivable with occasional messages in between.

Ring tone culture

Ring tones "actually serving to announce a call" have become far more than this: a pop culture of ring tones has been developed. Especially for the youth it is important to keep up with the latest trends in ring tones. Sales overtook already those for CD singles. Ring tones with their (still) poor aesthetic have become a ubiquitous part of urban soundscapes. Public spaces are filled with ring tones announcing a call, a (formerly) private, intimate form of communication. Public spaces have always been colonized by private sounds. Mobile phones are the latest phenomenon in a long history of technological devices bringing private sound into the public sphere, like for eample the Walkman. [6] Sound art with mobile phones often includes ring tones, but often in an quite unepected way.

A radio concert for 144 mobile phones

The German artist group **Ligna** combines mobile phones and the radio in their piece *Wählt die Signale!* which could be translated as *Dial the Signals!*. The German title

is an allusion to, or rather a pun on words to the refrain of the worker's song *The Internationale*. The German refrain could be translated as "Listen to the signals, you people", and the artists changed it into "Dial the signals". 7 They position their concert in the tradition of **Brecht's** radio theory. [8] The full-length title *Dial the signals. A radio concert for 144 mobile phones* [9] already tells us about the most significant parts of this piece. 144 mobile phones are lying in a closed room. Each of them has a specially composed ring tone and can be called from anywhere. The result, the ringing of these mobile phones, is broadcast live on radio.

The artist group *Ligna* formed by b>Ole Frahm, Thorsten Michaelsen and **Michael Hüners** premiered the radio concert 2003 in Hamburg, Germany. In the atrium of the gallery for contemporary art of the Kunsthalle in Hamburg, twelve times twelve, that makes 144 mobile phones, were lying on a pedestal. On every single cell phone a specific ring tone was stored, sounding when called. These inherent ring tones were composed by **Jens Röhm**. The basis for them was the room acoustic of the atrium: the harmonic structure of the ring tones was based on the room's overtone spectrum. All the audible sounds in the room were recorded during one night, like the air conditioning, the security service and so on. The emerging note G sharp became basis of the composition. [10]

Each of the mobile phones had its own phone number, which had been published on flyers and on the Internet. The audience, or better participants of the piece, could call any of these phones and let the piece develop through this. A microphone was hanging above the pedestal on which the mobiles were placed. It constantly recorded their ringing. These recordings were broadcast live on the local free radio station. On every radio in Hamburg one could then listen to how many people were calling which mobile phones.

The repertoire of sounds for the radio concert was limited to the 144 composed ring tones and their combinations. The ring tones do not resemble a ringing telephone; they are not shrill. New tetures emerge through their combination. The developing sound could be described as a minimal carpet sound.

It was not possible for the audience to actually see the mobile phones; they were lying in a closed room. The artists didn't want to create a sculpture of cell phones. According to **Ole Frahm** the aim was to make an "interactive radio concert" [10]. Neither the artists nor the participants could eactly control the development of the concert. Occasionally, during high volume of participation it was no longer possible to tell which ring tone one had initiated one self.

The mobile phone is not necessarily the input medium for audiences to participate. It makes no difference if you dial a number from a landline or from a mobile. The piece can be categorized as mobile phone music because mobile phones are called, and their ring tones build the sound repertoire of the piece. Still, the majority of participants used their cell phones. They did not call from home, but at the vernissage or at a location, where the radio concert was on air, for eample in some pubs.

The participants did not communicate with each other, as it would usually be the case in a telephone situation. Instead they "broadcast separately from each other, but collectively". [8] Thus, the associations, the sound, the community was constantly changing. The artists intended this situation: "The responsibility for incalculable effects is an allegory of the capacity to act collectively." [8] Eperimenting how the radio and mobile phones are able to interact with both, the individual and the collective, is a central aim of the piece.

The individualistic mobile phone and collective action

Collective action and the mobile phone - this association is not a common one. The mobile phone is usually labelled as a typical medium of our individualistic age, as the ideal phenomena of the individualisation of our society.

A mobile phone mainly belongs to one single person, as opposed to the traditional landline, which is usually shared, for eample, by a family. The mobile phone is personalised by choosing a specific type of hand set and ring tone. This indicates how important the cell phone has become to us. It is no longer just keeping us in touch with our friends, it itself becomes our friend. Losing your mobile phone is much worse than losing your purse, because a lot of personal data and contact information is stored on it. It spends a long time with us, and is always very close to us. Therefore you can feel the loss almost physically. Like a Tamagotschi, that needs to be fed, the mobile phone gets our attention all the time. The mobile is the every-day companion of the mobile individual.

In the piece *Dial the Signals* you can observe a totally different use of the mobile phone: it is used to produce music with others. The participants with their cell phones are scattered all over town and still they are acting in concert, doing something together. The radio concert by **Ligna** is not the only phenomenon of collective action, made possible through mobile communication. The use of the mobile phone offers diverse options for collective action and to act collaboratively.

In the Philippines, for the mass demonstrations, which eventually led to the overthrow of president Estrada, people were mobilized by SMS. The same is true for mass protests against globalisation, for eample, in Seattle. [11] Not only can the masses be mobilised and coordinated via mobile phone, for instance to flee from the police, the cellular phone transforms each of us into potential on site journalists, able to report live from our surroundings. Spontaneous mobile phone journalists already connect to networks to form mobile Blogs.

People equipped with mobile telecommunication technology spontaneously form a group, aiming to create something together, to act collectively. **Howard Rheingold** calls this phenomenon 'smart mobs': 'smart mobs consist of people who are able to act in concert even if they don't know each other. The people who make up smart mobs cooperate in ways never before possible, because they carry devices that possess both communication and computing capabilities."[12] The topos of the scattered individual, and the collective; of the individualist, equipped with mobile communication technology, acting collectively with others, is artistically realized in *Dial the Signals*. Mobile phone music draws our attention to social and cultural change brought along by this very device.

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Multiculturalism on the Internet : A case study of Nettime, an e-mail discussion list

Title	Multiculturalism on the Internet
Subtitle	A case study of Nettime, an e-mail discussion list
Lead-in / Abstract	Taking in consideration diverse studies on multiculturalism, this paper interrogates how Internet can be a tool to different cultures expresses their ideas. It is a case study of Net time, a list with different language groups. It was done interviews with list moderators and an analysis of e-mails flow. The list served as a small sample of what occurs in Internet.
Participants and speakers	Schuch Brunet, Karla (BR)

Short biography of participants

Karla S. Brunet was born in Brazil in 1972. She has a degree in Social Communication and another in Language. She got a grant for a MFA (Master in Fine Arts) in USA, where she studied and worked in digital imaging for 3 years. Back to Brazil she participated in diverse projects involving photography and Internet and worked for a few years doing commercial design work. She taught to Multimedia students in universities in São Paulo. Currently, with another scholarship from the Brazilian government, she lives in Spain to write a PhD thesis on Network Projects.

Full text

1. Multiculturalism

Multiculturalism as a mixture of cultures existing together, one respecting the other is still being discussed by governors, sociologists, and anthropologists. What is taken here as multiculturalism it is Christine Inglis [1] definition of the ideological-normative. She divides the term multiculturalism in three usages: the demographic-descriptive, the ideological-normative and the programmatic-political. Being the ideological-normative the usage of the term multicultural when it refers to ethic diversity and the rights of people to guarantee their cultural background and participation in society.

There are also the theories of "melting pot" and "salad bow" or "mosaic". Melting pot is when different cultures get together and these individuals are encouraged to discard their cultural background in order to form a new, more homogeneous, culture. The individuals loose some of their cultural identity. "Salad bow" or "mosaic" denotes a common identity preserving the individual's cultural background. Here the individuals learn to respect other cultures and to be respected. This paper will face multiculturalism with the "mosaic" approach. Actually I prefer the term "mosaic" to "salad bow" because of its semantic connotations. It is the idea that in the mosaic each little piece is very important to form the design, everybody can notice when a piece is missing. On the other hand, in salad bow, when a piece of lettuce is missing anyone will notice the difference. So, the mosaic, in a way, gives a strong importance to any kind of cultural manifestation.

The utopian idea of Internet being a place where everyone could interact and where there was no place race and ethnicity is not valid anymore. Lisa Nakamura, [2] in her book *Cybertypes: race, ethnicity, and identity on the Internet* , shows that this doesn't happen. In the whole book she used examples of race in the net. After researching on search engines about race, she found out that there was no section for "white". In the races there was, for example, black or African … and no white because white is consider to be the default option. People in the net are, in general, white, so if you are searching for races it means the other ones, the none-white ones.

2. Internet Culture

It is already known that Internet is a place where many cultures can manifest but only a few can survive. The mechanisms in the net make a culture disappear or stand out. This mixture of cultures and interests are creating an Internet culture. For Castells [3] the internet culture is based on academic and scientific work. Since in its beginning, the net was widely used by scholar and researches with its BBS (Bulletin Board System). It was a way to exchange ideas, researches, experiments and discuss the results. That had an influence in what we see today as Internet Culture.

This historical fact that Internet culture comes from research groups, scholars and academia, makes it a more open and intellectual medium. That according to Castells [4]makes Internet a medium for a new freedom of expression and horizontal communication media. He thinks that it can be a tool for collective action and social organization.

Another influence to the Internet culture according to Castells is the hacker culture, as an important element to form it. The hackers made the Internet an open place for distributing information and doing collaborative work. The author also states that the interest of the big companies is also a part of this culture. Concluding, Castells says that [5] "La cultura de Internet es una cultura construida sobre la creencia tecnocrática en el progreso humano a través de la tecnología, practicada por comunidades de hackers que prosperan en un entorno de creatividad tecnológica libre y abierto, asentada en redes virtuales dedicadas a reinventar la sociedad y materializada por emprendedores capitalistas en el quehacer de la nueva economía."

Another author that discusses this new form of culture is Mark Poster[6]. For him the

culture nowadays is processed by technology. Thought machines we assimilate our cultural objects. He also states that in Internet people represent themselves by home pages, and in those, identity and ethnicity might be portrayed.

3. Multiculturalism in Internet

It is hard to talk about multiculturalism in the Internet when we all know that the majority of the world population has no access to the web. It is just to see any statistic table on the worldwide Internet population and it is shown that North America and Europe have the great majority number of people with Internet access. Follow there is a short description on some of the studies done on the subject.

One of the important works on the theme is *Cybertypes: race, ethnicity, and identity on the Internet* by Lisa Nakamura[7]. After 10 years investigating the net she comes up with some conclusions regarding its multiethnicity: there is race in Internet. Even in games such as MOOs and MUDs, when users do their self-description, there is no field for race because they assume that the players are white. She presumes that by the demographics of the net, where the majority is white, male, educated and middle class.

Nakamura[8] also criticize some "multicultural" web saying that this kind of webs many times instead of helping to create a more multicultural Net, they end up creating a "form of tourism, benefiting from difference in order to make the American/Western self feel well-rounded, cosmopolitan, postracial. This is not digital identification, but digital disidentification _ disavowal of the recognition of race in local contexts in favor of comfortably distant global ones." It can be retaliated to the Coca-Cola and Microsoft advertising of people all over the world, different races, being the same, drinking Coke and using Windows system.

For Nakamura[9] Internet is not such a negative place. In the net there are many possibilities of community and space for discussion themes as identity, race and ethnicity. Statistically speaking, the web is not a demographic representation of the cultures and races in the world. This is due its beginning as predominant white upper-middle-class male user. The usage of the net by other cultures is increasing slowly, but that could be a good sign for new opportunities in Internet.

Another important work is by Olu Oguibe [10], *Connectivity, and the Fate of the Unconnected*, where he discussed about the ones there are unconnected. He shows that the offline ones are not only the ones in Africa, Asia and Latin America but, besides that, there are also a great number of people in developed countries that aren't connected. Those are the ones, for example, that have some problems with the written language or with computers, such as seniors or people that psychologically aren't comfortable with computer and browsers. When discussing the statistics of the ones online, he points out that from the number of the connected ones, there are a small number of users that have access at home. And it seems it will still take a long time for that to change.

4. Virtual Community

Here it will be discussed some theories on virtual community taking for granted nettime as an online community. It is not the intention of the paper discuss if nettime, an email discussion list, is a community or not.

I will start with Benedict Anderson[11], who considers the nations and/or communities to be imagined; they are created by the individuals. In his book, *Imagined Communities*, he says that a nation and/or community "is imagined because the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion." He said that referring to "real" communities, but it applies perfectly to communities in the Internet also. People interact with a small group within the community that has some similitude on interests and tastes.

It is common to see authors comparing the virtual communities with the actual physical spaces. Sometimes these virtual spaces are even considered as a parallel to the "real" life, what can be questioned. What happens is virtual communities are really real for the people who are there interacting. Some studies and interviews showed that, in virtual communities, people don't differentiate their actions. They behave similarly inside and outside the virtual space.

Benedict Anderson[12], in an interview by Eric Gower called *When the Virtual Becomes the Real*, said he is not hooked up in the net. He, based on observation of his students, has a critic to this engagement in virtual communities. He says, "I think it isolates them, but it does both. It puts them in touch with communities, real communities in the sense that they are talking to each other all the time. On the other hand, they are even less likely to have any real contact with their neighbours down the street because of these other worlds that they are hooked into."

There are studies showing that is the post-modern society people don't make their circle of friends or communities based on their geographic location but what approximate a person to other is the interested they have in common. For that, virtual communities are an excellent medium, because one can meet and interact with people that have the same interests than you. The problem might be that not meeting people with different interested than you, one can have a very narrow view from the world.

5. Email discussion list

This paper studies the multiculturalism in an email discussion list. Being an e-mail discussions list a group of people who subscribe to a specific list and receive and replay email on a subject. The lists, regarding moderation, can be divided in two types: moderated and unmoderated. Moderated is when the e-mails sent pass through one or more persons (moderators) that select the ones that are really important to the group. The advantage here is that the participant doesn't receive a huge number of emails every day and also can be sure that the things discussed will be about the list's theme. Unmoderated is the list where everything, which is received, is sent to the participants of the group. The advantages of this type it is that there is no kind of censorship, it is an open channel to anyone express ideas.

Kat Nangel [13] says that the majority of the lists have a circle. For her the first stage it is an initial enthusiasm, when people introduce themselves. Second it is evangelism, when people ask the others for participation. Third it is the growth, when more and more people join. Fourth it is the community, when information and advice is exchanged. Fifth it is the discomfort with diversity, when people start to complain about the number of messages and that they are not discussing only about the subject proposed. This leads to two sixth results. One it is the smug complacency and stagnation, when people start to argue about silly subjects and traffic drops and the participants start to do the discussion on private email. Or the other one it is maturity, when few people quit and many stay at the community level, many just delete what do no interested and the list continues.

6. Nettime (www.nettime.org)

Nettime is a moderated email discussion list for media. Its subtitle says: "mailing lists for networked cultures, politics, and tactics." The list is divided in groups depending on the language. These groups are:

Nettime-I English, moderated: a moderated list in English. It started in 1995.
Nettime-nl Dutch, unmoderated: an unmoderated section in Dutch. It started in 1996.
Nettime-fr French, moderated: the French list. It started in 1999.
Nettime-ro Romanian, moderated: the Romanian list. It started in 2001.
Nettime-lat Spanish/Portuguese, moderated: the list in Spanish and Portuguese. It started in 2000.
Nettime-see South-East Europe, moderated. It started in 2003.
Nettime-zh Chinese, moderated: the Chinese list.

Nettime is an open discussion list, which means that anyone can join, there is no moderator to decide who can be a part of the list, but the moderation is on the emails sent. Anyone can go to their web site and read the mails sent, even if you are not a list subscriber. This makes the list a good source material for researchers.

Regarding the stages of the list cycle proposed by Kat Nangel before, Nettime reached the Maturity. In the list the participants discuss about the related subject, a few participate actively sending emails, some send messages sporadically and a great number just read the information that interested and delete what they don't consider important. In the list it is discussed all sort of themes related to media, politics, art and Internet.

The language division of the list covers probably a wider variety of cultures then when it was only in English and Dutch. Even though the choices of language is broad nettime is consider a mainly European and North American discussion list. Critical Art Ensemble [14] when defining nettime used that description "Nettime is a loosely knit coalition of activists, artists, theorists, techies, collectives, and organizations from all over Europe and North America that have come together for reasons of generalized support for radical cultural and political causes."

Follow there is a list with the numbers of subscribers to each list and its active participants.

Nettime-I English, moderated
Number of participants: +- 3000
Estimative of active participants: from 10 to 20% per year

Nettime-nl Dutch, unmoderated
Number of participants: a few hundreds
Estimative of active participants: two dozen

Nettime-fr French moderated
Number of participants: 431
Estimative of active participants: no answer

Nettime-lat: moderated Spanish/Portuguese
Number of participants: 725
Estimative of active participants: 45 in a month

Nettime-Ro Romanian Moderated
Number of participants: no answer
Estimative of active participants: no answer

Nettime-see South-East Europe moderated:
Number of participants: 61
Estimative of active participants: 15

Nettime-zh Chinese, moderated
Number of participants: 91
Estimative of active participants: no answer

This list was created based on the interview done by email (May 2003) with the lists moderators, in the case of the Dutch list, I sent an email to the whole list and someone (a participant, not a moderator) answered saying it was her opinion. Nobody else contested, so I took her opinion as the data.

Another base to analyze Nettime list is the number of emails received. This can give some information on how much people really participate in each language. The number of posters, people active who send emails, is really small compared to the number of lurkers, passive subscribers, the ones who only ready the email.

Maybe this situation was different in the beginning of the list when there were not so many subscribers. Geert Lovink[15], one of its founders, in a text from 2001, assumes that there was not a great incidence of lurkers then. He stated "However, the content and the life of nettime is provided by its growing and changing subscriber base, using the many-to-many capabilities of Internet-based communication. The problem of "lurkers" (read only members) is virtually absent."

This list has the number of emails received on May and June (2003) in each section. The numbers were extracted from the Nettime´s archive web pages.

Nettime-I English, moderated
Number of emails received in May: 95
Number of emails received in June: 144

Nettime-nl Dutch, unmoderated
Number of emails received in May: 76
Number of emails received in June: 79

Nettime-fr French moderated
Number of emails received in May: 125
Number of emails received in June: 126

Nettime-lat: Spanish/Portuguese moderated
Number of emails received in May: 67
Number of emails received in June:73

Nettime-Ro Romanian moderated
Number of emails received in May: 80
Number of emails received in June: 62

Nettime-see South-East Europe moderated:
Number of emails received in May: 27
Number of emails received in June: 20

Nettime-zh Chinese, moderated
Number of emails received in May: no data
Number of emails received in June: no data

The list above shows that in these two months there was a good level of participation in the different languages lists. Of course English had more emails but the amount of subscribers in this language is enormous. It can be seen also that a list that is 3 months old like the South East Europe received a considered number of messages compared to the other ones that exist for more than 3 years.

This shows that there is a space new culture in the net, especially nettime. There are a growing number of different cultures that contribute and be a part of nettime. In a phone interview with Felix Stalder (May 2003), he said that they are open to new list, if someone comes and say they want to make a nettime on their own language, there is no problem. They do the support and their server is available for that.

6. Conclusions

With this small research we can see that there is a bit of multiculturalism in the net, especially in virtual communities and email discussion list such as Nettime. Of course this mixture of culture is far from being representative of the cultures in the world. And it is impossible to think of that, at least for the next years or decades, due to the fact that the majority of the world population (the majority in the southern hemisphere) has no access to the net.

The Internet is not a democratic medium as it was thought in the beginning of its uses. It is a portrait of the society where we live. I believe, thought, it is a good portrait because it seams to be a more accessible medium than any other we had it before.

The participation level in lists as such is still really low. I am a lurker as many others (maybe thousands). For me one of the problems of participation is the written language, something that I am no so confident with. And also, I considered nettime a public space, and my public is a high level educated people, the authors of the books I read. That makes me think twice, three times, ten times before sending a post. This might restrain my active participation. The only time I sent email was about a happening in Brazil, something that I had experience from being close by.

Regarding that I agree completely with Alain Sondheim[16], when he discussing if nettime was a community or not, said that in nettime "speaking is somewhat parasitized - by that I mean, it's a T-formation; one is much more aware of audience, lurkers, etc., than elsewhere. It's a form of publication, already reified in a list aura composed of books, newspapers, meetings, groupuscules, and so forth. So a reply (such as this) is always already deflected elsewhere - it's not that one is more 'careful' here, but one's more aware, perhaps, of the political economy of electronic community."

I believe this consciousness of the public and the carefulness to write make many not to participate, especially the ones from other cultures (none European and North American) because, of course, first language, but not only that. In third world countries, particularly in South America, where I come from, people were raised to look up to European and North American. We were taught, thought media, that everything that comes from there is better. So there are some difficulties to us to participate in an equal basis level. We are not used to that. For that, email discussion list might be considered an excellent medium.

Even though nettime has different language groups, a common language is still a problem. In the Latin Nettime, which I subscribe (besides the English one), the emails are mainly in Spanish. The Portuguese speaking ones never discuss anything, only post announcements of events and exhibitions. I attribute that to the difficulty to write in Spanish. It is accepted emails in Portuguese, of course, but I

believe people do not want to state something or defend an idea in a language that they might be misunderstood. So, I see the level of Portuguese speaking participants really weak compared to other lists only in Portuguese which I participate. A solution, perhaps, could be a mainly Portuguese section.

To conclude, it can be said that the level of participants of online community is still mainly European and North American. Virtual communities, such as Nettime discussion list, can be an example of a beginning of multiculturalism in Internet. They are not representative of all the cultures in the world but they could be an open channel for diverse people to interact and have different points of view on events.

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Network dynamics : A cross-dimensional comparison

Title	Network dynamics
Subtitle	A cross-dimensional comparison
Lead-in / Abstract	The network and its related concept of 'networking' has found increasing currency within diverse fields such as kinship, finance, information theory, media art, communication, bioscience, organizational structure and, most recently, contemporary forms of terrorist activity. Networks, generally operate on the model of a cell or unit system, wherein the exact nature of operation is defined by a parallel existence outside of any individual part. Simultaneously, the effectiveness of the network depends on its fundamental interconnectedness. Network functions and networking patterns therefore operate on a synchronous basis that deserves special attention from a comparative perspective. Proceeding from cybernetic perspectives on the network, this comparative analysis presents some of the key concepts related to networks and critically examines salient network models on a cross-dimensional basis. It seeks to establish key commonalties relevant to the intrinsic issue of sustainability that may be as meaningful for scientists as artists and cultural activists currently engaged in challenging hegemonic assumptions of the network experience.
Participants and speakers	Czegledy, Andre P. (ZA) Czegledy, Nina (CA / HU)
Short biography of participants	n/a
Full text	Not provided. The full text is available as an attachment. Please download it here.

Netzspannung.org : Knowledge Space For Media Art and Digital Culture

Title	Netzspannung.org
Subtitle	Knowledge Space For Media Art and Digital Culture
Lead-in / Abstract	How can the Internet be used as a resource of interdisciplinary exchange concerning topical discourses, projects and developments at the interface between media art and media technology? netzspannung.org [01], a laboratory for media presentation, artistic production and intermedial research, elaborates tentative solutions to these questions. As an interface between art, technology, science and society, netzspannung.org is an information pool for artists, designers, scientists and scholars. The Internet platform communicates diverse activities from the media-cultural scene and since 2001 has been building up a continually growing archive. netzspannung.org documents topical developments and media art history in the context of theory, technology and research. This multimedia database can be explored with new knowledge discovery tools, which facilitate the handling of the information stored within it.
Participants and speakers	Fleischmann, Monika (DE) Strauss, Wolfgang (DE)
Short biography of participants	Monika Fleischmann & Wolfgang Strauss are directors of MARS (Media Arts Research Society) Exploratory Media Lab at Fraunhofer Institute for Media Communication in Sankt Augustin/Bonn, Germany.
Full text	**netzspannung.org – archive for media art and research** **Monika Fleischmann & Wolfgang Strauss** A key intention of netzspannung.org [1] is not to leave the presentation of media art history to art historians and media theoreticians, but also to involve artists, researchers and developers. The production of digital culture presupposes

interdisciplinary work, meaning that discourse about this form of artistic creative process must also integrate all the disciplines involved. As a result, netzspannung.org was conceived as an interdisciplinary online archive to be built up with the participation of the community.

The word "archive" derives from the Greek word "arke-os", which means not only "beginning" and "origin" but also "rule", "authority" and "official place". [2] Initially the archive was an instrument of rule and control. Archives kept documents that attested to rights and privileges, legitimized institutions, and established rule over territories. Control of the archive meant control over the memory of a society. netzspannung.org, by contrast, no longer sees archiving as the administration of rule, but as the networking and management of chains of information. Accordingly, archiving at netzspannung.org aims to disclose the numerous positions in media art and research, to interrelate them, and to make them publicly accessible as an important resource for art, culture and commerce.

In July 2004 netzspannung.org's database [3] contained over 1000 entries, comprising texts and theoretical contributions from art, aesthetics and art history, media theory and computer science, multimedia presentations of artistic and scientific projects, as well as over 130 hours of video documentation of scientific/scholarly lectures produced in collaboration with prestigious cultural and scientific institutions. Lectures by internationally renowned scientists, scholars and artists, which can be retrieved in the area "Positions" [4] at netzspannung.org, cover a wide range of content. Thus, the film-maker **Wim Wenders** speaks on "Every Picture Tells a Story – of Places as Authors", the robotics researcher **Rolf Pfeiffer** on "Visualizing Intelligence", the art historian **Barbara Stafford** on "Images of Knowledge", and the art historian **Boris Groys** on "Baling out of the Image". Various interfaces show connections between the database entries and open different accesses. A purely visual and intuitive access to the archive is provided by the "randomizer". The "archive browser", on the other hand, offers a structured overview of the contents of the database. In addition, innovative tools have been developed for discovering knowledge.

While these interfaces allow intuitive or structured access, texts, such as can be found in the area "Media Art and Research" [5] permit access via thematic questions to the interaction of man-machine-man. Taking some typical examples by way of illustration, the topics "Explore Knowledge", "Cultural Heritage", "Take Part" and "Perform & Play" provide an introduction to basic issues of media art, showing interactions between artistic, design and scientific aspects. While the entries in the database give detailed information on individual works and projects of artists and scientists, the topics put these works into a theoretical, historical and media-practical context. Thus the texts form the foundation for searching through the database. netzspannung.org is also working on networking existing media archives: a new format has been developed in collaboration with MediaArtNetwork [6] known as the "hypermedia tele-lecture" [7] . When the latter is in progress, additional images, videos or texts are loaded from various databases and shown parallel to and synchronously with the lecture. Together with the areas " Learning Media Art " and the "digital sparks" student competition, the hypermedia tele-lecture is a contribution to teaching media art.

netzspannung.org is a place of learning

Providing teaching examples, the heading "Learning Media Art " [8] shows how works of media art are created, how media art can be taught in pedagogical work, and how children and artists can learn programming. Dancing scrap-metal robots, a film whose running speed changes with temperature, water movements that control electronic sounds – when school pupils realize such installations, they not only grapple with artistic strategies, but also develop aesthetic-creative and conceptual abilities as well as media-critical skills. With its interdisciplinary nature, the teaching of media art also helps develop social skills – after all, media art is teamwork. School pupils, students, artists and teachers will find all kinds of ideas and suggestions for teaching media art to different age groups and at various educational levels. Teaching media art means structurally combining content from the natural sciences and the arts with aesthetic and technical issues. Media art at schools, colleges and universities must evolve as a key cross-disciplinary capability, especially in a highly developed society that is underpinned by education and innovation.

netzspannung.org – training the next generation

The student competition "digital sparks" [9] provides an overview of the current training situation in German-speaking universities and colleges in the area of the New Media. The entire competition – from submission to adjudication – is carried out online. The digital sparks production prizes enable prizewinners to further develop or redesign their projects. The competition submissions are researchable via an interactive map. This map also provides a comprehensive insight into the teaching of media art at german speaking institutions of higher education. To this extent digital sparks is more than just a competition. It is a media strategy for supporting young media culture over the long term.

Community services of netzspannung.org

The area "Community" [10] is the platform's open channel, where interested members of the electronic arts community can present and archive their own projects in the so-called "netzkollektor". netzspannung.org therefore provides registered users with an opportunity to publish their own work in a professional context. This is done through the provision of a so-called "workspace" as a personal working area. The "Workspace" turns the platform into a media laboratory on the Internet and can be understood as a kind of "Internet workplace" with an "Internet hard disk".

Tools for visualizing and discovering knowledge

Basically there are two possible ways to access digital data: through a precise searching and through an imprecise "rummaging around". Searching presupposes that the user knows what he is looking for, that he can formulate his interest, and possibly define it more specifically or widen it. Rummaging around or browsing, on the other hand, implies that the user allows himself to be guided and inspired by what is presented to him. Just as powerful telescopes enable astronomers to see and understand space, netzspannung.org's knowledge discovery tools [11] are instruments for looking through, reviewing, grasping and evaluating large volumes of data – special tools that both afford an overall view of heterogeneous data volumes and visualize the data stocks as contextualized information spaces.

If we understand "knowledge" to be something that arises in social learning processes and is actively constructed by the individual under the influence of his environment, we can see that knowledge discovery tools represent important instruments especially for large and heterogeneous information pools. They offer different possibilities for accessing, filtering, and navigating – are therefore important functionalities, enabling an active, i.e. constructive handling of digital information. They allow content and connections to be discovered that cannot be disclosed with the traditional methods of systematizing and presenting archive content.

The principles of the knowledge discovery tools and the re-reading of the archive material as an intervention in data space are the basis of collaborative thought processes. According to Derrida, "real democracy is always measured in terms of this essential criterion: participation in and access to the archive, to its constitution and to its interpretation." [12] In addition, semantic knowledge maps solve the difficult problem of categorization in media art in favour of visualizing information across disciplines.

A central access to netzspannung.org's archive is provided not just by the traditional search and output interfaces, but also by the newly developed technologies of knowledge maps. Semantic Map and Timeline are dynamic interfaces that allow the content of the platform's extensive data archive to be grasped intuitively. The user is put into a position where he can cause information to be presented in different arrangements, can explore the data pool visually, and can discover knowledge exploratively.
See Fig. 1: Archive Interfaces http://netzspannung.org/archive/?lang=en

Semantic knowledge maps

Semantic Map [13] is a map for the database which gathers all the content of the archive into clusters. It allows explorative navigation in cross-discipline connections on the basis of semantic relations. Through semi-automatic text analysis of the database entries and subsequent evaluation with a neuronal network, relations between individual documents are assessed, organized into clusters with similar content, and visualized accordingly. Semantic Map is, therefore, a map that shows the interrelationships among the database entries. It appears that the data know of each other, reminding us of **Marvin Minsky's** vision of books being able to talk to one another [14].

Chronological knowledge maps

Timeline [15] orders database entries along a time axis, which presents several parallel development lines or categories neatly differentiated. Here too new possibilities for generating knowledge across disciplines arise. For example, content from media art practice is juxtaposed with theoretical discourse from events. It is a form of visualization that creates new semantic connections, thus allowing things to be understood in another way.

netzspannung.org perspectives

Online archives and public knowledge spaces on the Internet make an important contribution to the development of digital culture by processing current knowledge and making it available for general use. For some time it has been noticeable that – especially for copyright and economic reasons – access to knowledge on the Internet is becoming ever more restricted. However, students, trainees and those thirsting for education rely on free access to high-quality information. Knowledge is only socially relevant if all those who work in a particular area or are acquiring knowledge and skills in that area can participate in it.

Further development of the platform as a vehicle offering education and training affects both its technical and content levels equally. One objective is increased networking with other media-cultural online archives. To this end, web service technologies, for example, are being developed that will allow other archives to apply netzspannung.org's knowledge discovery tools to their data pools. In addition, an editing function is being designed for these tools, so that they function as authoring tools for developing theme- or context-specific teaching concepts.

Online platforms are a prerequisite for blended learning, i.e. for study groups that meet at physical locations to exchange ideas and use the network as a resource. Joint workspace, chat, webcast, streaming media give rise to a new community medium, which can also be used for teaching media art and its adjoining areas. In the future this medium may be expected to find its way just as much into cultural educational work as into education and training at universities and colleges, supplementing itself with "situated learning" (SiL), which can take place anywhere, nomadically using the Internet with the same personel environment. Where previously instruction was the order of the day in teaching, with SiL the students themselves are primarily active. Where previously knowledge was offered and taught to them, now they construct their knowledge themselves.

Acknowledgments

Netzspannung.org Team
http://netzspannung.org/about/team/?lang=en

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- 15 http://netzspannung.org/about/tools/timeline/

Related internet addresses

http://netzspannung.org/community/?lang=en
http://netzspannung.org/archive/?lang=en
http://netzspannung.org/index_en_flash.html

New Media Art as Transcultural Interface

Title New Media Art as Transcultural Interface

Subtitle Not provided.

Lead-in / Abstract Not provided.

Participants and speakers Kluszczynski, Ryszard W. (PL)

Short biography of participants Ryszard W. Kluszczynski, PhD. is a professor at Lodz University, where he has a position of the Head of Electronic Media Department. He is also professor at Academy of Fine Arts in Lodz (theory and history of art) and Academy of Fine Arts in Poznan (media art). He writes about the problems of information/network society, theory of media and communication, cyberculture and (multi)media arts. He also critically investigates the issues of contemporary art theory and alternative art (avant-garde). In the years 1990-2001 Kluszczynski was a chief curator of film, video and multimedia arts at the Centre for Contemporary Art – Ujazdowski Castle in Warsaw.

Full text

New Media Art as Transcultural Interface

Ryszard W. Kluszczynski

In the area of new media communication art we have to do with the process of cultural hybridisation. Net art may assume all discussed forms: expression of local culture, an agent of modernization, or a personal fantasy, being however in each case a merger of different and unpredictable cultural systems.

Problem of identity belongs to the most discussed questions in the field of cultural studies nowadays. In most of the cases it is closely related to the issue of cyberculture and its characteristic instruments of expression: new digital communication media. Debates on identity in the context of new media aim to

develop critical discourses concerning the position and features of the individual in the age of the global transcultural communication. Discussions, which locate such problems in the framework of art, extend sometimes the psychological concept of identity understood as an approach to specify a set of qualities defining the individual in order to ask about the identity of the work of art. In consequence, if we deal with the question of identity in the context of artistic practices we have to distinguish between two different aspects of the identity issue and between two separate although closely intermingled problems.

1. The problem of identity of the art work, which might mean the symbolic/cultural status of the work of art.
2. The problem of identity of the artist – the individual considered as the creator of the artwork.

