



DEAF07 '*Interact or Die*' Seminar Reader.



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DEAF07 *Interact or Die!* Seminar programme
Wednesday 11 to Sunday 15 April 2007
Locations: V2_, Witte de With / TENT



The seminar programme is a series of four condensed days with demonstrations, debates and theory rooted in artistic research and development (aRt&D) practice. All seminars share the topic of critical exchange between different fields such as the arts, social and technical sciences, philosophy and industry. The seminars represent theory and practice as intertwined aspects in today's research themes. In *Interrupting Realities*, *Critical Ecologies* and *Not everything is Interaction* several artists present the theoretical and technical context of their work in the DEAF07 exhibition. In most programmes, the audience has an active role to play by using all brain parts and their full sensory system. The seminar series distinguishes itself from academic seminars by the combination of brain-crunching intellectual papers, inside stories and hands-on demonstrations.

With this seminar programme we aim to contribute to the theory and understanding of collaboration and exchange among different practices.

We are happy to announce that this DEAF seminar edition includes three events which were produced and organized in close collaboration with our partners; ICT~Office (*CREATE*), Economic Development Board Rotterdam and Kennis Alliantie Z-H (*Transdisciplinary Innovation*) and Jan Van Eyck Academie (*UbiScribe*). Thanks to Giulio Prisco all seminars will be streamed live in Second Life.

Programme

Wednesday 11 Apr 2007

15:00 – 18:00 | Interrupting Realities

Thursday 12 Apr 2007

10:00 – 13:00 | Critical Ecosystems

15:00 – 18:00 | Not Everything Is Interaction

15:00 – 18:00 | Connected Archives - Presentation

Friday 13 Apr 2007

10:00 – 13:30 | CREATE

15:00 – 17:30 | Transdisciplinary Innovation

Sunday 15 Apr 2007

10:00 – 18:00 | UbiScribe: Collocollaboracontentquery?

Interrupting realities

Seminar

Wednesday 11 April, 15:00–18:00

Location: V2_ Endrachtsstraat

This presentation is connected to the Workshop:
Tracking Technology for the Performing Arts
11 to 14 April 2006, Test Lab_02, V2_Building.
Show and tell session on Saturday 14 at 16:00hrs in Test Lab 02.

Moderators:

Workspace Unlimited – Thomas Soetens (B), artist, and Kora Van den Bulcke (B/CAN), architect
<http://www.workspace-unlimited.org>

Provocateur:

Anton H.J. Koning (NL), computer scientist, Erasmus MC
<http://www.erasmusmc.nl/bioinformatics>

Speakers and demonstrators:

Marnix de Nijs (NL), artist <http://www.marnixdenijs.nl>

Armando Menicacci (F), director of Laboratoire Médiadanse, Anomos
<http://www.anomos.org>

Alma Schaafstal (NL), business director, Centre for Advanced Gaming and Simulation
<http://www.gameresearch.nl/>

David "DC" Spensley (US), a.k.a. DanCoyote Antonelli (Second Life), cultural producer and artist <http://spensley.com/hyperformalism> <http://furyinc.com/ftb>

Interrupting Realities is a seminar will investigate the artistic approach to human computer interaction in a world where digital and physical objects coexist.

Increasingly, we live, play and work in mixed realities – environments where physical and virtual objects and events coexist, merge and interact with each other. There, we create ubiquitous experiences through interaction and communication.

Technology facilitates our experience of mixed reality, through interface and network design, but the very same technology also hinders and obstructs our interaction with the world and with each other. Innovation in human-computer interaction usually focuses on a smooth and seamless transfer between the physical and the virtual environment. Artists, contrarily, often investigate control issues by introducing and emphasizing interferences or collisions between the two.

How can we contextualize this artistic approach? Is life in mixed realities a schizophrenic act? Or are we deliberately exploring and determining new actions, creating other types of sensations that are not rooted in our known, bodily, "real-life" experiences?

Are we interacting to become alive, or are we dying through interaction?



Workspace Unlimited

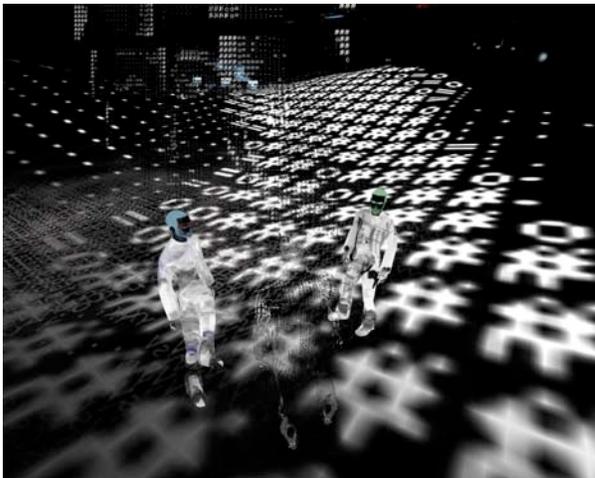
21 March 2007

The virtual world as multimedia and cultural "operating system".

The blur between the real and the virtual has never been as important as with the development of online multiplayer games, evolved as almost photorealistic environments for social experience and interaction. With the development of games, an immersive space has been developed where the user, to a certain point, takes at the same time the role of the cameraman and the editor. Just as cinema was considered as a direct descendant of photography and theater, films in their early days were defined as photoplays, now games can be considered as potential remediation forms of cinema. Where cinema makes use of editing to segment time, it is space that is gradually revealed in within the games. One could say that film organizes time and games organize space. In this sense, games are capable of overcoming the limits of cinema: such as the linear spatial perspective, the 180 degrees line of the traditional editing and the spatial context of the screen.

Online virtual worlds like Second Life and World of Warcraft are becoming for many people a second reality. Opposed to a lot of critical statements that depict these forms of entertainment as escapades (which we also think they are), these environments also function as spaces for intercultural interaction and exchange. A whole generation lets itself overwhelm in the esthetics and rhetoric of these worlds, as networked spaces for collective intelligence, in which everyone can create their personality, their environment and their life.

'Devmap' Workspace Unlimited



Workspace Unlimited wants to take a pro-active position on the complex question of this hybrid experience world and in this sense, function as a 'boarder crossing' multimedia model for this new cultural phenomenon. The physical space has already become a data environment. The concept of "Cyberspace" is no longer understood as a simple projection or a simulation of the real spaces, but as a network of all communication structures, that penetrates all aspects of our lives. Our collective perceives this new form of inter-culturality not

as substitute of our physical reality but as complimentary reality, as a process where the bidirectional positive contamination has unknown creative possibilities. Through our projects we explore the frontiers between the virtual and physical world as a public place for research, development and creation, and we investigate how both realities can function as extensions of each other. Our fields of inquiry are the paradigms of mixed or augmented reality, the interactive, responsive intermediate spaces that can arise from this and the influence of these spaces on our definition of presence, time and space. How are virtual worlds functioning as social realities? What can we learn from these new biotopes and what is the impact on existing social

structures and spaces around us? What influence can the existence of a parallel or integrated virtual world have on physical space and the urban environment? How can these public spaces develop as feeding grounds for creation, interdisciplinary collaboration and debate?

We strongly believe that virtual worlds and game technology will in the future function more and more as catalysts of cultural models for public participation, archives and reflection. Contemporary research starts to show more interest and focus on these social dimensions: technologies must fit into the human ecology and not the other way around. From the cultural influence, artistic projects can enrich research in this domain with stimulating and provocative dimensions. Only now we are getting a perspective on the potential of this new "cultural-technological" existence.

Common Grounds: Reality and virtuality: a holistic universe.

In the past few years we have been developing through our Common Grounds project, different strategies and projects that, through a combination of information, communication and game technology, investigate and offer new esthetic experiences, social connections and forms of perception.

Common Grounds is a network of virtual worlds, that connect research and development of game technology to cultural and artistic intentions. Opposed to traditional game worlds, we conceptually and physically connect our worlds to physical places. The spaces are interconnected through the internet and form together a hybrid network in which visitors can meet each other.

Thus, the project takes the hybrid reality as a starting point and creates, with the help of digital born formats, a space for immediate real-time interaction with the subject of investigation, where body and mind, subject and environment merge in an immersive experience between physical and digital. By launching traditional interaction formats such as our lectures and debates in a 3D environment that have direct anchor points in a reality, an unseen, intimate, clarifying relation to not only the subject but also the hidden aspects of mixed reality arises.

The separation between the virtual, the imaginary world and the physical space is in most of the cases separated by the screen or the projection. The installation of Common Grounds at DEAF07 aims at bringing both realities closer to each other by creating an intermediate space, a channel that opens new perspectives on the meaning and experience of physical and virtual space, while these are simultaneously occupied. Through the destabilization and decontextualization of the principle of the mirror, we call for critical and confronting questions about presence, representation and identification, as a reflection on media culture where the relation between the "real" and the "virtual" takes on more and more complex forms. The installation is connected to the Common Grounds network of virtual worlds, and is simultaneously accessible from the physical space of the installation and the other virtual worlds connected to different locations in the world. The complex layered, hybrid space that emerges from that will get different meanings, depending from which point of view the space is perceived by the visitor. In this way a new kind of dialogue arises between the networked virtual, the physical and the mental space.

www.workspace-unlimited.org

Armando Menicacci, Mediadanse.

<http://www.under-score.info>

Reader text

MnM: a Max/MSP mapping toolbox

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ABSTRACT

In this report, we describe our development on the Max/MSP toolbox MnM dedicated to mapping between gesture and sound, and more generally to statistical and machine learning methods. This library is built on top of the FTM library, which enables the efficient use of matrices and other data structures Max/MSP. Mapping examples are described based on various matrix manipulations such as Single Value Decomposition. The FTM and MnM libraries are freely available.

Keywords

Mapping, interface design, matrix, Max/MSP.

1. INTRODUCTION

In gesture controlled digital audio systems, the term “mapping” refers to the relationship between the gesture/control data and the digital sound processes. The ability to choose and control this relationship makes digital instruments fundamentally different than acoustic or electric instruments.

Different types of mapping have been developed over the years, often using idiosyncratic methods. Recently, mapping methods have been the subject of formalization and discussed in several papers [1]-[9]. Generally, mapping strategies are separated in three different classes: *one-to-one*, *one-to-many*, *many-to-one*. By combining these classes, *many-to-many* mappings can be built. Interestingly, it has been recognized that such complex mappings are more satisfactory, after a learning phase, than one-to-one mappings [2].

Nevertheless, there is still a lack of practical tools to implement complex mappings in a relatively intuitive manner. For this reason, we are currently developing a series of Max/MSP externals and abstractions, the MnM toolbox, based on the free FTM library.

The goal of this paper is to present our approach for this ensemble of Max/MSP externals and abstractions, based on modular matrix manipulations. We describe here the use of a first set of objects available with help patches².

2. RELATED WORKS

Mapping strategies have been reviewed in recent papers and we refer the reader to references [1] and [2] for a comprehensive overview.

Van Nort et al. [9] give a mathematical formulation of mapping as a function g between a controller parameter space $.n$ and a sound parameter space $.m$. If the

mapping is described by a series of discrete couples of vectors $\{X_i, Y_i\}$, where $X_i \in \mathbb{R}^n$ (control parameter space) and $Y_i \in \mathbb{R}^m$ (sound parameter space), the mapping can be seen as an *interpolation* problem. Van Nort et al. [9] and Goudeseune [4][5] have provided elegant mathematical solutions for such an approach. It is interesting to note that if the series $\{X_i, Y_i\}$ overdetermines the mapping function, considering a possible uncertainty for each value of the vectors $\{X_i, Y_i\}$, the problem can be then considered as a *regression* problem.

Finally, mapping procedures can be also viewed as pattern *recognition* problems, especially *many-to-few* mappings. For example, neural networks have been previously used, as described in [10][11][12].

Nevertheless, other common linear and non-linear techniques in statistical and machine learning methods seem promising for mapping, for example Principal Component Analysis, Linear Discriminant Analysis, Gaussian Mixture Models, Kernel Methods and Support Vector Machines, Hidden Markov Models. Even if particular cases have been implemented in dedicated Max/MSP externals [17][18], the use of such methods remains generally cumbersome in real-time musical context. The long-term goal of the MnM project is to fill this gap by providing general and modular mapping tools.

3. MAPPING USING MATRICES

3.1 Basic operations

A first approach consists in building mapping procedures as a combination of relatively simple matrix operations. Consider X , a vector of size n from the controller parameter space and Y , a vector of size m from the sound parameter space. A simple <http://recherche.ircam.fr/equipes/tempsreel/maxmsp/mnm.html>. Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

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mapping operation corresponds for example to the matrix multiplication with a $m \times n$ matrix A .

$$Y = A * X \text{ Eq. 1}$$

A is a *n-to-m* linear mapping (from \mathbb{R}^n to \mathbb{R}^m). This formulation can include both cases $n \geq m$ (*many-to-few*) or $n < m$ (*few-to-many*). Note that A can be defined as time-dependant, i.e. $A(t)$.

If $n \geq m$, A is a projection from the Euclidian space \mathbb{R}^n to an hyperplan in a subspace \mathbb{R}^m .

If $m \geq n$, A can be interpreted as a

linear extrapolation by defining a hyperplan in a space of higher dimension.

The matrix A can be exactly determined by a series of n examples $\{X_i, Y_i\}$, where $1 \leq i \leq n$. If the number of example is larger than n , A can be determined by linear regression. The solution for this case will be described in the section 5. More complex mappings can be built as a combination of several matrices. In particular, a layered mapping [7] can be easily set by a series of matrix multiplications. For example, considering three matrices A , B and C , the mapping can be easily defined as:

$$Y=(A*B*C) *X \text{ Eq. 2}$$

In particular, note that the intermediate mapping layer B can operate in a space of different dimension than n or m. Other matrix operations can be also considered, such as the element by element multiplication (noted here as .*). In such a case, the dimensions of the matrices A and B must be identical.

$$Y=(A.*B) *X \text{ Eq. 3}$$

A matrix can also be combined with a function f applied to each element of the matrix.

$$Y= [f(ai j)]*X \text{ Eq. 4}$$

The obvious interest of such an operation is to introduce nonlinear mappings. As a matter of fact, the combination of equations 2, 3, and 4 enables the design of powerful non-linear mappings (which can have similar structures to neural networks).

3.2 Notation

The case of an affine transform (B is a vector of size $m \times 1$):

$$Y = A*X + B \text{ Eq. 5 can be rewritten as an extension of A:}$$

$$Y = Ae *Xe \text{ Eq. 6 where Ae is a } m \times (n+1) \text{ matrix.}$$

The vector Xe of size n+1 is built from the vector X= (x1,..., xn) as follows:

$$Xe = (x1, \dots, xn, 1) \text{ Eq. 7}$$

From this point, we will use this notation that allows for a more compact representation of the mapping. In this case, the number of examples necessary to completely determine Ae is n+1.

3.3 Single Value Decomposition (SVD)

Obviously several other matrix operations can be useful to extend the mapping procedure. In particular, Singular Value Decomposition allows for the computation of the inverse (or pseudo-inverse) of a matrix, linear regression and Principal Component Analysis [14].

We briefly recall here SVD. Possible applications are commented further in section 5.

Consider a $n \times m$ matrix M. The SVD decomposition corresponds to compute three matrices U, S, V whose sizes are $n \times m$, $m \times m$, and $m \times m$, respectively:

$$M = U * S * V^t \text{ Eq. 8}$$

U and V are unitary matrices (i.e. $U^t=U^{-1}$). S is diagonal, and its elements are ordered in decreasing values.

4. Max/MSP IMPLEMENTATION

We chose to develop mapping modules using the recent shared library FTM in Max/MSP, which enables matrix handling. We describe FTM shortly in the next section. The integration of the approach shown in this report could be easily performed in other software with equivalent matrix structures and methods.

4.1 FTM

FTM is a shared library for Max/MSP providing a small and simple real-time object system and optimized services to be used within Max/MSP externals. FTM is distributed under LGPL3.

The main purpose of FTM is the representation and processing of sound, music and gesture data in Max/MSP extending the data types processed and exchanged by the Max/MSP modules. The implemented classes include matrices, dictionaries, sequences, break point functions and tuples. FTM allows for static and dynamic creation of complex data structures. An extended Max/MSP message box allows for the evaluation of arithmetic expressions, function calls and method invocation on FTM objects.

FTM objects can contain references to other FTM objects. A simple garbage collector handles transparently the destruction of dynamically created FTM objects referenced by multiple elements of a patch. FTM supports MIDI and SDIF file formats. The FTM *fmat* class implements a simple two-dimensional matrix of floating-point values providing methods for inplace matrix calculations and data import/export. An FTM *track* object allows for recording and playing of a stream of matrices as well as for the import/export of a stream in the SDIF file format.

The *mat* class acts as a 2-dimensionnal cell array of generic FTM objects, and in particular can handle matrices of *fmat*. The externals of the libraries based on FTM use *fmat* as a generic representation for a variety of algorithms implementing analysis/synthesis, mapping, statistical modeling, machine learning and information retrieval. FTM enable to easily connect these algorithms in an application, thus creating a tied link between gesture analysis and sound synthesis.

4.2 MnM

MnM, "*Mapping is not Music*", is a set of Max/MSP externals based on FTM, taking advantages principally of the matrix classes *fmat* and *mat*. The construction of the mapping procedure is performed using both basic matrix operations from the FTM library and using the dedicated MnM set of externals and abstractions. As already stressed, mapping can be thus built in a modular way. Different types of mapping [3 http://www.ircam.fr/ftm](http://www.ircam.fr/ftm) approaches, including interpolation, regression and recognition are implemented.

5. EXAMPLES

We explain here two abstractions, *mm.matmap* and *mm.pca*, which illustrate the use of the external *mm.svd* (performing the Single Value Decomposition of a matrix).

5.1 mm.matmap

The idea of this abstraction is to implement a multidimensional linear mapping. It can be seen as basic module to build complex *n-to-m* mapping. The mapping is based on the matrix multiplication $Y=Ae*Xe$, as described in Eq.6, corresponding to an affine transform. The matrix *Ae* can be determined by a set of *k* mapping examples $\{X_i, Y_i\}$, called "training examples". Two matrices are created from these examples:

- 1) X_{train} , of size $(n+1) \times k$, formed by concatenating the vectors X_i
- 2) Y_{train} , of size $m \times k$ formed by concatenating the vectors Y_i .

The concatenation is performed by the object *mm.q* (Fig.1)

We can therefore write the following equation:

$$Y_{train} = Ae * X_{train} \text{ Eq. 9}$$

A SVD decomposition of the matrix X_{train} enables the determination of A as shown below, (taking advantage of the fact that U and V are unitary matrices):

SVD: $X_{train} = U*S*V^t$ Eq. 10

$Y_{train} = A*U*S*V^t$ Eq. 11

$Y_{train} * V*S^{-1}*U^t = A$ Eq. 12

The computation of S^{-1} is simple since S is diagonal. Note that $V*S^{-1}*U^t$ corresponds to compute the inverse of X_{train} , if this latter exists. For the other cases, in particular if $k \neq (n+1)$, the SVD procedure still guarantees the determination of A (corresponding to a pseudo-inverse).

This procedure can be easily performed in Max/MSP thanks to the MnM objects `mnm.svd` and `mnm.xmul`, as shown in Fig.1. For example, the abstraction `mnm.matmap` allows for the computation of the matrix (bottom part of Fig1), as well as the multiplication $Y=A*X$. The matrix A can be imported/exported as a txt file.

The top part of Fig1 shows a possible use of `mnm.matamp`, i.e. the interpolation between different waveforms controlled by the 2D positions of the cursor.

Several of these objects can be used in parallel, enabling piecewise linear mappings [9][13]. Note also that switching and/or interpolating between matrices in real-time, allows for interesting "dynamic" mapping procedures.

5.2 `mnm.pca`

Similarly to the previous section, consider the matrix X_{train} (size $n \times k$) formed by concatenating a series of k vectors of the controller space n . The `mnm.pca` object performs Principal Component Analysis (PCA), based on the SVD computation, that outputs the three matrices U , S , and V . The first p principal components of X_{train} are determined by keeping only the first p diagonal elements of S (setting the others to zero). Note that X_{train} must be centered prior to performing SVD.

Fig.1 Max patch using the abstraction `mnm.matmap`, illustrating a 2 to 600 mapping, based on a set of training examples. The bottom part of the figure shows the part of `mnm.matmap` where the mapping matrix is computed.

Thus, PCA enables the reduction of the dimension of the effective control space, which can simplify the mapping procedure [15]. As a matter of fact, the actual space dimension formed by all controller values is often lower than n . This occurs typically when some configurations cannot be played due to physical constraints. In such a case, PCA can be used to define a new orthogonal basis of the actual controller space.

PCA can also be seen as a practical way to parameterize principal features of the control space (or the sound parameter space). After decomposing X_{train} in principal components, the re-synthesis is possible using the matrices U , S , and an additional "control" vector C (size of $p \times 1$):

$X = U*S*C$ Eq. 13. For example, the first value of C weights the major component of this space, whereas the last one weights the smallest component, generally a "noise" contribution.

5.3 Towards kernel methods

Principal component analysis based on SVD can suffer from severe limitations due to the assumption of the linear combination of the components. Nevertheless, kernel methods allows for the extension of PCA to non-linear problems, called Kernel-PCA [16]. We are currently investigating such an approach for mapping, which will be implemented in MnM in the near future.

6. DISCUSSION AND PERSPECTIVES

We described our approach for the design of mapping tools and some elements of the MnM library. The modular design of the MnM library greatly facilitates the experimentation of various mapping strategies, including interpolation, regression and recognition.

The object we described, `mm.matmap` and `mm.pca` were found to be very simple to use and promising. Their main limitation resides in the fact they model data linearly. However, as already mentioned, such objects can be generalized for non-linear mapping using kernel methods.

7. ACKNOWLEDGMENTS

We would like to thank Riccardo Borghesi, Diemo Schwarz, Emmanuel Fléty, Nicolas Leroy and Nicolas Rasamimanana for providing a fertile environment for this project and Suzanne Winsberg for interesting discussions on statistical methods. Special thanks to Matthew Burtner for his enthusiasm and for being the first user of `matmap` in a concert.

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Marnix De Nijs: "Exercise in Immersion 4"

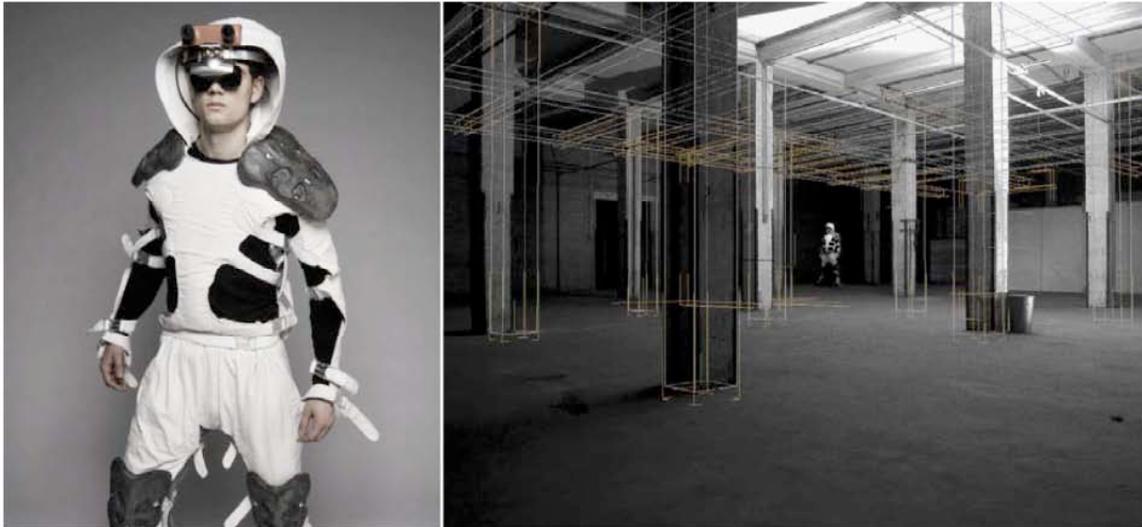
At the seminar Interrupting Realities, De Nijs will present "Exercise in Immersion 4," a research project currently in development with V2_lab (the International Lab for the Unstable Media), Rotterdam.

During this lecture, the artist will discuss the motives and ambitions for his new project and its relationship to earlier examples of his interactive and immersive works. The lecture will also focus on how De Nijs positions the threshold between the real and the virtual in tangible physical space.

Exercise in Immersion 4

In a specially devised headset, matching clothing you can make your way through an existing environment. On your headset's display however, you view a combination between the real and an artificial world.

The headset is equipped with a sensor system that can couple the exact position of the user in reality with previously designed imagery. The artificial representation of walls, stairs, pillars and doors etc corresponds directly with the exact environment. Objects and events are added and in extreme cases reality will completely disappear. Only a representation of the true objects and artificial additions are visible. Once the headset is in place, the participant is subjected to a parallel world; one that resembles a surreal existence and where the discrepancy between the real and illusionary presents the participant with a challenging situation. To endure, they must balance the connection and disconnection of the two entities.



The division between the real and virtual plays a role in more of De Nijs's work. In his most popular recent piece Run Motherfucker Run, the participant finds himself on a conveyor belt, running before a projected image of an urban environment. The active involvement in the film generates the feeling that in effect, you are within the world set before you and the interface is programmed so that interaction with the treadmill forces the user to persistently run harder.

Subsequently, this contributes to the surreal and angst characteristic of the imagery and hence amplifies the total experience. Should the punter be pressurised to run too fast then they will be cast from the machine and the imaginary terrain symbolically disappears. This astounding equilibrium between the virtual and real

world is employed by Marnix de Nijs as allegory of the problems that an individual can undergo while endeavouring to connect with modern city life.

In the project Exercise in Immersion 4, the relationship between these two realities will be further investigated and fine-tuned. A new balance examined within the true and the virtual by literally combining them both in the "real world". Metaphorically speaking, it could also be interpreted as the poise between private and public; real and fantasy.