Those problems, as I have already mentioned, in a sense are separate from each other and autonomous, yet merged with one another in contemporary discourses on art. Analysis of the status of the artwork, before they come to any conclusion, must have been linked to the concern of the relationships between the work and the artist.

Another reason explaining this close relation between them both comes from the fact that they have probably the same source: the modernist crisis of self-cognition. After Mark Poster (2001, 6-11) I distinguish between the notions individual, self, identity, and subject. If we turn to the works of Erik Erikson to understand what is the meaning of the term of identity, we will come to the idea that it is nothing but continuous process of self-negotiation (and re-negotiation) of the subject. If we talk on identity, we refer to "an individual who is deeply confused about who he or she is" (Poster, 2001, 7). The same confusion however we face nowadays when we try to specify the notion of art or work of art. The crisis of subjectivity and the crisis of both aesthetics and theory of art create together the context for our consideration.

Such an approach leads in consequence towards questions concerning belonging or representation. We may ask: Does a particular work of art belong to the specific, individual, internal world of the artist? Or rather: Does it belong to a certain cultural context? We may ask: Does it represent a position, an artistic approach or simply an individual history of the artist? Or rather: Does it represent a specific culture? Or maybe: Does it represent just a medium itself? Discussions around these dilemmas become especially boisterous when concern new media arts, and especially – net art. And this area – new media art, which I understand as digital, interactive art of communication will be the subject of analyses in this paper. Net art, to which I will be referring quite often, is considered here as the best representative of new media art.

It's time now to have a closer look at those two aspects of identity reflected in the discussions on new media and net art. As a good example may serve a debate hosted on the online forum <eyebeam><blast> in 1998. I will be referring to this on-line discussion through a book INTERACTION: Artistic Practice in the Network, which is kind of summary of that Internet-based exchange of ideas. The discussed topic I would like to refer here is represented in this book by a chapter entitled: "Identity: Where Is Global?" In the framework of that discussion Lew Manovich presented the standpoint, which triggered off numerous voices of comment. Manovich said that "the Internet functions as an agent of modernization, just as other means of communication did before" (53). What followed was even more provocative for other participants of the debate: "…we in the West, should not expect culturally-specific Internet art, should not wait for Internet dialects, for some national school of Net art. This simply would be a contradiction in terms" (53). "So-called Net art projects are simply manifestations of social, linguistic, and psychological networks being created or at least made visible by these very projects, of people entering the space of modernity…" (54).

The opposition to the concept of Manovich assumed different forms. The simplest and most direct answer, like the one by Pedro Meyer, just proclaimed, that "… it is precisely the Internet that will offer the possibility for art to create the 'national schools' as expression of diversity, because no longer does such art require that they travel through the gauntlet of the traditional metropolitan centers of dominance for them to circulate and be seen" (54). Meyer as well as Andy Deck assumed that problem with recognizing national schools of net art came from the unequal levels of technological development throughout the world, so it may be too early to discount the potential for regionalism in he field of communication art (54).

Another critical perspective on Manovich's idea of net art came from Simon Biggs. He pointed out problems with the concept of modernization, which over the previous twenty years had become very problematic. Biggs did not develop that issue. I would like however to strengthen this position adding, that problem with modernization is not only part of philosophical debates of postmodernity. Arjun

Appadurai (1999) indicated another important reason to deepen our suspicion about the idea of modernization: a tension between modernization and modernity. He reminded that modernization (in ex-colonial countries like India) appeared unable to deliver modernity. Modernization with its powerful instruments, like high technology, science, and education, did not succeed in providing "space of justice, access, equality, emancipation and participation that modernity was intended to imply" (59). One might say that since modernization fell into discredit, there is no sense in promoting the idea of Internet as an agent of modernization.

Biggs did not limit himself to problematizing the concept of modernization. He joined, although shyly, Meyer and Deck to put forward (again) the idea of possibility (only), that "…the Net will lead to an accelerated localization of creative activity in relation to socio-linguistic space" (55).

Should we agree with Meyer, Deck, and Biggs, that the Internet could allow for development of the national or local schools of Net art? We might accept such a concept only if we assume that Internet is sort of a neutral means of communication, transporting various forms, meanings, and values created outside its structure, sort of "neutral instrument of community, connecting preestablished ethnic identities" (Poster, 2001, 167). Or if we assume that characteristics of the Internet as a medium only add to the characteristics of the work of net art and not destroy its connections with the local context of production. However appearance of one of those circumstances is a necessary condition but only for the possibility of cultural localisation of the work to emergence but it is not a condition sufficient, or determining necessary result.

Alex Galloway, like Manovich does not think, that "there will be many culturally-specific categories within future Net art, especially culturally-specific categories as there have been in art history" (56). He predicted two scenarios for future development of net art:

1. [A] general relapse to nationalist/localizing networks as a style" (56), which I understand as a sort of post-modernist pastiche, stylisation, or another game-like art strategy.
2. Creating private net art; in this case "Net art will remake itself upon each viewing as a sort of personal fantasy art" (56).

From those two predictions of Galloway I will keep for further considerations only the latter one. I have a problem with the former: I do not understand how could we talk about stylisation of something which does not exist. Stylisation, pastiche, and all the other parasite cultural strategies require their victims, bodies, upon which they could feed. If we declare the existence of the stylisation ("nationalist/localizing networks as a style") that means however that at the same time we affirm the existence of the system of symbolization represented in the stylisation. Turning down the possibility of existence of locally oriented Net art Galloway deprived himself of the possibility of proclaiming existence of its stylisations.

In his second proposal Galloway proclaim diversity as a fundamental quality and virtue of "our contemporary experience". Personal fantasy becomes in his concept the only context for the work of Net art, creating alternative to the concept of modernization.

The choice between "the net art as an agent of modernization", and the net art "as a sort of personal fantasy art" is however not satisfactory either. If we accept such a frame of reflection and in addition – I would like to remind about that assumption – consider net art as just an extreme form of new media communication art, we might even argue that to some extent all kinds of new media art are becoming in this way more and more culturally neutral. I would like however to put forward a different perspective. I want to argue that because something like culturally neutral symbolic form simply cannot exist, because art is always culturally formed, we only have to do in the area of new media communication art with the process of cultural hybridisation. This mean that the whole discussion I refer to is based on an initial and fundamental misunderstanding. Net art might assume all discussed forms: expression of local culture, an agent of modernization, or a personal fantasy, being however in each case a merger of different, contingent, and unpredictable cultural systems.

A useful in this respect concept comes from Mark Poster. He proposes to consider Internet as an underdetermined medium. Referring to Luis Althuser and his idea of overdetermination he wrote that excess of causes leads paradoxically to "the contingency of events" (17). The term "underdetermination" refers to such "social objects [which] level of complexity of indeterminateness goes one step further. Not only are these objects formed by distinct practices, discourses, and institutional frames (…) but they are also open to practice" (17). In the case of the Internet we have to do with the opening to trans-cultural practice. Since this hybrid-cultural

aspect of new media communication is always being established individually in the process of constructing the meaning of the experience, the new media art serves in this process for an interface. New media art serves as transcultural interface.

Another problem, which appeared on the periphery of the related discussion seems to be much more important. Gilane Tawardos pointed out that problem of cultural identity involve questions of power and global stratification. She noticed that "authenticity, which is assessed by others, is always in question if you fail to conform or fit within certain fixed categories and identities" (Scholder, Crandall, 57). She referred to Catherine David's remark that "identity had now eclipsed by identification processes" (Scholder, Crandall, 57). And even if we say that we can identify ourselves in the way we choose, we also have to ask about the context of our decisions. Arjun Appadurai wrote about seduction and tyranny of local tradition. He called to develop interactive experiences between different cultural regions, to "imagine all traditions as available for the work of the production of one's own locality" (Appadurai, 1999, 59).

Michel Foucault (1982) claims that identity is actually a social, not individual construct. I would develop this concept saying that the only personal, individual aspect of identity is what has been recognized as imposed from outside, socially-culturally fabricated to perform us for us. The only way to discover what I am is to discover what I am not. There is nothing but negative individualization of identity. Let's have a look at the artistic example.

In December 1976, Croatian artist Sanja Iveković exhibited her Double-life 1959-1975 (documents for autobiography) in the Gallery of Contemporary Art in Zagreb (this exhibition was followed by three other representing the same approach or project (Tragedy of a Venus, 1975; Bitter Life, 1975; Sweet Life, 1975-76). The show consisted of two streams of photographs grouped in non-random pairs. One set of photographs was composed of the pictures showing Iveković herself in various periods of her life. The other grouped the photographs of women and girls taken from European magazines. Photographs belonging to the two sets were paired on the basis on the similarities in appearance, looks, props, locations and situations. The artist compared her own portraits to the pictures of unknown women to ask with anxiety for the sources of the analogies. Asking for analogies was simultaneously asking for the nature of identity. The exhibition contained an intriguing concept: the particular identity is to a lesser extent a result of one's conscious decisions and choices or the genetic heritage than the product of exterior systems and institutions.

The individual is subject to influences resulting from different premises and leading into different directions. He or she is under pressure to comply with different requirements and is corrected in the event of non-compliance. Videotape of Polish born Canadian artist Kinga Araya entitled National Anthem (2002) is a perfect example illustrating this problem, presenting the process of adjusting an individual to particular cultural patterns, the process of deprivation of what someone consider as his or her attributes.

The fluidity of identity transformations is subject to continuous disruptions. Instead of a single, even wide current, it takes the form of numerous currents flowing into different directions. Sometimes they come together. Sometimes they diverge. Such a picture of identity is no longer recognized and comprehended even by the individual himself or herself. And this is the source of the question 'Who am I?', which is asked over and over again. This question can be answered with stories. Identity becomes narrative. A series of narratives.

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New York Prophecies: : the imaginary future of artificial intelligen

Title	New York Prophecies:
Subtitle	the imaginary future of artificial intelligen
Lead-in / Abstract	This article is examines the imaginary future presented by the IBM pavilion at the 1964 New York World's Fair, especially its promotion of the 'artificial intelligence'. As well as comparing this SF dream with other exhibitors' fantasies about unmetered electricity from nuclear power stations and holidays on the moon using space rockets, the article also draws parallels between the 1964 New York World's Fair with the ideological themes of its predecessors from the 1851 London Great Exhibition onwards. Inspired by **Eric Hobsbawm's** concept of 'invented traditions', this article argues that imaginary futures are also a method of sanctifying the transient socio-economic relationships of the present by disguising them as products of another historical moment.
Participants and speakers	Barbrook, Richard (GB)
Short biography of participants	Dr. Richard Barbrook was educated at Cambridge, Essex and Kent universities. During the early-1980s, he was involved in pirate and community radio broadcasting. He helped to set up Spectrum Radio, a multi-lingual station operating in London, and published extensively on radio issues. In the late-1980s and early-1990s, Richard worked for a research institute at the University of Westminster on media regulation within the EU. Some of this research was later published in 'Media Freedom: the contradictions of communications in the age of modernity' (Pluto Press, London 1995). Since the mid-1990s, Richard has been coordinator of the Hypermedia Research Centre at the University of Westminster and is course leader of its MA in Hypermedia Studies. In collaboration with Andy Cameron, he wrote 'The Californian Ideology' which was a pioneering critique of the neo-liberal politics of 'Wired' magazine. In the last few years, Richard has written a series of articles exploring the influence of the gift economy on the Net. He is presently working on a book - 'Imaginary Futures' – which is about how ideas from the 1960s have shaped our contemporary conception of the information society. A selection of Richard's writings are available on the Hypermedia Research Centre's website: <www.hrc.wmin.ac.uk>.
Full text	Please see RTF-file.
Related internet addresses	http://www.hrc.wmin.ac.uk

Northern Lights [working title]

Title	Northern Lights [working title]
Subtitle	Not provided.
Lead-in / Abstract	Not provided.
Participants and speakers	Kuljuntausta, Petri (FI) Laine, Unto (FI)
Short biography of participants	
Full text	Not provided.
Related internet addresses	http://www.acoustics.hut.fi/projects/aurora/index.html http://www.nic.fi/~petriear

Open Source City : Field Office

Title	Open Source City
Subtitle	Field Office

Lead-in / Abstract

Our interest lies in the way interactive art reorders both the visual and spatial regimes that have historically informed the museum and the gallery and the way this interactive space connects with the conditions of urbanism.

Participants and speakers

Kasprzak, Michelle (CA)

Ramos, Amanda (US / CA)

Short biography of participants

Field Office is a constantly changing collaborative team and environment that temporarily assembles itself based on project commissions. Amanda Ramos and Kathleen Pirrie Adams initiated the Field Office collective and have primarily worked to develop curatorial, spatial, and event based strategies for multi-site exhibitions. For the past 3 years they have been asked by the Images Festival to produce their new media exhibition component – eleven to twenty five installations in over ten venues throughout the city.

Kathleen and Amanda are now involved in commissioning projects such as *Open Source City* in which they are facilitating the distribution of the project and the presentation of the work.

Full text

The work of the **Field Office** is concerned with enabling the extension of the artistic concept through all aspects of an artwork's public presentation. This approach allows us to treat the development of exhibitions of electronic art as a form of interface design. By creating specific conditions that attenuate or amplify particular aspects of the work, we are able to become directly involved in shaping not only the audience experience but the conceptual framework that supports the work as well.

Our method for developing exhibition strategies for electronic or new media art is experimental. After an initial research period, we pose a question that allows us to attune to the dynamic relationship the work will have with its environment. This hypothesis guides the development of the physical aspects of the installation, the graphic program, the voice or style to be used in the development of critical commentary, and the educational programs associated with the exhibition. Each project contributes to our evolving understanding of the larger field of electronic art and provides a basis for our more general assertions about the nature of new media, the consciousness it suggests and solicits, and the genuinely new opportunities it affords.

The **Field Office** successfully generated *WIDE*, *FLOW*, and *SOURCE*, a series of unique experiences that allowed visitors to not only see a range of media artwork, but also the opportunity to engage with the process, thinking and production of the pieces.

With *WIDE*, we developed a city-wide exhibition strategy. With *FLOW* we focused our strategies to create a sequence of daily events that engaged a range of audiences into the
exhibition experience. With *SOURCE* we borrowed the new media notion of source code and applied it to a broad range of interactive works, video and mixed media installations, and performances.

http://www.imagesfestival.com/flow

http://www.imagesfestival.com/source

A similar metaphoric use of the notion of open source code informs our current project entitled *OPEN SOURCE CITY*, a commission that brings together four media artists whose work share the themes and concerns of psychogeography: how urban environments influence our emotions, how breaking with routines can reveal hidden dimensions city life, and how personal experience intersects with the notion of the public.

http://www3.sympatico.ca/renn_scott/source.html

http://www.iloveaparade.net/

Related internet addresses

http://michelle.kasprzak.ca/osc/
http://www.field-office.org
http://www.imagesfestival.com/source

Overcoming the Distance: : Displaying Data-based and Location-driven New Media Art

Title Overcoming the Distance:

Subtitle Displaying Data-based and Location-driven New Media Art

Lead-in / Abstract Questions addressed in this presentation include:

How 'locative' is the online experience?
How do you make the online experience relevant to a 'local' audience?
What can be learned from other community-based collaborative models?

Participants and speakers Cook, Sarah (GB / CA)

Short biography of participants Sarah Cook is an independent curator and the co-editor of the online curating resource CRUMB. She holds the Doctoral Research position in New Media Curating at the University of Sunderland in conjunction with BALTIC. Sarah has a Master's Degree from Bard College's Center for Curatorial Studies (New York), and has curated at the Walker Art Center (Minneapolis), Banff Center for the Arts, and the National Gallery of Canada (Ottawa). She has spoken at the Tate (London), the Fruitmarket Gallery, (Edinburgh), and has written for the Arts Council of England, AN and Public Art Journal. She is co-editor of CRUMB < http://www.newmedia.sunderland.ac.uk/crumb>

Full text Curators are concerned with the placement of art works for their access by audiences. The question of 'where' the experience of net-based art resides has led to an investigation of 'locative media art' or geographical-sited online art. Many of the projects I have found interesting have been those that gather, in database form, information about real world experience to share with others. These works suggest that the essential functions of the Internet (the storage and retrieval of information) form an inherent part of the art experience.

As the work of **Heath Bunting**, such as *Bristol Tunneling* (2002-ongoing), demonstrates, the Internet is for most peoples' purposes, a contemporary archive of data; it is a collection of information insofar as data is amassed in one "place." *Bristol Tunneling* consists of little more than descriptive information -— photographs and text, drawings and diagrams — contained in a digital-database form on a server connected to the Internet. Like the *BorderXing Guide* (commissioned by Tate, 2001), the project is concerned with how to move around a geographic space using nonstandard routes. Bunting says the purpose of the *Bristol Tunneling*g project is to map tunnels in Bristol — existing spaces, caves, walkways, etc., — in order to use the city as a training ground. The digital practical information generated by the *Bristol Tunneling* project could thus be applied to the skills and techniques expounded in *BorderXing Guide*, which disseminates information on how to cross borders (regionally as well as internationally) without passing through official checkpoints.

A recurring question is how to exhibit this type of online, yet real-world, located work. Cultural production on the Web often plays between the idea of a dispersed virtual audience of contemplators and a sited audience of actual users. It would be easy to argue that information online is useful only insofar as it relates to the proximity of the user of the information (is that object in stock in my local store, which route should I take to drive to that other city, what should I visit when I get there?). While it is true that in the cases where the information is geographically relevant then proximity might indeed be the primary ordering factor; for a project like *Bristol Tunneling*, the usefulness of the collection of information is conditioned entirely by the geographic location of its participant. Yet, for the audience to **Jon Winet** and **Margaret Crane's** *Conventional 2004*, for instance, their location is less of a determining factor that the location on which their attention is trained – here the United States Presidential election campaign trail (though it could be argued it is simply more socially or politically relevant to a geographically-specific group of people, namely Americans).

But as many online art works point out, it's equally hard to think of the Internet as itself being a place as it is to think of it as an ordered, selected, or chosen 'collection' of information. **Nina Pope** and **Karen Guthrie's** *TV Swansong* brought together in online space art activity happening in locations all across the UK. Nine artist teams created projects in locations inspired by or made famous by another temporal and locative media – television. The one-day webcast was a result of a collaborative activity, an interesting model of cultural production. In this sense, information online is today as likely to be collaboratively generated as much as it is selected or edited by a centralized source (witness the rise of the blog or the wiki). *Conventional 2004* incorporates telephone interviews, journalistic on-the-fly reportage, and a collection of user/correspondents to generate the material in the database driving the site. Furthermore, with the question of distance comes the question of time. Information online can be either instantly timely (the news-ticker on the BBC site) or out of date (old archive pages for web-cast events that have

past).

Many art projects online explicitly play with these three factors: the collaborative generation of a database of information, and its relevance in space and time. They point out the interesting spots in the network where the real world gains purchase. **Thomson** and **Craighead's** *Template Cinema* seeks to use live webcams, and live internet radio station feeds to create mini movies on the fly. As **Josephine Berry** writes:
Net artists have become increasingly interested in finding shared languages or a shared experience internal to the texture and logic of the Net itself. In other words, technical features such as software, interfaces, desktops, file structures and transmission protocols which crucially shape millions of users' daily experience move to the centre of Net artists' exploration of deterritorialised collectivity.

While the database is potentially a form of a "language of self and collective identity" bridging online culture and the "real world," the experience of the works collapses the space between fact and artifact. Berry writes:

The global computer network, it seems, is nothing if not abstract; a system which combines the metaphors of software (especially of the office) and the material-technical functionality (cabling, satellites, hardware, flows of data packets, execution of programmes etc.) into an instrumentalised simulation and extension — a virtualisation — of the world. A spectacular regime in which distance is collapsed and substituted by the linguistic sign of country domain names (.uk, .de, .it, etc.), if at all.

Artists working on the Web are collecting, describing, and making useful, aesthetically and otherwise, the information in the database that is the Internet, that is the world at large. The database functions as both a way of creating a collectivity across a space, and of territorializing that space — marking its geography in a useful manner. Artists who use databases are in essence then describing spaces and places in such a way that the activities we as users engage in, in relation to those places, are profoundly altered and highly original.

References [endnotes]:

Sections of this have been previously published as part of my essay "You Can Find Me Here: Geographically-relevant database art online" in Kiendl, Anthony (2004) (ed.) Obsession, Compulsion, Collection: On Objects, Display Culture, and Interpretation (Banff: Banff Centre Press) (pages…)
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Berry, 66.
Berry, 55.
Josephine Berry, "The Thematics of Site-Specific Art on the Net" (Ph.D diss., University of Manchester, 2001), 52. The text can be found online at www.metamute.com.
The full text is available as an attachment. Please download it here.

Related internet addresses

http://www.variablemedia.net/
http://www.yproductions.com
http://www.newmedia.sunderland.ac.uk/crumb/

Play Ethics: : The Convergence of Art, Games and Politics

Title

Play Ethics:

Subtitle

The Convergence of Art, Games and Politics

Lead-in / Abstract

The refugee issue is one of the biggest issues facing human rights today. In Australia the situation is particularly caustic. One of the artistic responses to this has placed a refugee as the protagonist in an electronic game. Is this a successful ethical endeavour or a further media smokescreen?

Participants and speakers Wilson, Laetitia (AU)

Short biography of participants Based and working in Perth, Western Australia, (one of the most isolated cities in the world!) I have developed an interest in things electronic - music, art and culture. As a PhD candidate at the University of Western Australia, my research is focused on digital play, its cultural manifestations and social repercussions.

Full text

How can you make an electronic action game out of a current, real-life refugee crisis?

Rectangular concrete blocks ensconced in silver fencing, decorated by razor wire emerge from the red dust of the hot Australian desert; "…an image of another world: a landscape of the known, yet chillingly alien… the postcard familiarity of the Australian desert… is both affirmed and overturned. The outback as prison is a confined, sequestered, uncannily ordered space...." 1 This was the *Woomera Immigration Reception and Processing Centre*; a site amongst many that became an icon for the so-called refugee crisis in Australia. This crisis unfolded when people arriving in Australia, seeking refuge, were militarily addressed; family members were separated, personal belongings removed and 'home' became a site of isolation and depravation, uneasily positioned between prison and asylum. In such border 'zones of indistinction' detention is non-discriminatory; whole families are detained, sometimes for years at a time. This situation has caused some people to drink shampoo, whilst others sewed their lips together in a desperate attempt to draw attention to what was happening.

Perhaps this is indicative of the gap between citizen and human being. The citizen may reside in a politically demarcated, determined and controlled sphere, human being as such, stripped bare of definitive contextual identity, detached from its sheathing, or ticket of citizenship, teeters on the edge of the nation. This plight of the refugee represents both a split between the concepts of human and citizen and a crises in the concept of human rights. "The so-called sacred and inalienable rights of man prove to be completely unprotected at the very moment it is no longer possible to characterise them as rights of the citizen of the state."2 This understanding of the refugee is amplified in Australia; a country now renowned for its uncompromisingly harsh system of mandatory detention. Looked upon with a fearful and sceptical eye, the refugee in Australia is a prisoner of the desert, identified as a 'boat person' or 'non boat person', whose name is replaced by a number. Emotional public debate has dominated election campaigns and the toxic Australian media mélange has done little in the way of clarifying the issues. This situation is worsened by a general lack of access to the camps by independent critics. As a result, the refugee is predominantly framed as a threat; criminal, terrorist, illegal and invader. The question of how to effectively engage with the unfolding events is more than ever of critical importance.

Now imagine you are the protagonist in a 3D action adventure *FPS*; whose context and concepts mirror the aforementioned reality. The concrete blocks (outside and in) and barren landscape are 3D rendered and the digital being of yourself and others around you is based on case-studies. You are invited to 'see the world through their eyes' - as a modern-day detainee. As you explore your desolate surroundings you must decide on the best possible course of action; decide on positive or negative outcomes for your character; make moral choices and face the consequences. An ergodic, open-ended structure promotes a gameplay based on work; on a rational, systematic approach to navigation through the game-sphere. The detention centre as your game world presents you with the familiar element of puzzles to challenge you to advance. Essentially, you are granted the electronic freedom and agency to navigate within a space otherwise inaccessible to the public.

But questions already emerge, such as; how is the aforementioned reality and the game reconciled and, further; does it offer a new avenue for understanding the life experiences of refugees beyond the limited media depiction, or does it merely relegate them to yet another image on the over-familiar screen; thus presenting a falsetto of them by reducing the complexity of their lives?

The makers of *EFW* maintain that;

Escape from Woomera will be an engine for mobilising experiences and situations otherwise inaccessible to a nation of disempowered onlookers. It will provide both a portal and a toolkit for reworking and engaging with what is otherwise an entirely mediated current affair.3

This is a revealing commentary on the key polarities embodied within this game; it is both a political endeavor locating one in real-world issues and a means of play and immersion within a game realm. A portal implies traveling from one space/dimension and into another, whereas a toolkit evokes phenomenological notions of being-in-the-world. This quote both counters and confirms the proposal

that the refugee and surrounding issues are distanced through the electronic-game medium (by the simulation of the events, individuals and context). There is precedence given to the idea that through playing with the events, rather than merely reading or observing them, we engage with the issues with a greater degree of intellectual involvement via interaction; "we seek to engage the player's minds – emotionally, ethically, intellectually – not just their trigger fingers"4 state the makers. The metaphor of tools further implies the need of a knowledge-base for useability/gameplay, characterized by thought-driven navigation through the game challenges. The 'portal', then, transports us to a very well defined and comfortable playspace, distinct from 'ordinary space', or actual space and the avatar as proxy becomes our vehicle through which to grasp an alternate perspective on the issues facing the refugee in detention. However, to my knowledge, mediation is not miraculously bypassed with this strategy; its form is merely shifted to the electronic game mode, which comes loaded with its own baggage even as it is perverted by the makers who morph it in the direction of a documentary/educative game.

There are thus several problems that stand in the way of the translation of this 'alternate perspective' and means of grappling with (or reworking) what are incredibly complex real-life issues. *EFW* is defined by strategies that unsettle the traditional understanding of the *FPS*; the position of the protagonist is inverted; satire is applied and conversation is contextual to the issues facing refugees in detention. *EFW* is initially a modification of the game *Half-Life* (later to be translated to open-source software); the aesthetics of the gameplay are - in accordance with Half Life - removed from the traditional symbolic imagery of the electronic game hero and morphed to call attention to the plight of a very different kind of individual as hero. Both the image of the hero and the conventional, normalised image of the refugee as weakened, impoverished and dispossessed individual are inverted and perverted through the game mechanics. Yet this strategy - along with the use of violence - risks upholding the stereotyped myth of the refugee as violent and dangerous (in other words, terrorist); feeding into dominant fears and misconceptions and, in turn, negating the cause. Or, contrarily, it risks idealising the refugee as an uncomplicated hero; (which still keeps us at a distance). Meanwhile, the use of satire is blatantly engineered in the caricature of Australian political leaders as 'boss-monsters' to be overcome. In school-yard prank style the Australian government and its processes are ridiculed. Then, the sobering strategy of conversation defines progress through the game and becomes a means of communicating issues specific to detainees. Insight into daily life is gleaned through the conversations had between detainees; amongst themselves and in interaction with the guards. Yet this strategy, too, risks falling into banality and triviality as the gravity and seriousness of the situation at hand is obstructed by the aim of escape and act of play (i.e. when conversations about the deplorable treatment of refugees are intercepted by conversations about the need to find pliers to escape). Each of these strategies – for better or for worse – do disrupt stereotypes and this is an important step in generating awareness contrary to the dominant misconceptions surrounding refugees. Yet the success of such dialogue, satire and character inversion – as a valuable contribution to the cause of refugees - remains to be seen.

A thought that is often articulated by the likes of theorists such as Gonzalo Frasca is that the "structural characteristics of video games prevent them from dealing with serious content."5 As players portalled to a virtual toolbox we probably wouldn't even blink an eye to the familiar binary architecture and elements of a score, an aim(s), levels, puzzles and the possibility of replayability (if things should go badly). Such basic game logic is often commented on as being one of the inherent difficulties in the path of the success of games as social commentary. Games are, generally speaking, structurally geared to operate according to a goal-orientated, win-lose logic. This internal architecture potentially detracts from the extra-gamespace actuality - signified by 'tools' - and enforces a conceptual – as well as virtual - distance from the events beyond the screen. The refugee, detained in the desert prison has no option for replayability, if caught in the act of escape. Thereby, if, as a game-player, we are immersed in the gameplay and focused on a specific goal, where is the space for reflection on, and awareness of these issues and; most importantly, the space for empathy? One of the key elements to the success of *EFW* would be its ability to generate empathy through the vehicle of virtual agency as a modern-day detainee. If we are unable to empathize with our avatar, if we are unable to put ourselves in the place of a person seeking refuge, imprisoned within a remote detention centre, then how can understanding even begin; how can we *really*, as the makers claim, "have access to and engage with this issue in an unprecedented and unique way"6 ?.

One of the greatest challenges of political art is the question of how events, such as the refugee crisis are to be symbolized in light of the already overbearing myth production surrounding them. *EFW* navigates within what is already a very complicated zone in terms of the politics of representation (amplified by its position as a project of convergence). For the makers, ethics are intertwined with game

structure and mobility through the game-space, they state their position;

"As game developers we do not pretend to offer a political or ethical solution to the plight of refugees in detention. Therefore we have chosen to steer away from a value-loaded, clear-cut set of outcomes representing 'winning' or 'losing'. Instead we aim to set up a simulated environment where players are empowered to explore the possibilities, to be confronted with dilemmas…"7

The makers may not offer a political or ethical solution, but they do maintain a position that offers a strategy for awareness; which, as we have seen, is a complicated endeavor. The application of an open-ended play logic is critical, if only insofar as it marks steps toward the resolution of the problem of the binary-structured, win-lose logic of electronic games. However, steering away from a 'value-loaded, clear cut set of outcomes' - attached to winning or losing - cannot prevent the vehicle from traversing highly value-laden terrain. When constructing a game based on a current reality, that is already so charged, one inevitably crosses dangerous ground. The *EFW* makers aim to challenge stereotypes; the refugee is humanized and information about the way they have been treated is translated. As such, the predominant framing and perpetuation of the idea of the refugee as terrorist, invader, queue-jumper, culture contaminant and usurper of resources, is unsettled. Yet these steps are walked on a controversial tight-rope, as they waver between trivialisation and didacticism and their success or fall remains to be seen in the final product. It remains to be seen whether this convergence will succeed as a cohesive mixture of playspace and thinkspace, portal and toolkit; access to a gaming audience and not solely preaching-to-the-converted. Finally, it is interesting that EFW has attracted opprobrium from both the Government and Refugee groups. Both of these group's concerns are essentially focused on the trivialization of serious issues by the electronic game medium. Perhaps then, the question should be; not how do you make an electronic game out of a current, real-life refugee crises, but rather, how do you play such a game...?

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2002,
http://www.borderlandsejournal.adelaide.edu.au/vol1no1_2002/perera_camp.html

2. Agamben Giorgio, "We Refugees",
http://www.egs.edu/faculty/agamben/agamben-we-refugees.html

3. http://www.escapefromwoomera.org/faq.htm

4. Ibid
5. Frasca Gonzalo, "Ephemeral Games: is it
Barbaric to Design Games after Auschwitz?,
2000, http://www.ludology.org/articles/ephemeralFRASCA.pdf

6. http://www.escapefromwoomera.org/faq.htm

7. Ibid

Pockets of Plenty : An Archaeology of Mobile Media

Title	Pockets of Plenty
Subtitle	An Archaeology of Mobile Media
Lead-in / Abstract	Media experiences have often been associated with fixed locations. In ISEA2004 Erkki Huhtamo brings up that in recent decades, media experiences have begun to "break out" from fixed locations, taking place in various intermediate spaces. In his keynote Huhtamo discusses how mobile phones, pagers, personal digital assistants, MP3 players and pocket game consoles are changing the ways we conceive communication, mobility, social space and the formation of identity. As these developments are seen as the "Newest of the New", a veritable break with the past, Huhtamo asks is it really so? In his paper he performs a media archaeological excavation into the origins and early stages of mobile media, to test the validity of such an idea. Does the emergence of mobile media represent a real cultural rupture? Is it possible to identify continuities between the current mobile media forms, and earlier developments?
Participants and speakers	Huhtamo, Erkki (FI / US)

Short biography of participants

Erkki Huhtamo is a Finnish media researcher, curator and writer currently working in the United States. He is Associate Professor of Media History and Theory at University of California Los Angeles (UCLA), Department of Design/Media Arts.

Huhtamo has lectured worldwide, published extensively on media archaeology and media art, curated media art exhibitions and directed television programs about media culture. He is also known as an avid collector of media archaeological artefacts.

Full text

See the RTF file.
The full text is available as an attachment. Please download it here.

RAW : Rethinking the editing process and mediation in audiovisual narrative experience

Title

RAW

Subtitle

Rethinking the editing process and mediation in audiovisual narrative experience

Lead-in / Abstract

RAW is based on a tool that captures a minute of sound before and after a picture is taken. It is meant for allowing people to capture their everyday subjective experience. A third party, like journalists or documentary filmmakers, doesn't mediate the sound and visual material created (it remains 'RAW'). In August 2003, the tool was taken to Mali in Africa and given to 23 people who expressed themselves on their daily lives, recording sound and taking pictures, without editorial direction. The installation presents their content, without alteration, and allows the audience to immerse itself in a collection of moments of humanity.

Participants and speakers

Agamanolis, Stefan (IE / US)

Bitton, Joëlle (FR / IE)

Karau, Matthew (US / IE)

Short biography of participants

Joëlle Bitton, from the Human Connectedness group at Media Lab Europe is an artist and researcher exploring perceptions of the world. How do they affect our life and understanding of others? By confronting people with intriguing or disorienting experiences, she wants to challenge our assumptions and habits of urban, social and intimate environments. In particular, the project *RAW presented at ISEA2004 invite people to shift the awareness they have of a distant culture.*
Her academic background includes post-graduate studies in media arts at the School of Fine Arts of Paris and in history at the Sorbonne where her research focused on the influence of emerging technologies and networks on the 19th century European society.
She co-founded Superficiel in 2000, an experimental platform for digital art projects: 'Palpitations' on sexuality and memory; 'Plakatieren Verboten' with Rupert Huber, 'Kindergarten' on children and fair monsters, 'Passages' inspired by Walter Benjamin's Arcades Project…
She has also been working as a free-lance interaction designer between Vienna and Paris and presented her work in numerous international events.

Full text

RAW is a system combining a tool and a process for capturing and conveying audiovisual impressions of everyday life. The project aims to enable a relationship between the user of the tool and an audience in a different place or time with an absolute minimum of editorial mediation by a third party. The tool itself incorporates a digital camera and a binaural audio recording device that captures the minute of sound before and after a picture is taken. We tested RAW in workshops within several cultural contexts, the most important of which was an expedition to Mali in August 2003.