In addition to the presentation at the seminar, visitors to the Deaf festival can partake in the "first user test" of Exercise in Immersion 4 at the festival location "Pakhuis Meesteren".

The artist: Marnix de Nijs is a Rotterdam based artist who explores the dynamic clash between bodies, machines and other media. His works include mainly interactively experienced machines that play with the perception and control of image and sound, but also, radical and humorous pieces such as his bullet proof tent and bullet proof. Marnix has presented his works at several national and international media-festivals and worked with Time's Up_org, Edwin van der Heide, Montevideo_lab, V2_lab, ZKM and the Krisztina de Châtel Dance Company. He won prizes with his installations in Madrid, Linz, Berlin and Taipei. In 2005 he won the Witteveen & Bos Art and Technology Price for his complete oeuvre.

Dan Cyote/D.C Spensley

It is the role of a contemporary artist to remind us of our capacity for wonder. Wonder is an affirmation that our being holds experiences that transcend practicality and cut through ideology in such a way as to make wide eyed innocents of us all again.



Sometimes the artist explores another place and sends back pictures, or maybe a map, sounds or impressions from a location that result in an art experience. Other times discovery is the result of a line of intellectual inquiry instead of being locatable in physical space. So it is with art experiences created in what has been called virtual reality. Experiences that exist both as lines of inquiry at the same time as discoveries in locations are not really "virtual" reality, but as theorist Paul Virilio says a substitution or alternate for reality. "The splitting of reality into two parts is a considerable event which goes far beyond simulation."

I see the lack of physical constraints in virtual reality, combined with its network transportability as an unprecedented opportunity for the artist to create wonder. More like dream space than ever before, virtual reality offers the artist a space like a gallery or museum, but not the viewer limitations of a space fixed in physical reality. So not only is the artist free to break the bonds of physical limitation in terms of what can be made, the result can be delivered in a shared context anywhere a network exists. In this way virtual reality is the new art venue of the 21st century.

My personal explorations as an artist in virtual reality are mediated by an application called Second Life [secondlife.com]. Second Life (referred to as SL), is technically a MOO in internet jargon, means a multi user domain object oriented environment. [http://en.wikipedia.org/wiki/MOO] This is a fancy way of saying it is a way that many people can connect and share the same virtual space using a client software similar to an internet browser. The difference here being that web browser material has no depth dimension, is not 3D by nature whereas MOO environments are by definition "virtual realities" that allow a viewer to create and explore content spatially.

This spatial dimension brings into play some key potentialities for sculptural and contextual art experiences. It is now possible to have complete control of the context in which an artwork is presented and easier than it has ever been to manipulate the scale of an artwork in relation to the viewer, or the viewer's representation within the virtual space called an avatar. An avatar is essentially a camera connected to a virtual body that a viewer can move around in virtual space in any direction to perceive things in virtual space. Generally the size of the avatar is fixed relative to the world. This allows the artist considerable freedom to manipulate

scale relationships when situating artworks relative the environment and viewer. It is now possible for the artist to fill up the entire skyline with a sculptural artifact, or create a massive fine arts museum to display "paintings" within that architectural context. In Second Life there is no need for shelter, therefore architecture's practical utility becomes one of navigation, user interface to access content and provide some scale of reference. Architecture's other utility in the virtual world is aesthetic.

Shortly after arriving in the virtual world Second Life it became clear that there was something wrong with the scale relationship between avatars, architecture and visual artworks on display. Architecture within SL for the most part closely mimicked real life (RL) structures in scale and usability. This approach became immediately problematic for me since I had been invited to display visual art in this world by a curator working in both worlds. Of course the context of visual art display is always an important concern in any visual art exhibition. A cursory investigation of virtual galleries within this virtual world revealed that in most cases the common context for visual work was cramped into needless enclosures and limited to a RL scale relationship between the artworks on display and the viewer avatar.

While this makes perfect sense in RL, it is simply wrongheaded thinking in SL. Since there is no weather in virtual reality, the only reason for enclosures are to create a sense of defined space and to create the illusion of privacy. Since my intent was to display artworks to the public, privacy was not a concern, however there is some practical value in the defining a space/context advantageous to the viewing of my work. Another concern about enclosures in virtual space is what I have determined to be a low grade anxiety created by the claustrophobic combination of the camera view (the user's real window) and the avatar's scale inside space. While difficult to describe, this means that viewing and movement inside an enclosure in SL is difficult, tedious and detrimental to a pleasant viewing experience.

The common scale of displayed visual artworks within the virtual space is also detrimental to the viewing experience. Avatars in this space do not have articulated fingers and hands, and all visual exploration is achieved by the user, piloting their proxy (avatar) within the virtual space. This can be highly advantageous because while the limitations of avatar dexterity are very real, the viewer can literally fly and also has control of the virtual camera. This virtual camera allows the viewer a range of viewing options not available in RL such as the ability to move the avatar camera to any point around in a space and view anything object from any angle imaginable. This wonderful ability however, is most often hobbled by the unwise use of tight enclosures.

The lack of articulation of avatar hands and fingers reduces interaction in the virtual space to single points of input activated by the viewer with right or left mouse clicks. This gross articulation is comparable to the lack of fine motor skills in younger children. Sometimes this is solved in RL by designing items to be used by these children to be larger and easy to grip with a whole hand such as oversized crayons or pencils. This was a clue to the problematic sizing of objects in Second Life, I immediately began experimenting with large open spaces with oversized artworks more in the proper scale for the combination of avatar and virtual camera. This resulted in a much improved viewing experience and the unexpected side effect of something similar to viewing monolithic artworks in a grandiose RL public museum space.



In addition to the ability to manipulate scale and context, the virtual studio and display space (become one unit for better or worse) offer the possibility of not only manipulating awe inspiring scale, virtual reality also offers the possibility to easily apply scripted reactivity and interactivity to objects and experiences. While this possibility does exist in the physical world, it is problematic and difficult to attain fluency in. Interactive/reactive artworks in RL tend to be technically rarified, expensive and limited by physics. While these limitations make for great boundaries to work within in RL life, the virtual studio offers an expanded set of possibilities I have just begun to tap into.

Like any programming environment the Second Life programming language (LSL or Linden Scripting Language) has a unique library of off the shelf scripts that anyone can use and an extensive database of information on how to create original scripts for almost any scenario possible. While the use of scale and context are great things for the virtual reality artist, it is scripting that provides the greatest possibilities for aesthetic and conceptual exploration by far.

Scripting provides the ability to envision and create reactive and interactive environments and artworks with a strata of viewer involvement unheard of in physical artifacts. Artworks can change size, shape, color, location, interactive and reactive states with very little trouble on the part of the artist. This increased ease of use creates a potential for fluency not nearly as possible in physical systems. This fluency can allow the artist to go beyond the simple 1 to 1 button pushing, sensor triggering interactivity so prevalent in reactive/interactive artworks in the RL display context.

Second Life in particular is growing at an astounding rate. When I was invited to show at the Gallery Ars Virtua in April of 2006 there were just shy of 250,000 residents of this virtual world, as I write this in early December there are nearly 4 million. This incredible growth has created a demand for quality experiences in a world that is already filled with retail, gambling and pornography. Retail, gambling and pornography are weeds, or modes that people tend to create wherever they go. Combined with real estate, these modes fuel the economic engine of Second Life as they do in real life so any value judgement I may have personally is irrelevant.

However this "virtual strip mall" condition combined with the expanding population in Second Life has created a sincere and ravenous demand for other modes of expression and made art viewing experiences a viable and (at this time) rare quantity. In a world of weeds, people want roses! In fact art and music experiences are the only things of transferrable value in virtual reality. It is no wonder that as the population increases in SL, so does the demand for art experiences not connected to retail, gambling and porno. Nowhere in physical reality is such a confluence of viewers available to the artist 24 hours a day, 7 days a week from all over the world.

The following are some URLs to press about the Artist avatar DanCoyote Antonelli:
<http://www.justvirtual.com/index.php/the-organic-beauty-of-hyperformalism/>
<http://www.nmc.org/sl/2006/10/23/dancoyote/>
<http://sl-art-news.blogspot.com/2006/08/my-consciousness-will-never-be-same.html>
<http://www.secondlifeinsider.com/2006/08/08/a-moving-performance-zeroog-skydancers/>
<http://www.justvirtual.com/?p=68>
http://blip.tv/posts/?topic_name=dancoyote
http://www.secondlifeherald.com/slh/2006/08/the_sixfingered.html
<http://forums.secondcitizen.com/showthread.php?p=42883>
http://www.slatenight.com/index.php?option=com_content&task=view&id=86&Itemid=40
http://secondlife.com/newsletter/2006_09/

**Anton Koning, Research Scientist, Dept. of Bioinformatics,
Erasmus MC, Rotterdam, The Netherlands.**

"If artists start to program, shouldn't programmers be considered artists?"



Critical Ecosystems

Thursday 12 April

10.00 – 13.00

Location: V2_ Endrachtsstraat

Introduction

This seminar presents and investigates tactical approaches to technology related ecological issues and cultural activism.

Today's technology systems and media are often referred to as if they were living entities. This terminology and system theory oriented approach towards our technological environment meets the current debate on environmental issues and dying ecologies. A remarkable intersection of shared interests in ecologies and critical attitudes from very remote perspectives bring to the front pressing issues such as:

What are the design approaches for new mediated ecologies? What are the most effective strategies to infiltrate in existing power structures? How can one contribute to the environmental problems from an art, technology or cultural perspective?

Moderator: Ine Poppe (NL), artist, writer and director

Speakers and demonstrators:

Alejandra Pérez Núñez (CL), cultural activist <http://www.elpueblodechina.org>

Jo FRGMNT Grys (D), cultural activist, TOB (Transmitting Object Behaviours) <http://noisiv.de.vu/>

Sophie Gosselin (F), cultural activist, Apo33 <http://www.constellatio.info>

Julien Ottavi (F), artist and cultural activist, Apo33 <http://www.noiser.org>
<http://www.apo33.org>

Antony Hall (UK), artist, owlProject <http://www.owlproject.com>
<http://www.antonyhall.net>

Rens Kortmann (NL), games developer and environmental researcher <http://www.ce.nl>

Matthew Fuller (UK), writer, artist <http://www.goldsmiths.ac.uk/cultural-studies/staff/m-fuller.php>

Jan Willem Dol (NL), climate and energy campaign leader, Greenpeace <http://www.greenpeace.nl>

Matthew Fuller

Notes towards 'Art for Animals'

A crowd of apes and monkeys sit upon a box gawping at a canvas. They've seen nothing like it; or they are bored by it; or they raise their arms in delight at the general hullabaloo. They are of a number of sorts, baboons, gibbons and others that are unidentifiable, all however have the painting as the primary focus of their attention or reaction. What is on the canvas is hidden from view, all we see is the gilded side of a carved frame. Gabriel von Max's turn of the century comedy in oils, *Affenfamilie*¹ points at the trade of the art critic, utter monkey business, but also at the viewer of art, a mug, an enthusiast, or, in the stare of the ape, turned to address the viewer through half-closed lids, a rare specimen in itself. For apes to look at a canvas makes the pretensions of those who look with a mind to judge also minds to be judged, or at least, to be sniggered at.

Pliny the Elder's *Historia Naturalis* gives us another story along these lines, perhaps one which raises further the question of what actually is depicted on that stretch of cloth. In a competition between two painters in trompe l'oeil technique, Zeuxis and Parrhasius, face off in front of a crowd. The first artist pulls away the curtain protecting his work to reveal the most perfectly rendered bowl of fruit, so lucidly real in fact that a flock of birds immediately descends upon it and starts to peck away the paint. Impressed, Parrhasius stirs, but does not move. He simply stands and watches. Annoyed, Zeuxis demands that he remove the curtain from his canvas. The second artist does indeed reveal his painting, but by stating that he has no curtain to remove, that it is a painting of a curtain. It is a painting which has deceived the eyes of his adversary, an artist not a mere bird. Parrhasius wins the competition and perhaps brings to a close a current in art which is only just re-emerging, art for animals.

Art for animals is that that art with animals intended as its key users or audience. Art for animals is not therefore art that uses animals as a substrate or a carrier, nor as an object of contemplation or use. It is not art that, like *Affenfamilie*, that depicts animals for human viewers, or that incorporates animals into living tableau, but work that makes a direct address to the perceptual world of one or more non-human animal species. There are only a very small number of works that make such an address. This essay will make a brief survey of them and then go on to discuss their implications. Where it differs from Pliny's tale is in that it works, not on the level of successful imitation, of duping perception, but in rendering perception somewhat more irresolved, and in the experiment with degrees of reflexivity.

A further important category of work that does not usefully fall into this current are objects such as dog-kennels by celebrity architects (such as Frank Gehry) or housings for birds. Whilst some work in zoo design, notably that of Berlin Zoo by Johannes Baader, and the aviary in London Zoo by Cedric Price does attempt to engage with animals' sensual powers, in a way that Berthold Lubetkin's famous double helix penguin pond at the latter zoo does not.² Thomas Schütte will shortly install 'Hotel For Birds' on a plinth in London's Trafalger Square. Made of brightly coloured layers of perspex, this is a sculpture designed to catch light, and to act as a 'public space' for urban rock doves displaced by a cleansing policy established by a different branch of the body commissioning the work. Whilst being of interest, it is primarily a 'housing'. David Nash, an artist who works with the materiality of wood,

¹ Gabriel von Max, *Affenfamilie*, (late nineteenth century)

² The development of architectural work in the London Zoo was at the initiative of Julian Huxley

and whose aim is for the work to integrate into natural processes, has made shaped blocks of oak for use in a small copse, by sheep who gather there to escape the rain. They use the blocks for "shelter, safety and scratching"³ More recently, the sociology artist Jeremy Deller is using the device of an architectural competition to produce a design for a Bat House for the Wetlands Centre in South London.⁴ Whilst these are perhaps interesting projects, they largely address animals in terms of ergonomics, making spaces that physically 'fit' them.

At the same time, because many animals experience and shape a place by literally inhabiting it, there is no absolute distinction between what is proposed here as art for animals and work that produces scenarios that animals live in, work on and complete or render definitively unfinished. Equally, other projects that involve moving animals from one context to another as in the case of Hans Haacke's 'Ten Turtles Set Free' (1970) or sorting systems for animals, as in Robert Morris', 'A method for Sorting Cows', (1967) are assumed to engage some aspects germane to this project, such as the categorical systems, including property, to which animals are assigned, but fall outside the scope of this essay.⁵

Art for animals intended to address the ecology of capacities for perceptions, sensation, thought and reflexivity of animals. The capacity for art is part of the rather mobile boundary line that performs the task of annihilating the animal in human and in demarcating the human from animality. The purpose of this text is not so much to legislate upon the placing of this line, but rather to suggest that the sensual and cultural capacities of various kinds of being, whether ordered into species or not can be explored.

Paul Perry, has installed a small robotic device to spray Lynx-urine high up a tree to stimulate pheromone responses. Natalie Jeremijenko makes a robotic goose, the aim of which is to set up interactions with a small group of Brent geese, in a number of other projects she sets up devices for inter-species communication. Louis Bec attempts to set up a dialogue between two speciated parts of the same family of fish, and Marcus Coates stages a series of actions with animal materials and behaviours with interaction with other species as the prime goal. Some of this work is rightfully absurdist, whimsical, self-trivialising, other work in this field verges on the technocratic. But all of this work moves towards setting up actual, non-representational and imaginal relations with animals that involve a testing of shared and distinct capacities of perception.

Deleuze and Guattari, who have, following von Uexkühl, Kafka and Maturana and Varela amongst others, placed animal subjectivity at the core of their reinvigoration of thought, provide some dynamic formulations of conceptual personae as animal-beings and of animals as engaged in reciprocal relations of life shaped by colour, growth and habitat formation. In *What is Philosophy* art and nature are alike because they combine the interplay between House and Universe, the homely and the strange, and the specific articulation of the possible with the infinite plane of composition. 'Art for Animals' takes up such work for the category of art.

³ Gertrud Købke Sutton, 'David Nash, The Language of Wood' in, *Art and Design* no.36, p.28-73. The Sheep Spaces sculptures were made in 1993 as part of the TICKON Project, Langeland, Denmark. The same exhibition also included an oversize thatch beehive by Jan Norman.

⁴ Jeremy Deller, *The Bat House Project*, 2006-onwards, <http://www.bathouseproject.org/>

⁵ Robert Morris, 'A Method for Sorting Cows', in, Kynaston McShine ed., *Information*, Museum of Modern Art, New York, 1970. Hans Haacke, *Ten Turtles Set Free*, 20 July 1970, St. Paul-de-Vence, France, 1970

In engaging animal cultures and sensoria, these projects also make art step outside of itself, and make us imagine a nature in which nature itself must be imagined, sensed and thought through. At a time when human practices are rendering the earth definitively *unheimlich* for an increasing number of species, abandoning the human as the sole user or producer of art is one perverse step towards doing so. More widely, a core process of Guattari's writing, one which it amplifies in that of Deleuze is the project of understanding ecology at multiple scales, from the social, to the medial, technical and aesthetic, to that of subjectification. This text draws upon such processes to develop the question of animal-human subjectivation as a cultural and inventive process. Within a web of interconnected capacities and materials can a set of processes and instances, set-ups, ruses, devices, work to establish what Rosi Braidotti has called 'affirmative interrelations'⁶ between, not simply a fixed set of innate behaviours and predilections but of the capacities for becoming that might exist between different forms of life and aesthetic dynamics.

It is not the intention here to suggest that there is a necessary continuum between human and animal, a continuum is a figure that implies ends. Rather, what is suggested in this initial sketch of a possible field is a myriadic ecology of perceptual-cognitive sets, some of which may overlap or share functions and capacities. As the primatologist Frans de Waal notes, "One cannot expect predators to react the same as prey, solitary animals the same as social ones, vision-oriented animals the same as those relying on sonar, and so on."⁷ Equally, we cannot expect sensual experience to stay the same amongst members of what is logged as the same species. Humans for instance have domesticated themselves since advent of agriculture, with, at the genetic scale, changes in composition equivalent in the degree of change to that found to be involved in the transition from wild corn to domestic corn today. In certain populations such changes manifest in the ability to digest foods associated with a sedentary mode of life. At a sensory level, rather than a genetic one, our habituations tend towards similarly substantial changes: one recent study for instance suggests that it is possible, with a little retraining, for humans to acquire an equivalent capacity of smell to that of dogs. Regardless of whether this is desirable or not, or whether it might also suggest the need for an uptake of the scenting and smelling habits of dogs, art for animals does send a tingle along the edges of what we take for granted as our current capacities.

Matthew Fuller <http://www.goldsmiths.ac.uk/cultural-studies/staff/m-fuller.php>
Research for *Art for Animals* is supported by Fonds voor Beeldende Kunst,
Vormgeving und Bouwkunst.

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⁶ Rosi Braidotti, *Transpositions*, Polity, Cambridge, 2006, p.209

⁷ Frans De Waal, *The Ape and the Sushi Master, cultural reflections of a primatologist*, Basic Books, New York, 2001, p.55

Jan Willem Dol – Greenpeace. **Green my apple. Reinventing a greener Apple.**

Apple products - sleek looks, amazing design, meticulous attention to detail. So what's with the toxic chemicals inside, short life spans and allowing their products to be dumped in Asia? None of this fits with Apple's iLife image, and none of this is making Apple a successful company. So why hasn't Steve improved Apple's design? Well it seems Apple just doesn't prioritize environmental concerns.



This is why Greenpeace calls on Apple users worldwide to help to make Apple green.

Toxic chemicals in electronics are a big problem. More and more tech gadgets are produced and disposed of every year. This means more toxic pollution when they are produced and when they are thrown away. That's the bad news. The good news is that alternatives do exist.

Apple can remove the worst chemicals from its products and production processes. But it's not even close to this goal. We want all new Apple product ranges launched from 2007 onwards to be free of the worst toxic chemicals in the production process and products themselves. Now that would make us proud of Apple.

Are you happy with your Apple? Make sure next time it comes in green!
Help us make Apple green, visit www.greenmyapple.org

Rens Kortmann

Gaming/Simulation for the environment

CE Delft, the Netherlands kortmann@ce.nl

14th March 2007

CE Delft is an established think tank for environmental policy making. In the past three decades we have served governments, industries, and NGOs alike to develop innovative policy tools to tackle environmental problems. Gaming/Simulation is one of our distinctive characteristics used for:

- studying the effects of policy measures,
- communicating our findings,
- moderating a dialogue between parties.

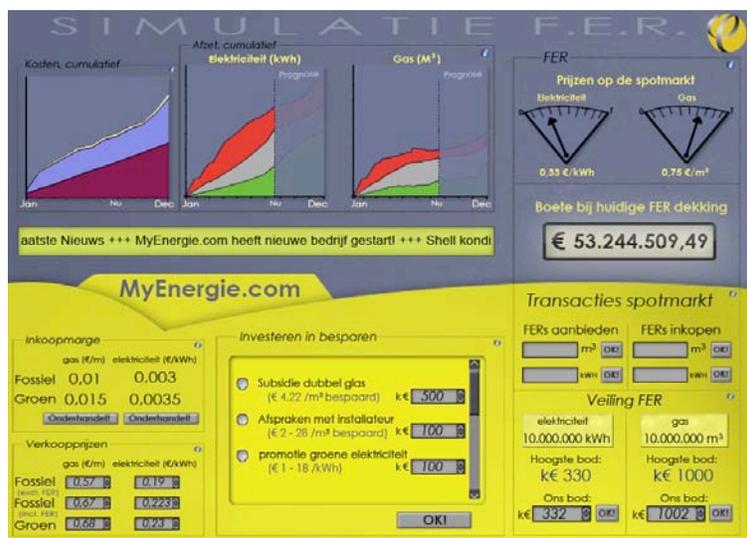
The following sections illustrate these three types of applications.

Policy simulations

What will happen when the government introduces "CO₂-tax" to reduce emissions of greenhouse gasses?

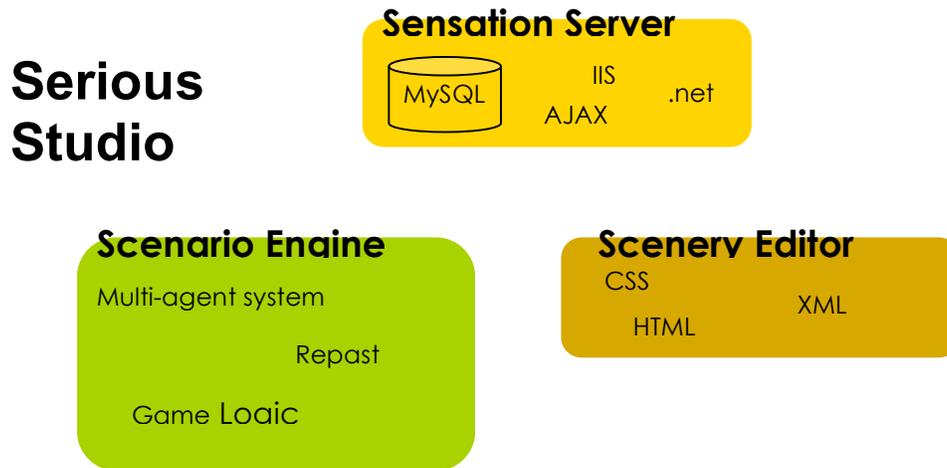
To study the effects of environmental policies, such as the one above, we develop policy simulations. More than traditional methods, policy simulations enable civil servants to experience the pros and cons of their plans. Our simulations sessions are conducted as a mix of role-playing games, decision making in a protected environment, and interactions with dynamic computer models of economic markets and energy use. Below is an example of a computer screen that assists to simulate a particular instance of environmental policies.

Figure 1 Screen shot of a computer simulation used to study the effects of environmental policies



CE Delft developed a dedicated tool for rapid development of policy simulations: Serious Studio. The figure below shows its main components and some of the technologies used.

Figure 2 Serious Studio is CE Delft's tool to develop policy simulations and serious games



Serious Studio offers a development environment for three components: to create policy scenarios (using Scenario Engine) and distribute control over a (local) network (using Sensation Server). Participants of the simulation sessions can interact with the scenarios through dedicated input/output screens (designed with Scenery Editor).

Serious Games

The reports published by CE Delft target an audience of mainly policy makers from governments, industries, and NGOs. To communicate our findings to other groups we develop *serious games* based on factual research and techniques from entertainment gaming. Below a prototype of our racer game Melting Pole is displayed.

Figure 3 Screen shot of the prototype serious game Melting Pole developed by CE Delft



The objective of the game is to drive over the North Pole as quickly as possible and gain luxury items on the way. Whilst playing the game, players learn about the effects of fossil fuel use on climate change; depletion of fossil fuels; the economic challenges for renewable energy; and most of all, have fun.

CE Delft has joined the development of a Climate Game for children age 11 – 16 supported by, e.g., UNESCO. Our role is to supply the required environmental knowledge. 'Think Global, Act Local' is the starting point of this game, showing players how they can act to influence climate change in a positive way.

Figure 4 Screen shot of the prototype Climate Game for which CE Delft is a scientific advisor



Bringing people together

The third application of Gaming/Simulation is to bring people together and moderate a dialogue to solve hard problems in environmental policy making. Our management game GreenCompany shows problems and opportunities of companies starting green innovation. We combined computer simulation and a board game for this.

Figure 5 Two people playing the eco-management game GreenCompany developed by CE Delft

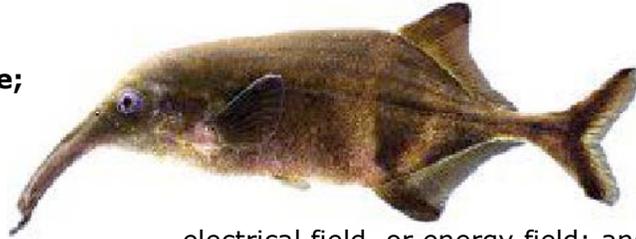


Summarising, Gaming/Simulation is a distinctive feature of CE Delft to perform and communicate environmental policy research

Antony Hall

ENKI 'Human to fish interface prototype.'