Initial research directions

The RAW project began with the realization that, for many reasons, we don't always have a good sense of what everyday life is like in other places in the world, and that having this sense might be helpful in improving understanding and relations between people in different cultures.

However, the most common perceptions that people have about life in different places in the world are often the result of choices made by the popular media and

news channels that tend to focus almost exclusively on extreme events…For example, like the latest war, famine or chaos happening in the continent of Africa.

We feel these factors can degrade the full sense of awareness and appreciation we can achieve of other peoples and places, above cultural stereotypes and clichés.

RAW aims to address this problem by highlighting the moments of everyday life, a common and familiar reference to everyone: when the trivial and the banal can reveal much about the realities of the societies and cultures that people inhabit.

We chose the African country of Mali as a starting point for thinking about the project because we feel this country has a particularly rich and diverse culture that is not well recognized or understood within Western societies. We conducted a large scale workshop over three weeks in August 2003 in three locations in Mali: Bamako, Timbuktu and Ségou; and worked with 23 people. The content gathered by these participants is presented in our project.

The tool

The tool we developed is meant to allow users themselves to reflect more directly on their everyday lives, without the traditional mediation of a third-party, like a documentary filmmaker or journalist.

The material gathered with the tool remains "raw" and unedited all the way from production to archive to presentation; hence the name of the project.

Finally, we felt it was important that such a tool be tested and considered relevant and valuable within a plurality of cultures.

In detail, the RAW tool is an audiovisual recording device that combines a digital still camera and an audio recorder. Audio is recorded binaurally using high-quality miniature microphones that are placed in the user's ears. The tool records 1 minute of sound before and after a picture is taken. The captured material is archived in a totally raw form, with no deletion or modification allowed by the user or any third party.

Sound and still images

We chose to work with sound and still images because we believe that video is not the only way to relate sound to image. In the domain of video-making we feel that audio is typically considered secondary—that audio is seen as supplementing the visuals, not the other way around. Yet we believe audio, and especially ambient audio, holds great potential for conveying certain kinds of impressions of everyday life with a richness not possible with visual media.

We wanted to innovate in the field of audiovisual expression so that sound and image could have a different and more equal dialog than they have in the domain of video. The design of the RAW system aims to consider both sound and image of the same importance. The audio provides context to the image and the image provides a context for the audio.

There have been several experiments in the domain of "audiophotography" in recent years. These primarily research or artistic efforts partly trace their roots to earlier projects such as Chris Marker's La Jetée (1962), a short film made up entirely of still images and a soundtrack.

Depending on how RAW material is presented to its audience, the availability of that minute before makes it possible to add a dimension of mystery, set up by a sense of progressive discovery—wondering how the sound being listened to will converge to the moment depicted in the image. In photography theory, a recurrent subject is the question of what could have happened just before a picture was taken.

The previous minute of sound captured by RAW gives some element of an answer and reveals the picture like the chemical development process, while the following minute of sound haunts the user who is already forgetting about their last picture.

In this sense, the RAW tool differentiates itself from the few seconds of "audio caption" available in some new digital cameras. Sound is not an option with RAW—it is a core constituent of the recording made with the tool. A composition can treat sound and image equally or it can take on different emphases. The user might desire to capture a sound that piques his attention as the primary subject.

Conversely, he might illustrate a scene he likes with contextual audio, whether it's his own narration or that of a stranger talking in the street, or just ambient noise.

"Non-editing" process

We also chose to design a tool that would leave the content unedited. Indeed, with video content, a producer must review the footage shot, possibly multiple times, before choosing specific moments to be edited into a final movie. This process stands in stark contrast to that designed for RAW in which no editing is allowed. In effect, knowing this constraint in advance, the user is compelled to "edit" at the same time he is capturing material.

The act of taking a picture is itself a selective process that marks a specific point of interest. The immediacy of these moments is enhanced because they are chosen in real-time, not while reviewing the material at a possibly much later time.

After his experience with the tool, the user obtains an immediate result that doesn't need further processing. This result intrinsically possesses a story-like quality since each photo is enclosed by two minutes of contextual audio that, together with the image, create a natural rise in suspense, a climax, and a resolution.

Minimal mediation and exhibition

Because we felt there were many different ways one might want to be able to present RAW records to audiences (on the web, interactive museum installations, mobile devices, to name a few), we created a set of guidelines that exhibitions of such records should obey in order to maintain the spirit of a minimally-mediated relationship between the user and the audience on the presentation end of the pipeline. For example, no modification of, deletion of, or favoritism toward any of the content is allowed by the presentation apparatus itself or by any other party acting between the capture and display of the material, and all the photographs and audio captured in a particular user's session with the tool must be accessible in their entirety to the audience. These presentation rules were instrumental in helping to guide the design of our installation.

We were in search of presentation designs that would provide an engaging experience while also respecting the project's ideal of minimal mediation. This would prove to be a difficult task since the very idea of a presentation somewhat implies that there is some kind of mediation or editing happening.

We tested several presentation prototypes with various groups of people. We realized from their feedback that some staging of the content was needed, so the audience could better understand the rhythm underlying the capture process and control the progression of the presentation.

The Mali experience and types of "narration"

The exhibition 'RAW' presents a series of experiences captured in Mali during the month of August 2003, more specifically in Bamako, Timbuktu, and Ségou. 23 people participated in this project, expressing themselves, for an hour or thereabouts, on their daily lives, recording sound and taking pictures, without editorial direction.

The records created by our participants were inspirational to us in their originality and immediacy.

But the most significant result of our experience in Mali is that we began to observe some clear categories for how our participants exploited the RAW tool for different kinds of capture or storytelling purposes.

These span a range from personal reflection to more outward styles of engagement, with either a passive or active stance toward the audience. They emerged despite the care we took to not suggest any particular styles or themes to our participants in our initial discussions with them.
We identified four categories:

Type 1: Social glances

This category represents uses of the tool that occur primarily in a social mode, or in which social contacts and spontaneous encounters are the primary content underlying the media captured by the user.

Many of our participants used the tool as a means to strike up conversations with people in their workplace, at home, or on the street. Or conversely, sometimes friends of the user would be curious about what he is doing and interrupt him during his session, resulting in a social exchange.

But at the same time, no particular audience is addressed by the user.

The RAW records that fall into this category convey a rich impression of the social fabric and relationships that exist in the society, and they are also the records in which we hear the greatest variety of spoken languages.

Type 2: Caught in activities
Some people chose simply to perform their everyday tasks or livelihoods and capture impressions of them in more of an individual mode.

Again, no specific audience is actively addressed, but the user is aware that these moments are indeed a kind of "performance" that will be experienced by an audience at a later point in time.

Musicians were the most likely to share their daily experiences in this way, often capturing themselves playing in a jam or rehearsal session.
Another woman recorded her daily journey to obtain water from a community well in this fashion.

Type 3: Active documentation
In this category, the user of the tool actively addresses the eventual audience of the record he is creating with spoken narration or even live interviews with people he encounters, as a way of documenting some aspect of his everyday life or his society.

There may be a specific theme, determined in advance, or a looser structure based on spontaneous encounters with interesting scenes or personalities.

In some cases, the user clearly had a foreign audience in mind that would wonder what life is all about in their Malian city is all about. Hence, the language most often used in this context was French, sometimes even English.

For example, one participant walked around Timbuktu, interviewing people along the way about the development of the city infrastructure.

Type 4: Intentional discourses
This category refers to exploitations of the tool in which the user has a very specific message or commentary that they wish to relate to the audience.

The user's speech is not intended as a narration of the audio or visual moments they are capturing, but rather it is the other way around—the pictures and sound are an augmentation of the commentary.

The user may operate alone with a more "political" or "activist" perspective, and the record might take the form of a monologue or spoken contemplation.

For example, one participant used the tool to convey specific thoughts concerning the development and position of academia in Malian society, which he illustrated with loosely related audio and visual impressions from his university.

The visual and sound materials all of our participants created are gathered in the RAW installation, without alteration, in a presentation that allows the audience to discover a collection of moments of humanity.

Thus, the experience of RAW aims to transform audience behavior by using sound media and still pictures as a way to immerse oneself in the life of another person, hence enabling a different and more direct kind of connection with distance societies or future generations, in different places or times.

Related internet addresses

http://www.medialabeurope.org/hc/projects/raw
http://www.medialabeurope.org/hc/raw/video.html
http://www.medialabeurope.org/hc/raw/

Re-public : Performative public communication with mobile &

locational technologies

Title	Re-public
Subtitle	Performative public communication with mobile & locational technologies
Lead-in / Abstract	This panel discussion contribution will outline a proposed research project concerning the following questions: What are the genre, text type, rhetorical and multimodal discourse characteristics of mobile, context-sensitive communication in public settings and cultural institutions such as museums? How can collaborative, participatory and adaptive design between human and information sciences be applied to understand the shared construction and production of public electronic communication? What are the performative characteristics and activities of individuals and groups in their negotiations of digital mobile technologies and content, as institutionally given and as generated by public participation? In what ways can critical and participatory research methods and analyses be used to develop situated analyses of embedded, context-sensitive, and interactional public communication?
Participants and speakers	
Short biography of participants	Andrew Morrison is an Assoc. Prof at InterMedia, an interdisciplinary research centre at the University of Oslo. He works with dance and digital media, mediating research online, and multimodal discourse and performativity.
Full text	.....

Re:searching our origins : Critical and Archival Histories of the Electronic Arts

Title	Re:searching our origins
Subtitle	Critical and Archival Histories of the Electronic Arts
Lead-in / Abstract	The mid-to late 20th century has become a popular topic for arts research in recent years. Many projects are attempting to re-discover and re-contextualise the long-neglected period of late modernism and, in particular, the field of art and technology. The aim of the panel was to bring together members of the international community who are interested in or involved with projects intended to archive, document and create historical and critical analyses of the use of and impact of computing and digital electronics in the arts.
Participants and speakers	Mason, Catherine (GB)
Short biography of participants	n/a
Full text	Sea RTF document for introduction to the session theme. The full text is available as an attachment. Please download it here.

Ruta Remake : Stage/Table, Theramidi, PC, Screen, Sign System, Dolby Surround 5.1, Light

Title	Ruta Remake
Subtitle	Stage/Table, Theramidi, PC, Screen, Sign System, Dolby Surround 5.1, Light
Lead-in / Abstract	Provoked by the notion of "the lack of women's voices", the *Ruta Remake* project works to map out relations concerning a politics of identity in Lithuania today. *Ruta Remake* unfolds as a search system that is suggested as the play between forms, ranging from the remainders of the 'Homo Sovieticus' through to the Modern Capitalistic Model.
Participants and speakers	Urbonas, Nomeda & Gediminas (LT) Urboniene, Nomeda (LT)

Short biography of participants

Since 1993 Nomeda & Gediminas Urbonas have been running the Jutempus interdisciplinary art program - a model for social and artistic practice with an objective to build frameworks of new and old media practices and facilitate a creative discussion in a critical discourse.

Full text

Linguists, philosophers and music theorists join the *Ruta Remake* project to investigate the contemporary state of women's voices. Through the shared recollections of media they build a pathway to navigate through a collection of samples that reflect social construction and metaphysical qualities, resulting in a 'voice archive'.

Participants suggested a specific weaving pattern named Ruta (rue) that refers to a perennial plant. In Lithuania, this pattern was imbued with different meanings, to become an icon representing virginity and femininity. The Ruta pattern provides a system for sound notation, a shuttle for composing the voice threads of the archive, as lines of information and as routes, joined in patterns.

Ruta Remake employs an updated version of the *Thereminvox*, the *TheraMIDI* device, which allows a user's hand gestures to mediate between sets of acoustic samples using two light-sensitive resistors linked through a MIDI interface. The hand's movement within light casts shadows, and these register output and representation. In this way the *TheraMIDI* based navigation turns the user into a performer, charting a path through the sound archive of voices in real time and weaving patterns to compose a sound fabric.

Related internet addresses

http://www.transaction.lt
http://www.nugu.lt

Safe As Mother's Milk : The Hanford Project

Title

Safe As Mother's Milk

Subtitle

The Hanford Project

Lead-in / Abstract

Safe As Mother's Milk: The Hanford Project is a website and installation examining the atomic history of the Hanford Nuclear Reservation. The project incorporates recently declassified documents and historical photographs available online through Hanford Declassified Document Retrieval System.

Participants and speakers

Stringfellow, Kim (US)

Short biography of participants

Kim Stringfellow is an artist and educator residing in San Diego, California. Her work addresses ecological, societal and historical issues related to land use and the built environment through hybrid documentary forms involving digital media, photography and installation.

Full text

The Hanford Nuclear Reservation is located on 565-square-miles of desert in southeastern Washington State. For more than forty years, Hanford released radioactive materials into the environment on an uninformed public while producing plutonium for the U.S. nuclear arsenal during the Cold War era. Although the majority of the releases were due to activities related to production, some were also planned and intentional.

Hanford workers, their families and other downwind residents became literal guinea pigs for radiation experiments that were carried out at the facility by the former Atomic Energy Commission (AEC), Department of Energy (DOE), the Department of Defense, and civilian sub-contractors including DuPont and General Electric from 1944 to 1972.

Safe as Mother's Milk examines these important events through declassified historical photographs, media and documents available online at various government archives, including the Hanford Declassified Document Retrieval System and Human Radiation Experiments Information Management System (HREX).

This project is important for ISEA 2004 as it illustrates how the Internet may be used to investigate, research, and disseminate "unofficial" social and political histories in a multimedia documentary form to the public.

Related internet addresses

http://www2.hanford.gov/declass/]
http://www.kimstringfellow.com/hanford/

Segmentation and Reassembly of the Digital Moving Image : A Method of Depiction of Temporal and Spatial Nonlinearity

Title	Segmentation and Reassembly of the Digital Moving Image
Subtitle	A Method of Depiction of Temporal and Spatial Nonlinearity
Lead-in / Abstract	With the invention of the moving image, carrying in itself the concept of space-time correlation, a whole new field of artistic experimentation emerged. Today's artistic research takes advantage of the digital technology of the moving image that enables its segmentation and reassembly.
Participants and speakers	Jaschko, Susanne (DK)
Short biography of participants	**Susanne Jaschko** works as a freelance curator for media art and cultural manager in Berlin, Germany. Her focus lies on interactive art, installation and digital moving image. In the past, she has worked as curator at the transmediale, international media art festival berlin, where she was deputy director from 2001 till 2004. In 1999/2000 she was in a charge of the programme management at the monomedia conference at the Berlin University of Arts. Furthermore, she initiated and curated a number of contemporary art exhibitions, e.g. at the Ludwig Forum for International Art in Aachen, Germany. She holds a PhD in Philosophy at the RWTH Aachen.

Full text

The theory of the image and of emblems is a prominent field in temporary cultural theory. For some time now, discourse about the image has been liberated from pure aesthetics and has been adopted by the complementary practice of media science and its phenomenological research. Within this context, the image is discussed across disciplines as a fundamental method of world construction. Current research on imaging techniques aims at ascertaining what impact these techniques have on our understanding of the image and on how we use the image. Thereby, for instance, it has been understood that the development of central perspective went hand in hand with a new concept of subjectivity and that photography in its early days was dedicated only to the recording of the real.

When speaking of image-based artwork made with digital technology, we often stick to the question of how something was made and forget to ask the more important questions: why was it made and, even more important, what does it say about our image of the world?

In 1938, **Heidegger** gave a lecture called *The constitution of a modern view of the world through metaphysics* in which he evaluated contemporary imaging techniques developed by the natural sciences as a fundamental change of practice in modern times. **Heidegger** saw the basis of this change of practice in the visualisation of the world. According to **Heidegger**, it was only this technological practice that engineered the world as an image and that made the constitution of a world image possible.

My hope is that this paper, *Segmentation and Reassembly of the Digital Moving Image* will serve as a starting point for a discussion of what exactly the cultural and philosophical bases of these artworks are.
In my paper *Space-Time Correlations Focused in Film Objects and Interactive Video* (2002), I tried to link contemporary artistic experimentation in the field of the interactive moving image to the subject of time and space representation in art history. In it, I showed that the subject of space-time relationships has always played a dominant role in art and presented some major artistic methods of its models of representation, for instance in panoramas implying an extension of format, and in interactive installations.

With the invention of the moving image, which included the concept of space-time correlation, a whole new field of artistic experimentation emerged, using film as a basis for the transfer of space-time correlations into audio-visually perceptible representations.
In this field of artistic research, the digital video image is connected to generative processes and computational design, thus closing the gap between opposing genres.

In 1993, created probably the first interactive artwork using real-time video technology to alter the spatiotemporal reference of the image by scanning each pixel row of a picture and reassembling stacks of rows in the visual result. A computer programme executed various visual manipulations, such as time-lapse delay, slow motion, and time compression, which were displayed on a number of

monitors.

This early work laid the foundation for a series of artworks that made use of the segmentation of the digital image into pixel rows, thus creating distortions of the original image and nonlinear spatiotemporal representations of the world. **Iwai's** main interest seemed to lie in the power of the visual effects [1], and in fact this newfound technique provided a sense of playful immersion and expressiveness. Nevertheless, the application of such a technique in an art context is not only a function of its availability. If we assume that every invention and application of a cultural technique is closely linked to a specific change of cultural precepts and needs--as has been assumed in the case of central perspective--there must also be an underlying cultural concept behind this particular technique. [2]

I would put forth some precepts that seem to me to lead to this playful experimentation with the digital image and the manipulation of its spatiotemporal dimensions. The most obvious is the basic change in the perception of time and space in the modern era. Today's expanding global networks, enabling the real-time exchange of emotions and thoughts over huge distances, fundamentally influence our understanding of time and space. They have led to an unconscious adoption of their characteristic speed and have fostered the sense of shrinking geographical distances. The awareness of simultaneous existences and of multiplicity of views of the world supports the imagination of a parallel and fragmented reality that can hardly be understood and perceived as an entity. The fragmentation of the world goes hand in hand with the disaggregation of linearity. The impossibility of representing and reflecting the word in all its multiplicity encourages both a reduction of the individual and self-generated view of the world and, at the other extreme, an intense (self-) reflection of the here and now.

Pieces like *Soft Cinema* by **Lev Manovich / Andreas Kratky** and *Somebody, Somewhere, Some Time* by **Maurice Benayoun** [3] seem to be born out of the same idea, though they use the more traditional technique of collage, which already has a lively history in (video) art. *Soft Cinema* displays various streams of moving images on one screen, arranged along a clear and geometric grid. This continuous image delivery is driven by specific software that generates the output out of a movie database. *Somebody, Somewhere, Some Time*, on the other hand, assembles still images representing diverse locations, time zones and actions linked through a quasi-narrative.

In the latter piece, the image is divided into sections accessible to the viewer, who can "dive into" the picture and its manifold details. **Benayoun's** interactive piece betrays deep roots in art history, particularly in panoramic paintings. Despite the obvious aesthetic and functional difference between the **Benayoun** and **Manovich / Kratky** pieces, in both cases complete, autonomous and representational images are combined to form an associatively linked, synchronous universe of images.
In these works, the fragmentation of the world and of a worldview takes place on a metaphorical level, by a facet-like assembly of narratives, which, taken together, represent a universal totality.

In contrast, Iwai and his successors don't refer directly to the multiplicity of the world in its entirety; rather, they reflect on the multiplicity of a smaller unit, the here and now, by assembling segments of one real-time image. Another experimental art project that descends from *Another Time, Another Space* is the interactive installation *Zerrfalten* (Refolding) [4] by **Nelson Vergara** and **Stephan Schulz**. This piece questions the depiction of time and space in linear video and photography. *Zerrfalten* contrasts these recording methods with a system that combines compressed moments of time into one large image.

The system consists of two video cameras that feed the projection. The projected image is built out of segments of the recorded image of the visitor--out of pixel rows displayed in relation to the movement of the visitor and his/her position in space. The greater his/her distance to the camera, the thinner and more numerous the vertical pixel rows from the recorded image. The closer he/she comes to the camera, the bigger the segments of the image. The programme grades these segments from left to right and freezes them, unless they are "overwritten" by another sequence of segments or deconstructed by someone walking very close to the projection. This movement opens the small lines like a curtain to their full frame size.

Vergara and **Schulz** use pixel rows as a metaphor for time compression, for the depiction of "now." Scientific research has shown that the human perception of "now" lasts for approximately 0.3 seconds. This is the time span it takes the various centres and sections of the brain to find a synchronous rhythm that we experience as the present. **Paul Virilio** coined the term "intensive time," which describes an

extreme acceleration: the time beyond experience, the technically driven time that lies below the 0.3—second threshold and eliminates space. [5]

In *Zerrfalten*, a row of pixels as a time unit represents machine time as opposed to human time. Only by adding single moments of machine time in the form of pixel rows, is an image created that the human brain can interpret. Additionally, **Vergara / Schulz** integrated a fitting model of interaction that expressed the temporal concurrence and overlap of events.

Moreover, the single pixel row, as well as the frame it originates from, work as a precise spatiotemporal description of the visitor's movement. In the case of *Zerrfalten*, visual experimentation led to an artistic result that demonstrated the nonlinear quality of space inherent in this method of segmentation and reassembly of the digital image.

Barrington Street[7], also by **Schulz**, uses video footage shot from a moving shopping cart that was pushed down Barrington Street in Halifax, Canada. If there is no manipulation by the user, the programme automatically selects the middle and vertical pixel row of each video frame and freezes it on the right side of the former pixel row. If the user intervenes and moves the cursor, the pixel row parallel to the cursor is taken out. Thus a change of perspective is implied, providing unique nonlinear views of the street architecture. The nonlinear perspective conveys the impression of space that is dependent both on time and on the movement of the viewer.

That time and space were rediscovered extensively in the 1990s as topics in philosophy, physics and art can be interpreted either as a late consequence of **Einstein's** theory of relativity finally reaching mass consciousness or as a side effect of globalisation, which comprises the ideas of distributed space, multitudes, and simultaneity. However, the laws of nature are far less incontestable than we might like. For lack of a general and logical comprehension of time and space, we usually favour a naive and illogical understanding of these concepts. Admittedly, art is limited by its metaphorical language, and its appeal to our senses can only convey a rather simple idea of time and space compared to the true complexity of the subject. Nevertheless, artists feel compelled to find appropriate visualisations and systems that provide a notion of the implications of time theory. **Tania Ruiz Gutierrez** researched models of time representations and came up with a piece about the question of cyclic time and space. For this piece called *La Plaza 2* she extracted pedestrians from video footage and looped their movements in an endless and desynchronized process, while she imprisoned them in a torus-like model space. [7] She programmed the trajectories of these figures so that they will walk forever without reaching the boundary of the model space, since the space wraps back on itself. The pedestrians walk in a straight line and at a constant speed, enclosed in the system and in the frame. The film is programmed to last until the moment when all the possible encounters between figures have taken place.

While the **Ruiz** piece can be described as a film that runs by itself in a predefined way, **David Rokeby's** piece *Sorting Daemon* extracts human faces from their real-time contexts and reassembles them in a vibrant collage. A CCTV system connected to a computer system recognizes moving people on the street; when it finds what it thinks might be a person, it removes the person's image from the background. [7]

Then, the extracted image of the face is divided up according to areas of similar colour. The resulting swatches of colour are next grouped according to hue. The original faces first appear at the bottom of the collage and slowly separate into the coloured regions with their appropriate locations.

According to **Rokeby**, the focus of this piece lies both in exploring the generative process and in reflecting critically on surveillance systems. Nevertheless, it is closely related to previous pieces by **Rokeby**, such as *Seen* and *Taken*, both of which document and visualise the spatiotemporal occurrences of some site in real time, employing feedbacks, delays, processions of motion studies and loops as well as the extraction of persons from the source image. The fragmented images of *Sorting Daemon* therefore explore not only the metaphorical decomposition of a person by the recognition and classification of phenotype through software, but also embody the fragmentation of existence and of the world in general.

The aesthetics of visual and sonic noise is well-established in today's art culture, but it has recently been given new life by the development of real-time video-processing techniques and equivalent sound tools. In his essay for the Dokumenta 11 catalogue, **Sarat Maharaj** points out that sonic noise is neither the junk of the music system nor the simple antithesis of musical composition, but rather raw data for digital sound manufacturing done without a script in a tense

correlation to the visual.[8] **Rokeby's** *Sorting Daemon* is a production apparatus for visual noise, for a structured horror vacui, in which the endless stream of fragments overlap, are duplicated, and appear and disappear without any recognizable goal. Comparable to what **Maharaj** asserts for sonic noise, here the visual composition executed by the programme is neither a strict negation of traditional pictorial composition nor a visual scrap yard of digital fragments. Instead the visual output is part of the predefined generative process, which is what **Rokeby** is primarily interested in.
This ideological shift--from product to process--is an inherent differentia of digital culture and characterises also the following artworks, in which the degree of segmentation and abstraction of the digital image is further increased.

Osman Kahn and **Daniel Sauter** have employed the segmentation of the digital image into pixel rows in several works, starting with a piece called *We interrupt your regularly scheduled program...* [9] which reinterprets the TV broadcast stream by abstraction and time lapse. They chose television as an image source because of its huge impact on society. By switching through daily TV programmes the viewer collects a mass of fragments of information which he/she has to process somehow. It is well known that the mass of information that the human brain must process has never been bigger than it is today. This continuous, nonlinear intake of information has significantly influenced our perceptions of time and chronology and has fostered the development of spatial information management systems. In the piece, a stream of lines is created by first generating a pixel average of every horizontal pixel row for every frame. Then a one-pixel-thick slice of every one of these horizontally averaged pixel rows is kept in memory and scrolled down the projection. The result is a perpetual flow of abstract row patterns that pulsate and change colour and speed in relation to the source material.[10]

In his provocative though dated essay *The work of art in the age of mechanical reproduction*, **Walter Benjamin** compares film with painting and finds film wanting: "The painting invites the spectator to contemplation; before it the spectator can abandon himself to his associations. Before the movie frame he cannot do so. No sooner have his eyes grasped a scene than it is already changed. It cannot be arrested."[11]
Of course, **Benjamin** was referring to contemporary narrative film; however, today's experimental artwork with the digital moving image goes far beyond figurativeness and narration, and sometimes it even links itself back to abstract painting.

André Bazin was one of the most influential proponents of the idea that cinema, under the aegis of photography, "freed Western painting, once and for all, from its obsession with realism and allowed it to recover its aesthetic autonomy."[12]
Following this train of thought, video liberated cinema from the bondage of narration, and now and finally, the digital moving image frees itself from linearity and figurativeness.[13] Through both the abandonment of narrative and the reintroduction of complete abstraction, digital art regains its contemplative and auratic nature.

One last example of the segmentation and reassembly of the digital image is a project by Jeremy Welsh that intends to bridge the fields of painting and digital media. One of the results of this project was the exhibition *Dialogue/Transition* [14], which was mounted in collaboration with the painter **Jon Arne Mogstad** and the media artist **Trond Lossius**, whose main focus is on sound.

The database behind the project contains numerous photographic images of container terminals that represent temporary architecture and urban zones and thus function as metaphors for transition and transience. By applying several effect filters and video editing programmes, these still images are heavily manipulated: For instance, a single row of pixels is extracted and stretched across the entire image area and then imported into a video editing programme where they are treated as frames of a single-cell animation. Also, more complex geometric forms are achieved by combining several streams of animation in a single video image consisting of multiple layers.[15] The visual results of this image processing are strong rhythmic and repeating patterns which are read and then translated, through real-time sound processing, into ambient sound.

The visual output of this process takes on the quality of "painting over time" [16], comparable to the result that **Kahn/Sauter** achieve through the live processing of digital moving images. The abstract digital moving image thereby gains the contemplative quality whose absence Benjamin complained of.

The segmentation and reassembly of the digital image, the extraction of pixel rows and the "compression" of the image, is used in various ways mainly to express the

temporal quality of the world. This method produces a broad spectrum of visual results, ranging from figurativeness and readability to pure abstraction and contemplation. The experimentation in this field of artistic production is fostered both by the artists' search for new means of visual expression beyond the narrative and their exploration of the visual capabilities of the video image and its tools. Within this artistic field, the focus of the work often lies in the live process of translation and transformation from one level of perception to another. Moreover, the work is based on a serious examination of complex space and time correlations whose perception and understanding has changed deeply through the everyday use of locative media.

By applying one basic technical method, i.e. the extraction of pixel rows, and combining those "comprised" moments of time in one moving image, a variety of artistic results is achieved. While the visual products of this artistic method strongly relate to each other and to contemporary painting and photography, for instance to present-day pinhole camera photography, the cultural basis for this kind of work is the acceleration of daily life and the disbandment of distances. In an even more technology-based future, the digital moving image that today plays a dominant role in culture already will be liberated from darkened rooms and monitors and the rectangular shape – thus leading to new artistic models representing the complex concepts of time and space.

■ 1. In The Leonardo Gallery, MIT Press, the piece is described as follows: "This 'live' sculpting in time generates some strange and beautiful distortions of the time and spatial dimensions that are displayed upon a rig of eight monitors." http://mitpress2.mit.edu/e-journals/Leonardo/gallery/gallery332/iwai.html

■ 2. Here I just want to point to two pieces that were produced at the Media Art Academy in Cologne (KHM) in 2003: In Vera Doerk's work "Update," visitors' motions are tracked and recorded. The single video frames are then displayed in the original sequence in a 3-D picture, while areas of high movement are identified by the software and visually connected by white lines between the single frames. Thus movement in space and time is documented and exposed. See http://netzspannung.org/learning/codekit/update

Another piece, called "selftime," made by Bei-Kyong Lee, plays with the opposite: While the image of motionless spectators is shown in the video projection, moving spectators are erased from the video image. The latter are represented by generated pixel dust.

■ 3. Both works were shown in the exhibition "Future Cinema: Cinematic Imaginary after Film", ZKM Center for Art and Media Karlsruhe, curated by Jeffrey Shaw and Peter Weibel, 16 November 2002—30 March 2003 (and other venues).

■ 4. A full documentation of the project is available at www.maybevideodoes.de/sites/zerrfalten.html

■ 5. This was discussed in the introduction to Machine Times. DEAF_00 Book. Published by NAI Publishers and V2_Organisation, Rotterdam, 2000.

■ 6. The project "Barrington Street" was the result of an artistic research that finally led to "Zerrfalten". A documentation is available at www.maybevideodoes.de/sites/barrington.html

■ 7. "In such a closed system, events are no longer read parallel to each other but through each other." Tania Ruiz Gutierrez: "From the matter of the facts to other substantial matters." Unpublished paper in which she describes the results of her artistic research. This research is part of her PhD thesis at the Université Sorbonne, Paris.

■ 8. See Rokeby's description of the piece in the catalogue "Transmitter. 21 April—23 May 2004, Kunsthalle Dominikanerkirche Osnabrück," published by Hermann Nöring, Ralf Sausmikat; copyright European Media Art Festival 2004, pp. 64—67.

■ 9. Sarat Maharaj: "Xeno-Epistemics. Ein provisorischer Werkzeugkasten zur Sondierung der Wissensproduktion in der Kunst und des Retinalen." In: Dokumenta 11_Plattfrom 5: Ausstellung. Katalog, Ostfildern 2002.

■ 10. This piece is a student project, which Kahn/Sauter realised at UCLA, California, in 2003, and which received an honorable mention at the Prix Ars Electronica in 2004, in the category Interactive Art. The installation contains a TV monitor placed with its screen toward a projection screen or wall. Next to the monitor the image is projected onto the screen, evoking the impression of a flowing

abstract digital landscape that pours out of the TV. See project page www.daniel-sauter.com/display.php?project_id=10

■ 11. The installation is interactive in the sense that the viewers can switch channels. Whereas the image is "compressed," the original sound is kept, so that the viewer possibly identifies the programme.

■ 12. Walter Benjamin, "The work of art in the age of mechanical reproduction," paragraph XIV. Quoted from: http://bid.berkeley.edu/bidclass/readings/benjamin.html

■ 13. André Bazin: The Ontology of the Photographic Image. What Is Cinema?, translated by Hugh Gray, University of California Press, Berkeley, 1967, p. 16. Quoted from: Paul Arthur: Transformations in Film as Reality (Part 6). On the Virtues and Limitations of Collage. www.city.yamagata.yamagata.jp/yidff/docbox/11/box11-1-e.html

■ 14. In speaking of the aesthetic autonomy of the digital moving image, one cannot ignore the vivid experimentation with digital video documentary. This type of aesthetics forms the opposite pole within the formal and semantic spectrum of the digital moving image.

■ 15. The show was realised at Christiansands Kunstforening (Norway) in March 2004, and showed paintings by Mogstad that combine the use of photographic reproduction and digital manipulation with traditional and new painting techniques. Lossius created the overall digital sound and contributed a video installation that uses abstract visual information from a live video feed to generate the soundscape.

■ 16. The full description of the research project at the Bergen College of Art and Design (Kunsthøgskolen i Bergen) is to be found in the text: The Bridge: the expanded field of painting and digital media, an art research project by Jeremy Welsh that will be published in the Kunsthøgskolen i Bergen yearbook 2004.

■ 17. ibidem.

Session introduction: Amplexus Poetics : Coding New Textual Experiences

Title	Session introduction: Amplexus Poetics
Subtitle	Coding New Textual Experiences
Lead-in / Abstract	Not provided.
Participants and speakers	Moren, Lisa (US)
Short biography of participants	At the forefront of these creative dialects are artist Bill Seaman (US/*Recombinant Poetics*) widely exhibited New York conceptual artist Nina Katchadourian (Finland/*Talking Popcorn*); New York interactive artist/programmer Camille Utterback (US/*Text Rain*); and New York based poet and author Kenny Goldsmith (US/UBUweb). Lisa Moren is an artist who creates interactive installations and recently curated INTERMEDIA:The Dick Higgins Collection at UMBC.
Full text	*Amplexus Poetics: Coding New Textual Experiences* is a panel of artists including **Kenny Goldsmith**, **Nina Katchadourian**, **Bill Seaman**, and **Camille Utterback**, moderated by **Lisa Moren**. *Amplexus Poetics* is an inter-linguistic form of software poetry where the concrete material of language is experienced through fleeting embraces and intermittent gestures. The familiar semantic perception between word, object, meaning is dismantled, fluxuating graphemes and sounds into new forms. This panel will trace poetic forms critical to interactivity, recombinant texts, aleatory interfaces through concepts of onomatopoeia, alliterations, and the work found in kinetic poetry and concrete poetry movements. Through their recent projects, these panelists will explore the gaps between raw impressions, signified impressions, mediated technologies and their interpretations. Artists who have critically shaped textual concepts in social, linguistic and participatory technologies will offer insights to their impact on digital culture. Projects such as *Ubuweb*, *Recombinant Poetics*, *Text Rain* and *Talking Popcorn* will present unique hardware/software installations that explore interactivity, sound, and an inter-linguistic territory of stripping our presumed knowledge of seeing the

world through symbols. Through the use of live interpretive software (C++ and Max), this fluency is exclusively dependent on the inherent dialects of media technologies.

Artists working with software and textual interfaces work with language properties through the use of code to express a paradigm reflecting spectator's behaviors as their material. How does linguistic expressions translate from syntactical narrative to the modular paradigms of software? How can software use poetic constructs to amplify the senses? What is the interplay between the senses? What are the technical limitations of coding knowledge and how are those limitations useful?

Though manual database paradigms — such as the concrete poets — one of many aspects that distinguish software-based artists from the work of previous generations is the point at which digital fluency became a household representation of a rational world. While raising numerous issues regarding participation, social compositions, and cultural aesthetics, these artists critically exploit the gaps between technology, semantics and perception. Their work exposes a subversive and poetic asset that is able to expose a product in route to simulate syntactical knowledge. These prejudicial flaws inherent in a utopian promise reveal a computerized reflection of a cultural desire.

Related internet addresses

http://www.debsandco.com/debsandcoMovie.swf
http://www.ubu.com/contemp/lehto/lehto.html
http://billseaman.com/

Shocking Flesh : Fatness, Feeling and The Politics of Interpretation

Title

Shocking Flesh

Subtitle

Fatness, Feeling and The Politics of Interpretation

Lead-in / Abstract

In my PhD research on fat embodiment in the media, I look at different kinds of images of women and men who are defined fat by the contemporary body standards, and these images almost always provoke strong feelings. Some of the images tend to annoy me or even shock me at first. Most of the popular, mainstream images of fat bodies seem to support very conventional power relations in terms of body size, gender, sexuality and "race". During the process of interpretation the feelings and attitudes towards the images necessarily change.

In the presentation I will discuss how my feelings, interpretations and ways of looking as a feminist researcher meet and are constructed in the research process. I am especially interested in the cultural constructions of distance and proximity between the researcher or the viewer and visual material, and how the variations in distance can be of use from a feminist perspective. Distance and proximity are produced through bodily experience as well as research objectives and conventions. The assumed bodily similarities or differences between the viewer and the image are important factors in producing different ways of identification. However, through feminist reading and interpretation some images that have first felt distant to me have become closer – sometimes images that have felt uncomfortably close have become distanced. To illustrate how the consideration of embodied distances can be useful, I compare my interpretation process of pornographic images of fat women on the Internet with some other typical representations of fatness in the contemporary popular media.

Participants and speakers

Kyrölä, Katariina (FI)

Short biography of participants

Katariina Kyrölä is a researcher and a PhD student in Media Studies and teaches Women's Studies at the University of Turku, Finland. In 2004-2005 she will be studying at Utrecht University, in the Netherlands Research School of Women's Studies. She is working on her PhD on the popular representations of fat bodies in the contemporary media and the politics of difference.

Full text

In my PhD research on fat embodiment in the popular media, I look at different kinds of images of women and men who are defined fat by the contemporary body standards. These images often provoke strong feelings. Most of the popular, mainstream images of fat bodies seem to support very conventional power relations in terms of body size, gender, sexuality and "race", and this explains a significant portion of my annoyance, but there is also a more immediate, embodied shock that feels unavoidable, uncomfortable and unexplainable. In this paper I want to take up some of these uncomfortable moments and feelings, and try work through them in a way that would turn them into a richness instead of a disturbance, in the framework of feminist thinking. I am especially interested the construction of identification or lack of it, distance and proximity between the researcher or the viewer and disturbing visual material. I discuss my experiences of looking at and

thinking through 1) pictures of fat women in dieting stories of a Finnish tabloid magazine *7 päivää*, and 2) pictures of fat women on the Internet where weight *gain* is eroticized. Both these picture types immediately provoked rejection and shock in me.

The Importance of Feelings for a Feminist Researcher

Research objectives are of crucial importance in making interpretations. One of the central goals of my research is to map out both media conventions in representing fat embodiment, and possible ruptures in those conventions that may question the slim, gendered body norms. This way I simultaneously distance myself from negative viewing experiences and bring the material closer to myself. A representation which I manage to read against the grain or reveal ambiguous often begins to feel pleasurable, becomes closer to me, as I have shown myself a different way to look at it. Some images that have first felt distant become closer -- sometimes images, that have felt uncomfortably close, become distanced.

Feelings or emotions produced by research material are necessarily central in constructing feminist research questions and knowledge, since feminist research is, to my view, always political by definition. To formulate research questions, one must ask: what do I find problematic and irritating in the material, and how do I argue against it? On the other hand, defending irritations can be valuable as well. The critique of so-called mainstream (or male-stream) science is in the core of feminist research, therefore one of its goals is to irritate, to ask non-traditional and uncomfortable questions.

According to **Sara Ahmed**, feelings are all about the attachments and reciprocal movements between I and the Other, my body and the other's body, the individual and the society. Ahmed claims that intensifications of feeling provoke us to construct a boundary between ourselves and others. Feelings both create distance between my body and other bodies, and connect us to each other. For example, the feelings of fear and pain become possible only through an encounter with what is experienced frightening or painful -- proximity is a condition for separation and rejection [1]. Inspired by Ahmed I ask: what kind of attachments and distances are produced, as I, the researcher, encounter disturbing material? Why is it important to explore these encounters, even as they are uncomfortable?

Bodily jolts and reactions, such as crying, laughing, screaming, shivers, and sexual arousal that some media representations may produce in viewers, are often considered involuntary and therefore out of reach[2]. However, I believe these immediate feelings have great significance. Although it might be tempting and common, at least in mainstream science, to simply ignore them, it would also mean ignoring elemental questions about embodiment -- and feeling -- in constructing cultural hierarchies.

Example 1: The fat female body in a dieting story -- approaching through similarity

The first example that I want to discuss is one particular picture in a dieting story firs published in a Finnish tabloid magazine *7 päivää*, but now also on the Internet pages of Finnish Weight Watchers [3], Dieting stories typically tell of a previously fat, now slim female interviewee and her amazing, happy transformation, illustrated by photographs of her body "before", as fat, and "now", as slim. The "before" picture, which began to haunt me in a way, is a part of the story of a white, Finnish 35-year-old woman who lost 60 kilograms (about 130 pounds) in Weight Watchers. In the "before" picture she sits in a sun chair, on a holiday, wearing a bikini, with her legs spread open, with a small baby between her legs. Her bare skin fills most of the picture space, and the baby seems to disappear into her flesh, to become one of her body's bulges. In the "now" picture she is very slim, smiles and poses in a tight black dress.

The "before" image seems somehow vulgar to me, the amount of flesh on display feels improper. I despise the magazine for showing an intimate picture like that to repel and shock the readers. But very soon I begin to feel shame for my reactions. I *am* the reader. Why would I consider her picture improper, when I barely notice the bikini pictures of slim models that I see practically every day?

Of course, the feeling of being repelled by a person's body, because it does not

conform to the gendered body norms, is quite intolerable for me as a feminist researcher. I am painfully aware of the ongoing discrimination, especially against women, on the basis of body size and shape in the media as well as in everyday life. I am irritated by the way in which the dieting story format naturalizes body size hierarchies, by showing how fat women are "saved" into the world of "proper" slim femininity, which is pointedly equalized with becoming heterosexually desirable. I believe my first reaction of aversion was what the ideology of dieting stories primarily tries to produce: to present fatness as horrible but possible to overcome. But no matter how I criticize the hierarchies behind my initial reaction, the memory of it remains underneath the layer of feminist analysis.

I do not *want* to feel repulsed, but nevertheless I do. This does not mean that my feelings are out of reach or not on my responsibility because they are not products of completely conscious thinking. These feelings are not only my own, but they are produced in complex webs of social and cultural norms which define, categorize and rate bodies. Therefore analysis of my feelings is much more than introspection: it is analysis of those norms. I must ask if it would or should be possible to feel otherwise, thereby act otherwise and perhaps ultimately shift ways of understanding embodiment.

Elspeth Probyn's analysis of the potential uses of shame and disgust in fat acceptance politics may offer a useful way to grasp the feelings in looking at the image I introduced. Probyn suggests that pride and complete self-acceptance may not be very useful as goals of fat politics. She does not deny the significance of the politics of pride, for example in gay pride and fat pride movements, but she suggests that the relationship between pride and disgust should be redefined instead of thinking of them as feelings that rule each other out. [4] For Probyn, assurances of pride can not remove the ever-present dimension of disgust from seeing and experiencing embodiment. Instead, one should pause to register one's immediate, involuntary feelings of disgust and *take responsibility of them by not just letting them be.* Probyn talks about "gut feelings", which, to her, attach feelings to the body and emphasizes the unconscious dimension of emotions. These "gut feelings", such as disgust, have been used to naturalize hostile attitudes towards marginalized groups, but they may also bring out moments of intensely felt proximity between my body and the body I look at.[5] Pausing to process one's feelings means taking some distance, but distance should be understood as an encounter as much as coming close.

Recognizing even potential similarities between the one looking and the one being looked at is surely one of the strongest affective factors in looking at the "before" picture introduced above. My own reaction while looking at the picture derives from the gendered fear of fatness. As I look I recognize the image as someone *I could potentially be similar with*. Thereby I construct a common denominator for us called "womanhood", but although it is a construction, I would certainly not react similarly, if I recognized a male body in the picture instead.

An interesting question arises: what are the boundaries of the body that I could imagine myself like? For example, "race" or ethnicity have their input in the fear of "becoming the image". It may not feel as threatening for a white woman to look at images of fat black women. The fear of "becoming the image" is not as great, since it does not seem as likely to become fat and black as merely fat. Skin color, and/or bodily features understood as ethnically specific, are rendered culturally much more stable and permanent than body size and shape, in spite of the continuing attempts by innumerous feminist theorists to destabilize "racial" categories. Connected to this, the stereotypical idea that fatness is more accepted and natural in black communities lurks in the background.

Film theorist **Mary Ann Doane** theorized in the beginning of the 1980's the white, Western female viewer's fear of becoming the image, and although she has been severely criticized for it, she may have nevertheless touched a nerve. According to Doane, the female viewer looking at an image of a female must either reject the image or "become the image", because the look brings the image too close, uncomfortably close to the female viewer. [6]

Doane has been criticized for universalizing the category "women", when she means white, Western, heterosexual, middle-class women, and for forgetting the pleasures and desires of female viewers. Indeed, why couldn't my rejection be just as well connected to the fear to *desire* the woman in the image, not only with the fear to *become* the woman in the image? The whole set-up of dieting stories diminishes the chances that the image of the fat female body, even though nearly nude, would be looked at as desirable or sexual, as it is posited as the undesirable opposite to the image of the slim, supposedly more attractive, and fully clothed, body.

But, in a way, this "before" picture is pornographic -- it shows body parts and areas

that are not commonly shown in public, flesh that is culturally demanded to be hidden. As **Jerry Mosher** has noted, there is an impulse in the popular media to both utilize the inevitable over-visibility of fat embodiment and hide its sexual connotations. In part, this controversy easily gives fat a pornographic significance, even if it is not presented in a pornographic context.[7] But what if the context was eroticized? Or: what if the whole setting was turned upside down, and the fat body was portrayed as the more desirable one?

Example 2: Eroticized weight-gain and fat female bodies -- inescapable distance

Fatness and sexuality or desire are not very commonly connected in Western mainstream media. Being sexy, sexually active, desirable and desiring are portrayed as qualities of almost exclusively slim people, and this has been experienced as a heavy stigma especially by fat women. At the same time, there is also the stereotype of the fat woman as over-sexualized, equalized with loss of control in fleshly pleasures: insatiable in eating, insatiable in sex[8]. The only media where the connection between fatness, sexuality and desire is easily found, is the Internet. There this connection is most often presented in very conventional way in terms of gender and desire: men are the subjects of desire and women the objects. There is a great number of services provided especially for BBW's, Big Beautiful Women, and FA's, fat admirers, who are mostly addressed as men. The naming of sexual attraction to fat bodies as its own fetish appears to be a largely Anglo-American phenomenon -- perhaps in other cultures it is either not considered a fetish, or it is not acknowledged as a sexual preference. In the context of Anglo-American fat acceptance politics, there is a considerable amount of energy invested in the recognition of sexual desire towards and of fat people, particularly women. The fetish status does on one hand give a name to a desire that has not been considered as legitimate, but on the other hand it adds to the deviant or abnormal status of that desire.

But on many Internet pages of size acceptance organisations and publications, one runs into a heated discussion on a phenomenon called feederism, which is not only a preference for a fat partner, but a preference for a partner who continuously and actively gains weight. It is something that I was completely unaware of and, to be frank, could not even imagine to exist, until I began doing my research. One party, usually called the feeder or encourager, almost always a man, takes pleasure in feeding his partner, almost always a fat woman, or encouraging her to eat more, and seeing her gain weight in massive amounts. The feedee may supposedly take pleasure in gaining weight and being fed. This phenomenon has been invisible in public in Finland, until last winter TV channel 4 (Nelonen in Finnish) showed a disturbing document on feederism called *4D: Big Love* (4D: Iso rakkaus). The document shocked me profoundly, but I was also interested in the phenomenon, since it does turn upside down the contemporary Western hierarchy between fatness and slimness. I wanted to find out more about it, and the only place to do so was on the Internet.

I should not have been surprised, given the vast amount of all kinds of sexually explicit and exploitative materials on the Internet, but I found deeply disturbing images. Some pictures were actually a bit similar to the "before" picture discussed above: they had very fat women posing in home photographs, nude or in underwear, but not showing genitals, and not involved in sexual activity in the common sense of the word. Looking at these images made me feel completely at loss and eventually physically sick. [9]

Some of the extremely large female bodies in the pictures become shocking by seemingly stretching the possible limits of the *human* body altogether, much in the same manner as the skeleton-like body of the anorexic. They are visualizations of excessive, abject embodiment which wavers between the living and the dead. It is interesting that the only role that this kind of bodies are given in the popular media, although those occasions are rare, is the role of the alien monster.

On a little more processed level, there is no doubt that the images are evidence of brutal, sexualized violence against women. Actually, some feeders/photographers even process the photographs further by adding fat digitally. Apparently this is done because it is difficult, if not impossible, to reach the level of fatness that would be ideal in feederism[10]. The morphed pictures look almost ridiculous in their horrifying excessiveness. But what if we compare the morphed pictures of fat women to the very common practice of "polishing" photographs of skinny models in advertisements etc.? The latter practice is usually not considered revolting although perhaps misleading and unrealistic, although it might be just as strenuous or

impossible to reach the ideal body of Western culture as it is to reach the ideal body of feederism.

Regardless of the doubtful reality value of some porn images of fat women, I believe that most people agree with me in seeing feederism as a violent and condemnable practice. But why is it completely "normal" and accepted to take pleasure and be aroused by women's bodies getting thinner and tighter, whereas it is considered monstrous to enjoy the continuous growth of women's bodies? What else is feederism, if not a reversed version of the gendered Western compulsion to diet continuously in order to be considered sexually attractive? A comparison between eroticized images of weight-loss and weight-gain points out the naturalized and culturally accepted gendered violence in the promotion of life-style dieting.

It is quite problematic to feel worse, when seeing fat women portrayed as sexy, than when seeing fat women portrayed as miserable and desperate to change. On the other hand, after decades of feminist struggle to deconstruct the female body as an eroticized visual object, why *should* there be anything different about objectification of *fat* female bodies instead of slim ones? **Jane Feuer** suggests that even if objectification is not liberating to slim women, it may be that for fat women, since it is not even possible to struggle against objectification without ever having been an object, let alone the subject of the gaze. Feuer does also note that fat women may gain access to popular media products as non-repulsive *only* if they conform to the norms of conventional femininity in other ways: dress, pose, passivity etc.[11]

Feuer's points may be true up to a certain extent, but there is a limit to what kind of fat bodies can conform to the norms. Some bodies are beyond conforming, thus becoming repulsive, even if they were wearing traditional signs of femininity, such as sexy underwear and long hair. Perhaps it is so difficult for me to process my reactions to the porn images of extremely fat women, because the difference feels too great to begin with, both in terms of size and gender, co-dependently. The recognition of "same" gender depends sometimes on pointedly constructed qualities in these images. Traditional bodily signs of gender, such as breasts, hips and genitals, disappear into the folds of flesh, and the only marks of "womanhood" are make-up, hair and clothes -- much in a similar manner as with female bodybuilders. Although I find this one of the most theoretically appealing points with fat embodiment, the bodily instability and incomprehensibility of the images makes them difficult to grasp.

Therefore, I would reformulate Feuer by suggesting that objectification may be liberating to moderately fat women, but not to more sizable fat women. The latter group has access to the popular media only as monsters or freaks, but displaying their bodies as sexual spectacles reduces them even further into unanimated flesh with no inner life and no boundaries. The context makes it difficult to keep in mind, that these are real, feeling, thinking women -- which probably derives in part from the experience of looking at "just" an image, not having a real-life encounter.

Conclusion

For an unpleasant encounter to change its nature, there needs to be more than the acknowledgement of shame. There has to be a will, a desire to change the nature of the encounter, a desire to approach the other, a desire to be able to look in a different way. Both the "before" image in the dieting story and the fat porn images seem to give no space for subjectivity of fat women. Fat embodiment is reduced into a dead surface, which is either always already left behind, or produced through sexual objectification. In the latter case, I have not been able to desire to see differently. I probably do not want to even try. But in the case of the "before" picture, pausing to think through the hierarchical structures behind it gave me a possibility to see it differently. I can now think of the image as a happy, sunny holiday picture of a woman enjoying herself with her child. The immediate aversion was pushed to the background because of shame and transformed into a partial, tolerated presence that produces acceptance.

My approaches to these two different, but in many ways similar, types of images can only be explained on the affective, "gut feeling" level. But my inability to transform my encounter with the porn images of fat women could be turned into something useful through the comparison with more normative images. Therefore, I would stress that the important issue is not to *force* a transformation in the affective encounter between the researcher and the material, but to explore that *possibility* and pause to give it a chance, even if it fails.

In conclusion: it may be better to openly portray excessively fat bodies, even at the

risk of being shocking and irritating to many of viewers (like me), than to downplay fatness and refuse negative emotions. Intense feelings force the viewer to pause and process her/his reactions and their backgrounds, to think through the potential effects of those feelings. This is not to say that any provocative image of a fat person is a "good thing", but if we wish to transform body norms towards a more flexible and tolerant direction, nothing can be gained by keeping fat bodies hidden.

- 1. Sara Ahmed, "Communities that Feel: Intensity, Difference and Attachment". In Anu Koivunen and Susanna Paasonen (eds.), *Conference proceedings for affective encounters*, http://www.utu.fi/hum/mediatutkimus/affective/ahmed.pdf. University of Turku 2001, 10-12.
- 2. See Linda Williams, "Film Bodies: Gender, Genre, and Excess". *Film Quarterly* Vol. 44, No. 4 (Summer 1991), 2-13.
- 3. Finnish Weight Watchers, http://gcms.weightwatchers.com/WWI_Wrapper.aspx?SiteId=11&Page=1013712.
- 4. Elspeth Probyn, *Carnal Appetites. FoodSexIdentities*. London: Routledge 2000, 126-130.
- 5. Ibid., 125-143.
- 6. Mary Ann Doane, "Caught and Rebecca: The Inscription of Femininity as Absence" (1981). In Sue Thornham (ed.), *Feminist Film Theory: A Reader*. New York: New York University Press 1999.
- 7. Jerry Mosher, "Setting Free the Bears. Refiguring Fat Men on Television". In Jana Evans Braziel and Kathleen LeBesco (eds.), *Bodies Out of Bounds. Fatness and Transgression.* Berkeley: University of California Press, 2001, 171.
- 8. Marcia Millman, *Such a Pretty Face: Being Fat in America*. New York: Berkley Books 1980, 101-128, 157-179.
- 9. See for example www.feeder.co.uk -> BBW -> betsy.
- 10. See www.feeder.co.uk -> Morphing -> betsy, for digitally "enhanced" pictures of the same woman as in the BBW section referred to above.
- 11. Jane Feuer, "Averting the Male Gaze: Visual Pleasure and Images of Fat Women." In Mary Beth Haralovich and Lauren Rabinowitz (eds.), *Television, History, and American Culture*. Durham: Duke University Press 1999, 184-198.

split_connect presentation : global net_culture and translocal spaces

Title	split_connect presentation
Subtitle	global net_culture and translocal spaces
Lead-in / Abstract	Not provided.
Participants and speakers	Bonik, Manuel (DE) Chroma, Chris (DE) Mikina, Michael (?) Moritz, Juergen (?)
Short biography of participants	Main members of travellab are: Manuel Bonik (D), Chris Chroma (D), Mic Mikina (AT), Juergen Moritz (D), S.D.C. Marquardt (USA). For more detailed information please see our website at http://www.travellab.net
Full text	travellab is run by an informal association of artists, scientists and cultural networkers. With a laboratory in Berlin, and branches in Cologne and Vienna, travellab works in different constellations on concept, funding, promotion, realization, and evaluation of several international artistic-scientific projects, mainly in media, education and the arts of networking.

travellab works with principles of multiple authorship, transdisciplinary workflow and cross-cultural exchange. travellab also is a content provider for cultural formats, such as art projects, concerts, media formats, lectures, workshops, and international exchange programs in the arts of networking.

travellab researches on society's questions in a digital age, with an epistemological interest in artistic basic research, experimenting with the generation and the incompatibilities of cultural systems. It works on the creation of models for active participation in societies changing demands from the arts, on shared and mobile resource development, through researching topics of identity, networking and economy.

The desired output will be a manual and resource base for interdisciplinary and cross-cultural exchange in the domains of the arts, sciences, and economies, dedicated to give a structured overview and to maintain access for participation in global entrepreneurship, as well as information on the arts of networking, key technologies used and standard exchange of routines. The four years evaluation will also lead to a book and a digital publication. travellab will further release compound and modular tools for dedicated networking demands. Thus travellab is conceived as development-platform for mobile networking and the creative use of digital technology in the context of globalized workflows of collaboration, competition and coopetition.

travellab is a ongoing project for 4 years with the aim to research different cultural environments and to develop skills and tools in global networking. To develop infrastructure by means of new media technology and interdisciplinary collaboration, travellab tries to learn from recent experiments in the design of art and technology laboratories. An intermediate aim is to be with little compromise of artistic or research values, while still creating values of public interest and reaching economical sustainability.

Related internet addresses

http://www.travellab.net/love/love_activities_split2.html
http://www.travellab.net
http://www.travellab.net/love/index_love.html

SR c

Title SR c

Subtitle Not provided.

Lead-in / Abstract Not provided.

Participants and speakers

Berg, Magnus (?)

Cuzner, Steven (?)

Short biography of participants --

Full text

SR c is a sound-periodical with episodes one can return to. SR is for Swedish Radio, the National Public Radio. "c" is for seeing; programs which evoke imagery. And for the visual presentation on internet and DAB.

SR c investigates different ways to present and use radio, with images and interactivity included. It is a channel which rather produces than reviews cultural content, broadcasting an array of new programs/works by radio explorers and artists. One can also find handpicked gems from the rich program archive at Sveriges Radio (SR). The archival chapters are naturally not so accessible for non-swedish speaking users, yet worth investigating as they are constructed in unusual ways - our take on computer games.

SR c expands weekly, and where possible also in the English/International section. All issues are streamed and broadcast at premiere date with an in-house DJ, responsible for connecting the programs within the theme with dance music, to produce the possibility of an unusual club event wherever there is a reciever. All previous issues, complete with respective DJ events are streamed continually 24 hours, from the web-site.

Regularly, we also extend our activities to analogue spaces and present interface ideas physically in public settings, employing artists and performers to collaborate also when facing the audience in person.

Related internet addresses http://www.sr.se/src

Staging Relations : Relational Art and Network Technologies in Superflex' Staging Strategies

Title	Staging Relations
Subtitle	Relational Art and Network Technologies in Superflex' Staging Strategies
Lead-in / Abstract	Setting off from an action research approach, this paper identifies and analyses the staging strategy employed in Copenhagen art group Superflex so-called relational art; a strategy that makes use of the Internet in order to connect people and facilitate dialogue, change, development, etc., in accordance with the general aim of relational art. Following a typology of the arenas that this staging strategy amounts to, the paper finally discusses how concepts of network in relational art become influenced by technology, and vice versa.
Participants and speakers	Johansson, Troels Degn (?)
Short biography of participants	Troels Degn Johansson is an Assistant Professor at the Department of Digital Aesthetics and Communications, IT-University of Copenhagen (ITU), and Head of Studies of the ITU's Masters program in Design, Communication, and Media. Additionally, he is a co-founder of the newly opened ITU Center for Computer Games Research Copenhagen (game.itu.dk). His main research interests are aesthetics and representation with special reference to virtual environments in e.g. games, MUDs, visualization, and narrativity. His PhD thesis, "Landscapes of Communications", (2002) thus maps out pictorial representation in web-based visualisation of change in landscape and urban space, by setting off from an epistemological analysis of cybernetic geography. He has published extensively on aesthetics, pictorial semiotics, and computer-mediated communications; most recently as a co-author of "Sense and Senses in Aesthetics" (Söderström, Helsinki, 2003). More information available at http://www.itu.dk/people/tdj
Full text	See the PDF file.

Stuff That Matters : The Rise and Rise of Open News

Title	Stuff That Matters
Subtitle	The Rise and Rise of Open News
Lead-in / Abstract	Open News Websites combine news, rumours and commentary. These sites involve their users as content contributors and producers, turning them into 'produsers' of the site. Open News site produsers are 'gatewatchers', observing the publication of news and information in other sources and publicising its existence. They apply Open Source principles to the gathering and publication of news and information.
Participants and speakers	Bruns, Axel (AU) *this person is also part of the following presentation(s)* ■ **Fibreculture**: Internet: theory + criticism + research
Short biography of participants	Dr Axel Bruns lectures in Media & Communication at the Creative Industries Faculty, Queensland University of Technology, Brisbane, Australia. He teaches and conducts research about online publishing, electronic creative writing, online communities and popular music. He is general editor of the online academic publication M/C - Media and Culture (http://www.media-culture.org.au/).
Full text	Please see the RTF-file. The full text is available as an attachment. Please download it here.
Related internet addresses	http://www.bgsb.qut.edu.au/conferences/ANZCA03/Proceedings/default.htm http://www.m-cult.net/mediumi/index.html?lang=en

SUBKULTOURIST : AIRE INCONDICIONAL / AIR UNCONDITIONAL

Title	SUBKULTOURIST
Subtitle	AIRE INCONDICIONAL / AIR UNCONDITIONAL
Lead-in / Abstract	Not provided.

Participants and speakers

Garcia, Ignacio (?)

garcia noguero, susana (?)

schulbaum, olivier (?)

Short biography of participants

Not provided.

Full text

1. Who we are (www.platoniq.net)

Platoniq straddles the fields of communication, digital creation and criticism. It tryes to create bridges between the work of cultural agents and producers.

Platoniq's main point is the interaction between the new technologies, popular culture and the social event, with the intention of establishing connections between Internet/new media and public physical space.

Platoniq works in different areas: the organization of events related to culture and technology (ie cycle of electronic arts and media cultures), the creation of documentary contents for TV (ie Neue Kraft Neues Werk - Transcoder Express) and radio in Internet and the development of public tools (database and software for public use).
www.platoniq.net

Our last project Media_space invaders, (invasores del media_espacio) - art and politics of e-democracy – was a mobile-workshop including talks, panels, projections and actions that will be hold in barcelona beetween the 14th and 24th of may. The project travelled beetween the media_space (platoniq.net) and public spaces (Goethe Institut, MACBA museum, the Centre of Contemporary Culture) and the streets of Raval and Poblenou "barrios", two hot spots of urbanistic, cultural and political debates in barcelona.

Media_space invaders brought together artists, activists, theoricists, journalists, organizers and other cultural agents to discuss and analyse the cultural, social and political impact of new tecnology and independent media. Low cost methods and strategies of mobility were discussed as well as the emergence of a survival co-operative cultural system and economy.

International Guests:
Micz Flor, Florian Schneider and the "everybody is an expert" team and Ursula Frohne*

2.Radiored.org (www.radiored.org)

Radiored is Platoniq's documentation project that produces, stores, manages and distributes audio contents on the Internet. It’s contents are related to digital culture and electronic music on the net.
Radiored also works as a platform for the developement of new radiophonic formats and tools for creating music on-line where the core is a database that allows a non-linear reception; means by which Radiored enables the receiver to become an editor of it´s contents.
To make the public acquainted to the net radio content and to promote cultural debate Radiored/Platoniq organizes public events. Some of the latest events include: MK2 cycle (Medien Kunst – Medien Kulturen) in collaboration with the MACBA (Museo de Arte Contemporaneo de Barcelona), Metronom, Hangar, Goethe Institut; Open Radio, Festival Internacional de Radios at the CCCB.

Related internet addresses

http://openserver.cccb.org
http://www.platoniq.net/invasores
http://www.platoniq.net/

Subversive Networks : Disrupting Accepted Models of Human-Networked Interaction

Title

Subversive Networks

Subtitle

Disrupting Accepted Models of Human-Networked Interaction

Lead-in / Abstract

Subversive Networks is a design methodology for deconstructing accepted and practiced forms of human-networked interaction through the introduction of interference, shifted rule-sets, and disruptive interactive experiences. As the proliferation of networked experiences intensifies worldwide – from Internet access in physical locations to wireless and Wi-Fi access points - there is an increasing emphasis on information and networked spaces augmenting their physical counterparts. This shift in focus changes the fundamental architecture of connected spaces into ones that can simultaneously exhibit both permanent and transient states. Subversive Networks aims to challenge the foundations of network interaction in both physical and online spaces, along with the fundamental rules and expectations that exist in these environments. By questioning the increased proliferation of connectivity clichés that are associated with the Internet and emphasizing the aesthetics of the interaction above interface design, this methodology focuses on shifting experiences and perceptions as key elements of networked interaction. This paper will discuss several of my projects that address the theme of network subversion including Alerting Infrastructure – a physical hit counter that destroys a building when one visits its website, BumpList: An Email Community for the Determined, and WiFi-Hog, a personal tool for hijacking publicly accessible wireless network nodes for personal use.

Participants and speakers

Brucker-Cohen, Jonah (US)

Short biography of participants

Jonah Brucker-Cohen works as a Researcher in the Human Connectedness Group at Media Lab Europe in Dublin, Ireland and is a PhD candidate in the Disruptive Design Team of the Networks and Telecommunications Research Group (NTRG) at Trinity College Dublin. His focus is on subverting existing relationships to human/networked interfaces by building new real-world inputs to networks, redefining how information is used and disseminated, and shifting virtual processes into physical forms through networked devices and experiences. His writing has appeared in WIRED Magazine, Rhizome.org and his work has been shown internationally at events such as Ars Electronica (02, 04), The Whitney Museum of American Art: Artport (2003), The Institute of Contemporary Art (ICA) in London (2004), DEAF(2003), SIGGRAPH (2000), ISEA (02,04), Transmediale (02,04), European Media Arts Festival (1999), and the 8th Annual New York Digital Salon (2000).

Full text

!Alerting Infrastructure! is a physical hit counter that translates hits of an organization's into interior damage of the physical building. The focus of the piece is to amplify the concern that physical spaces are slowly losing ground to their virtual counterparts.

BumpList was created to re-examine the culture and rules of email list communities. The main constraint of *BumpList* is that it only allows for a maximum amount of subscribers so that when a new person subscribes, the first person to subscribe is "bumped", or unsubscribed from the list.

Wi-Fi Hog is personal system for a laptop or portable computer that enables people to gain complete control over a public access wireless network. This project is a cautionary one, and comes as a reaction to the battle over free wireless spectrum where corporate pay-per-use and free community networks are fighting for signal dominance in public spaces. *Wi-Fi Hog* i exists as a tactical media tool for controlling and subverting this claim of ownership and regulation over free spectrum, by allowing a means of control to come from a third-party

Related internet addresses

http://www.coin-operated.com/projects/wifihog
http://www.bumplist.net
http://www.coin-operated.com/alertinginfrastructure

Surfaces that See. : Subjective Vision and Imagination in Gaze-based Interaction.

Title

Surfaces that See.

Subtitle

Subjective Vision and Imagination in Gaze-based Interaction.

Lead-in / Abstract

The gaze is used as selective and creative input to dynamic images and figures that are made apparent in fluid media, such as random surfaces, noisy textures, and chance images. The subjective selection of signals in the presence of noise (figure/ground) transforms observation into a reciprocal process mediating between visibility and invisibility.

Participants and speakers

Roch, Axel (GB)

Short biography of participants Axel Roch, born 1971, has a degree in Cultural Studies and Philosophy (M.A.). Is co-founder of the Interface Laboratory while having joined the Artistic and Academic Staff at the Academy of Media Arts Cologne, Germany, for three years. Was Artist-In-Residence at the Mediatower / Medienturm, Graz, Austria. Since 2002 Axel Roch holds the David Gee Lectureship in New Media and teaches in Interactive Media at Goldsmiths College, University of London, UK.

Full text Various methods are discussed in this project, e.g. the drawings of flowing and moving water by DaVinci that highlight a dynamic concept of the image, the pillow drawings by Duerer that contain faces to be discovered, the mescalin drawings by Michaux that blur the relation between text, texture and figure, the chance photography by Polke that leave the completion of the image to the viewer, the morphosyntactical objects by Walker that engage the gaze of the viewer in an highly interactive and non-technical way, etc. These artistic explorations of -in the sense of McLuhan-"cool media" can and should be re-mediated through present day interface technology such as eye-tracking. A variety of scientific algorithms enable us to generate textures and figures. How can we encode polysemiotic and evolving figures into a similar complex background in a way that changes onlooking into an active and co-creative gaze ? It is generally assumed that a viewer is able to co-constitute images from virtual, potential or hidden images by detecting a signal in noise, form in texture, or figure on ground. The project consists of a series of experiments and addresses historically and critically such advanced methods in gaze-based interaction.

Related internet addresses http://www.khm.de/~roch
http://www.axelroch.org/

Symptoms of Visibility : Scientific Performance and Media Aesthetics

Title Symptoms of Visibility

Subtitle Scientific Performance and Media Aesthetics

Lead-in / Abstract Not provided.

Participants and speakers Ursula, Frohne (?)

Short biography of participants Not provided.

Full text The paper concentrates on a question that arises as a desideratum in the research on the relation between art and natural sciences: Can artistic practices in media art be understood as specific epistemological methods. And can these be seen as a contribution to and an intervention in the scientific discourse, respectively one could ask, which artistic activities are meant in this regard?