Experiments in cross species communication and commune; Human body as 'electric image'.



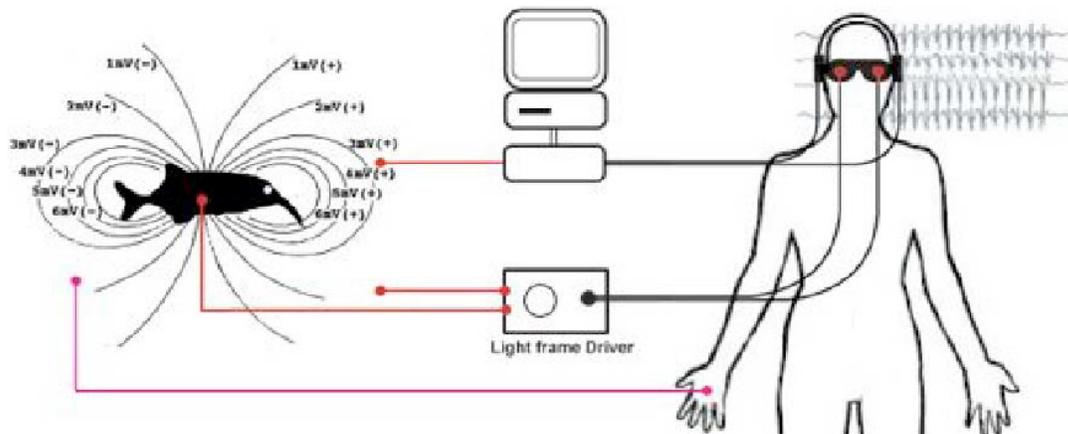
It has long been thought that humans poses an ambient bio electrical field, or energy field; and that this, can be manipulated in order to effect healing processes using electromagnetic fields, bio-magnets, and bio-electrical fields; It is certain that the human body has inherent weakly electrical properties, certainly at a muscular and microscopic level.

Therefore is it possible that a symbiotic relationship between human and electronic fish can be effected through passive and active electronic media's?

ENKI technology

ENKI uses the bioelectric information from live Electric Fish to control an immersive sensory environment designed to alter states of consciousness, and produce potentially healing effects. While exploring biotechnology and electronics, I found there are many connections between neurological research (with electric fish), and medical 'healing' technologies, both historic and contemporary.

ENKI is a real and functional technology. It allows electric fish and humans to commune on the same level - that of electrical fields and brain waves - avoiding the use of language as such; instead stimulating a shared empathy through and actual physical connection (see www.enkitechnology.info)



The Aquarium; fish as techno-cultural device

Given that aquariums are in use as what could be considered as a low-fi relaxation technology, it is a natural progression that fish, in particular, the the weakly electric fish, should be interfaced with the latest electronic and computer based technologies.

A typical tropical aquarium is a multi cultural space - consisting of farmed and wild-

caught species. Aquariums are installed as calming objects, however; on closer inspection the contained environment is one of both aggressive conflict, tolerance and submission. The skill of the aquarium keeper is to create harmony among fish - and through this; craft an impossible window into an otherwise wild world by creating a controlled illusion of it.

About the weakly electric fish; Interaction and communication

Unlike non-electric fish, electro-active or electrogenic fish are in a continual state of 'electro reception'. Given this we can transmit (talk) to the fish electrically at any time, and it will receive (listen).

It is my interest to see how and if the fish will respond and to what; is it possible to 'communicate', and what would communication entail?

Knife Fish naturally emit 'Binaural' frequency***when in interaction with like fish - these frequencies are thought to have phycoacoustic effects on humans. Binaural frequencies are thought to affect 'brain-wave entrainment' (BWE)'.

The Mormryds emit bipolar pulses at variable amplitude and frequencies - as do electro therapeutic technologies; This includes acupuncture, electroacupuncture, transcutaneous electrical nerve stimulation (TENS) and spinal cord stimulation, as well as other more extreme forms of Electro-convulsive therapy (ECT)

These fish have high intelligence, memory, and learning ability. These fish are both used in neuroscientific research for human benefit. It is in the interests of neuroscientists to understand how this information is processed filtered and understood so quickly (the Mormryds have an extremely large brain in proportion to body size.) Of particular interest is the process of Jamming other electrical signals, and frequency modulation.

Human body as 'electric image'.

It is certain that these fish can recognise 'electrical images'**, changes in environmental electro connectivity as well as sense tiny creatures in zero optical visibility;

- Therefore Is it possible that the fish, with such a sensitive electro-sensory system, be aware of a human presence? or even senses these subtle electrical fields we generate? What, if anything, can these fish tell us about our selves?

- What role can electric fish play today in the development and application of electro-accupunture, EEG, and other electro-therapeutic technologies?

Electric fish have been used medically & therapeutically for thousands of years; In ancient times, the Greeks and Romans considered the Torpedo fish to have magical properties. During the Middle Ages, the magic capacities of electric fish were sought for their vital force.

I Investigated the development of these ideas through to the modern day; How are electrical fields, therapeutically thought to effect us, and if they do at all? Closely coupled with the medical use of electromagnetic fields, I found this debate is alive and well; Scientifically controversial (shunned), as is any so called 'alternative medicine', the evidence for the effectiveness of such technologies is in question - and yet still in use even by the NHS (the british National Health Service)

Despite this; these ideas, and technologies developed around them have been in use in-use medically, and commercially since the 1910. Perhaps the use and perpetuation of ideas is subject to what we believe in - or are made to believe in - not necessarily what we 'know' to be true.

'Alternative' medicine and hard sciences are two fields which are traditionally at odds with each other - ENKI is an art work which brings these two worlds together and generates a discussion in this scientifically controversial area. It is an exploration of the role subjectivity and experience in the construction of knowledge and belief structures.

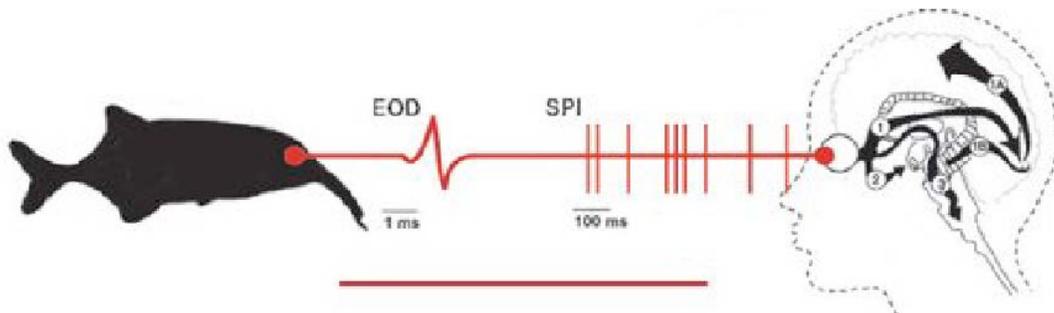
Antony Hall 2007

Supporting Information / Further reading

****Fish perform spatial pattern recognition and abstraction by exclusive use of active electrolocation. Graff C, Kaminski G, Gresty M, Ohlmann T.**

The field generated by the electric organ of weakly electric fish varies with the electrical properties of nearby objects. Correspondingly, current fluxes in this field differentially stimulate the electroreceptors in the fish's skin. Thus, resistors are to conductors and insulators as gray is to black and white in optics. Additionally, the capacitances of plants and insect larvae contrast with those of water or stones, giving effects comparable to "coloration". Receptors arrayed over a large area of the skin act like a retina upon which the discharge projects "electric images". By further central processing, the fish also discriminate between objects according to their composition, size, or distance, a procedure termed "electrolocation", analogous to echolocation in bats.

We demonstrate that *G. petersii* and *S. macrurus* can also recognize 3D orientations and configurations and extract and generalize spatial features solely with their electrical sense. We presented fish with virtual electrical "objects" formed from electrodes set flush in the inner surface of a Y maze with various patterns of external connectivity. With reward and aversion training, the fish could recognize similar electrode configurations and extract a feature, e.g., a vertical connectivity, present in various novel configurations.



Curr Biol. 2004 May 4;14(9):818-23

Laboratoire de Biologie du Comportement, Universite Pierre Mendes France, Boite Postale 47, 38040 Grenoble, France. christian.graff@upmf-grenoble.fr

*****Binaural Beats & Brain-wave entrainment**

Binaural Beats are commonly referred to as "tones", and consist of two tones of different frequencies played into the ears through stereo headphones. The tone in the left ear will be at a different frequency than the tone in the right ear.

The two tones are processed in the brain, a third tone is generated that has a frequency equal to the difference between the left and right tones played into the ears;

Left ear hears a tone at 900Hz

Right ear hears a tone at 910Hz

The third tone is generated in the brainstem at a frequency of 10Hz

This third tone is called the **Binaural Beat**, and is responsible for synchronising the left and right hemispheres of the brain and creating the **Brain-wave Entrainment** (BWE). When any BWE method is played to the brain in a repetitive manner, a phenomenon known as the **Frequency-Following Response (FRR)** occurs. This means that the brain is following the BWE and is entraining. On average, it takes around 6 minutes for FRR to occur.

Frequency Range State of Mind

Delta 0.5 Hz - 4 Hz Deep sleep

Theta 4 Hz - 8 Hz Drowsiness (also first stage of sleep)

Alpha 8 Hz - 14 Hz Relaxed but alert

Beta 14 Hz - 30 Hz Highly alert and focused

www.enkitechology.info office@enkitechology.info

ENKI was originally created at Atelier de Recherches Interactives (ARI) l'École nationale supérieure des arts décoratifs, (ENSAD) Paris 2006. The residency was organised by Pepiniere programme. Research partners include de Neurosciences Intégratives et Computationnelles, (UNIC) an academic research laboratory belonging to the French Centre National de la Recherche Scientifique, Gif-sur-Yvette, France.

Background research 2004-2005; Thanks to Dr Jan Benda, Institute for Theoretical Biology, Humboldt university, Berlin. Bolton Art Museum & Aquarium. The North of England Zoological Society at Chester Zoo aquarium, and Arts Council England. **Current project support 2007;** Interface Hardware development advisor - Steve Symons, muio. Human relations & treatment advisor & Neuro-graphic interfacing by Gregory Byatt (alpha palace). Project generously supported by Reef-one, biOrb. www.reef-one.com

A Lecture Performance.

With Alejandra Alejandra Pérez Núñez,

<http://www.elpueblodechina.org>

Jo FRGMNT Gry (D), cultural activist, TOB (Transmitting Object

Behaviours) <http://noisiv.de.vu/>

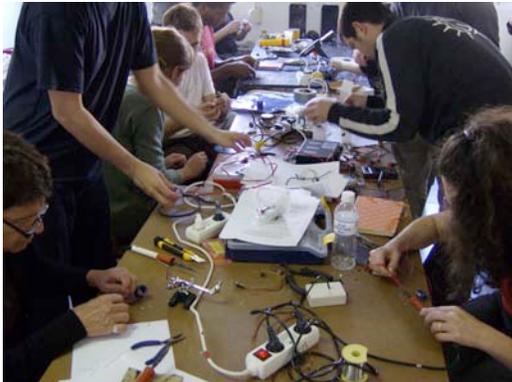
Sophie Gosselin (F), cultural activist, Apo33 <http://www.constellatio.info>

Julien Ottavi (F), artist and cultural activist, Apo33 <http://www.noiser.org>

<http://www.apo33.org>

This presentation is connected to the DIY Networks: A Hands On Workshop on Media Ecologies – 11 to 14 April 2006, Test Lab_01, V2_Building. Show and tell session on Saturday 14 at 17:00hrs in Test Lab 01.

The problem we face when making work with technology is how to do so without implicating ourselves in the process. How can we question the tools we use and the practices we realise with them, without looking at our own maps, the diagrams of our desires, imaginaries, utopias, the maps of our own bodies, moving restlessly, following the production flow, alongside other components of daily life in capitalistic cities (society?).



How to escape from the control paradigm that overlooks the biopolitic relations of control instances and apparatuses, for the modulation of individuals. We want to keep these two factors together body and technology, looking at science fiction for instance (Dune, Frank Herbert, Ubik Philip K Dick).

In the technological development of networks we often witness a prolongation of security and surveillance mechanisms that integrate over and over new elements of

production, psychological and behavioral procedures of the consumers, of the trading instances and of the global markets in such a centrifugal process that it soon accelerates from the micro to the macro. Nevertheless...

1 Control is just an illusion in our human mind (old thinking of almighty god etc)

In the physical world there are things with their properties, by mutual Influence the "laws of nature" occur. control (which involves laws) is thus secondary or our interpretation of this interaction. i.e. the sun does not "control" the earth's orbit

2 our tricky digital machines, symbol-based what they are, inherited this control paradigm.

Midi is control, keyboard, cpu, dvd, digital is control, etc, etc

From the paradigm to the level of digital technology, back to the social level.

society (social group)

human

body
mind
control paradigm
build control tech
controls
mind
body
human
society

Control Versus Influence.