More than ever before -- digital — media art has become a discussion partner for the natural sciences. The basis for this relationship between media art and the media of natural sciences is the talk about the return of the type of artist who is always also a scientist.

This comparison between the artist and the scientist is usually conjured enthusiastically as the new type of artist without any deeper questioning. This concept generally draws on the Renaissance image of the artist, a notion, which at the same time is inscribed in the deployed “two-culture”-model, established by of C.P. Snow. Such a rash comparison not only misjudges the incomparably different cultural situation of the Renaissance artist in contrast to the modern artist’s context, but it also ignores the fact that such references developed rather in the direction of engineering arts instead of natural sciences. Most important is the fact that this undifferentiated comparison levels out any specificity of the new, contemporary image of the artist in favor of a rash homogenization which serves to form and position an unquestioned image of the new artist.

In the proposed section, Snow’s “two-culture” model shall not simply be regarded as obsolete; its inherent questions shall instead lead to a perspective that goes beyond this model, by investigating its genesis and its relevance for today’s discourse. Such an approach will reveal the intersections between the actual artistic and scientific activities on the basis of the media usage that might help to state the question of artistic epistemology decisively more precisely.

This investigation seems necessary for the reason that the meaning of the processes and methods involved in the production of epistemological objects and scientific theories, refer to images, text and graphics, not because these represent knowledge, but because knowledge is really produced in this way.
Accordingly, the position of the artist within this ensemble changes: Once the

debate it is not any more about the fact that the artist creates artworks whose meanings can only be found within these works themselves, their contextual involvement makes clear, that the artist and the scientist work in their own fields, but with comparable procedures and methods.

For the proposed session "Media, Art and Sciences. A Liaison Dangereuse?" the following questions are essential: Which concrete medial procedures and methods enable a transfer of knowledge between the arts and the sciences and what do they promote? How can the system between art, science, and media be specified? What is the artist's part in this?

For the time being thus the central question will be concerned with the status of images produced by media art. This view will be extended to artists' works that escape the classical concept of the image. If multiplying practices -- beginning with the avant-garde in the early twentieth century and accompanying art ever since – could already not bee characterized comprehensively with a canonized picture theory, then this applies even more to forms of presentation working with digital media. On the one hand, these operate with a competition of media between word and image, textuality and visuality in general. These forms of representation on the other hand, also serve scientific visualizations using multimedia methods. Therefore the discussion will be dedicated to the basic question, how can a picture theory be described, that goes beyond its classical means and is at the same time used by the arts as well as by the sciences.

The discussion will focus on the transformations in the relation between picture and knowledge induced by "new media" by which pictures then can also be understood as organizational models of knowledge and epistemology.

The unstoppable rise of the computer as an image medium leads to a true "Renaissance" of the connection between sciences and art. At the same time, a new type of artist has evolved who further develops the computer medium -- with artistic methods – and is active as a scientist as well.

Scholars of the Humanities and Sciences, as well as artists shall participate in the proposed session and contribute to the further to be defined questions (as for example "The Knowledge of Images", "The Artist as Scientist", "What is the Potential of Artificial Life", etc.) to possibly arrive at a precise positioning of the artistic epistemology of media art.

TESTER : connected systems of local detection

Title	TESTER
Subtitle	connected systems of local detection
Lead-in / Abstract	Not provided.
Participants and speakers	Mariategui, José Carlos (?) Neustetter, Marcus (ZA) Rodríguez, Arturo (?) rodriguez, natxo (ES)
Short biography of participants	
Full text	The Rodríguez Foundation was created in 1994. It formed part of the Basque Selection of Concept Art (SEAC) until 1999, when this group disappeared. Since then it has operated as an artistic body organizing, coordinating and developing different projects that are primarily related to contemporary culture and the new media, always understanding its activities to be an extension of its artistic work. It has worked indistinctly on creative practice, basically audiovisual media, as well as on theoretic production, both the new forms of commissioning as well as aspects related to the production, diffusion and distribution of contemporary artistic works. Last projects: www.e-tester.net, www.intervenciones.tv, www.arteyelectricidad.net, www.web-side.org 1.0

Related internet addresses http://www.e-tester.net
http://www.arteyelectricidad.net
http://www.intervenciones.tv

The Aesthetics of Behavior

Title The Aesthetics of Behavior

Subtitle Not provided.

Lead-in / Abstract Not provided.

Participants and speakers Penny, Simon (?)

Short biography of participants

Full text Please see attached RTF-file.
The full text is available as an attachment. Please download it here.

Related internet addresses http://www.ace.uci.edu/Penny

The Mediated City : Globalisation and emerging urbanities

Title The Mediated City

Subtitle Globalisation and emerging urbanities

Lead-in / Abstract This presentation explores the impact of globalisation on emerging urbanities, and the relationship between the mediated and the physical city, and shows selected samples from the work carried out over the past years within A + URL, the Architecture + Urban Research Laboratory, and other collaborative projects, i.e. prototypes, installations, performances, etc. The projects intend to explore to what extent we can construct new environments, cities of intensity rather then cities of density.

Participants and speakers Betancour, Ana (SE / ES)

Short biography of participants A + URL Architecture + Urban Research Laboratory, KTH (Royal Institute of Technology) Stockholm: a postgraduate programme in Media and Architecture/Urban Design. Focussing on the relationship between the mediated and the physical city, emergent metabolic systems, synthetic environments, adapted and appropriated technologies, A + URL carries out research, projects and events in a laboratory of prototyping, testing, direct actions and new modes of communication.

Other groups and collaborations:
Syndikat: art/architecture/media network based in Barcelona, Stockholm, and London. The projects explore tactical media through a multidisciplinary practice.

Full text The mediated city is a new phenomenon involving the emergence of new technologies of communication and information technology. While these factors are technological and often not physical, they are modifying economic, social, political aspects as they are transforming the physical nature of cities. This paper explores the relationship between the physical and the mediated city.

The mediated city is defined by immanent technology. It is therefore intrinsically related to globalisation through the media of global connectivity, networks, information, trans-national corporations, new infrastructures and technologies that allow these to occur. For example one of the effects of globalisation is that cities, larger parts of their urban fabric, and buildings are increasingly affected by factors from outside the city, region, and nation. Using Deleuze's definition of deterritorialization, we can speak of specific localities becoming the sites connected to other places, where a part of another place or an abstract place becomes visible. If previously, the connection to other places where harbours, airports and the stock exchange, today, a key place within a city may be more determined by forces from - for example- New York or Tokyo, as multinational companies might relocate key parts of their global companies to different places in the world as an issue of branding advertising and corporatisation of space.[1]

The term, the mediated city, coined in my practice work as the title for a project and exhibition, evolved into a field of research, an academic postgraduate programme, and was the starting point in the establishment of A + URL, the

Architecture and Urban Research Laboratory, (1999-) at the School of Architecture, KTH, Stockholm. This programme has developed to become a testing ground and a laboratory of investigations and physical explorations on the relationship between mediated and physical spaces. Understanding the design process as research, the investigations aim to challenge and explore the boundaries in what ways architects can work. A + URL is a laboratory of prototypes, direct actions and 1:1 testing urban and architectural propositions. The aim is to critically reconsider how we can develop new spatial patterns and ideas for urban space, with the aim of developing ways of mediating between artificial and natural systems.

I will first briefly discuss the impact of globalisation on emerging urbanities, thereafter, I will draw samples from the work carried out over the past years within A+URL and other current collaborative projects; i.e. prototypes, installations, performances, direct actions, etc. The projects intend to explore to what extent we can make new environments, cities of intensity rather then cities of density, in which architecture mediates between existing conditions and new conditions whose future outcome, are open and flexible.

I believe that the mediated city: the city of communication and information technology, enables global factors to operate at any scale, and points towards a significant change in the future practice of architecture, urbanism and cities.

■ 1. Ana Betancour & Peter Hasdell, "Connection to another world", Det Transparenta huset, Statens Kulturråd, Stockholm: 2001

Related internet addresses

http://www.syndikat.se
http://www.arch.kth.se/a-url

The Network of No_des : Excavating the Histories of the 'New'

Title The Network of No_des

Subtitle Excavating the Histories of the 'New'

Lead-in / Abstract

The panel, which i am moderating, will discuss the work of 'networked' culture in south and south east asia by examining modes and duration of the dispersal of ideas across the cultural space of the region, and by looking at how issues such as labour, access and anxiety impress themselves on the formation of a network.

Participants and speakers Narula, Monica (IN)

Short biography of participants

Sarai Media Lab Bio

Sarai Media Lab (www.sarai.net) is a research and practice space in Delhi, at the Centre for the Study of Developing Societies. Sarai undertakes research, creative and social projects in the areas of urban culture and media.
Members: Jeebesh Bagchi, Monica Narula and Shuddhabrata Sengupta (Raqs Media Collective), Iram Ghufran, editor & researcher, T. Meyarivan, programmer, Mrityunjay Chaterjee, designer.

Full text

The Network of No_Des is a media art and inter disciplinary public research project that seeks to recover the history of 'Networks', "Nodes" and 'Newness' in global terms. It considers the term "new" (especially when used with media) as one that has a long history and it will situate the horizon of the "network' that it refers to, in meridians far removed from the limited trans-atlantic/trans-pacific latitudes of the general discourse of media history and theory.
The full text is available as an attachment. Please download it here.

Related internet addresses

http://latitudes.walkerart.org
http://www.opuscommons.net
http://www.sarai.net

The Peers Are Alright : Peer-to-Peer Call-and-Reponse

Title The Peers Are Alright

Subtitle Peer-to-Peer Call-and-Reponse

Lead-in / Abstract Not provided.

Participants and speakers Jaeger, Timothy (?)

Short biography of participants

Full text

For one week in August this year, the Baltic Sea was the center of electronic music, new media research, art, and design by virtue of hosting ISEA2004, the 12th annual symposium on electronic arts. This year it was organized for the first time in two cities, Helsinki, Finland, and Tallinn, Estonia – and the ferry that runs between them. I participated in this conference (http://www.isea2004.net)
as a representative of UCSD's Center for Research in Computing and the Arts and UC DARNET (Digital Arts Research Network), both of which helped fund my trip.

A year ago I had submitted a proposal to present a project I worked on in conjunction with WKCR Radio of Columbia University in New York City. The project, entitled The Peers Are Alright!, dealt with ways of harnessing the users of various decentralized peer-to-peer (p2p) file-sharing networks to contribute and mix parts of their music collections for broadcast over radio and the Web.

What ensued was a rapid proliferation of mixes and samples from users across the globe. For the live broadcast, which took place on June 27th, 2003, I made three live mixes of the samples collected for WKCR Radio's Live Constructions program, which in the past has featured the works of prominent avant-garde musicians such as John Zorn and Farmers Manual.

At ISEA, my presentation dealt with a synopsis (and snippets) of the radio/Web broadcast and further research on the ways decentralized p2p file-sharing networks are turning into different kinds of entities altogether. Tapio Mäkelä, the program chair for ISEA 2004, led the panel "Networked Experience" in which this took place. Other participants included artists and programmers from Sweden and Sofia, Bulgaria, who dealt with such topics as Linux-servers for artists.

I went into some depth on aspects of telematic art production and new phenomena, such as records labels for users of p2p file-sharing networks that are developing in the digital domain. For instance, when a critical mass of users decides that the flexibility of a network allows for different kinds of positive production, they will "hijack the net" and facilitate its use towards that end, as in the case of Soulseek, one of the p2p networks. One of the conclusions I drew was that users will continuously (re)define the networks -- not the other way around.

Other events that took place on the "Networked Experience" cruise were various presentations from artist/new media groups from Africa, India, and New Zealand, all dealing with various methodologies for working/writing grants/developing self-sustaining practices. There was a wide variety of all-night concerts and multimedia events, and a predominance of collaborations between electronic musicians and VJs (Visual Jockeys) using some of the most advanced tools to create engrossing environments of music and visuals.

Related links:

http://crca.ucsd.edu

http://www.columbia.edu/cu/wkcr/archives/newmusic/index.html

http://www.soulseekrecords.com/

Related internet addresses

http://www.columbia.edu/cu/wkcr/archives/newmusic/chron.html

The Remains of Tomorrows Past : Speculations on the Antiquity of New Media Practice in South Asia

Title

The Remains of Tomorrows Past

Subtitle

Speculations on the Antiquity of New Media Practice in South Asia

Lead-in / Abstract

Not provided.

Participants and speakers

Sengupta, Shuddhabrata (IN)

Short biography of participants

Not provided.

Full text

0. Preface - Or, What this Talk is Not Going to be About. 0. Preface - Or, What this Talk is Not Going to be About.

I would like to thank **Tapio Makela** and **Amanda McDonald Crowley** for the invitation to be present at ISEA 2004 and to share with you an array of speculations about the histories of all our practices. My talk is titled : *The Remains of Tomorrows Past - Speculations on the Antiquity of New Media Practice in South Asia.* One of the origins of this talk lie somewhere in a slightly chaotic New Delhi afternoon with Amanda while she delighted us with her effervescent presence in Sarai during which I think I said something to the effect that it would be nice to throw a spanner into the proceedings of the next ISEA by talking about the role played by bamboo in the history of electronic art and new media. Ever since that somewhat frivolous and chance remark, I have been thinking about what I am going to have to say about Bamboo. Today I have to deliver. What I present today to you is one attempt at trying to live up to the word I gave to Amanda McDonald Crowley, So, this one is for you, Amanda.

The South Asia that I invoke is not a bounded space but a networked entity that straddles various cartographic imaginations in different ways. The 'New Media' that I talk about is unglamorously analog, occasionally hand powered, sometimes framed by bamboo supports and usually sheathed in organic resins, and the Antiquity I refer to (with an important exception) does not go back much beyond the nineteenth century.

Having scuttled my project with all these disclaimers I must also confess that I lost all the slides I had about 'Avatars' and the other computer science achievements of ancient Indic civilisations, from recursive coding to meta syntactical schemas to mnemonic devices and cryptography and the fact that we know that South Asian mathematicians had been working with the zero at least in the 9th century of the common era, and if that is the case then we can say - how else would there have been binary numbers if there had been no zero and so on. And if there were no binary system, there would not have been computers as we know them now, and if there were no computers there would not have been ISEA and if there were no ISEA we would not have been here, neither you with your 100 Euro tickets nor me with my tall tales.

You know how it is, put an Indian behind a lectern or on a stage and he or she will tell you how everything began in India, and how they are the reason for everything to be what it is, and the source of all wisdom on the planet, and gullible westerners will part with serious amounts of money to hear this being said provided they also have to bear with the discomfort of sitting cross legged on their butt and eat badly cooked vegetarian meals afterwards. But really, jokes apart, I did not come all the way to Helsinki to brag about ancient Indian mathematics and the significance of a number for nothing. Unfortunately that's a different kind of talk that can only be given by a different kind of person, perhaps someone who can be found more easily in California than in Delhi, which is where I live and work. So apologies in advance for not being value for money on that score.

If, despite all this you do decide to stay on, what I hope to do, is to inaugurate with you a conversation about how the new media universe that we all inhabit today, looks, feels and impacts differently, when seen from the vantage point of another, sometimes not very distant time, and a different set of latitudes. I hope to give you a slightly different picture of at least the world that you think you are familiar with, and appraise you with a history that you perhaps did not know that you had. In doing this, all I am actually inviting you to join me in is an attempt at setting right some of the parallax errors that creep into our understanding of who we are (and here by we I mean the broad community of new media and electronic arts practitioners that gather at events such as ISEA) and where we might stand.

My presentation this afternoon consists of a series of forays into a territory that my colleagues and I have begun exploring - alternative histories and cultures of technologies of communication - in Sarai - a programme of the Centre for the Study of Developing Societies in Delhi[1]. What I will offer to you are a set of speculations that log the preliminary progress of some of these explorations. Far from being a definitive account of the field, they are more the result of a tentative and very provisional set of sightings of what I think are some of the landmarks of an exciting but relatively unexplored terrain. I offer this paper as a provocation and as an invitation, in the hope that it will invite others who are far more qualified than I am to enter into a series of historical investigations of alternative global histories of new media. I am not a historian or a theorist, I speak as a practitioner, who follows with my comrades the commands of a nose perpetually distracted by the fragrance of well cooked histories. I do this to try and understand what I do.

1. Acknowledgements and Antecedents

But before I begin the presentation, I would like to acknowledge the fact that I am particularly grateful to the discussions and convesation and work that that I have shared with **Monica Narula** and **Jeebesh Bagchi**, my colleagues in the Raqs Media Collective,[2] (like everything we do in Raqs, this paper too emerges from our work as a collective, from the air we have been breathing together for the last 13 years, especially in terms of the discursive engines that propel the ideas that lie at the core of this presentation) and with **Mrityunjay Chatterjee** and **Iram Ghufran**, my colleagues in the Sarai Media Lab, and with **Ravi Sundaram**, **Awadhendra Sharan** and **Bhagwati Prasad**, colleagues at Sarai - it is the generosity of these conversations and the spirit of intellectual and creative solidarity at Sarai that accounts for the insights and ideas that have gone into the making of this presentation. I would like to flag in particular, what Ravi Sundaram has elsewhere called 'Pirate Modernity'[3] as a telegraphic, (appropriately telegraphic) and highly condensed shorthand notation that helps us inscribe the histories and practices of media culture outside the colonial metropolis of the nineteenth and twentieth centuries, and what Jeebesh Bagchi calls an ethic of 'Defiant Access' to media culture, which is the way we have had to learn to be new media practitioners. I am indebted especially to Monica Narula, my greatest critic and dearest friend, for teaching me how to think the present continous tense even as we continue to obsess about the past, and dream about the future.

The shortcomings, and oversights, wherever they occur in this presentation, needless to say, are attributable to me alone. 'The Network of No_Des' a hypertextual interpretation of the day to day life of new media in Delhi, a work produced by us at the Sarai Media Lab is something that this presentation owes a lot to. Many of the Ideas that have found their way into this presentation were incubated in the research that we were doing in the Sarai Media Lab in preparation for the Network of No_Des [4], and I would urge those of you who have not already seen it to take some time to browse through it, should you find the time to return to Tallinn - although it will be available very soon.

I would also like to draw your attention to a small but growing body of literature in the history of communications - an emerging discipline that is changing the way we think of new media, that has helped me formulate many of my ideas and questions in this field. Within the South Asian context there are magisterial technology historians like **R. K. Kocchar** [5], and a young labour and technology historian **Deep Kanta Lahiri Chowdhury** [6], both of who's recent writing I am deeply indebted to, for much of the contents of this presentation.

I would also like to acknowledge the science and technology writer and journalist **Tom Standage**, who's recent book 'The Victorian Internet' [7]essays many images, facts and metaphors that I will echo today. I also have in mind the little known but excellent specialist - a Finnish historian of telecommunications **Jorma Ahvenainen** who's "Far Eastern Telegraphs" [8]published in 1981, in some senses paved the way for the cultivation of a global approach to the history of the telecommunications industry.

(I am mindful of the fact that we are in the country that Nokia comes from. And what is not often appreciated is the fact that before Nokia became the mobile phone giant that it is today, it specialized in the manufacture and installation of telegraph cables, especially undersea telegraph cables. It is no wonder then that there is a rare appreciation of the the history of the labour that goes into making the nervous system of our planet here in Finland.) What I will have to say is something that I would like to be seen in the same spirit of respect and affection for all those who laid down the grid.

You would not be wrong if you were to say that all that I have done is to eavesdrop on the history of a fascinating conversation, to morse code like taps discernible through the hum and static of the cable that connects us to the past, perhaps to the future. But then, I have always considered listening to be a most honourable calling. My speaking would be impossible had I not spent some time listening. My writing rests awkwardly on the shoulders of all the reading that I have done.

Let me quote here in my defence a somewhat unfashionable poet, someone I am happy to claim as a fellow South Asian, who, in his own day was just as fascinated by the 'New Media' of his time as he was by the adventures of orphaned adolescents in hot countries. Here is **Rudyard Kipling**, better known to the world as the man who gave us the Jungle Book, Mowgli and Kim, rhapsodising antique new media. The poem is called "The Deep Sea Cables" [9] and I want to share it with you today, because it dredges up with some drama, some might say, with fulsome sentimentality, the romance of the telegraph cable, of which I will have much to say as I go along.

The Deep Sea Cables
by Rudyard Kipling

The wrecks dissolve above us; their dust drops down from afar -
Down to the dark, to the utter dark, where the blind white sea-snakes are.
There is no sound, no echo of sound, in the deserts of the deep,
Or the great grey level plains of ooze where the shell-buried cables creep.
Here in the womb of the world - here on the tie-ribs of earth
Words, and the words of men, flicker and flutter and beat -
Warning, sorrow, and gain, salutation and mirth -
For a Power troubles the Still that has neither voice nor feet.
They have wakened the timeless Things; they have killed their father Time ;
Joining hands in the gloom, a league from the last of the sun.
Hush! Men talk today o'er the waste of the ultimate slime,
And a new word runs between: whispering, `Let us be one!'

Let us be one. Let us at least try to be one, even if not in Kipling's 'Imperial' sense. Let us at least try and see if we can share in a planetary sensibility with regard to communication practices. Let us not fool ourselves into thinking that everything that is valuable in the contemporary has a delimited cultural origin that centres on the northern hemisphere, in Europe or in North America. Let us forego claims to primacy in the history of our practices, Let us not priviledge the current moment and foreswear our debts to the past. Let us try and listen to what it might have to say.

2. The Fickleness of Novelty, and an Antidote for Cultural Claustrophobia

As practitioners of New Media, which is one way of describing anyone who works in the electronic arts, we can often catch ourselves feeling bereft of a history, compelled as if to inhabit the eye of a storm called the 'new'. We are the miscegnated progeny of the furtive couplings of the information practices and cultural processes of the past, warily looking up from our toadstool level at the tangled branches of the sheltering family tree. We are close to the roots, far from the branches, thriving on the remains of fallen ancestors, waiting our own turn to be compost for the mushrooms of the future.

Anyone who has ever had their thought or their practice tagged as in any way 'new' is destined to be nagged by the anxiety of looming obsolescence. Having lived through the roller coasters of dot com booms and busts, broadband waves and bottlenecks, dot net utopias and dot org wastelands, we, the generation that grew up in or to the internet, no when and matter where we grew up, we are all already history.

Novelty is a fickle companion; the 'New' just doesn't stay new for very long anymore. Today's killer application is tomorrow's exhibit in a technology museum. Today we have e-mail anxiety attacks; once upon a time, our hearts skipped a beat at the sudden, staccato arrival of a telegram. In Hindustani, the idiomatic mode of conveying urgency, immortalized in the plea that the distraught heroine in a village far from the nearest telegraph office makes to her lover in the distant city in innumerable Hindi films from the 1930s, 40s, 50s and 60s is - *"is chitthi ko telegram samajhkar aana"*, or "rush, consider this letter a telegram." I want you to consider what I am going to present today to be a set of hurried, perhaps somewhat disjointed telegrams. Messages tapped out with a certain urgency from a far away set of places. As I transmit them to you, I will also try to decrypt them, so that we can begin to see a few echoes and resonances across time and space.

Every time is laden with its own assorted cargo of 'futures'. Some of these 'futures' or promises, come unstuck and drift away into a temporal limbo, stuck between the tenses like odd bits of floating grammatical anomalies. They are neither *'would be-s'*, nor *'have been-s'*, but mere *'could be-s'*. I call these anomalies - the 'Remains of Tomorrow's Past'. They are what to someone in our *'yesterday'*, might have appeared as if they were capable of maturing into credible *'tomorrows''*. Thus we can see many potential futures at any given moment. Each of these futures is related to every other future that is potential, and the one that matures into a 'credible' tomorrow, is in my view, continually indebted to the others it left behind. No one 'future' can exhaust all the promises of tomorrow. And we must return to the imprisoned and abandoned futures in the past to renew our own tomorrows. This is why I insist on revisiting tomorrows past.

What is true of time, is also true of space, of geographical and cultural distance. The ideas that spring forth, as if they originated in a given space, can usually

through a process of investigation be seen to have a complex matrix of origins. Their components may derive from the commerce in ideas, concepts and innovations that is a standard incidental of cultural contact. Ideas and innovations emerge in a cultural context. A cultural context is something that I can only think of as being like a harbour or haven for ships that have berthed after travelling what we in Bangla like to call *"Shaat Shomudro, Tero Nodi"* or seven seas and thirteen rivers. Nothing comes from just one place.

Nevertheless, we continue to suffer under many misconceptions. Such as the idea that what is new media, must always have had, and will always have a strong transatlantic, middle european, and to a certain extent, pacific rim cultural tenor. New Media is what happens, or happenned in New York, in Amsterdam, in San Francisco, in Berlin, in Vienna, in Nagoya, in Yokohama, in Seoul, in Sydney. Perhaps after this ISEA, it will also speak hopefully, in Finno-Ugric accents. It should, given that the future of new media technologies and practices may be more influenced by Linux, which began here, in Helsinki, and to Nokia, then it will be by Microsoft and Motorola. Anyway, what I am trying to say here is that the notion of a Eurocentric, or Transatlantic, or Sinocentric, or Indocentric or whatever-centric new media culture is only an illusion, because it is based on the fallacy that communication cultures arise in isolation from each other. Nothing does in the realm of culture, least of all with respect to cultures of communication. Some people would go so far as to say that nothing does at all. I am inclined to agree with this view, and with it's explanatory force and generosity, but for the moment let us stick to the narrower universe of media and communication culture.

You might ask then "that if we are to abandon our servitude to novelty and loosen the anchor of latitudes, how can we even begin to narrativize or historicize or offer any concrete explanations of what we are, how we came to be, and what we are about." Let me suggest a line of thought that might be of some help.

One way of looking at cause and origin is to pin down a time and a place where something emerges. Another way is to reveal, layer by layer, the complex web of time, space, events, processes, interactions and cultures within which that emergence is nested. To see things in this way is to emphasize a materiality of relatedness above a solipsistic, idealistic and monadic origin myth. My contention here is that it is time that the New Media cultures of Europe and North America overcame their immature solipsism, and understood that theirs too is but a provincial and provisional moment in the unfolding of the material history of communicative practices. Similarly, it is time for cyber-triumphalists, say in India, to heed the warning that just because the zero, and the idea of 'sunyata' or nothingness began being used in sanskrit texts on number theory and philosophy sometime in the first millennium AD is no reason to think that the origins of binary code lie in south Asian culture, and that therefore Indian programmers will eventually prevail and rule planet earth. (There are some people who think seriously along these lines, just because lots of Indian programmers, schooled in the computer programming assembly lines of engineering institutes in India, got lots of HIB visas to go to silicon valley). Arrogance of this sort can only need to debilitating anxiety. [10]

The liberation from having to think of yourself as unique and new, or the very origin of everything, means that you don't have to be so paranoid about ending when you have to, letting go and moving on.It also means that you dont have to hold on to cultural material as if it were your property, produced by dint of your monadic transformative authorship, but more of that later. If tomorrow all the computers in the world spoke to each other only in Finnish or Swedish, (as they do in something resembling English today at the level of higher level programming languages, at the level where the words for 'if', 'then', and 'run' become embedded in the commands we give to a machine) in homage, let us say to the cultural antecedents of Linus Torvalds (may peace be on his name), it would be neither a good thing nor a bad thing, it would just mean that a lot more people would have to learn the Finnish or Swedish words for if, then and run. Communication would not have come to some terminal end merely because the residual anglo-saxon linguistic imprint on programming culture were somewhat modified in a Finno-Ugric or at the very least more Nordic direction. Substitiute English for Finnish, Finnish for Lithuanian, Lithuanian (which is the closest European Language to proto Indo European) for Sanskirt, Sanskrit for Hindustani, Hindustani for Tibetan, Tibetan for Chinese, Chinese for Japanese and Japanese for Xhosa and you will still get computers that can talk to each other, for better or for worse. The world of new media will not come to an end. There are in other words distinct advantages to realizing that you are not the centre of the new media universe, of realizing that the domain of media practice can be productively viewed as one which is contraindicative of the idea of a centre, or of an origin.

3. Dependent Origination, The Net of Indra, the World

Wide Web and the Network of No_des

Let me try and open a window by quoting a fragment of a text written by the Bombay based Art Historian, Curator and Poet **Ranjit Hoskote**, [11]which purports to be a discussion of the possibilities of contemporary new media based art practices in India. Ranjit writes and I quote -

"The Internet is only the latest in a long tradition of metaphors enshrining the interrelatedness of all beings, the possibility of a global community. Earlier in this genealogy, there occurs one of the most spectacular expressions of a global network that draws human, non-human and divine creatures together: the image of the net of Indra, the world conceived of as a web in which every sentient being is a jewel-like node or knot. We find this compelling image in the Mahayana scripture known as the Buddhavatamsaka Sutra, or the Sutra of the Garland of Buddhas. Called the Avatamsaka Sutra for short, this Mahayana scripture is extant only in Tibetan and Chinese translations today; the Sanskrit original has been lost. Taking for its centrepiece the principle of mutually unobstructed interpenetration, the Sutra teaches that all sentient beings are to be valued and cherished equally, without regard to difference."

Let me read to you a fragment of recent English translation [12]of the 4th century AD Chinese translation entitled Hua-Yen Ching of this now lost Sanskrit text.

"Far away in the heavenly abode of the great god Indra, there is a wonderful net which has been hung by some cunning artificer in such a manner that it stretches out infinitely in all directions. In accordance with the extravagant tastes of deities, the artificer has hung a single glittering jewel in each 'eye' of the net, and since the net itself is infinite in dimension, the jewels are infinite in number. There hang the jewels, glittering like stars of the first magnitude, a wonderful sight to behold. If we now arbitrarily select one of these jewels for inspection and look closely at it, we will discover that in its polished surface there are reflected all the other jewels in the net, infinite in number. Not only that, but each of the jewels reflected in this one jewel is also reflecting all the other jewels, so that there is an infinite reflecting process occurring... This relationship is said to be one of simultaneous mutual identity and mutual intercausality."

The metaphor of Indra's net can be found dispersed in several texts (written in Sanskrit and Pali) across the Buddhist canon, though it's most cogent expression is in the *Avatamsaka, Flower Garland* or *Hua-Yen* text. Other Buddhist sutras that refer to this net are Maharatnakuta Sutta (where we come across a modified version of Indra's Net in something called *Maudgalyayan's Net*) and in the *Nidanavagga* section of the *Samyutta Nikaya (The Book of Causation* or the *Connected Discourses on Causation)* and in the *Kaccanagotta,* the *Digha Nikaya* and the *Brahmajala Sutta* (where it is referred to as the *'Supreme Net'*). We do not have texts for all of them, we know some of them through citations, or dead hyperlinks, if you will, in other texts)

The survival of the image and metaphor of Indra's Net as it is exprssed in the Garland Sutra is itself a function of the properties of an ancient net that transmitted signals back and forth between different nodes in the ancient Buddhist world. The *Hua Yen* school, (which had Tibetan and central asian antecedents) gave rise to *Hwaom* school of Korean contemplative mysticism, which in turn is the parent of the *Kogen* tradition in Japanese Zen Buddhism. What is crucial to know here is that the first iteration of the source code, if you like, of this piece of software was lost in the very space where it was created, and what survived were rescensions, which flourished elsewhere.

The South Asian subcontinent became over time, inhospitable towards Buddhism, and like much else in Buddhist culture, little remained at the locus of so called origin. However the presence of many other nodes in the network, ensured that the signal could continue to be transmitted. Notice the parallel I am drawing here between one of the design impetuses that led to the creation of communication system that we now know as the internet, that communication would route itself around a failure, or fault in any one node in the network, and the history of the transmission of a metaphor in Mahayana Buddhism.

It is no wonder then that **Tim Berners Lee**, [13]echoed the metaphor of Indra's Net, quite consciously, in his conception of the world wide web. It had come to him as part of the unitarian heritage that he had grown attracted to. The Unitarians had long had strong affinities with dissident strands in south asian philosophical traditions, and the Universalist Unitarians [14], the denomination that Lee was to

eventually adhere to, had in particular a history of using the Indra's Net metaphor to construct an image of an interdependent universe, and to imagine an ethic of mutuality and reciprocal relatedness.
Let me quote Tim Berner's Lee to make this relation more explicit ;

"...In an extreme view, the world can be seen as only connections, nothing else. We think of a dictionary as the repository of meaning, but it defines words only in terms of other words. I liked the idea that a piece of information is really defined only by what it's related to, and how it's related. There really is little else to meaning. The structure is everything..." **Tim Berners Lee, 'Weaving the Web'**

Or again, in an address called **"Hypertext and Our Collective Destiny"** Tim Berners Lee writes, in 1995 -

"People need to be part of the fractal pattern. They need to be part of organisms at each scale. We appreciate that a person needs a balance between interest in self, family, town, state and planet. A person needs connections at each scale. People who lack connections at any given scale feel frustrated. The international jet-setter and the person who always stays at home share that frustration. Could it be that human beings are programmed with some microscopic rules which induce them to act so as to form a wholesome society? Will these rules still serve us when we are "empowered" by the web, or will evolution give us no clues how to continue?

Look at web "home pages". "Home pages" are representative of people, organizations, or concepts. Good ones tend to, just like people, have connections of widely varying "length". Perhaps as the web grows we will be able to see fractal structure emerge in its interconnections. Perhaps we ought to bear this in mind as we build our own webs. One of the reasons that the web spread was that the hypertext model does not constrain the information it represents. This has allowed people to represent topologies they need. We have found that people love to use trees, but like to have more than one, sometimes overlapping. We have found they need structure and involvement at all scales."

It is perhaps in this spirit that we in the Raqs Media Collective began writing what came to be a text called the **'Concise Lexicon of /for the Digital Commons'** [15]in 2002. We were nor aware of the image of Indra's net in the Garland Sutra or of its invocation by Tim Berners Lee, but an entry that we made for the word 'Nodes' is resonant with both the vision of Berners Lee, and of Indra's Net, and I cannot resist begging your indulgence to quote the complete text for the entry, also because it serves as a conceptual foundation for the Network of No_des installation that is showing in Tallinn:

"Nodes : *Any structure that is composed of concentrated masses of materials which act as junction points for the branching out of extensible parts of the overall system may be described as nodal. The concentrations or junctions being the nodes. A nodal structure is a rhizomic structure, it sets down roots (that branch out laterally) as it travels.*

Here, nodes may also be likened to the intersection points of fractal systems, the precise locations where new fractal iterations arises out of an existing pattern. A work that is internally composed of memes is inherently nodal. Each meme is a junction point or a node for the lateral branching out of the vector of an idea.

In a work that is made up of interconnected nodes, the final structure that emerges is that of a web, in which every vector eventually passes through each node, at least once on its orbit through the structure of the work. In such a structure it becomes impossible to suppress or kill an idea, once it is set in motion, because its vectors will make it travel quickly through the nodes to other locations within the system, setting off chains of echoes and resonances at each node that trace a path back to the kernel of the idea.

These echoes and resonances are rescensions, and each node is ultimately a direct rescension of at least one other node in the system and an indirect rescension of each junction within a whole cluster of other nodes. Nodes, when written, perhaps erroneously, as 'no-des' gives rise to an intriguing hybrid English/Eastern-Hindi neologism, a companion to the old words - 'des', and 'par-des'. 'Des' (in some eastern dialects of Hindi, spoken by many migrants to Delhi) is simply homeland or native place; 'par-des' suggests exile, and an alien land. 'No-des' is that site or way of being, in 'des' or in 'par-des', where territory and anxieties about belonging, don't go hand in hand. Nodes in a digital domain are No-des."

What we are trying to do here is to argue for a different logic of spatiality. Not one that does not require a map, not one that does not admit to difference, but which at the same time refuses to construct a causality, points of origin, arrows of progress, hierarchical evolutionary schemas that converge towards the manifest unifocal

destiny of the history of the industrialized world, or a hoary point of origin in a mystical orient. Instead, we are trying to argue for a world of intercausality. Where different immanences separated in space and time emerge and subsist in relation to each other. We must learn always to be both more specific, and more general at the same time. Interdependence, or dependent origination is not only consistent with a rigorous philosophical materialism that sees strands, strings, knots and webs everywhere where other visions might see isolated entities, but also demands that we actively pursue relationality as an ethic in order to protect the signals that we create from a kind of self absorbed autarkic metastasis that accompanies any attempt to construct a siege of the self by the self. Dependent origination, which the Hua-yen school termed *fa-chiai yuan-ch'i* (which in turn suggest itself as an echo of the Sanskrit expression *dharma-dhatu pratitya-samutpada,* translated either as the *"interdependent arising of the universe,"* or, perhaps more accurately, as the *"interdependent arising which is the universe...")* is the lens through which I want us to see the spatial-cultural and temporal encounters which eventually led to the internet. To do this we will have to jump several centuries.

4. Laying the Foundations of an Empire built on Information : Surveying and the Computer in 19th Century India

The 19th century in India is a great laboratory of information technologies. The demands of administering a vast, differentiated territory, with a mind boggling diversity of cultures, customs, religions, languages, types of land use and terrain, led the nascent East India Company state to evolve new technologies of harvesting and processing information. [16]

Apart from founding numerous surveys of India (the geographical, geological, anthropological, archaeological, metereological and botanical), representatives of the colonial administration founded learned societies, like the Asiatic Society of Bengal, where later, with local elites, they set about mapping everything that could be mapped.

A key feature of this new apparatus was the computer, [17]which in those days was not a machine but a human being, a surveyor, a person entrusted with the task of interpreting and performing calculation operations on large sets of data, the lowest cog in the apparatus of information specifically deployed as power.

The enormous quantity of census data, linguistic surveys, maps, revenue records and other kinds of compressed information created what could be considered the world's first processed info sphere. Remember, that the drive to generate information in a space like India was in many ways much more intense than back in the colonial metropolis. Not only was there large amounts of information, this was also information that needed to be interpreted and made sensible to an alien power.

For instance, the needs for administering court records and the evidentiary uncertainties attendant to witnesses and the difficulty of the recognition and inscription of what the colonial administrator thought was the bewildering sounds of 'native names' led to the first systematic attempts to create a science of identification through fingerprinting. The most important pioneers of fingerprinting, **Herschel** (1858) and **Edward Henry** & **Aziz ul Haq** (1895) [18], were all administrators in 19th century Bengal, separated by a few decades. But it was their methods that ultimately give rise to biometrics and contemporary identification and surveillance technologies.

The computer, (still a person) had to make the data speak, had to create relationships that eventually could be used to make decisions. The task of surveying land, undertaken by the great trigonometric survey of India was crucial to mapping and calculating gradients, which in time would underpin the construction of railway lines and a telegraph network. One information grid was the layer on which another information grid could be knitted, and at the heart of this apparatus was the nineteenth century computer.

5. Beyond the Reach of Monkeys and Men : O' Shaugnessy and the Telegraph in India : Innovation, Imitation and Intellectual Property 1

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The first proposal to build a telegraph network in India was submitted by one **Adolphe Bazin** to the Asiatic Society in June 1839. The proposal, which Bazin termed as a plan to build an 'Electro hydraulic telegraph for effective correspondece between Calcutta, London and the rest of the world' may well have been the first cogently articulated desire to build a transcontinental communication system using electricity. The proposal was as impractical as it was elaborate and ambitious. And a subcommittee that included an Irish doctor by the name of **William O' Shaughnessy** rejected the proposal, arguing for a simpler system, more suited to local conditions. O' Shaughnessy in particular, pointed out the problems of humidity and moisture in the damp, rain fed climate of Bengal, that any plan like Bazin's which counted on using non insulated 'common electricity' would have to overcome.

O'Shaughnessy was an active member of the Asiatic Society, and avid correspondent and contributor to its journal and involved in several technical initiatives as an enthusiastic amateur. He had developed his own photographic process and built a camera, besides having the distinction of being the person to write a detailed pharmacopia for Cannabis Sativa Indica (20), a herb that has played a very important role in the history of human communication, and introducing the many medicinal and recreational usages of its products, the substances hashish and ganja, to the western world as a committed medical researcher.

O' Shaugnessy, perhaps inspired by the mind expanding properties of the substances he was consuming, was already interested in using electro chemical conductivity for communication. Electricity, it must be remembered was viewed almost as an 'occult and esoteric elemental force' well into the late nineteenth century, and any number of the electrical pioneers of the Victorian Age, right up to Nicholas Tesla were also dabbling in what today we would consider strictly X Files material. O'Shaughnessy, the stoned Irishman in damp Calcutta, was building electromagnetic motors, batteries and conductors in 1835-36, and was involved in the construction of a 1,000 cell Mullins battery. In a letter to the Secretary to the Goverment of Bengal, O'Shaugnessy described himself as the man 'who in 1837 declared an electric telegraph to be a practicable thing... and proved it to be so in 1837 (we know, because he documented everything he did, including his daily experiments with Hashish) He goes on to record that the reward for his preliminary experiments was 'universal ridicule for the advancement of such visional and impracticable ideas' and it would appear that his breakthrough in electromagnetic communication came in May 1839 and he described his experiment in September of the same year in The Journal of the Asiatic Society. In this paper titled *'Memorandum Relative to Experiments on the Communication of Telegraph Signals by Induced Electricity'* [21], he mentions a previous experiment in which he had 'fallen into the error of indulging prematurely in dreams of useful results, and of reasoning unguardedly from the model to the machine.'

There is one intriguing possibility that I cannot but resist speculating on, and if it is not fact, then it makes for intriguing and to my mind delicious fiction. We know that O'Shaugnessy was an active member of the Asiatic Society. We also know that the Asiatic Society was the kind of place where you would have learned discourses on Buddhism or some ancient Sanskrit text one week, and a proposal to cure Malaria or reform the postal system or demonstrate the benefits of cannabis or make electrical dynamos the next week. Is it possible that O'Shaugnessy in his wanderings in and out of the Asiatic Society, would have chanced upon a discussion of Indra's Net? We know that Unitarians had become interested in Buddhist tenets by the middle of the nineteenth century, and that the first Buddhist philosophical text to be published in English was in an American Unitarian journal called the Dial, in 1844. We know that the metaphor of Indra's Net was much discussed in Unitarian circles, and that there was a strong Unitarian connection to Calcutta, through the Boston East India Trade at about the time that O'Shaugnessy was in Calcutta. Is it possible then that the visions of the telegraph and the metaphor of Indra's Net had somehow coalesced in one of O'Shaugnessy's hemp smoke filled damp Calcutta aftenoons? It remains a tantalisingly plausible possibility. Perhaps something that someday should make its way to a ‘wirepunk’ science fiction novel set in nineteenth century Bengal. I suppose we will need a different kind of engine to crank that one out.

O'Shaugnessy's place in the history of telegraphy is an object lesson in the theory of dependent origination. His tragedy if you want to think of it that way, or his great good fortune, if you want to think of it that way, amounted to the fact that he was working at a time pregnant with telegraphic experimentation. O'Shaugnessy's telegraphic work is exactly contemporaneous with the work of **Samuel Morse** the person usually credited with the invention of the electric telegraph, and the morse code. The difference is the fact that Morse wanted to, and could patent his 'inventions' and O'Shaugnessy, sat dreaming about the possibilities of what he called 'sympathetic flesh telegraphy' where the human skin itself, because of its conductive properties, is used as a transmitter and a reciever of electrical signals.

Indeed his earliest prototype visualizes a telegraph operator with his finger against a needle, sensitive to a series of micro electrical responses that he learns to read as discrete elements in a cipher connected to the English alphabet. In doing this O'Shaugnessy was trying to teach the body how to read, how to communicate, and though we can speculate about how influenced these ideas were by his hashish induced trance states where he reports a heightened level of sensate awareness, what is certain is that his experiments were probably some of the earliest exercises in 'wearable' new media, where the telegraph receiver was in a sense an extension both of the nervous system as well as of the epidermis itself.

O' Shaugnessy wrote in his *'Memorandum'* and I quote - *"The delicacy of the impressions of touch transcends the sensitivity of all other senses. The eye and the ear are liable to distraction by casual sounds or phenomena, while the attentive touch knows no interruption."* He goes on to say - *"the most perfect sympathy is practicable between the signalists, and that as fast as the signal can b e felt, in short, with little less velocity than the articulations of language or writing of stenographic characters, this silent but thoroughly intelligible and still most secret of correspondences can take place. "*

Here was O'Shaugnessy, in Bengal, dreaming up and realizing a full fledged telegraphic infrastructure, from wiring, to insulation, to code, to transmission, to reception; and there was Samuel Morse, at the same time doing similar things, across the 'seven seas and thirteen rivers' on the campus of the University of New York. One node in the net of indra, reflecting the electric excitation of another node, far away in the system, constructing between themselves what we in the Raqs collective would be happy to call a network of no_des.

Morse and O'Shaugnessy both claim to have made their first electro telegraphic transmission experiments in 1837, Morse goes on to patent his invention, stoutly denying that he had *'learnt in histories of the telegraph in India anything crucial to the development of the electric telegraph in India from the physicist* **Joseph Henry'** [22]. It is important to know that O'Shaugnessy too, comes to know of what Morse had done only after 1839, by which time he has successfully demonstrated his telegraphic experiments by constructing a line that used iron rods and bamboo supports in the Calcutta Botanical Gardens. Subsequenlty, once he gets to know what Morse had wrought, O'Shaughnessy, in a bid to avoid the complicated business of being trapped in the labyrinth of patent suits, sought to devise a completely independent technology, using materials and skills available to him in Bengal. The intellectual property regime, while it priviledged the primacy of Morse's claim, based on a principle of the priority of a first past the post vis a vis the filing of patent applications, also ensured that O'Shaugnessy was forced to consider a set of options that we would today recognize as being 'appropriate technology'.

Crucially, O'Shaugnessy works in a totally collaborative frame, his key interlocutor is a man called Shib Chandra Nandy, who sent out the first signal in the first officially endorsed major telegraph transmission between Diamond Harbour and Calcutta, supervised and organized by O'Shaugnessy in 1852. People like Nandy would have played a very crucial role, as O'Shaugnessy totally relied on local initiative and technological acumen. His instruments were manufactured by Calcutta watchmakers and toolsmiths. The original design incorporated elements both from the indigenous metallurgical tradition as well as the metropolitan urban mechanical skills that had been established in Calcutta. The inventiveness with which terracotta pipes and other local materials were used for insulation, the forging of iron rods in local smithys and the use of bamboo, date palm, madras cotton, locally produced silk and a host of other indigenous materials could not have taken place without considerable dialogue between O'Shaugnessy, Nandy and a host of Bengali craftsmen. Deep Kanta Lahiri Chowdhury in his fascinating monograph which I am drawing extensively on for this section of my presentation, writes,

"From curious crowds and far seeing businessmen, to metal workers and mistris (a kind of craftsman), a broad spectrum of the indigenous population was very much a part of O'Shaugnessy's telegraph project. Iron rods were easily available and cheap bamboo was abundant in Bengal. These measures were not just economical at this juncture but were original in doing away with insulators, non conductors and winding apparatuses needed in a wire system. His telegraph used a different code and initially imposed a series of very small electric shocks on the operator to transmit the message. He also came up with another unique invention ; he used a two and a half mile stretch of the Hooghly river, in place of wire to complete a circuit. He was one of the earliest to experiment with a system of using water as a conducting medium for electricity. His experiments with rivers led him to conclude that only two wires were sufficient to maintain long distance communication, and if water came between them, then only one line would be sufficient to complete the circuit."

Once again, this is of crucial importance, because in using water, O'Shaugnessy

anticipates in his own way the great leap forward in the telegraphic girdling of the earth, the use of undersea cables - but more of that later.

O'Shaugnessy's vision saw the realization of miles of overhead telegraph lines cutting across the firmament of India to link an entire subcontinent, from the humid riverine delta of Bengal to the dusty plains of north India, across the rocky deccan plateau of peninsular India and into the far north west frontier bordering Afghanistan. The telegraph had conquered, what O'Shaugnessy had called in his memorandum, the desolate howling wilderness of the Indian interior, by hanging just out of reach of both monkeys and men. I quote Lahiri Chowdhury again: "The great gulf between the bustling hubs of colonial and mercantile commerce like Calcutta and Bombay and the interior or hinterland was physically and visually illustrated by the telegraph and its high poles which rationally transected the countryside. Most of the basic structure was built with remarkable rapidity after 1852, and by 1856 the first telegraph network of over 4,000 miles was in place."

In fact so considerable was this achievement that a compendium of technical information called the *'Telegraph Manual'* [23]written by one **T.P. Shaffner** and published by the New York firm of Pudney and Russel in 1859 described the Indian telegraph system as *"the most extensive in the world"*. So if you were looking for connectivity in 1859, India was the place to be.

Who or what is O'Shaugnessy? A maverick backwater genius, as the Telegraph Manual would have us believe, architect of the most impressive communication network in the world at that time, or, a narcoleptic charlatan, an imitator, a transmitter of received ideas? (as the Morse camp would have us know him). Perhaps a bit of both. Clearly, O'Shaungessy moved from ignorance and originality to a full awareness of Morse's work. Awareness led to two responses: at first, an ingenuous adaptation, a form of reverse engineering designed to subvert the intellectual property regime by choosing to remain outside it, and at it's margins. This is O'Shaugnessy's most creative phase. Complex factors are at work here; local ingenuity operates in tandem with a keen appreciation of reverse engineering, encouraged by the looser, intellectual property regime of the colonies. In other words, the fresh winds of a 'Pirate Modernity' act as a stimulus to an extraordinary burst technological adaptation and improvisation. O'Shaugnessy absorbs every despatch, every piece of technical news he reads, obsesses about the latest news from the world of conductivity and electricity, and refuses to be put down by his so called defeat to Morse in the race to the telegraph patent. He learns what he can, and improves upon Morse's invention in a manner that is particularly suited to the damp and natural electricity of the Bengal countryside, and is at the same time resonant with what we will come to recognize as the the download, improve, circulate ethic of free and open source software culture. There may be an element of imitation here, but it is the most innovative form of innovation. If ever there was a hacker of the telegraph system, O'Shaugnessy , in his marijuana haze and with his incessant curiosity, was one.

I want to quote here a couple of passages from Donald Cardwell's *Fontana History of Technology* [24] on the virtues of imitation.

"Imitation means innovation, which, in turn, often stimulates invention. This is the lesson of medieval Europe in its first phase; the lesson was later exemplified by Britain in the seventeenth century, and by Japan at the end of the nineteenth century. Imitation is not, as may be supposed, an indication of inferiority. For an invention to be adopted - imitated - in a different community, that community must have reached about the same level of technical competence as that of the originating community; and, moreover, the adopting community must obviously be willing to learn...

A willingness to imitate, or adopt, inventions made by foreigners, is the first step towards the creation of an inventive and technically progressive society. We suppose that the process worked like this; town and village craftsmen - blacksmiths, coppersmiths, wheelwrights, millwrights, masons, carpenters etc. faced with demands to make imported inventions, began with slavish imitation, then learned how to use local local materials or processes and how to modify the inventions for local needs ; quite possibly for needs never envisaged by the original inventors. This means that the technicians make original inventions themselves; in any case they extended the range of their own skills and increased their own capacity to make inventions. "

Just to take this line of argument, let me quote for you another slightly more obscure text,

" The truth is, that the natives (of India)] are the best apes for imitation in the world, so full of ingenuity, that they will make any new thing by pattern, how hard soever it seem to be done; and therefore it is no marvel if the natives there make

shoes, boots, cloaths, linen, band, and cuff, if our English fashion, which are all of them very much different from their fashoins and habits, and yet make them all exceedingly neat. "

This is a English traveller whom we know only as a certain Terry, writing in a popular seventeenth century travelogue titled simply -*'A Voyage to The East Indies'* [25].

Had O'Shaugnessy, like so many English and Irish expatriates of his generation, lost in *'the desolate, howling, wilderness of India'*, gone native, become one of the *'best apes for imitation in the world'*, one of the more ingenious monkeys who had somehow managed to clamber up a branch in a tree high enough to snatch off a piece of telegraph wire ?

Perhaps, but soon enough, the monkey began to perform as was demanded of him by his masters., O'Shaugnessy abandoned his monkey tricks, lay aside his ingenuity to become a myrmidon, a secrecy obsessed lackey of the communication apparatus of the British Empire in India. What lay behind this transformation? Exhaustion, demoralization, paranoia, a lack of recognition, the shame of having come 'after' Morse - we can only speculate, we only know that most of all, O'Shaugnessy became lost to himself and that the telegraph that he was so passionate about became (with the Telegraph Act of 1854), a state secret. Unauthorized entry into a telegraph office anywhere in India was declared a serious offence punishable by rigorous imprisonment (this law continues to be in operation today, and influenced every other piece of communication related legislation, down to the ones governing the internet and mobile telephony). The information state in India was born, which effectively put paid to all further efforts at independent technological creativity, and O'Shaugnessy was its earliest victim, even as he was one of it's progenitors.

Later, as the demand for standardization, and homogenization grew apace with the desire to cover more and more of the terrain within a set of mainly military imperatives, we witness the overturning of the originality of O'Shaugnessy's early design interventions. He becomes in a sense the destroyer of his own work. He totally imitates (this time having duly paid obeisance to the requirements of the patent regime) what is happening in the metropolis and creates a structure that is robust, but entirely a replica. Gone is the improvisation, gone are the bamboo poles, the epidermal ecstasy of decoding telegraph messages by touch, the iron rod and the local enterprise and initiative. Instead we have a telegraph culture shrouded in secrecy (protected from natives, lest the imitating apes create their own versions and start tapping messages to each other), under the helm of an O'Shaugnessy increasingly obsessed with ciphers, encryption and steganography.

It is this structure that helps the British East India Company 'keep India' in the wake of the sepoy mutiny of 1857. When the speed of the telegraph wins the day over the ubiquity of the mythic round cakes of unleavened bread that were used as an encrypted cipher, apparently to spread the news of the uprising in the Bengal Army through the length and breadth of India. Apocryphally, a rebel about to be executed is reported to have said, pointing to the telegraph wire - *"it is that accursed wire that strangles us…"*[26].

The wire's stranglehold over India is complete by 1857 and a resurgence of creative thinking about technologies of communication is kept in abeyance until a strange echo of the patent controversy surrounding O'Shaugnessy's early telegraphic experiments comes to surface in the early years of the next century, but more of that later.

6. The Creation of a World Information Grid in the Nineteenth Century : The Global Telegraph Network : C & W History and The Cable Ship

By the middle of the 19th century, the spectacular success of Indian telegraphy had demonstrated the viability of a communication grid that spanned large distances, went through large stretches of inhospitable terrain and spanned a very diverse set of geographically, and culturally distinct communities. The military usage of the telegraph was repeated almost immediately after the Indian mutiny of 1857 during the Crimean war, which also saw the birth of the first wired despatch of news from the battlefront. An international communication space marked by unprecedented speed was taking shape. It could be argued, that India in a sense was the laboratory in which this had been rehearsed. In this telegraphy was not alone; fingerprinting, anthropometry, and census techniques were all either initiated or perfected in India and in a sense all four of these techniques, which encompassed

between them all the informational technologies of knowing, classifying, enumerating and transmitting knowledge about human beings, were the foundations on which a global political economy and polity with information at its very core could emerge.

In fact I would go so much as to hazard a statement to the effect that our current conditions, the circumstances of our lives in the twenty first century, which see such intense contestations over the harvesting and transformation of information into commodities, property and state assets, over identification and surveillence, and the increasing industrialization of communication and the media, are nothing if not the legacy of what might have begun taking shape, among other places, in the humid, electrically charged air of nineteenth century Bengal. To understand our present, we need to retrieve this past, and that is why, the remains of tomorrows past, and the task of speculating about the antiquity of new media in South Asia is, or at least ought to be, an urgent item on the agenda of anyone who has anything to do with new media today.

The first intercontinental telegraph link was transatlantic cable (which did not work very well) laid in 1858. A year after the Telegraph had saved India for the British Empire, and only six years after O'Shaugnessy's experiments with telegraph wires and large water bodies. Efforts to lay an improved cable between Great Britain and North America continued till 1865, and definitive success was finally achieved in 1867. The link between India and Britain came soon after, in 1870.

Incidentally the revolution in undersea cabling is itself made possible by the discovery of the insulating properties of a resinous substance called Gutta Percha, which is a rubbery byproduct of the Gutta Percha tree which grows in South East Asia, especially in the Malay peninsula. Large Gutta Percha plantations in Malaya worked on by Tamil indentured labourers from South India, produced the sticky substance that protected the signals under the sea. The information revolution of the nineteenth century was built with their labour, as it was with the labour of the sailors on the great cable ships.

By 1870 the co-ordinates of a westerly axis that joined Europe to North America, and an easterly axis that joined Europe to India, had laid the foundations of a global information age. Once this had been accomplished it was only a matter of time before the earth had been spanned. The South Asian subcontinent was crucial in this process. While Great Britain controlled the seas, German telegraph interests opened out an overland telegraph route, through Eastern Europe, Russia, Turkey, the Caucasius, Iran and Afghanistan to India. The race to India, by sea or by land, was the attempt to get to the first pit stop before moving on to Singapore, to Indonesia, to Australia and to China. This expansion was mirrored by a series of spectacular mergers and acquisitions which gave rise to the first true information transnational corporations of our age .

In 1872 the Eastern Telegraph Company owned 8,860 miles of cable, owned or rented 1,200 miles of landline; had 24 stations and two repair ships. Its capital was £3,397,000 and gross annual revenue was £376,900.

By 1877 the British Indian Submarine had 60% of telegram traffic to India and 80% from India to China, Java and Australia. In 1887 the Eastern owned 22,400 miles of cable and had 64 stations. Its capital was £5,900,000 and gross annual revenue £650,971.

In 1878 a Joint Purse agreement between the British Indian, the Indo-European and the Indian Government was made. Let us briefly go through a set of images that I downloaded from the webpages of the history of the Cable and Wireless Corporation that dramatize the unfolding of this global network. [27]

By the time of the First World War, the Eastern operated six out of the nine lines of communication with India and the Far East. During the war, the upsurge of traffic and inoperability of the Indo-European land-lines which passed through enemy territory led to traffic with India and the Far East being transferred to the Eastern Telegraph Company. In all of this, the Indian landmass played a key position both because of a well established culture of technological expertise in telegraphy, a class of 'operators' who were familiar with the processing of information and with the English language, (these were the successors of the earlier 'computers') and the peculiar geographical position of the Indian subcontinet, bifurcating the Indian ocean, and becoming the key node that could connect Europe, Africa, South East Asia, East Asia and Australia. Without the telegraph being what it was in India, the world information economy and the first layer of a global new media space would never have become so active, so extensive, so quickly.

Clearly this expansion in communicative capacities was not being done to spread world peace; it was a function of what Marx would call "capital fashioning the world

after its own image ". It helped co-ordinate the temporal substratum of the functioning of global capitalism, so that ships could move smoothly, exchanging information about their co-ordinates through the telegraph (and later radio, and today GPS devices). This is what helped create a global market, helped to see currencies as mutually translatable, and on occasion, as in 1857 in India, in Crimea, and in the case of the Zimmerman telegrams, the leakage of which drew the United States into open conflict with Imperial Germany, even as it also proved to be a most important weapon of war.

The telegraph was not an innocent communicative device, and yet, it also created the first networks of virtual resistance, as telegraph workers (many of whom were women) began to constitute themselves into online communities of protest. The early consolidation of international feminism has a lot to do with the facilitation of communication between different regional and national sections by women telegraph workers. This is especially true of the rise of feminism in Scandinavia, where, for instance in Norway, the earliest feminists were actually telegraph workers [28]. Similarly the great pan Indian telegraph strike of 1908 [29] which stretched from Burma to Afghanistan was an instance of an embryonic virtual community that transcended class, race, religion, caste and gender to focus on oppression and resistance in the work place.

It is important to understand this because today's information infrastructure, which is as much a weapon of war as it is a force for peace, as much as tool of protest as it is one of power, as much a playground for the imagination as it is the arena of the stock market as what the teleg

Related internet addresses

http://latitudes.walkerart.org
http://www.opuscommons.net
http://www.sarai.net

The Routes Toward British Computer Art : Art Schools & The Computer Arts Society

Title

The Routes Toward British Computer Art

Subtitle

Art Schools & The Computer Arts Society

Lead-in / Abstract

The education and support of the British pioneers of computer based arts with particular reference to the major role played by art schools 1960-70 and the prominence of the artist-run Computer Arts Society. The complexity and rarity of computers meant that artforms based around them were specialised and highly dependent upon support and funding to exist.

Participants and speakers

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Short biography of participants

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Full text

The concept of using computers in art started in a sympathetic social and political climate in the UK. Although in the initial post-World War II period there were no computers available to artists, there was a great wealth of conceptual thinking, informed by cybernetics, which influenced the next generation. With advances in technology and the formation of the polytechnics in the late 1960s, computers became available. In certain institutions, a limited number of artists took up this as a tool, working method or metaphor for practice. Due to these unique issues of access, both artists and persons from a technical or scientific background created work during this pioneering period.

The complexity and rarity of computers at the time meant that any artform based around them was bound to be a specialised branch of art, highly dependent upon support and funding to exist, not least because of the expensive, large-scale nature of much early equipment and the resulting technical expertise required to operate it.
In the face of much official disinterest, the pioneers of computer arts found ways to exist largely outside what may be considered the mainstream artworld of dealer-gallery networks.

This paper is a brief introduction to the role played by British art schools in fostering computer arts activity during the period 1960-1980, and the prominence of the artist-run Computer Arts Society (CAS), founded 1969.

The influence of 'Basic Design', a new type of art education influenced by Bauhaus concepts, can be traced through art schools from its inception in the 1950s, with artists informed by cybernetics, through the 1960s with artists working in programmatic ways, to artists who actually used computers by the 1970s.

Throughout the 1950s and early 1960s, computers were at an early stage in their development, commonly thought of as 'number crunchers' or referred to as 'electric brains'. Not only was it difficult to access this equipment, at this stage it was difficult to perceive of the computer as being an art method or material, let alone one with capacity for interactivity. The new scientific development of cybernetics was to inform the gestation of computer arts. In the 20th-century it was reinvented by the MIT mathematician Norbert Wiener, culminating with his book *Cybernetics, or Control and Communication in the Animal and the Machine* (1948). According to Weiner, at a basic level, cybernetics refers to 'the set of problems centred about communication, control and statistical mechanics, whether in the machine or in living tissue'.[1] Cybernetics, the study of how machine, social, and biological systems behave, offered a means of constructing a framework for art production in which artists could consider new technologies and their impact on life.

In London, the Independent Group - the younger members of the Institute of Contemporary Arts (ICA), became interested in the implications of science, new technology and the mass media for art and society. The Group met officially between 1952 and 1955 and included visual artists, theorists and critics. They informed the next generation's interest, not least through their influence on advanced art educational developments in the 1960s. They were inspired by *Scientific American,* Wiener's writings, Claude Shannon's Information Theory, von Neumann's game theory and D W Thompson's book *On Growth and Form*(1917).[2]

Richard Hamilton, Rayner Banham and others of the Independent Group were involved with the exhibition This is Tomorrow at the Whitechapel Art Gallery, 1956. In the catalogue, these artists cited potential tools and methods of practice. As well as the more traditional such as, 'fingers, arranged in or on hands, operated or produced by body', the authors also list 'punched tape/cards arranged in or on punch card machine, operated or produced by motor and input instructions'. They also acknowledge Edmund C Berkeley and Giant Brains.[3] These artists believed in the power of modern technologies, even emergent ones (like punch cards) for which the exact artistic employment cannot have been fully clear. This ranks as one of the first published allusions to 'the computer' in relation to artistic practice in Britain.

In 1953, Hamilton went to teach under Lawrence Gowing, Professor of Fine Art at King's College, Durham University (at Newcastle upon Tyne). Together with Victor Pasmore, Hamilton set up and ran the 'Basic Design Course', building on the Bauhaus concept of an integrated method of teaching by bridging the gap between the disciplines of the life room and the rigours of basic design. [4] (A similar Basic Course set up at Leeds College of Art by others.[5]) This was a unique concept at this time - no more copying from plaster casts, which had dominated art education since the Royal Academy.

Roy Ascott, a student of Hamilton's and Pasmore's, was encouraged by the process-driven way of working taught on the Basic Design Course. Inspired by Pasmore's constructivism, Ascott incorporated an interactive element into his work that reflected his interest in communications. In 1961 Ascott created a revolutionary course at Ealing Art School informed by the principles of cybernetics - the 'Ground Course'.[6] This was among the first Foundation Courses to be set up - a result of the radical reform of education in the art and design sector put forward in the First Report (1960) of the National Advisory Council on Art Education, under Sir William Coldstream, eventually paving the way for the introduction of degree-level (BA) fine art courses.[7]

Ascott brought in a number of important artists and theorists, including Gustav Metzger and Gordon Pask to give lectures and demonstrations. This way of teaching art was not based in the traditional 'master and apprentice' system. Instead, behaviour and process were the model for the course. Stressing interdependence, co-operation and adaptability, the tutors set student projects using analogue devises such as calibrators for selecting human characteristics and behavioural alterations in a random but systematic manner.

Metzger was one of the first artists to actually detail the specific use of a 'computer' in relation to his practice. His 1961 manifesto declared his interest in computer controlled cybernetic systems, 'The immediate objective is the creation, with the aid of computers, of works of art whose movements are programmed and include

"self-regulation".' [8] In a lecture at the Architectural Association (1965), Metzger gave details about how computers can be used in sculptures to be auto-destructive. His position countered those who advocated the utopian possibilities of the coming computer age, with sobering details of its origins in military research. He later became the first editor of *PAGE,* journal of the CAS.[9]

This impacted on the next generation - students from the Ground Course included the musician Pete Townsend and artist Stephen Willats. Willats later followed Ascott to Ipswich Civic College at a tutor. There he continued his interest in using informed and up-to-date technological models to produce interactive collective projects, further developed at Trent Polytechnic, Nottingham from 1969.[10] Stroud Cornock, then a sculptor, also met and worked with Ascott at Ipswich during the middle-60s, later moving to the City of Leicester Polytechnic, where he founded 'Media Handling' in 1968. One of the main principles of this course was the belief that any medium had validity for artistic activity.[11] This had obvious relevance for people who wanted to work with computers - Cornock's student Stephen Scrivener was among the first cohort at the 'Department of Experiment' (later known as the Department of Experimental and Electronic Art) set up by systems artist Malcolm Hughes at the Slade School of Fine Art in 1972.[12]

The great interest in cybernetics and art in Britain during the 1960s culminated in the exhibition *Cybernetic Serendipity,* curated by Jasia Reichardt in 1968 and opened at the ICA by Tony Benn, as Minister of Technology in Harold Wilson's 'White Heat' government.[13] It is still considered to be the benchmark 'computer art' exhibition for its influence on many pioneers as well as introducing the subject to a wider audience.

One of the main characteristics of British computer arts of the 1970s, was that it involved artists who either learned to programme and write code themselves or built up a working relationship with scientists, engineers or technicians, at a time when the computer itself was at a formative stage. This was made possible largely by the creation of Polytechnics, which concentrated expensive resources into fewer, but larger multi-disciplinary centres. The first ones were designated in 1967 and many art schools were amalgamated into them.[14] In a few institutions, at least, the result was that artists had the opportunity to access expensive and specialist computer equipment and technical expertise (generally belonging to science or maths departments) for the first time. These provided not only education and training but, in some cases, career incubation, employment, research facilities and networking opportunities. This was a unique feature of British education - as an art student, one could learn to programme.

At Coventry School of Art (in the process of becoming Lanchester Polytechnic), Clive Richards (then a technical illustrator) was able to work with Ron Johnson, Head of Computer Science, on an Elliott 803. Writing in Algol, he produced first a picture of an obelisk in 1969 and, in 1970, *Spinning Gazebo,*the first computer animation done in a British art school, later creating the CACTI (Computer-Aided Construction of Technical Illustrations) package.[15] At the same time, the conceptual art group Art & Language started at Coventry involving Terry Atkinson, Michael Baldwin, Dave Bainbridge and Graham Howard - concepts based on computational methods were approached from a fine art tradition.[16] In this way people from the two backgrounds of design and fine art were able to meet in computing.

Middlesex Polytechnic incorporated Hornsey School of Art and Enfield and Hendon Colleges of Technology. In 1968, John Vince, then a programmer, was put in charge of the Honeywell computer and a 'very rare' plotter - the Calcomp model 565. Vince developed one of the first packages for artists, PICASO (Picture Computer Algorithms Sub-routine Orientated), written in Fortran. Artists who worked with John Vince at Hornsey include Darrell Viner and Jullian Sullivan (who later went to the Slade). Later, Vince and his colleagues ran training courses for the television industry, teaching designers who had never seen a computer before how to do animation in a short period of time.[17] In 1985, with a grant from the Thatcher government, Middlesex became the National Centre for Computer Aided Art and Design under Paul Brown, a graduate of the Slade's programme. In 1988, this was headed by John Lansdown (later became The Lansdown Centre).