In some systems like old synthesizers and instruments such as ANS synthesiser, the Theremin, Cahill and De Forrest synthesizers, consider the relation between various systems, sharing and coupling on each other. As well as radios and radio feedback techniques and oscillators as in the Rain Forest of David Tudor.

We want to bring inside our discussion the notion of influence in the sense of becoming devenir femme/animal/mineral...

Our realities are so complex since machine & human are in such a way, implicated with each other... All our rhythms are coupled now with those of instruments and technological devices. If we want to think about technologies outside of the control paradigm we have to change ourselves, not just the technology we use. It is about micro-politics and molecular revolution (Felix Guattari) on how we are affected and coupled at microscales with other systems.

In order to reflect upon these ideas we will consider some examples of machines made of different components, assemblages of objects or other circuits found in images (un chien andalu, Buñuel and the man with the movie camera (Vertov)) and sound such as David Tudor and Henri Chopin also Mezbau of Kurt Schwitters and La mariee misce a nu par c'est celibataires, meme of Marcel Duchamp.

The idea would be to add to the device building aspect, a dimension of sound and image diffusion that will materialise the actions made on the controllers and digital automatons. Basically, the idea is that little by little, all the devices which are build by the participants (controllers, automation systems...) are interlinked, connected to create a kind of big eco-system of which we (as participants and / or producers) are part. We could "visualize" this construction process through sounds and images which would be the basic material on which the controllers would play.

We will do recordings of discussions that will be initiated with participants while building DIY devices (in the situation of action) on the issues of "sustainable" soft-hardware = the issues of creating parallel channels of exchanges, alternative to the channels imposed and controlled by the neoliberal market. Linking the idea of ecosophy to the one of control: the ecological approach as a critical position to control.

We propose to look at the networks rising from our conversations and technical set ups and to understand the implications of our technologies, the network of relations in which each device is embedded, we sense that such a shift will have to come out of the reflection about becoming woman (le devenir femme) and the integration of machine/philo/sound/sex/art/politics...

Not Everything is Interaction

Thursday 12th of April, 15h-18h.

Location: V2_ Endrachtsstraat

Interaction is a key concept in many scientific paradigms and art forms. But while these scientific paradigms and art forms often claim their studied phenomena (such as social order and the mind) and artworks (such as generative art and Net art) to be interactive in nature, critical voices claim that mere response is often mistaken for interaction.

interaction,

\`in-tər-`ak-shən\ noun

: mutual or reciprocal action or influence

response,

\`ri-`spän(t)s\ noun

1: an act of responding

2: something constituting a reply or a reaction

From the first introduction of computers to art in the 1960s onward, the role of the audience has gradually transformed from viewers to participants. Accompanying that transformation, the performance of the technology involved became a main focus for interactive art (Candy & Edmonds, 2002), with the role of the technology within this 'interaction' under constant attack by its critics.

The most predominant accusation of interactive art critics is directed at the nature of interaction delivered by the technology used in the artwork. As art critic Florian Cramer (Cramer, 2006) states, 'It [interactive art] is struck with dangerously simplified notion of interactivity - a reductive understanding of interaction as pointing, clicking and other Pavlovian stimulus-response-reactions within the constraints of a programmed box.' From Cramer's perspective, contemporary technology in interactive art at most delivers interesting replies or reactions, i.e., responses. In contrast, many other artists and authors believe that the nature of interactivity achieved by contemporary technology *does* go beyond mere response. Especially in the field of generative art, the general opinion is that even interaction that is conditioned by the structures of a system can provide unique emergent outcomes (see, e.g., Whitelaw, 2004), indicating a mutual or reciprocal action or influence, i.e., interaction.

The latter view also holds strong ground in many contemporary scientific paradigms, in which a wide range of phenomena such as social order, perception, consciousness, and language are, regarded as the emergent outcome of interactive processes (see, e.g., Stryker (1980), O'Regan and Noë (2001), Heeslow (2002), and Steels, L. (1996), respectively). The predominant critique on such interactivity-based approaches in science, shows striking similarities to the criticism regarding the notion of interaction in interactive art. While some claim that the wide range of phenomena mentioned above can be explained in terms of the active relationship, i.e., the interaction, between humans and their environments, critics claim that such approaches are a return to behaviourism; a paradigm that was abandoned because it tried to reduce phenomena to mere stimulus-response relations (see, e.g., Block N., 2001).

It seems that both interactive art and interactivity-based science are divided into two camps over the same issue; one camp increasingly emphasising the role of interaction as a fundamental building block for art and science, and the other strongly opposing this emphasis by advocating that **not everything is interaction.**

This seminar will flesh out the difference between interactivity and responsiveness, to ultimately clarify when art is truly interactive and whether or not the scientific application of the notion is justified. In order to do so, in the seminar, artists will present and demonstrate examples of recent 'interactive' artworks while expert scientists will present the role of interactivity in their current research.

Eric Postma will moderate and open the seminar with a brief introduction to the theme. He will introduce the theme by showing why interactivity is attributed strong explanatory value in some cognitive science paradigms. Furthermore, he will show how his intelligent computer program can determine whether a Van Gogh painting is real or fake, but relies on interaction with human art experts to make the final judgment.

Following Postma, **Mitchell Whitelaw** will present some exciting examples of recent Artificial Life artworks. On the basis of these artworks he will point out how emergent outcomes of artworks are conditioned by the structures of the interaction involved. Could the 'constraints of a programmed box' lead to true interaction in the end anyway?

While Postma and Whitelaw focus on the notion of interaction from a cognitive sciences and generative art perspective, **Jose van Dijck** will present a very different angle on the notion. Van Dijck will go into the change of role of new media users from responsive to interactive due to the recent incredible success of user-generated content on the web. In their new interactive roles, users are 'active creators and adaptive agents in addition to still being viewers and consumers of televised content' in contrast to their passive responsive role in the 'conventional broadcast model where recipients are "programmed" as receivers' (see reader contribution).

However, the ultimate form of active user interaction on the web may be that occurring in Second Life, a 3-D virtual world entirely built and owned by its residents, users represented by avatars. **Gazira Babelli** is a rebellious Second Life performance artist, with a personal dislike for the notion of interaction. In her view, something that 'could be basically making children and war' (Babelli, personal correspondence) is definitely too broadly defined. Nonetheless, Gazira will illustrate the differences between real life interaction and Second Life interaction by demonstrating her 'code performances', in which she confronts other Second Life avatars with the fact that their world is based on code instead of atoms in sometimes hilarious ways. With a code-based world being so similar to the real world that some have to be reminded of its virtuality, it is tempting to assume that modern computer programs can actually facilitate true interaction.

Bringing attention back to the real world, **Roman Kirschner** will present a selection of his artworks. In his view, some of his artworks are truly interactive, while others are merely responsive. By showing these examples of interactive artworks and discussing the nature of their interaction, Kirschner will implicitly evaluate the harvest of the seminar and trigger the general debate moderated by Postma that will close the seminar.

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Block, N.(2001), Behaviorism Revisited. Comment on O'Regan, J.K. and Noë, A. (2001) [A sensorimotor account of vision and visual consciousness](#). *Behavioral and Brain Sciences* 24(5): 939–1011.

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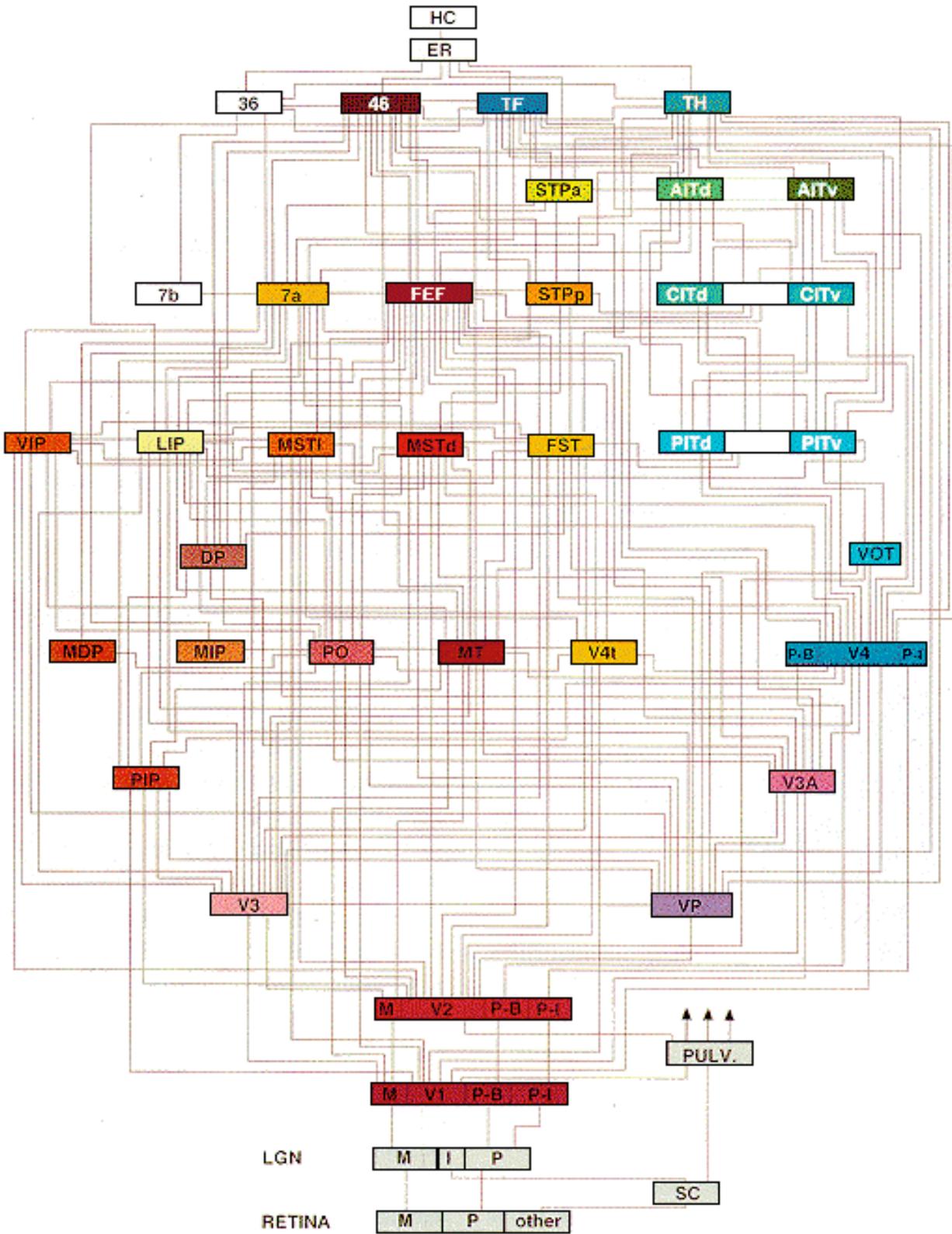
<http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=10080>Whitelaw, M. (2004) *Metacreation: Art and Artificial Life*. Boston: MIT.

Moderator: Prof. Eric Postma

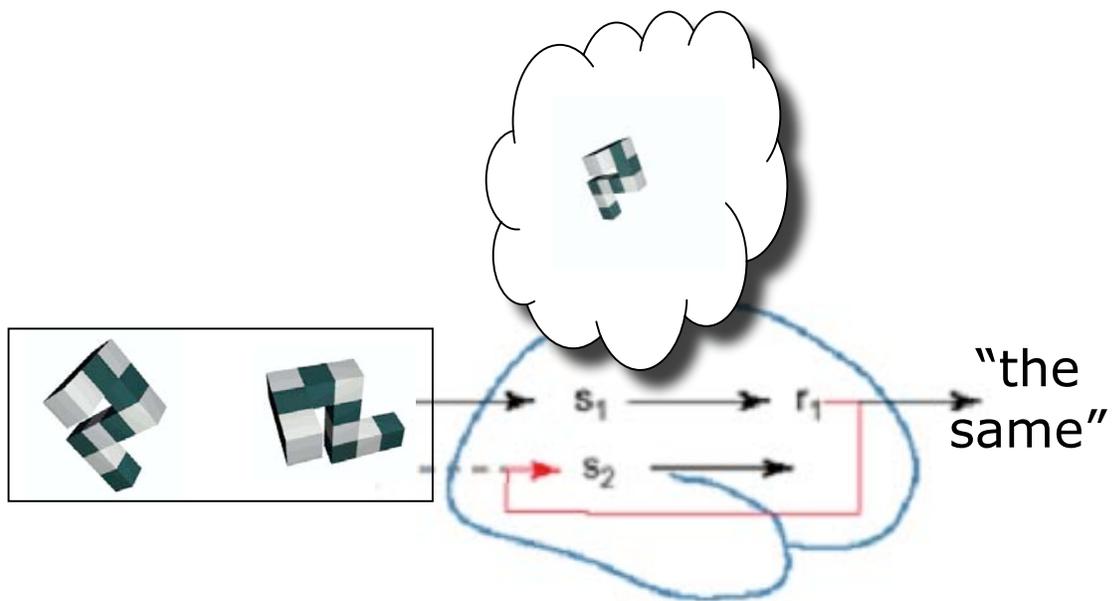
Artificial intelligence researcher <http://www.cs.unimaas.nl/~postma/>

Illustrations:





From: S.M. Kosslyn (1994) *Image and Brain*



Michell Whitelaw

What bearing do ideas of emergent order and techniques of Artificial Life have on interactive art practice, as ideas or tools? The most profound, as I see it, is that it offers an alternative to the current **all too deterministic paradigm** of interactivity as pre-set responses to user navigation through an ossified database. This paradigm is firmly within the Top-Down camp. Emergent interactive behavior would not be derived from a set of pre-determined alternatives. ... This is **a new paradigm of interactivity**, radically different from the notion of a pre-linked database.

Simon Penny, "The Darwin Machine: Artificial Life and Interactive Art " (1995). Available: <http://ace.uci.edu/penny/texts/darwinmachine.html>

+ + + + +

Interaction is usually associated to the direct control of the viewers over the systems. These installations can be categorized as **reactive** rather than **interactive**.

In the reactive model of man-machine interaction, the **viewers do not gain control** at their leisure and will over the self-steering system but, instead, **influence the unfolding of high level events** (expressed by its behaviors) through their simple presence and movement.

In many ways this communication scheme seems closer to the relationship between living organisms and their environment compared to the usual interactive model found in hypermedias where the system is usually waiting for a command from the user in order to react

Bill Vorn and Louis-Philippe Demers, "Real Artificial Life as an Immersive Media" (1995). Available: <http://www.hfg-karlsruhe.de/%7Eldemers/machines/alife/alife.pdf>

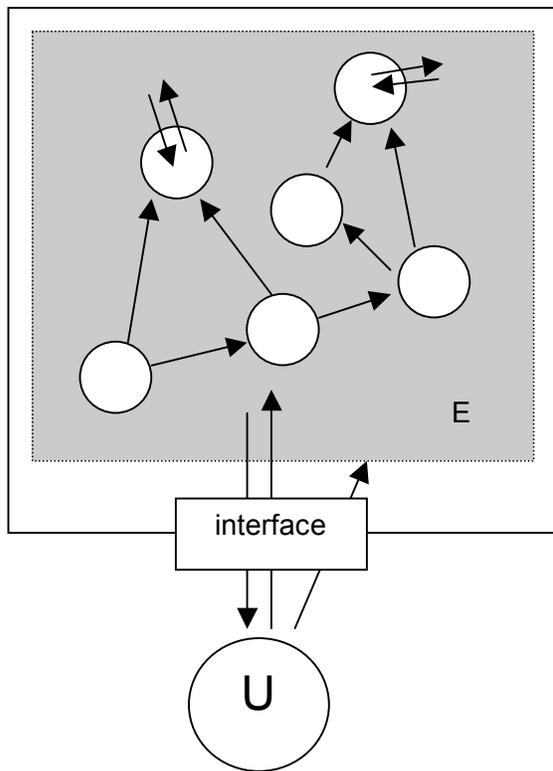
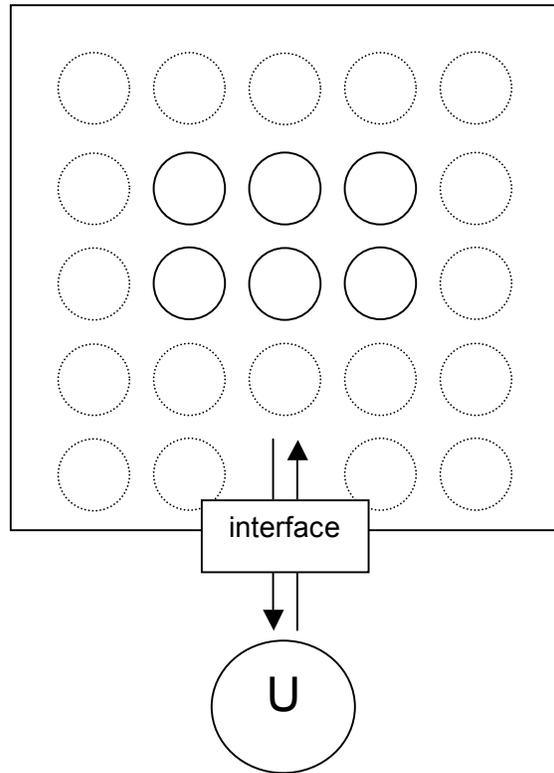
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Even more exciting, artificial life techniques present opportunities for both artists and viewer/participants to develop true relationships with the computer that go beyond the **hackneyed replicable paths** of 'interactivity' which have thus far been presented by the arts community. ...

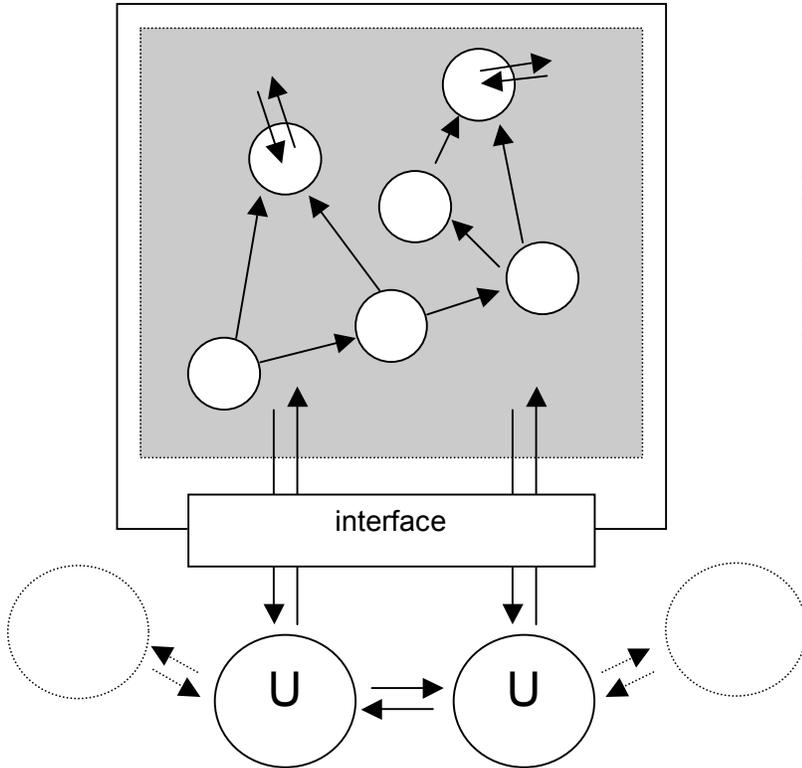
With artificial life programming techniques, for the first time interactivity may indeed come into its full splendor, as the computer ... will be able to evolve relationships with each viewer individually. This may finally be **a cybernetic ballet of experience**, with the computer/machine and viewer/participant involved in a grand dance of one sensing and responding to the other.

Kenneth Rinaldo - "Technology Replicates Phylogeny: Artificial Life Art" (1998). Available: <http://www.artnode.dk/contri/rinaldo/index.html>

artificial evolution
 interactive exploration of a space of potential; narrow interface.
 eg. Karl Sims, *Genetic Images* (1993)



artificial ecosystem
 interaction with a network of interacting agents / environment; local and/or global (E) interaction
 eg. Troy Innocent, *Iconica* (1999)

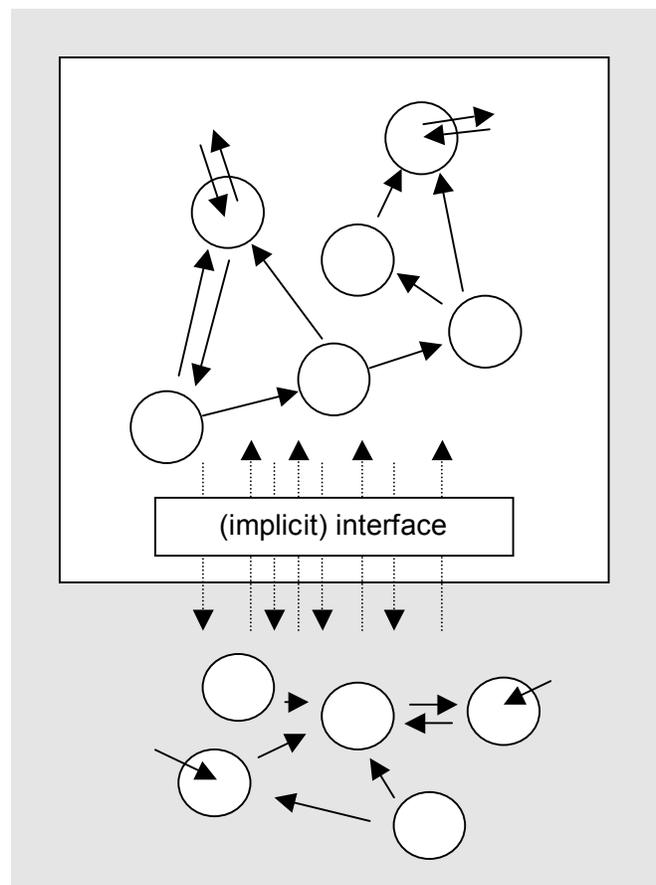


multi-user ecosystem

user/system and user/user interaction;
 system as social ground; broader
 interface
 eg. Sommerer & Mignonneau, *A-volve*
 (1994)

coupled ecosystem

implicit interface, unintended
 interaction; emergent coupling between
 system and outside environment
 eg. Jon McCormack, *Eden* (2001);
 Simon Penny, *Sympathetic Sentience*
 (1995-1996).



Television 2.0: YouTube and the Emergence of Webcasting

José van Dijck
University of Amsterdam

The end of 2006 was marked by two events both flagging the remarkable rise of a novel form of media production and consumption. In October, Google acquired the popular video-sharing website YouTube—a site that had yet to celebrate its first anniversary and welcome its first profit—for the preposterous amount of 1.65 billion dollar. The buy-out was part of a trend: eight months earlier, Murdoch Inc. purchased videosite MySpace for an equally impressive sum. Obviously, Google's acquirement was not about bringing innovative technology to the house, as its own GoogleVideo was already running on superior software; it was about bringing in communities of users. Sites such as YouTube, GoogleVideo, MySpace and DailyMotion boast millions of daily users willing to download and upload self-made videos, short TV-clips, and movie trailers. In December 2006, *Time Magazine*, nominated "You" as its person-of-the-year—an unknown web-soldier symbolizing the aggregate production prowess of millions of web users around the world. The "YouWeb", also known as "Web 2.0" (O'Reilly 2005), refers to the second generation of web-based technologies that foregrounds user-controlled platforms, inviting productive engagement and enticing bloggers, music uploaders, reviewers, writers of entries, private traders, video sharers, and others to interact with and contribute content to the virtual universe.

In the light of these events, what significance do video-sharing sites such as YouTube actually represent? Are they merely the latest silicon bubble or are they indicative of an emerging cultural phenomenon that warrants a serious reconsideration of the institutional practice of broadcasting, television, and viewers? In my talk, I will argue in favour of the latter option. The "you" in YouTube signifies a new type of collaborative co-producer of media content whom we have come to refer to as a "user" of audiovisual content. Compared to text and audio, video was initially lagging behind in relation to other web-sharing sites. Whereas Amazon, Wikipedia, KaZaa, and millions of blogger-sites have boosted the exchange of sound and text via the Internet for years now, the maturation of video-diarists and videoclip producers as full-fledged members of the YouWeb took considerably longer. But once this relative newcomer to the Internet nestled itself in easy-to-use software applications, its popularity exploded. Rather than simply offering a new technological environment for video-sharing, YouTube and similar sites are well underway to engender a new cultural practice which prompts media theorists to reflect on user agency as distinct from conventional agencies of viewers, audiences, or consumers. The "tube" in YouTube consciously positions the user in dialogue with the "device formerly known as television": a broadcasting system historically cemented in centralized production, simultaneous programming, and mass reception (Uricchio, 2004). Characteristics of broadcasting as an institutional system were never written in stone, but they have been in flux ever since television's inception. Technological, social, and cultural changes have forced adjustments upon television's institutional structure as well as upon its practices and programmed content. The medium's shift from broadcasting to narrowcasting via a variety of alternate carriers (cable, satellite, Internet) has resulted in a substantial alteration of interfaces between viewers and programs (TiVo, WebTV, video-on-demand systems). More recently, the emergence of websites such as YouTube adds yet another dimension to personalized program packages selected by viewers: we can now produce our own audiovisual production and distribute it from our homes to a potentially worldwide audience. This new institutional practice is also referred to as "webcasting". The creation and

distribution of user-generated content via webcasting sites such as YouTube and GoogleVideo both expands and alters our rapport with the medium of television. The growth of self-produced audiovisual content in a contemporary culture that is still dominated by broadcasting and narrowcasting, prompts media scholars to assess trends across new production platforms (Croteau 2006: 343). It is important to theoretically explore the concept of "user" in the context of video-sharing sites. Users are active creators and adaptive agents in addition to still being viewers and consumers of televised content. Accepting users' agency as part of an indivisible spectrum of production and consumption appears to be problematic in a conventional broadcast model where recipients are "programmed" as receivers. Second, I intend to introduce and specify the concept of "webcasting" as a step towards designing a meaningful framework for understanding the current mediascape and the technological, social, and cultural forces shaping it. Rather than rendering conventional television programming obsolete, the emerging institutional practice of webcasting is dependent upon the customary practices of broadcasting and narrowcasting. If the World Wide Web has provided new channels for audiovisual self-expression, these channels are equally affected by legal and techno-economical conditions. Yet how do new sites for webcasting help "institutionalize" this new cultural phenomenon? And what are the different proprietary, legal (and thus cultural) strategies involved in shaping these practices? For media scholars, the challenge is to make sense of an up-and-coming institutional practice in a field of forces still dominated by established media institutions, systems, and forms.