In addition, activity took place in a number of other academic institutions. The Department of Design Research was involved in Computer Aided Design and systems research at the Royal College of Art from 1967. At the Slade, Malcolm Hughes was instrumental, along with Chris Briscoe, (who later become Head of the Department), in persuading management to fund computing for artists. The Slade department ran until 1981. At the Institute of Computer Science, London, Tony Pritchett created the Flexipede, in 1967 - the first computer animation in Britain,

later exhibited at *Cybernetic Serendipity.*[18] At University College London, Edward Ihnatowicz worked in the Department of Mechanical Engineering, as a researcher into robotics, building his major work the Senster (1971).[19] At Imperial College, with its ties to the Royal College of Art, Kit (Colin) Emmett and Alan Kitching developed Antics animation software starting in 1971-2, using punch cards on the IBM mainframe with the results plotted on the SC4020.[20]

Efforts in educational institutions impacted technological developments in the wider world. As the Polytechnics had the equipment and the practitioners within had the expertise, they took on commercial work for advertising agencies and clients like the BBC. As the decade continued and into the 1980s, the field started to grow commercially. Computer animation techniques in particular were in high demand. Some pioneers migrated from educational institutions to found commercial production houses. Digital Pictures was formed by Brown and Briscoe, initially in partnership with the Slade, as a way of running and maintaining the computer there. System Simulation was founded in 1977 by George Mallen and Lansdown, with others from the CAS and worked on animation projects such as graphic elements within Ridley Scott's *Alien.* Although part of the service industry, such ventures were also important places of research and development while their participants continued to make art and in some cases, teach. Other pioneers were involved with artist-led initiatives and/or held down day jobs in the computing industry. In this way crucial links between the upcoming generation and the latest technological developments were created.

Artist-led projects allowed social and networking opportunities and access to technical expertise and equipment, as these groups often contained participants from a technical or scientific background. Activities included formal and informal networks such the Computer Art Society, the Arts Lab, the FilmMakers Co-operative, the Artists Placement Group and the Centre for Behavioural Art (founded by Willats in 1972).

CAS, perhaps the most prominent of the myriad of artist-led initiatives during this period, was founded by Alan Sutcliffe, then a programmer at ICL, Mallen, who had worked with Pask and Lansdown, a pioneer of computing in architectural design. An offshoot of the British Computer Society, CAS was formed to encourage the creative use of computers and to allow the exchange of information in this area. It played an important role, bringing together an international membership from a wide variety of practices. In spite of limited recognition from the artworld, CAS supported practitioners through a network of meetings, conferences, practical courses, social events, exhibitions, publication of a journal and occasionally, through funding. The inaugural exhibition,*Event One,* March 1969 at the Royal College of Art, was interdisciplinary, incorporating architecture, sculpture, theatre, graphics, music, poetry, film and dance and saw collaborations between artists and programmers. Subsequent exhibitions and conferences include *Interact,* at the Edinburgh Festival, 1973, funded by the Scottish Arts Council. On view were Ihnatowitz's interactive robot *The Bandit,* Willats'*Edinburgh Social Model Construction Project* and performances of computer dances choreographed by Lansdown.

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■ 2. A Massey, The Independent Group, Manchester University Press, 1995, 54
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■ 3. Alloway, et al, This is Tomorrow, Whitechapel Art Gallery, 1956, Section 12
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■ 4. R Hamilton, 'About art teaching, basically', Motif, No 8, Winter 1961,17-23
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- 10. S Willats, Author interview 06/07/04
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- 11. S Cornock, Author interview 09/03/04
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- 12. S Scrivener, Author interview 04/11/03
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- 13. J Reichardt, Author interview 13/02/03
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- 14. 'A Plan for Polytechnics and other Colleges…', quoted in Strand, 54
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- 15. C Richards, Author interview 22/07/03
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- 16. G Howard, Author interview 22/10/03
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- 18. Tony Pritchett, Author interview 20/02/04
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- 19. A Zivanovic, http://www.senster.com
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- 20. A Kitching, Author interview 20/02/04
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Related internet addresses http://www.bbk.ac.uk/hafvm/cache

The Third Archive Art Detective - Akte KW

Title The Third Archive Art Detective - Akte KW

Subtitle Not provided.

Lead-in / Abstract Erfurt - a city in the former German Democratic Republic is the focus of this cross-disciplinary collaborative, visual arts project that sets out to collect visual evidence of a decade of Stasi surveillance methods by documenting the 500 conspiratorial meeting places that were found in a copy of a lost file at the Central Archive for the Records of the State Security
Service of the Former German Democatic Republic, Berlin.

Participants and speakers Clausmeyer, Tina (NL)

Skelton, Pam (GB)

Short biography of participants Art Detective is a cross-disciplinary group comprising on artists, Pam Skelton, England, and Tina Clausmeyer, Netherlands, environmental health researcher Achim Heinrich, Germany and sociologist and historian Heinz Mestrup, Germany, that sets out to discover what has become of the Stasi meeting places known as KW's.

Full text Using the Akte KW (KW files) we set out to unveil all KW's in Erfurt, a medium sized city in the former GDR. We use the city as an example: as a case study of Stasi surveillance methods in the 80s and to visualise an architectural map of surveillance. This could suggest the Stasi as a State authority in fear of the people and operating outside of logical spheres of behaviour, in a space, where fear and acute distrust motivate governance.

A key member of our project team, Achim Heinrich, attracted the attention of the Stasi because of his active role as an ecologist in a local environmental group in the 1980's in Erfurt. To Stasi methodology, this was critically observed as 'underground activity', which had the immediate potential to easily form an oppositional working group that discredited the environmental politics of the GDR. Achim Heinrich was therefore suspected to having carried out political dissident activities. As with all

individuals under Stasi surveillance and suspicion, a substantial file was built up on him, which after German unification he was able to access at the Central Office for the Records of the State Security Service of the Former GDR, in Berlin. Since then he has been researching - as a case study - into the working methods of Stasi control patterns and repressive state structures, particularly in relationship to the environmental group, in which he was an activist. Drawing on his research, knowledge and experiences of the city in which he lived and worked, and in cooperation and support with the archive of the outpost Erfurt, we have recently accessed the files that locate all the KW's operational in the last decade of the regime (1980 – 1989) and are finally in a position to navigate the city in relation to its history.

The architecture of the city becomes both, the material and receptacle of our investigation, where its buildings and spaces will be examined as evidence of semi-enduring, three-dimensional inscriptions of past events. Together they will form a geographical grid of diverse architectural spaces that attempts to mirror the disciplined society, the complete security apparatus at a time when its surveillance strategies were arguably at their height. The conspiratorial venues here referred to as 'meeting places' are therefore neither fiction nor fabrication, but a reality that frames the history of East German cities today. Historical data will be given a visual identity by remembering and absorbing these blank, often banal and ordinary spaces into a form of memory work that see the former free-floating net of control. The urban geography of Erfurt's cityscape at that time is as important for us as it is 'now', almost 15 years later. The meeting place, as an architectural site of cryptographic space becomes therefore an indicator of the multiple layers of history that mark out the progression of a city's historical/cultural/socio-political meaning.

Source MaterialThe 'meeting places' were the locus of a highly refined system of observation and control. Stasi-officials and their unofficial informers (IM) would meet in a designated place at a specified time on a regular basis. Here, the unofficial co-workers/informers would be instructed by their Stasi officer to spy on colleagues, family and/or friends. Their reports often contained banal but potentially personal incriminatory information on targeted individuals who were under surveillance. For these clandestine meetings, the meeting places were situated throughout the cities in civic and domestic spaces, in hotels, café's, homes, cars, public buildings, offices and objects that were established specifically for the purpose of meetings etc. It was as if the city was a receptacle for these secret locations, 'blank spaces' absorbed by the urban geography.

The Files KW

We are now in possession of many copies of the existing dossiers of KW meeting places. A fascinating picture begins to appear even after a cursory glance of the dossiers, which have only just been made available to us at the time of our recent fieldtrip to Erfurt in July 2004. However, here are some preliminary results. Each KW had its own file with information relating to what kind of accommodation it comprised. Groundplans and drawings of the flat/room etc. were included in the files as well as sometimes indicating furniture and fittings. Routes of access and directions or approaches to the building were also provided, some files containing extremely detailed information. Sometimes they even contained photographs – worthy of note – that illustrated the neighbourhood in which the individual flat or building was located. The number of photographs included in a file varied considerably. One file included around 30 images. It was standard practice that a contract would be drawn up between the Stasi and the occupier. These hosts or landlords were recruits to the 'Firm' (the nickname for the Stasi) to provide safe and reliable Stasi accommodation. Here, a Stasi official would meet with his IM's (unofficial co-workers, informers) on a regular basis. The 'host' was nevertheless instructed to provide a pleasant, comfortable and clean environment for their 'guests'. In Stasi terminology, they were called IMK/KW, unofficial informers, who only collaborated with the Stasi in the sense that they provided a conspiratorial venue for their meetings. Before vacating the premises the host was also responsible for providing refreshments for the meetings, savoury snacks, drinks (alcohol) and tobacco for the men or tea and cakes, for the women.

Each KW was given a pseudonym, although a fair number of KW's inadvertently shared either a similar name or even the same name. Individual names were often used i.e Siegfried, Hertz, Müller or Rose. Rose and Müller were the most popular choices and appear several times in our files. Sometimes a pseudonym may refer to a landmark location such as local bookshop close by, i.e. 'Buch'. Or perhaps the pseudonym would borrow a part of the street name, for example in Blumenstrasse, the name 'Blume' (flower). The road, Juri-Gagarin-Ring used the pseudonym 'Ring' on three occasions for three different KW''s. The main international Hotel Cosmos that was also situated in Yuri-Gagarin-Ring possessed the pseudonym 'Cosmos', the

same name as the hotel. No marks for originality here. Plenty of KW's in the nearest surrounding were using the same name, too, which of course could create a great deal of confusion.

In some instances it appears that KW's were strategically positioned. The Juri-Gagarin-Ring again provides an interesting proposition. Built in the 70's this major thoroughfare is a ring-road dividing the old town from the suburbs. It is also the main access route in and out of the city. The Ring is predominately but by no means exclusively made up of mid to high-rise blocks of flats. Its significance as a series of look-outposts is convincing as views from a KW would have provided excellent views of passing traffic, especially the ones positioned at the corner of cross roads and other intersections. Perhaps this reflects other models of urban control such as Haussmann's project for his development of 19th century Parisian Boulevards. In addition an extremely high number of KW's are located on this ring road. To be more precise, perhaps six or eight KW's can be found in one tower block, with two or three neighbouring blocks also contaminated.

Erfurt is a pretty medieval town and the regional centre with a population of over 196,000. It contains many important listed buildings and it can easily be described as picturesque. Situated close to Weimar, Erfurt is the capital of Thuringia, and has again become a popular tourist destination. One can take a guided tour around the old town, where knowledgeable guides elaborate on the cities history, architecture, trades and guilds, but hardly a word about its more recent history, the GDR. In fact an alternative tour could soon be arranged to accommodate the towns KW meeting places, which are also amply distributed throughout the old town. A good example of a KW in the old town is in 'Grosse Arche'. It is the 16th century 'Haus zum Sonneborn' or Wedding House, that according to the files was occupied in its entirety by the Stasi unbeknown to the locals even now. This famous town house is the main Registry Office and apparently always has been.

The photographs

The meeting places KW were distributed throughout most of the districts of Erfurt. These can be described as 'the City Centre locations, Yuri Gagarin Ring, Erfurt North, Roter Berg and Erfurt South East. The files that we have grouped together and have begun to work with are all the files that contain original photographs of the KW and its environments. Some of the Stasi photographs are truly impressive both for their technical and creative sensibilities as well as their historical significance, often leading to strong visual impressions of a former East German town. At present, we only have photocopies of these photographs. We have though made a request to the Records of the State Security Service of the Former GDR for an estimate of the cost for making high quality copies of a selection of original photographs, (funding permitting). These images are significant in the sense that they often show the exact location of the KW. A photograph may have arrows to indicate a window, or a cross to identify the entrance. Some of the photos while shot on a wide-angle lens are composites cleverly put together to recreate a panorama of the site.

Information and Communication technologies Old and new methods of surveillance

What are the conspiratorial meeting places of today's western world in relation to nation states and surveillance? In the capitalist west, information and communication technologies transform information into economic value. Here we talk about information abundance, open networks, uncertainty, and trust and risk societies. In controlled discipline societies such as the former GDR and the Soviet Union we may consider contrary and binary oppositions such as, information deficit, closed networks, certainty and fear. When referring to the conspiratorial meeting places, how can the three-dimensional grid of located KW's be transformed and translated from their physical presence in the urban architecture of the city to that of a vast collection of information data into the non-linear network dynamics of the Internet? Can the physicality of the KW be adapted to the so-called Internet architecture of cell-locations? By mapping the power structures and control mechanisms of the Stasi in a real physical space of the 21st century, can one further pursue or transform its evaporated presence (since German unification) into a reoccurring, but asymmetric and dynamic network of cryptographic spaces. Since the conspiratorial meeting place was embedded within the architecture of the city, each space was clearly defined in its physical terrain, named, carefully documented and clearly observed by one assigned Stasi-official. With the emergence of a new information and surveillance technology in the early 90s, the methods of

surveillance have opened up to an unlimited, dynamic and less controllable so-called cryptographic space, where new modes of surveillance and counter-surveillance can be carried out, with the Internet as its new home. Control and surveillance strategies have therefore left the physical terrain of border, the meeting-place, and transformed itself to the borderless, non-physical gigantic cryptographic space of the electronic world, the Internet. The invisibility of electronic data flows makes it even impossible for the inexperienced individual to detect the all-observing eye of this new surveillance apparatus that has emerged itself online. Strangely enough the Internet is often referred to as the postmodernist dream - a yet uncontrollable, non-hierarchical space enabling individuals to meet and communicate in secret as well as to hide and isolate information.

However, it cannot be denied that even now in the age of Information and Communication Technologies cities still remain as important meeting places and power centres which structure all economies and technologies. These real spaces provide the traditional reference points where human 'management' reside and where the time consuming GDR Big Brother methods of information management and control took place. And yet some Big Brother tactics are openly sought after now as popular entertainment (seen so frequently as live TV) which has embraced the rush of celebrity that accompanies being watched and hits the box offices with the highest audience ratings ever.

Cryptographic architecture as conceived in its physical presence has supported and created a most intriguing net of public surveillance in the GDR. Here, each conspiratorial meeting place was clearly labelled (even though with duplicated pseudonyms), and could be perceived in its singular appearance. In comparison the cryptography of the electronic landscape cannot be perceptible as a whole. Comparing asymmetric surveillance and networking as it is made possible via the Internet to the totally structuralized and bureaucratic Stasi methodology of the most confined control apparatus could become another challenging area to explore.

A Third Archive

The collection of information and writing of endless reports about the KW's was always carried out in a standardized way using filing and archiving procedures. With the emergence of cryptography as the science of information security, cryptographic writing enables information to be hidden in storage or transit. This may not only change the role of the traditional archive but also the way information is gathered, changed, distributed and archived. In the linguistic sense, a whole new agglomeration of words has spread out where information becomes data and is gathered, send or distributed as the archive becomes storage space and is saved, filled up or deleted. In what had once been a publicly closed and secret archive, Akte KW becomes public and aims to represent its own research outcomes as a territory, an archive, but where data privacy concerning individuals will be ensured and protected since this is not a site of confinement.

Research Directions

Using the Stasi files as our principle referencing material we intend to map our target city and in a pragmatic way, we will investigate how control and information networks have manifested itself in the GDR: where and why the numerous meeting places were created and situated, how secrecy was maintained and managed and how cryptographic space has been documented over a decade of time. While mapping the entire city, Akte KW is interested in considering recent methods of surveillance and their impact on contemporary cultures and societies: how civil rights are contested today, how ordinary citizens may, in so-called 'democratic societies' become the extensions of the police apparatus.

Art Detective is interested in extending participation to artists and theorists, who are particularly sensitised to issues of state control.

Note:

The Third Archive, Akte KW project is based at London College of Communications in the Photography and the Archive Research Centre. Access to this information has been made possible by the support of the Outpost in Erfurt for the Records of the State Security Service of the Former German Democratic Republic and the State Commissioner of the State of Thuringia for the Records of the State Security

Service of the Former German Democratic Republic.

Tilanteita - Situations : Developing concepts for situated and mobile imaging

Title	Tilanteita - Situations
Subtitle	Developing concepts for situated and mobile imaging
Lead-in / Abstract	Two projects, *Imaginary Journey*, a virtual trip across Europe and *Syntymiä*, two public spaces for families wanting to announce the birth of their child with an mms message, will be presented to describe a work process, in which narratives play the key role in the structuring of the collaborative design process and the framing of the audience participation.
Participants and speakers	Tikka, Heidi (FI)
Short biography of participants	**Heidi Tikka** is a media artist and a researcher. Since 2003 she has collaborated with **Grip Studios Interactive** and **Elisa**, producing an ongoing series of mobile imaging experiments for Tilanteita. Her interactive installations, such as *Mother, Child*, have toured internationally. She is currently completing her dissertation at the Media Lab UIAH, where she also teaches media culture.

Full text

Tilanteita sets out to imagine situations for using mms messaging within socially specific interactions. The work reflects my personal experience as the mother of a small child, living within the triangular social space of home, work and day care center. Therefore, I have produced my imagining from the place of a less privileged user, not necessarily having access to the ownership of latest mobile devices.

With this positioning, I have wanted to argue for the need to develop mobile services across the range of social realities and for the importance of making visible any absences within the imagined user groups accessing mobile technologies.

In the context of experience design *Tilanteita* should be placed into the emerging field in-between media art practice and mobile service concept development. I believe this kind of hybrid work has the advantage of creating less conventional ways for user experience design and testing. In the series of *Tilanteita* projects, *Imaginary Journey* represents an independent art project, whereas *Syntymiä* is a pilot for a potential mms service. Taken together, however, they suggest a design approach, that is both socially and culturally informed and uses methods common in art projects for setting up social experiments for further mms service concept development.

The method I would like to specifically address in this context is the creation of narratives that articulated my personal involvement with the projects and which, to some extent made visible the personal risk I have taken in each of them. As these projects were participatory, their success depended significantly on whether and how people would respond to them. In both *Imaginary Journey* and *Syntymiä* my tales on maternity were used to make intelligible a system of reasonable complexity. And these tales did not only frame participation, but also helped me to bring together the heterogenous groups of actors that were needed in the completion of the various stages of each project.

As *Syntymiä* involved a challenging collaboration with various groups of actors I will specifically focus on reporting how narratives were used to structure the design process and the actual pilot experiment.

Tilanteita projects include

Imaginary Journey, 2003
Participatory online project in conjunction with Ideologia II, Biennial of Nordic Art
Concept, image editing, production: Heidi Tikka
Web design: Giedre Kligyte
http://imaginaryjourney.uiah.fi

Syntymiä – Births, 2003
Experimental mms service pilot in collaboration with
Radiolinja (Elisa), HUS Women's Hospital, Kiasma
Concept, production: Heidi Tikka
Technical implementation: Grip Studios Interactive,
Production funding: Ministry of Education, AVEK

Perheitä – Families, 2003
mms experiment in collaboration with
Radiolinja (Elisa)
Concept, production: Heidi Tikka
Technical implementation: Grip Studios Interactive,
Production funding: Ministry of Education, AVEK
Participating families:
Ronja, Miska, Tuomo Tammenpää, Sari Kippila
Verna, Maunu Häyrynen, Sari Karttunen
Severi, Heidi Tikka

Situations4x, 2004
Participatory mms project in collaboration with
ISEA04, Kiasma, Elisa
Concept, Production: Heidi Tikka
Technical implementation: Grip Studios Interactive,
Production funding: AVEK
Participating families:
Ronja, Miska, Tuomo Tammenpää, Sari Kippila
Verna, Maunu Häyrynen, Sari Karttunen
Severi, Heidi Tikka
http://tilanteita.kiasma.fi/situations4x

Related internet addresses

http://mlab.uiah.fi/~htikka/
http://tilanteita.kiasma.fi/situations4x
http://imaginaryjourney.uiah.fi/

Timestamps

Title

Timestamps

Subtitle

Not provided.

Lead-in / Abstract

Time decides the order in which posts are displayed on blogs and the standard permanent link. The precision of a timestamp declares that which is stamped an archived document potentially permanent, also emphasising its transcience: this time is past. Why this obsession with punctuality?

Participants and speakers

Walker, Jill (AU / NO)

Short biography of participants

Jill Walker is an associate professor at the Department of Humanstic Informatics at the University of Bergen. She is the leader of ELINOR, a new network for Electronic Literature in the Nordic countries, researches networked writing and distributed fiction, and is an avid blogger.

Full text

Time is discipline. Factory owners knew that, and rang the sirens three times each morning: first to wake the workers up, then to tell them it was time to leave home, and a final time to let everyone know it was time for work. Workers who had recently been farmers, obeying only the rhythms of seasons and of light and dark, now resisted the sudden sharp division of time, gossiping while working the machines or leaning idle on their shovels as the clock ticked towards lunch. The factory owners and land owners complained of their laziness and sent their children to school (bells ringing every hour) to teach them the discipline of time. After fifty years of obeying the clocks, stamping in and stamping out, the traditional gift from an employer is a golden watch.

Today bloggers post their thoughts and links daily, many times a day, and each post is marked with a time stamp: Posted by Jill at 12:54. The software knows exactly when we hit the ÒpublishÓ button, and is happy to tell us the precise date and time in an number of ways: day, month, year, hour, minutes, seconds, milliseconds. 24 hour clock, month first, spell out the month, am, pm, which time zone. We measure time with ever increasing precision. Industrialisation depended upon the discipline of precisely running clocks and alarms and bells. Railways between cities caused clocks to be synchronised, and. TodayÕs post-industrial society has clocks inside every computer, computers inside every gadget, many of which sychronise automatically, constantly, through the network.

Weblogs are a new genre, but their formal constraints are already clear. Ev Williams summarised the genre as requiring "frequency, brevity and personality," but when Tinka of http://distantsun.blogspot.com
deconstructed her blog she did it not by seldom posting of long posts, but by removing the timestamps, marking each post as having been posted Yesterday".

The main function of the timestamp is, apparently, order. Posts can be sorted

according to when they were written. Weblogs.com can display the hundreds of blogs updated a minute ago, two minutes ago, three minutes ago. Does this obsession with the now stem from a loneliness, a comfort in seeing that others are writing too, now? If we do not have a common here, perhaps a common now can satisfy too. Or perhaps the reverse chronological order of weblogs and their trailing RSS feeds is merely the excess heat of a time-bound culture: "[Modern] society has a linear bias to it; and that with this linear bias many natural rhythms have been replaced by artificial ones, a rhythmic society replaced by a metronomic." (Young 1989: 19)

Yet blogs are notoriously eclectic. Each post does not refer to the post written immediately before it. If their only, or most explicit, organization of information is by the time of writing, this also resists traditional ways of organising information: how can time of writing be more important than the theme, the topic, the argument?

Though most people still have to work fixed hours, obeying the clock, web workers are finding the boundaries between work time and leisure time are collapsing. We read articles in magazines bemoaning the way that work leaks into evenings and weekends, and forget that that is the way life was before factories. Time is getting mushy Ð we no longer make precise appointments, instead we agree to meet our friends "after dinner" and we send SMSes to tell them we're nearly there, we're a little late, we're waiting for them. Online, our rhythms form a new kind of cycle shaped by timezones and seasons. I wake to find other bloggers have written as I slept, and after I've eaten lunch, a new wave of bloggers awake and begin to type. In the weekends there are fewer comments and in summertime everything slows and becomes quiet. Our rituals are no longer determined by a factory siren but by a need for information: "As I came awake I was hit by a terrible absence. The first thing I do when I get up is check my email but that day and for the next two risings that familiar ritual would be denied to me. All of a sudden I missed my computer so much it hurt." (Thomas 2004: 108)

In this presentation I explore some of the prehistories of our digital temporality. I look at the long cultural traditions of situating written correspondence by stating the date and place of writing, and at the way in which digital computers, though without clocks at first, have now built the timestamp into every act of expression on a computer.

I explore how we have used timestamps as guarantees for authenticity and as whips to ensure that workers -- or computers -- do what we want them to do. Through a sketch of these histories, and a look at specific blogs and their use of time, I will explore the possibility that our current obsession with time is the mark of its declining power over our lives.

Thomas, Sue. Hello World: Travels in Virtuality. York: Raw Nerve Books, 2004.
Young, Michael. The Metronomic Society: Natural Rhythms and Human Timetables, London: Thames and Hudson, 1989.

Related internet addresses

http://huminf.uib.no/~jill
http://grandtextauto.org

Transformation of a Rehabilitation Colony to a Market : Madipur

Title Transformation of a Rehabilitation Colony to a Market

Subtitle Madipur

Lead-in / Abstract Not provided.

Participants and speakers Prasad, Bhagwati (IN)

Short biography of participants ....

Full text Not provided.
The full text is available as an attachment. Please download it here.

Related internet addresses

http://latitudes.walkerart.org
http://www.opuscommons.net
http://www.sarai.net

Unstablelandscape: : Bottom-Up Composition and a Post-humanist

Era

Title

Unstablelandscape:

Subtitle

Bottom-Up Composition and a Post-humanist Era

Lead-in / Abstract

UNSTABLELANDSCAPE is my artistic and research platform to investigate and deploy:

-Dance improvisation within digitally augmented environments.

-The dramatic tension between design and desire, abstract patterns and anthropomorphic depictions.

-Real time composition or improvisational performances with hybrid systems (humans, computers and other living systems).

-The improvisational creative act with generative strategies and systems.

-Alternative human-computer interfaces for dance performance and multimedia installations.

-Embodied, embedded and distributed cognition.

-The relation between moving bodies, cognition, technology and the design of experiences and realities.

-The intelligence of biological systems and bottom-up or biologically inspired architectures for art making and performance systems.

-The relation between improvisational digital pop-culture (DJ/VJ), art making and social events/performances.

Participants and speakers

Barrios Solano, Marlon (VE / US)

Short biography of participants

I am a Venezuelan dance and new media artist/researcher, based in usa since 1994. My work explores dance improvisation, "real time" interactive technologies, artificial intelligence and embodied cognition. As a dancer in USA, i performed with new york choreographers **Susan Marshall**, **Lynn Shapiro**, **Bill Young** among others, and with the musicians **Philip Glass**, **John Zorn** and **Eric Friedlander**. I have participated in festivals in Venezuela, Austria, Scotland, Poland and the USA (New york improv festival 97-98-99) and lectured internationaly on improvisation, interactive media and perspectives on embodiment.

I have been invited to present my research at the conferences towards a science of consciousness:Tucson 2000, 2002 and 2004 (USA), consciousness and its place in nature: Skovde 2001 (Sweden), Interaktionlabor 2003 - 2004 (Germany) ,isea2004 (Baltic sea) and art and technology (Utah, 2004).

I am participating at the oik/junxion project at steim (Amsterdam, the Netherlands) and i am a third year mfa student in dance and technology at the ohio state university. I was a guest lecturer in new media at denison university and a 2004 dupont series lecturer at the art institute of Boston at Lesley university.

Full text

As a dance/new media artist (dance improvisation, digitally augmented performance, interactive installations, generative media) and a researcher (relationship between socio-technological discourses about mind, intelligence and bodies and their instantiations in dance training and compositional strategies), I am interested in an a trans-disciplinary and "hands on" approach to understand improvisational systems, their intelligence and aesthetics.

As a director of improvisational performances, I have been developing a model of performance of improvisation that enhances the skills needed by the improviser, so as to handle simultaneously, the dynamic design of choreographic composition and the ongoing generation of meaning with physical actions. It is a model that intersects algorithmic notions of movement and composition with awareness/embodied training. It is focused on the interaction among performers, as observers of their own actions and the movements and changes observed by the audience.

I integrate "real-time" interactive multimedia technologies (mainly using MaxMSPJitter and alternative interfaces) to create environments where the improvisation takes place.

I develop digital contexts where I play with metaphors and physical tasks, inhabiting them and recreating precise, yet mutable performative worlds. I amplify the dance improvisation with improvisational multimedia environments.

I attempt to reformulate the investigation on dance and new media technology to an actualized paradigm that takes into consideration new theories of cognition and embodiment, biological models of intelligence, emergence and complexity theories, and a post humanist perspective on our relation with techno-scientific discourses and representation about minds, bodies, dance and digital tools.

I believe that the composition of aesthetic improvisational systems is based on the discovery and re-application of simple rules of interaction within a system, where embodied cognitive processes have complex emergent properties that we call the dance or the aesthetic experience.

I am interested in investigating the possibilities of new media to continue the re-examination of dance, performance and art making that was initiated by **Duchamp**, continued by **Fluxus** and **Judson Church pioneers**, among others.

I believe that dance and digital technologies as a field needs the reformulation of the dance artist as a researcher with a more scientifically based approaches on fundamental processes of motion, sensing, composing and experiencing (embodied cognition). At the same time, this artist researcher must think deeply the complex relation between embodied practices, epistemologies and the philosophical lineages of the practices themselves.

Dance improvisation and interactive/generative systems are the perfect domains to investigate questions of agency, control and autonomy in relation with the phenomena that we understand as design, motion, change, growth, development and evolution: an ongoing changing composition.

Currently, my work has two main conceptual manifestations that are not totally separate but deploy a dialectic tension:

-Deconstruction of the compositional premises of what we understand as a dance or a video. Total real time interaction towards exploring the aesthetics of patterns and changing forms. Nothing is pre-recorded.

-Metaphorically oriented pieces with extreme sampling and pre edited material.

My work is about change and explores the ecology of what is already present: our memories embodied in biological bodies, digital tools, trainings and procedural parameters.

I place my work in the confluence of an epistemology that is attempting to understand the relation of the pervasive exactitude and mutability of this inhabited form, that is our body, with the elusiveness of metaphor and thought.

I elaborate on the ideas about the Posthuman postulated by **Katherine Hayles** in her book titled: *How We became Posthuman*. Hayles reflects on the lineage of cybernetics ideas as discursive constructions. Hayles simultaneously distills a very flexible and innovative way to approach the materiality of the human body in our world ubiquitous computational systems. She presents the human body as a discursive construction and places embodiment at the core of several dialectics that simultaneously interact in the creation of the posthuman subject. For Hayles, the main dialectical pairs introduced by her are: the body and embodiment, and inscription and incorporation practices.

These dialectics are presented as heuristic devices rather than as categorical distinctions. She focuses on the differential tensions between the normative aspect of discourses and the phenomenological reality of the lived bodies within performative practices. The posthuman is relevant to different strands of inquiry: epistemology, phenomenology, socio-technological studies on human-computer interaction, dance and performance studies.

Hayles, building upon **Foucault's** archeology of knowledge, questions the ways in which the Focaultian view tends to construct the body only through discursive formations and material practices that fail to account for the embodiment's contextual enactment. Instead, Hayles advocates an understanding of embodiment in conjunction with inscription processes, technology and ideology.

Hayles expresses that a parallel focus on embodiment would "...help to clarify the mechanisms of change, for it links a changing technological landscape with the instantiated enactment that create feedback loops between materiality and

discourse." [1] She redefines embodiment, contrasting it with the Foucaultian view, and suggests that the idea of the body is definitely socially constructed and normalized. Embodiment, for her, is contextual, merged with the particulars of place, time, physiology and culture. It is within the differential tension between the two that enactment take place and experiences of embodiment are generated in continual interaction with the constructions of the body.

The dynamism of Hayles' model appears when she juxtaposes the body and embodiment with another binary distinction: inscription and incorporation practices. She imagines both binaries acting in complex syncopation with each other. Inscription is normalized and abstract, representing a system of signs that operate independently of any particular manifestation. In contrast, incorporation exists only when it is instantiated in its embodied medium.

The shift of focus to embodiment creates an awareness of the specifics of the materiality of the experience and the particularities of the inscription practices instantiated in incorporating practices. In this approach, being a knowing creature in the world is inherently a performative phenomenon, subject to individual enactment, and therefore improvisational.

I contend that this model is relevant for dance and technology studies mainly in its potential for explaining many embodied actions as incorporating practices that will be encoded into body memory through repeated performances that make them habitual. Our bodies are cultured and trained by both kinds of practices: incorporating practices performing the bodily content and inscribing practices that correct and modulate the performance. Hayles emphasizes improvisational aspects that are context specific and incorporation processes that emerge from the interplay between the body and embodiment, between the abstract model and the specific contexts in which the model is instantiated. Incorporation can never be entirely separated from the context of enactment. The body is never just a text, but texts that can inscribe representations, shape enactment and become part of a socio-technical landscape of an incorporating practice.

Hayles proposes that, it is in these contexts or environments that changes in technology affect how people use their bodies and how space and time are experienced. In other words, technology impacts incorporating practices. For her, embodiment mediates between technology and discourse creating new experiential frameworks that serve as markers for related discursive systems.

For Hayles, the term posthuman indicates the end of the humanist subject, a concept that may have applied only to a fraction of humanity who had the wealth, power and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice.

The posthuman implies the recognition that we have never been in total control and that we have to relinquish fictions of total agency. We now understand about the nature of emergent processes that dynamically construct the landscapes of our experienced bodies and environments.

I advocate for an actualization of our analytical devices to understand the relationship of dance with technology as a system that encompasses more than external prosthetic devices in performative environments. We have always danced within semiotics, physiology and forms that change and interact within environments that we have already changed and made more intelligent.

The posthuman is in itself a construction that is reflexive, and physically grounded in its own material changes. It is a new epistemological and metaphorical device that de-tangles and recomposes age-old knots and conceptual splits about bodies, minds, experience, language and biology.

Performance of Improvisation and interactive media had worked as amplifiers of the dynamics characteristics of the human embodiment and the cultural context in which the body composes as it moves. I conclude that improvisational performances with humans and/or computers manifest the pervasive generativity of living and intelligent systems and I propose the posthumanist account as an integrative paradigm. In the Posthumanist account, principles of emergence replace notions of teleology, objectivism is replaced by reflexive epistemology, autonomous will is replaced by distributed cognition, and the body as support of the mind is replaced by embodiment. In this way the posthuman becomes an epistemology that recognizes the dynamics of human bodies interacting within environments and semantic domains that in multiple feedback loops co-create the characteristics of human experience.

We, dance scholars and practitioners, must expand (actualize) our models and take adventage of the incresing relevance of the embodied cognition approaches within

cognitive science. On the other hand, cognitive scientis are realizing the relevance of the embodied knowledge and sofistication of dance practices in the levels of phenomenological exploration and psychophysical behaviour. We can joint efforts to appoach the mutable patterns of the emergent dance that we call life.

- 1 (195)

Related internet addresses http://dancelab1.dance.ohio-state.edu/~barrios/

Warporn warpunk!

Title Warporn warpunk!

Subtitle Not provided.

Lead-in / Abstract The warpunk is not a perverse subculture that embraces weapons as an aesthetic gesture but uses radical images as weapons of self-defense

Participants and speakers Pasquinelli, Matteo (IT)

Vallauri, Ugo (IT)

Short biography of participants Rekombinant is a connective modular weblog and an edited mailing list about media activism, global movement, geopolitics, creative subcultures, cognitive capitalism. It was started in 2000 in Italy and it is connected to the networks of european net culture (such as Nettime) and political criticism (such as Multitude). Within the italian context it works as a think-tank for new creative strategies.

Full text After NY911, the first live broadcasted catastrophe, the global media war has been keeping on with everyday videoguerrilla episodes from the Iraqi front. On the media chessboard a sort of videoclash of civilisations takes place: it's the conflict between the American videocracy and the pseudo-Islamic videoclasm. Between that polarization the global movement tries to establish an autonomous videopoesis.

The mass collective imaginery have been hybridized with the connective imaginery produced by the net and the digital mobile media, such as cameras and smart phones. It's the digital anarchy not even Donald Rumsfeld can control. Through digital technology we face the nemesis of the body libidinal repression: tortures and decapitations become Spectacle and - like in a Ballard's novel - cause uncontrolled psycho-political backlashes. The Abu Ghraib and beheadings choc forges a new narrative genre, that is the warporn.

Subcultures such as rotten.com reaches the masses and the world of art and activism reacts with new strategies, that is warpunk.

Web Biennial 2003 : International Bi-annual Contemporary Art Exhibition for and on the World Wide Web.

Title Web Biennial 2003

Subtitle International Bi-annual Contemporary Art Exhibition for and on the World Wide Web.

Lead-in / Abstract Web Biennial is the first bi-annual contemporary art exhibition created exclusively for the WWWW. Both the exhibition and the whole production was online. The Navigation was based on a custom search engine and custom coding by participants. The project aimed to offer an alternative approach to exhibiting art online and for presenting online art.

Participants and speakers GÜLAN, Genco (TR)

Kaplan, Kemal (TR)

Polat, Osetya (TR)

Sinan, Mehmet (TR / US)

Short biography of participants Genco Gulan is an artist and a social critic. He studied Political Science and Art at Bogazici University, Istanbul. Then he pursued an MA degree on Media Studies at New School University, New York. During his studies he focused on new technology and art. He showed his works at Steirishes Herbst, Graz, 1997; Mediaterra, Athens

2000; Museum of Modern Art, Rio 2003 and ZKM, Karlsruhe 2004. His online works had been presented at www.rhizome.org and www.kanonmedia.com. His articles have been published in NY Arts Magazine and Milliyet Sanat. Genco Gulan's name appeared in the required reading list of University of Californi at Santa Barbara 2002 and Hunters College at Buffalo, New York 2003. One of his works "interactive poem" is listed at www.kaigisho.ne.jp Multimedia & Internet Dictionary. He currently he lives and works in Istanbul.

Full text

Virtual Biennial: A Biennial Without a City

Biennials are usually named after cities. For example, the Istanbul Biennial,the Venice Biennial, the Habana, Tiran, Johannesburg, Kwangju Biennials, etc. As an alternative to all this, the Web Biennial is not located in any specific city but, rather, it exists in virtual space. Nevertheles, it has a growing reputation outside of virtual reality.

The term virtual should not always be perceived as opposed to the term real. Virtual is different from the physical but virtual is also measurable, therefore, it is not metaphysical. I would like to argue that virtual can be challenging and serious. For example, La Mediatheque du Musee d'art contemporain de Montreal, Canada, also lists "Web Biennial 2003" together with established biennials and other festivals such as 6th Graz Biennial, Ars Electronica, File, Mediaterra and Steirischer Herbst. [1] Furthermore, in the same list the virtual istanbulmuseum.org is listed with museums such as the Whitney and Guggenheim.

The Biennial on the Web

The Web Biennial 2003 is a contemporary art exhibition which is realized exclusively on the W.W.W. every two years. Previews of Web Biennial 2003 started in March of 2003, while the exhibition started in June 2003 and the exhibition was online till the end of the year. Currently 86 artists from 20 countries confirmed their participation in the Web Biennial 2003. Access to these artworks will be from portals http://www.istanbulmuseum.org/webbiennial.html
and http://www.webbiennial.org/.
Kun-sheng Wang of Art Today magazine [2] ,in an interview with us, asked what the purpose of this project was:

"... The main aim of Web Biennial 2003 is to put the artwork itself before everything else and in its purest form. That means liberating art from the curator, the gallery/ museum/ institution, the sponsor, the media and the physical location or city. In other words, we are trying to get rid of the middle man or 'the noise factor'. Direct from the artist to the audience; one to one but also many to many. This de-constructed structure of the exhibition stands outside of current Biennial models and the hierarchies of the Art market. But it also tries to re-construct new ways for effective communication and navigation. We are trying to inter-link the de-centralized structure of the WWW."

The Representation Problem of the WWW

The Web Biennial project is the result of seven years' research on the exhibition methods and representation problems on the WWW. In general, most of the -so called- virtual galleries or museums present representations of artwork, such as scanned images of paintings or digital photos of sculptures, as online exhibitions. Digital images of paintings are also being called interactive only because they are beamed to a screen. Web sites that are being hosted on a single main server are arguing for examples of net-art . [3] Here I would like to refer once more to the interview with Kun-sheng Wang. He asked when the concept was first conceived:

"At the istanbulmuseum.org/ we are trying to focus on web based presentation and representation and open exhibition models. In 2002, we organized the exhibition "Reload: Net Art Open " and saw that the open exhibition models were appropriate for the WWW. We received positive reviews and made many new online friends. We got inspired from Linux's code development/ information exchange model and many others. In the physical world we were also creating/ collaborating/ participating (but also criticizing) Biennials and/ or (grand) exhibitions that exist in real/ physical spaces and cities. Examples of this are Free Manifesta in Frankfurt and Cosmopolis in Thessaloniki." [4]
Neglecting such common mistakes as calling online brochures virtual galleries, the representation method and style of art on the net is in fact the source of much

debate in academic circles. [5]Web-art but especially net-art are very much related by dynamic content and it is neither easy to capture or document this flux of information. The Web Biennial 2003 tries to add a new dimension to this debate by dealing mainly with artworks that are created for digital, networked, interactive environments.

Documenting the Networked Avant-garde

"You can not step twice into the same river, for other waters are continually flowing on" wrote Heraclites of Ephesus 2500 years ago. Even today, I think the same and not only because we are both from Western Anatolia. Referring to his adage, I can say that "on the Internet you don't see the same pixel twice." This argument offers two possibilities: first, to create a net-art piece you should utilize the flow of information over the Internet. Secondly, you can not really document this dynamic flow in another context. Hence, net-art can not be exhibited without the Internet. I argue, as McLuhan does, that the medium is the message - but, on the Internet, only more so.

The Web Biennial 2003 is designed to utilize the possibilities of the Internet. The project not only uses the media but also uses the relations of the virtual environment. The Biennial has been announced, realized, produced, exhibited and then documented exclusively on the W.W.W. Still the project not only aims to offer an alternative approach for exhibiting online art but also an alternative approach for exhibiting art online.

In the exhibition process, all projects are presented as diversly as possible. There were no limitations on media or size. We wanted artists to create in as unlimited a vein as possible. Hence we created an alternative information structure. The exhibition portal contained hypertexts that would lead into individual sites of artists or groups of artists. The main server did not host any information other than the information on the directory pages. In this regard the project differentiates itself from many other online museums and galleries and other art portals but, at the same time, it resembles other web formats such as link lists or web rings. In this structure all the participants were required to change the source code of their index pages and add the texts "Web Biennial 2003- Name of the Artist- Name of the Project" in their titles. Hence this voluntary re-coding not only created an alternative navigation system but it also underlined the participation, collaboration and community formation. [6]

The Notion of Online De-centralizaton

Museums and galleries are designed to collect art work and spectators in a single physical space. In the Biennials you have several locations throughout the city but you still have certain centers. The idea of collecting is very much related with the idea of centralizing. In contrast to this approach the Web Biennial is built upon the notion of de-centralization. The Internet is the only media that can enable such a relationship.

The de-centralized structure of the exhibition on the Web has many advantages. First of all, de-centralization enabled us to carry unlimited media sizes,an unlimited number of artists and unlimited number of the art works and, of course, an unlimited number of spectators. The network between the artists not only eases the organization process but also decreases the organizational work and cost.

Still we needed to face with the technical limitations of the Internet. For example, we needed a custom made search engine to navigate through this complex structure. Peter Dalhuijsen, a programmer whom we also met in a forum on the web, designed an alternative search engine for us. [7] In this search engine there were embedded words in the search parameters, "Web+ Biennial+2003". These helped us to search for special Web Biennial 2003 title tags and hence helped facilitate a search for a clustered sample on the W.W.W. Without such a navigational system it would be impossible to create such a complex de-centralized structure.

For the project, all the communication is made online. We exchanged hundreds of e-mails, used e-mail groups and made many virtual friends. All the announcements for the exhibition were made online and the calls were posted on free public domains like rhizome.org, nihayeticimdesin.com, artswire.org and absolutearts.org/. We tried to reach all the artists who are active or who want to be active on the WWW. After 12 months of online announcements, 86 artists from

more than 20 countries responded to our call. They send us their URL's and changed their source codes of their index pages to show their participation in our event.

The news on the Web Biennial had spread all over the world and been translated into many languages. Some of the web sites that announced our event are: Inside Film Magazine, Avusturalia; La Mediatheque du Musee d'art contemporain de Montreal, Canada; Associazione Culturale Mirada, Flash Art Italy; Art info.ru, Russia; Universidade Federal do Rio de Janeiro, Brazil; Kanon Media; Austria; NYFA Artswire, USA; <nettime>amsterdam, Holland; ISEA-Japan; Nihayet Icimdesin, Sanart from Turkey. We believe that this voluntary contribution to our event underlines its success.

As a result, a large global exhibition of international net artists was created with a very small budget and with a very small organization team. A grand exhibition with 86 artists from 20 countries is created with a total organizational cost below buying a dinner anywhere on the planet. This low budget also enabled us to make a large independent exhibition without a major sponsor.

This online cooperation should also be regarded as a new way of social interaction and collaboration among artists. Our previous exhibition 'Reload', which was an individual exhibition, began it's showing in other museum portals as an artwork in itself, for example at the le-musee-divisioniste . This showed that not only the individual works but the exhibition process itself may became an example for networked art. [8]

Open Exhibition as a Biennial Model

The Web Biennial was an 'open' exhibition which means that the participating artists were not chosen by any one. [9]There was no curator or jury. All the announcements were made online and artists decided to apply by themselves. All the applications to the exhibition were accepted to create a non-hierarchic form. We only had to exclude commercial and portfolio sites.

The importance of the open model was that there was no discrimination of any form. The policy was, as the poet Rumi said;

"Come, come again, whoever you are, come!
Heathen, fire worshipper or idolatrous, come!
Come even if you broke your penitence a hundred times,
Ours is the portal of hope, come as you are." [10]

We did not ask the artists their sex, citizenship, marital statues, their age, color or sexual preferences! We did not ask them for their education, credit cards or social security numbers. We did not ask them who their favorite pop singer was or what their internet service provider was! We did not even double check if their names were real or not. A valid e-mail was all we asked as a signature.

The structure we propose here was similar to Umberto Eco's concept of "open artwork" but is rather different. I believe that our approach resembles more the online evolution of the Linux operating system (OS). Unlike Microsoft OS, the Linux OS is open to use, sharing and other improvements. Users on the Internet freely copy the code, develop it, fix the bugs and return back to code in the cyberspace for further usage.

To sum up, the Web Biennial 2003 not only aims to legitimize web based art such as web-art or net-art but it also questions the current Biennial models and corporate relations in art. We believe that by questioning these models with a new media it will also help to strengthen the core notions of the W.W.W. itself, namely, as an open environment to share and exchange information freely. [11] The W.W.W. can evolve only if it keeps its independence and freedom. Hence, I believe that, like the Web, the art can continue its' evolution and progress only if it maintains its' freedom.

Footnotes:

- 1. See the listings of La Mediatheque du Musee d'art contemporain de Montreal, Canada http://media.macm.org/e/rep/disci/artsmedia/expo/

- 2. Art Today magazine, is based in Asia for Chinese readers. See; http://www.artouch.com

- 3. For example, the Virtual Museum of Eczacibasi Holding at http://www.sanalmuze.org,
exhibits digital reproductions of oil paintings: For this reason the site could not be considered anything more than just a web catalogue and it can not be considered as a virtual museum..

- 4. From the interview with Kun-sheng Wang of http://www.artouch.com

- 5. "The Representation Problem on the Web. On-line Presence versus Web Representation: http://www.moma.org/
Barbara London is interviewed by Genco Gülan @ MoMA." NY Arts Magazine. May 2000.

- 6. I would like to refer to certain projects and artists that inspired us for the development of the Web Biennial 2003: 'Chaos in Action' by Evgenia Demnievska and Wolfgang Zimmer,1996 & 1997, and 'The Open Museum Net.Art @ The Irish Museum of Modern Art' by Arthur X. Doyle, 2002.

- 7. Peter Dalhuijsen from http://www.avenue-it.com
developed our search engine.

- 8. "Reload" Net-art open at iS.CaM in 2002, was exhibited at the portal of "le-musee-divisioniste" www.le-musee-divisioniste.org/service/pages/2002/istanbul01.htm The introductory text to "Reload"; "Please 'do' Touch the Artwork: New Approaches to Interactivity in Arts, both as an Ideology and a function of New Technology" was presented at ISIMD 2003 in Istanbul.

- 9. I explained my concept of 'open exhibition model' in the Milliyet Art Magazine with the article 'Açik Sergi Kavrami ve Genç Etkinlik', Article in Turkish (The Concept of Open Exhibition Model and Youth Action Exhibitions of Istanbul) on March 2003. I argue that the open exhibitions are if not more are as equally important as curated or juried exhibitions.

- 10. See; http://www.mevlana.net/
for more info on Rumi.

- 11. Sanal Çünkü Gerçek, Interview in Turkish, (It's Real because it's Virtual) by Sanem Öge, Aksamlik magazine, 'Aksam Newspaper, Istanbul, Supplement. No: 36, page: 15.

Related internet addresses http://www.istanbulmuseum.org
http://www.webbiennial.org

What are the Aesthetics of Collaboration? : Time and Presence in the Spaces of Collaboration

Title	What are the Aesthetics of Collaboration?
Subtitle	Time and Presence in the Spaces of Collaboration
Lead-in / Abstract	Not provided.
Participants and speakers	Diamond, Sara (?) Kennard, Susan (?) Ride, Peter (?) diamond, sara (?)
Short biography of participants	Not provided.
Full text	The Banff Centre is a multi-disciplinary international artists' residency centre in Canada. The Banff New Media Institute supports dialogue, research and production of new and convergent media projects.
Related internet addresses	http://www.banffcentre.ca/bnmi

What Cabwatch Does Right : Wireless in the Real World

Title	What Cabwatch Does Right
Subtitle	Wireless in the Real World
Lead-in / Abstract	Cabwatch is a New York City-based organization that uses wireless technology to turn ordinary cab-drivers into a mobile, roving neighborhood watch; cabbies in the program are trained to spot and report criminal activity using 911-only cell phones. While Cabwatch itself is a brilliant program that has prevented hundreds of crimes, its real genius is in the way it melds wireless technology with real-world social networks and a keen understanding of social roles. For example, Cabwatch asks its members to participate in the program at the very same time that they're already doing their own jobs as cabbies. Instead of asking people to make an additional commitment to the program, Cabwatch's use of wireless technology allows the program to travel with the cabbie on the job. Being an active Cabwatch member is folded into the pre-existing work role of the cab-driver; it supports and enhances their daily activities rather than competing with them. Other ways that Cabwatch shows its social smarts are by reinforcing the wireless community with real-world social support networks, by choosing a technology already familiar to most potential members, and by providing concrete benefits to the population of potential volunteers. Other programs could take a page from Cabwatch's book. It's these lessons – the lessons of what Cabwatch does right – that can inspire other low-overhead projects that address specific social needs.
Participants and speakers	Hammer, Jessica (US)
Short biography of participants	Jessica Hammer has always been fascinated by the intersection of community and technology, especially as in the study of voluntary human commitments such as art, play, or social service. She has worked as a professor at New York University, a game designer, a researcher and consultant on social software, a programmer and a writer. She has lectured internationally on her theories of interactive narrative, and will be beginning her PhD. on video games and communal storytelling at Columbia University in the fall. She also runs an experimental storytelling group in New York City.
Full text	Text messaging. Camera phones. GPS. Wireless technology has been progressing by leaps and bounds, and companies and non-profits alike have been trying to jump on the bandwagon. Staying on top of the wireless revolution, though, doesn't necessarily mean having all the latest bells and whistles. Because wireless communication moves technology from the computer lab into the real world, the killer applications for wireless are ones that incorporate real-world social understandings. Social software no longer has to mean just people communicating through the computer; it can also include technologically-mediated social relationships offline, in the real world. When it comes to understanding this lesson, a small social-service organization called Cabwatch is way ahead of the pack. Because Cabwatch understands the social nature of wireless technology, the program is able to achieve a great deal with very basic technology and minimal funds. Cabwatch gets more done with less – and it does it by backing its technology with social smarts. Here's how Cabwatch works: it turns cab drivers into a roving neighborhood watch by giving them cell phones and training them to spot and report crimes. Volunteers learn what kinds of crimes are 911-worthy, how to make an effective incident report, and what trouble signs to look out for. They call in crimes they see and help recruit other drivers; in return, they receive social support from the program in both tangible (discounts) and intangible (respect) forms. It sounds simple, but even this brief description of the program incorporates social understandings of technology that are less than obvious. Consider, for example, the problem of time. Too many companies expect that users are willing to dedicate some fraction of their time to their new service, gadget or community. Unfortunately for them, most people don't have the time to make many additional commitments, no matter how interesting, novel or compelling. Every human being gets twenty-four hours a day – no more and no less. Ordinarily, participation in one new activity means taking time away from something else, which means that new commitments are always competing against the other demands on a person's time. Cabwatch, though, addresses this problem in a way that is anything but ordinary. Because Cabwatch happens while cabbies are in their cabs – on the job – Cabwatch can build on their commitment to their existing role as a cab driver. A Cabwatch

member doesn't have to take time away from other activities in order to participate. Instead, Cabwatch becomes an enhancement to an existing activity. Cabwatch membership is layered on top of members' existing lives.

Other companies have already figured out that layering activities is a powerful tool, of course. Google, for example, relies on interpreting the links that people make to web pages in the course of their daily activity. At the same moment that a user makes a link, they are also participating in ranking and indexing the web – two activities layered on top of the same action. Amazon's collaboratively-filtered recommendations work similarly; each purchase functions both as a purchase and as an implicit suggestion for what others of similar tastes might like.

Unlike Amazon and Google, though, Cabwatch stretches away from the computer. It relies on wireless technology, which makes it powerful. Most people, even devout computer users, spend more time in the real world than sitting in front of a computer. For people whose work isn't sedentary and computer-based, the difference between time spent in the real world and in front of a computer can be extreme. Combining layered activities with mobility means that many more aspects of people's lives are open to technological change. Not only do layered activities not compete with other social commitments, but they can also layer with activities of all kinds, both in front of the computer and away from it. Mobility lets people mine the potential of all the roles they play in a day, not just the ones that involve being in front of the computer.

Of course, Cabwatch also has its own challenges, most notably that participating in the program requires a lot more effort than making a link or a purchase. For Amazon and Google, people's participation in multiple arenas at once is encapsulated in a single action. The company simply uses the resulting data two ways. Cabwatch, on the other hand, asks for a positive commitment from its members. The participants have to watch the street, and, in a crisis, act. Even though that commitment can be combined with the ordinary work of being a cab driver, the barriers to participation are still higher than those Amazon and Google face.

Cabwatch goes to some effort to lower those barriers even further than the layering of social roles does, though. Not only do they make joining the program as easy as possible (a phone call and an orientation), they also make the technology itself unintimidating. Cell phones are late-adopter technology, with over half the world's phones now cellular. Instead of adding bells and whistles to “liven up” the experience, the program emphasizes simplicity. For those who don't know much about cell phones, Cabwatch provides 911-only cell phones and a step-by-step outline of how to use them; for those who do, Cabwatch includes a guide to social obstacles such as intransigent passengers. The program recognizes the real-world obstacles to making the call, not just the potential technological hazards.

Unfortunately, though, convincing people to use technology in novel ways isn't as simple as getting it into their hands and removing technical impediments. Giving a cab driver a cell phone doesn't make him a Cabwatch driver any more than giving the average person pen and paper makes her a novelist. Lowering barriers isn't enough; people need active reasons to participate.

Conveniently enough, Cabwatch's rewards are clear. For the altruistically minded, they're protecting the streets from predators; for the more practical, they're also protecting themselves and their own community from criminals who particularly prey on cabdrivers. (There have been a number of arrests of people who have attacked cab drivers due to this program, and such arrests are well-publicized.) Additionally, Cabwatch relies on social techniques to actively encourage participation. Some of these techniques are traditional. The organization gives its members concrete benefits, like discounts on gas and insurance, and intangible ones like respect from the police for their volunteer service. It advertises the service and gives awards for particularly good service, all to encourage members to feel loyalty to the organization.

Cabwatch doesn't just rely on these traditional techniques, though; it also exploits even more of the social aspects of wireless technology to create and increase motivation. Too often, technology comes between a person and their actions. Clicking on The Hunger Site or donating online to MoveOn may be easy, but it also alienates the action from its result. One may be aware of the click, but not necessarily of the final result. When a Cabwatch member calls in a crime, though, they can immediately see the results of their action. Though such an action would not be possible without wireless technology, the technology actually makes them feel more connected to the action, since they're right there on the scene. Technological mediation doesn't have to be alienating, and Cabwatch has figured out how to make that happen.

Cabwatch may be doing a standout job in leveraging technology with a keen social understanding, but it certainly doesn't have to be unique. Other companies could take a page from Cabwatch's book. Whether they use wireless technology or the old-fashioned wired kind, they can look for ways to layer their activities into existing social roles, use late-adopter technology to lower barriers to participation, and find ways to create social support both through traditional methods and through non-alienating use of technology. It's these lessons – the lessons of what Cabwatch does right – that can inspire other low-overhead projects that address specific social needs.

Related internet addresses http://www.cabwatch.org

What was Hypertext?

Title What was Hypertext?

Subtitle Not provided.

Lead-in / Abstract More than 30 years ago, Ted Nelson (who coined the term "hypertext") articulated a vision of computers for media -- "designed, written, drawn and edited, by authors, artists, designers and editors." A far cry from AI hype, hypertext was also not a synonym for "node and link."

Participants and speakers Wardrip-Fruin, Noah (US)

Short biography of participants Noah Wardrip-Fruin is a new media scholar and artist. He has recently edited two books, both from MIT Press -- The New Media Reader (with Nick Montfort, 2003) and First Person: New Media as Story, Performance, and Game (with Pat Harrigan, 2004). As an artist his work focuses on new media text, including The Impermanence Agent (a storytelling web agent that "customizes" based on reader browsing habits) and Screen (an immersive VR text that interacts with the reader's body). His work has been presented by the Whitney and Guggenheim museums, as well as discussed in reference works such as Information Arts (Stephen Wilson, 2002), Digital Art (Christiane Paul, 2003), and Art in the Digital Age (Bruce Wands, 2004). He has presented his scholarly and artistic work in journals (Leonardo, PAJ), at scientific gatherings (ACM SIGGRAPH, ACM Hypertext), at art and culture conferences (ISEA, Digital Arts and Culture), and in regional new media exhibitions (Boston Cyberarts, New York Digital Salon). He is a director of the Electronic Literature Organization.

Full text In the *Wired* magazine version of new media's history — quite popular during the last decade — **Nicholas Negroponte** was the visionary prophet and **Ted Nelson** the object of ridicule. However, this construction can't withstand an examination of Negroponte and Nelson's seminal books of three decades ago: *Soft Architecture Machines*[1] and *Computer Lib / Dream Machines.*[2] Negroponte offered a vision of the computer as an artificial intelligence-driven hyper-personalized assistant — a dream almost no closer to reality today. Nelson, on the other hand, articulated a vision of computers as media — "designed, written, drawn and edited, by authors, artists, designers and editors." He also proposed the creation of a worldwide hypertext publishing network; an idea dismissed as farfetched by the new media mainstream that embraced Negroponte's work (at least, until the rise of the World Wide Web). If we turn our attention back to Nelson and ask "What *was* hypertext?" the answer is very different from that offered by the acolytes of *Wired,* and also from those offered by academics who, a few years before *Wired*'s appearance, had begun to equate Nelson's work with various literary-critical formulations. Recovering an appropriate meaning for hypertext is necessary if we view ourselves, in electronic art and writing, as having a history. In addition, an understanding of Nelson's work can provide a foundation for understanding recent Web phenomena around blogs and wikis. But we must also consider how a historical point of view may mislead us. Focusing on the Nelson/Negroponte split can produce the impression that hypertext and AI are fundamentally opposed projects. And it is true that the visions of recent hypertext/AI marriages such as the Semantic Web and Adaptive Hypertext are incompatible with Nelson's vision. But a number of computer media artists are now employing tools developed by AI researchers within an approach that is arguably Nelsonian. To understand this work we may need to see Nelson's work in a different relationship — not in comparison with Negroponte, but perhaps alongside that of a figure like Claude Shannon.

■ 1. Negroponte, Nicholas. Soft Architecture Machines. Cambridge: MIT Press, 1975.

■ 2. Nelson, Theodor Holm. Computer Lib / Dream Machines. Self-published, 1974. 2nd ed., Redmond, Washington: Tempus Books/Microsoft Press, 1987.

Related internet addresses http://huminf.uib.no/~jill
http://grandtextauto.org

Who owns our culture? : ---a first-person case study

Title Who owns our culture?

Subtitle ---a first-person case study

Lead-in / Abstract The invention and realization of a new technique, software paradigm, or other large piece of work may take place over a period of one or even several decades. It frequently happens that the IP model under which the work was started changes before it is finished - sometimes more than once. This paper explores the development of the Max/MSP/jMax/Pd paradigm, along with some other related developments, in the period from 1980 to the present. Starting from these examples, some generalizations are attempted about how the question of ownership and IP control should be addressed in the arts world.

Participants and speakers Puckette, Miller (US)

Reas, Casey (?)

Short biography of participants Not provided.

Full text

Introduction

Just after the artist **Christo Javacheff** finished wrapping the Pont Neuf in Paris with cloth, we learned that we did not have the right to photograph it. All images of the wrapped work were reproductions of a work of art and the rights were thus controlled by the owner of the work. So thoroughly had the concept of "droit d'auteur" been shoveled into the French cultural consumer that this claim was not even questioned---despite the fact that the object we were forbidden to photograph was the oldest standing bridge in Paris (1606).

The very idea that a notion could be original, and that it could therefore reflect glory on its originator, may be more recent than the Pont Neuf. Even more new---and more original---is the idea that, once you've had an idea, it then should (or even could) belong to you. This is reified in the phrase, "Intellectual Property" (IP).

For example, here is an idea: GHQWJD. It didn't show up on Google, so perhaps I can claim it as an invention. However, it consists of nothing but the letters G, etc, which themselves weren't new at all---all that is new is the particular juxtaposition of the six of them. We could pause here to pose the obvious and dark ontological questions this raises. But there is also a more materialistic question: what, precisely, are you protecting if you forbid some competitor of mine to arrange his or her own letters G, H, Q, W, J, and D, in the same order? And yet this is exactly what the inventors and protectors of IP seek to control.

I could walk into a grocery store, rearrange their bananas, and be accused of: (1) destroying their IP (the previous arrangement); (2) stealing someone else's IP by accidentally or purposely recreating some aspect of THEIR way of arranging bananas (or even non-bananas); (3) communicating a subversive message, whether or not I know what the message meant or what it might subvert, or perhaps revealing a trade or governmental secret. I claim that all I really did was move some bananas, and shouldn't I be free to do so?

Software

Software has long been treated as IP, protected under copyright law. (The notion of software patents---a new mode of IP protection for software---has sneaked into the picture, gradually, over the past three decades or so.) The use of IP protections on software has created all manner of distortions in the way software is produced and consumed. Rather than rehash the big story, I'll use my own experience with software IP as an example. My own journey into the open source movement came about because I got burned by the old model.

When I first wrote the program now known as Max, in 1988, my paycheck came

from IRCAM. But many of the ideas behind Max had been developed at MIT, and many more were adapted from the work of other researchers. The code, at least, almost certainly belonged to IRCAM. IRCAM has energetically tried to capitalize on this, with some positive results early on, and with mostly negative results later.

The negative effects of IRCAM's over-protectiveness were threefold. The most evident was a drop in IRCAM's reputation among researchers (whereas as a production facility, IRCAM still enjoys a very high standing worldwide). Second, researchers within IRCAM become disaffected because of the difficulty of making their work known to people outside IRCAM. Since professional respect is the most important currency to a researcher, this can be a decisive factor in an employee's decision to stay or leave. Finally, and most subtly, IRCAM cuts itself off from the most exciting new developments in the electronic arts by building a virtual wall between itself and the rest of the digital world. This is evidenced by the differing fortunes of jMax, IRCAM's "new Max", and Pd. Pd was instantly embraced by a huge, and extremely hip, community of users who have taken it far beyond my wildest dreams of it; see for instance convention.puredata.org for recent developments as of 2004. The jMax community by contrast was small and anemic.

All this need not imply IRCAM's imminent demise as a research entity. With resources still unparalleled by any institution in the world, IRCAM's situation would be quickly turned around if its IP policies were adjusted to be more in line with those of today's international research community.

Getting back to my own story, I left IRCAM, and when it became clear that they would not permit my own further work on Max to be disseminated, I gave up and started a new project, Pd. (One meaning of Pd was "Public Domain".) This was only possible for me to do because I was working for a U.S. university which does not place claims on my work in the same way IRCAM did. However, I got a job at a U.S. university partly because of the reputation I had earned from writing Max at IRCAM! Clearly, some of the IP of Max stayed with the source code, some of it was public (as a result of research papers I wrote) and some of it was stuck somehow in my physical body. How do we decide which part resides where?

Art

Artifacts of art may be owned, but 'digital art' itself is not intrinsically ownable by anybody. This is bad news to composers, for instance, who obviously would like to own their scores. They do indeed own the paper and the ink on top of it, but the work exists only as a way of arranging things, not of the things themselves, and therefore can't be owned. Composers and other digital artists must survive by the mechanism of attribution. This is indeed how **J. S. Bach** operated; the intervening years, dominated by physical printing presses and their output, can be seen as an aberration, now coming to an end.

This ending will bring great advantages to musicians. Returning to IRCAM, consider the fate of a composer having realized a work there in, say, the 1990s. For many years the works of**Boulez** and **Manoury** were locked into IRCAM's proprietary hardware and software. The ownership of the materials themselves (for instance the ISPW patch that realizes Manoury's *Pluton*) went to the composer, but the computer files were useless without the infrastructure of IRCAM---both hardware and human expertise---to turn them into music.

As this situation now changes (with PCs more powerful than IRCAM's once-mighty ISPW now costing much less than the microphones and speakers needed in a performance), the stage is set for wider distribution of IRCAM's realizations. Whether this is to be done freely or under some kind of copying restriction may now be decided by the composer (although the composer's publisher may place restrictions). One possible approach to spreading the work of composers is explored in my own Pd Repertory Project (www.crca.ucsd.edu/~msp/pdrp/latest/) which includes, among other materials, two realizations that come from IRCAM. (The actual patches have been taken down however, at IRCAM's insistence; I hope to clear this up in the future.)

Does this threaten IRCAM? I think not at all. Indeed, composers in the old days were often unwilling to realize music at IRCAM knowing that IRCAM would then control any possibility of performing the music. Many pieces commissioned at IRCAM saw only very few performances for this reason. Moreover, IRCAM possesses another form of knowledge vastly more valuable than the mere ability to perform the composers' music. This lies in the collective experience of IRCAM's personnel---a treasure unlikely to be recreated anywhere else in the world, entirely

non-digital and non-duplicable. They need to figure out how to use their true capital. The answer is unlikely to be hoarding their IP.

I think one of the most interesting things we'll find out in the next decade is to what extent digitally connected communities can rival the physical ones, and to what extent they will, instead, enhance them. Conferences (such as ISEA!) still seem essential, and perhaps become even more valuable as the possibilities of connection between physical meetings amplifies their significance and potency.

Price fixing

IP is at bottom an attempt to peg two currencies together: that of material and that of ideas and information. Physical goods can only be in the posession of one person at a time; if I have a loaf of bread, I would still have to work to produce a second, identical loaf. If two people want the same loaf, they can't both have it. Material obeys conservation laws.

Information and ideas don't obey any such conservation law; more ideas can come out of a system than went in. Information, in the form of a bit stream for instance, can be copied as many times as you wish, at almost no cost. If we think in terms of supply and demand, the supply of copies of **Madonna's** newest CD is infinite, so the natural, unregulated price is zero.

IP effectively makes a zero-value commodity cost money by making copies artificially scarce. All the billions of dollars worth of "software" are intrinsically worth nothing at all, and IP law's only purpose is to make them cost money instead of being free.

Although it is the big distributors who pocket almost all the money, the artists are at fault for inventing the idea that their work should be sold in this way. SACEM, after all, was set up by composers, although now it (and ASCAP, BMI, etc) mostly work for the distributors. Christo is vigorously defending his right to be the only purveyor of postcard pictures of Pont Neuf clothed, but he is in fact, perhaps unknowingly, contributing to the commercialization of an already highly commercialized art world.

The current legal approach to IP confuses two kinds of ownership: property and configuration. Property must be physical---we can't own things which are the mere fact that physical objects are juxtaposed, although we can own the physical objects themselves and have the right to complain when someone changes their physical arrangement without our consent. We certainly shouldn't be allowed legal redress if someone else chooses to arrange THEIR physical objects---their bananas or the bits on their disk drives---in a way similar to the way we have arranged ours.

It is a ironic that researchers and artists now find themselves trapped by their own efforts to make their creations have monetary value in the form of IP. Researchers (such as myself) are too easily seduced by the promise of material gains to be reaped from our work. Artists (such as Christo in my example above) fall into the same trap. Both eventually lose control over their own work.

To fix this situation will require a careful re-evaluation of how we use IP and attribution today. We need a new set of mores that protect the actual creators of "content" without attaching monetary value directly to the bits use to transmit their output. Artists and researchers are the ones who need it the most, and we should be active in making and keeping information space safe for us to work in.

Related internet addresses http://www.crca.ucsd.edu/~msp/pdrp/latest/doc/