Gazira Babeli

"I am not interested in dealing with a few sophisticated people"
- Miuccia Prada

"griefing is a bourgeois concept"
- Leon Trotzky



Film Stills from - Gazira Babeli Presents: Gaz' Of The Desert. The Stylit : Gazira Babeli, The Devil : Chi5 Shenzhou, The Boss : Beavis Palowakski

These past couple of months has been extremely productive for me... Not only was the performance-art group that I co-founded, Second Front www.slfront.blogspot.com formed within days of me actively creating my avatar (Second Front est. November 23, 2006) – this very same group was able to add Gazira Babeli to our roster almost exactly a month later. For those who do not know Gazira Babeli already, she is probably considered to be the very first dedicated performance artist in Second Life. Little is known about the RL life of Gazira Babeli. This is an avatar who likes to hermetically exist only within the virtual bubble-economy of Linden Labs. All the public knows for sure is that she hails from Milan, Italy and is a "code performer".

You may have seen her at Ars Virtua *(hyperlink to [www.gazirababeli.com/Singing Pizza.html](http://www.gazirababeli.com/SingingPizza.html)) slinging endless pans of singing pizzas or possibly had to scrape off the globs of both the nanotech industry's and Linden Labs' worst virtual nightmare, "grey goo". www.gazirababeli.com/Grey-Goo.html If "Gaz'" (as she is known in SL) took a special liking to you, you may have had the privilege of being barfed on! If you have not already witnessed Babeli's official performances and artistic interventions yet, you are very likely to be her unwitting "audience" sooner or later. Just make sure you do not offend her with any foul language as she is likely to send an intelligent yet sinister tornado after you in order to make you repent your impolite ways. <http://www.gazirababeli.com/DONTSay.html>)

I interviewed Babeli about modernist White Cubes, contemporary Pop-(T)art(s), "Fluxus Hut" pizza toppings and the generally non-lucrative enterprise of performance art in Second Life...

Wirxli: The Second Life art-critic, Lythe Witte has written a previous article for SLatenight magazine called "The White Cube of the Virtual Art Space " where she questions whether or not the modernist white cube gallery model is worth reproducing in Second Life.

You might recall from a few days ago that we were all hanging out together feeling depressed and bored about the fact that even Second Life itself felt like one big and boring white cube.

My question is, what kind of methodology do you think is needed to make interesting art that can be comprehended within the unique context of Second Life?

Gazira: To realize an "artistic" or "aesthetic" experience, it requires a frame-space that is contemporarily physical and conceptual; it could be a frame, a museum, a computer network, a bedroom... or just a plain box 'dressed' like a RL art-galley. This referential "cube gallery" reminds me of the ironical artwork made by Marcel Duchamp called "Box in a valise" (Boîte-en-valise, 1942)

Although the "box gallery" could be a valid expression, I prefer thinking the whole SL environment as (a kind of) frame-space. It means that scripted and built objects, avatar-people and their behaviors become essentially parts of the artwork...a "world in a valise", in this case. :)

Wirxli: So there are parallels between the Second Life infrastructure as a kind of "artistic" framing device and the statements made by the early RL performance-art group, Fluxus where they blurred the boundaries between "art" and "life"?

Gazira: Sure, and it is very similar with the Linden's statement: "Your World. Your Imagination". We still don't understand what "life" is and yet, we are talking about a second one. One life at a time, please! Maybe these lives (RL and SL) are not so different: symbolic abstractions and virtuality are common attributes.

Wirxli: Is there a difference in your mind between "performance art" in SL and "performing arts" (theater etc) in SL? Also, everyone in SL seems to be either intentionally or unintentionally an artist of some sort - in what way does a performance art group like Second Front stand out from the regular surreal, yet routine activities of SL residents?

Gazira: Yes, SL looks like a very democratic kind of theatre. Everyone is an actor, director and audience together. But is that so different from what we call RL? I think that "intention" is the keyword. The artistic goal could be primarily some shared aesthetic way of thinking and it also needs a shared kind of intentions, so I enjoy being part of the Second Front crew. I think Second Front is the first example of Second Life as the embodiment of a "native" artistic proposal.

Wirxli: Do you feel there is a fundamental difference between performance art in RL and performance art in SL?

Gazira: Physical emulation? Falling down from 21.987.0987 meters height is not so safe in RL. Geographical audience? Nothing new, I still call it Internet Network, is the Internet RL? But I think there is a fundamental difference: in SL you forget the 'computer', it disappears and you are totally inside the frame-space. Everybody knows that this is a Real Experience, therefore, I don't like the dualistic statements about SL/RL. "Second" is merely a title invented by the Lindens only... People will (eventually) discover the nature of that kind of experience.

Wirxli: I think my question above was referring more to Lythe's critique for what she calls the mere "remediation" or "refashioning" ("repackaging") of RL art-world protocols. If she calls for artists to move beyond the remediation/emulation of the blatant white-cube space for producing "authentic" art in Second Life, should there also be a need in Second Life to transcend performance art's remediation of 1970s performance practices and find something new? I say this because there is even a tendency at this point in time to directly "re-enact" historical performances from the Fluxus-era.

Gazira: Yes, I told you above that it could make sense if you think of it like a mirrored "repackaging" of RL social-show of art events...theatre again. There are the main artists, the young artists waiting for... the critics, gallerist, curator.. the complete cast.

Artwork is pretty much an optional element, "the piece of conversation". This mirrored ritual has got a surrealistic effect and at the climax point, when boredom begins, you could "orbit"[1] all the audience. I repeat, Linden Labs is a Fluxus corporation!

Wirxli: You have a coded-script and a performance series based on Andy Warhol's Campbell's Soup Can called "Second Soup – You love Pop-Art – Pop-Art hates you". www.gazirabeli.com/Second-Soup.html

But in Second Life, what really is Pop-Culture's artistic relationship towards the residents and artists of Second Life? Is the pop-culture part of the unique properties of Second Life that artists must learn to do deal with when producing "pure" art in Second Life?

Gazira: Most of SL pop-icons have a RL heritage. One word: gadgets. Technological "fashionism" = any kind of gadget that allows you to create personal or "artistic" identity. My first SL performance has been: 4 hours sitting in front of a big discotheque with a default-naked-avatar... nobody talked with me as they were a bit scared. With no gadget identity, I was the perfect alien.

Gadgets are the primary matter in SL. like stone, bone, wood, and clay for Neanderthals. Is it so different from RL? Do you have an iPod? It is an iGod... I have three iGods. I'm polytheist. "Pure art" is good for aliens.

[1] orbiting: ejects an avatar million meters away from the property via a script routine.

Gazira Babeli is an avatar performance artist in Second Life from Milan, Italy.
Wirxli Flimflam is an avatar performance artist in Second Life from Vancouver, Canada. He is a founding member of the performance art group, Second Front. www.wirxliflimflam.blogspot.com
www.slfront.blogspot.com Second Life in Italy – www.secondlifeitalia.com Courtesy of Slatenight <http://www.slatenight.com/> and special thanks to Wirxli Flimflam.

Roman Kirschner "Not everything is interaction"

1) Presentation of some pieces of „fur“ (Tilman Reiff, Volker Morawe, Roman Kirschner)



His Master's Voice – Boardgame with semi-autonomous ball robots that react to voices and sound.

Painstation – Mistakes in the game Pong result in real pain



Painstation – Mistakes in the game Pong result in real pain



LegShocker – Hack of a Playstation2 Controller. A shin-protector fouls and changes commercial games.

2) The burden of involvement after Fifa Soccer.

Fifa Soccer uses a very sophisticated approach to involve players. If the user is a total rookie, the range of action is quite limited. The game plays itself and watching it is as pleasant as watching soccer on Television. But at a rising degree of skills the player can take over. The game is still supportive but its actions become almost invisible.

Does art need similar strategies?

3) Presentation of more recent works



Ohrwurmbeschleuniger/EarwormCollider – musical SuperCollider for catchy tunes



Roots – dynamic Sculpture

Connected Archives Networking Media Art Cultures

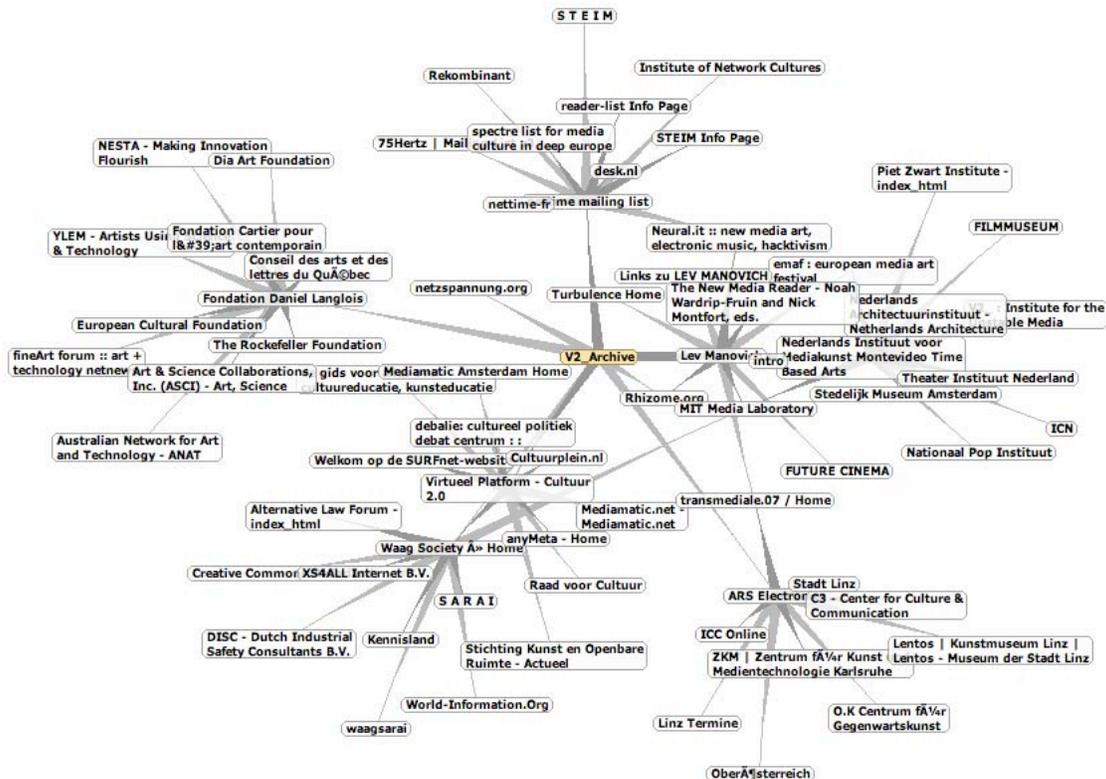
Expert meeting (morning) and public presentations (afternoon)
Organised by de Balie and Portsmouth University, ISEA and V2_
In collaboration with Virtual Platform, Daniel Langlois Foundation and DOCAM

Thursday 12 April
Expert meeting: 10.00 – 13.00
Participation in the morning session is by invitation or application only.

Public presentations: 15.00 – 18.00
Location: TENT./Witte de With

As technology-inspired art is gaining more widespread acceptance, documentation of the rich and diverse media art histories is becoming increasingly important. Worldwide, many groups and organizations are developing online databases and archival portals about media art and culture.

This expert meeting wants to bring together an international group of archivists and developers in the field of electronic art and media culture, in order to facilitate exchange of expertise about current work-in-progress.



In the morning, a roundtable discussion (on invitation or application only) offers the opportunity for in-depth discussion about shared problems and questions. In smaller groups, participants are invited to inform each other about current developments about the following areas:

- *Tools and models.* Which types of software (content management systems, archival software) are in use or being developed by archival initiatives? Is it possible to formulate shared requirements for such tools? Where do features of the various software systems overlap? What are the main pitfalls in the development and usability of such systems?
Which metadata models or information architectures are currently under development? How are they similar and different?
- *Terms and connections.* What is the state of the art in current development of thesauri, keyword lists, glossaries? Who is working on scope notes and definitions? Is collaboration in this area possible, taking the difficult problem of multilinguality into account?

In the afternoon, a public presentation will summarize the findings of the morning sessions and will offer a series of presentations that showcase several examples of good practice in the field of media culture archives.

Moderator:

Eric Kluitenberg (NL), theorist, writer and organizer, De Balie
<http://www.debalie.nl>

Presentations:

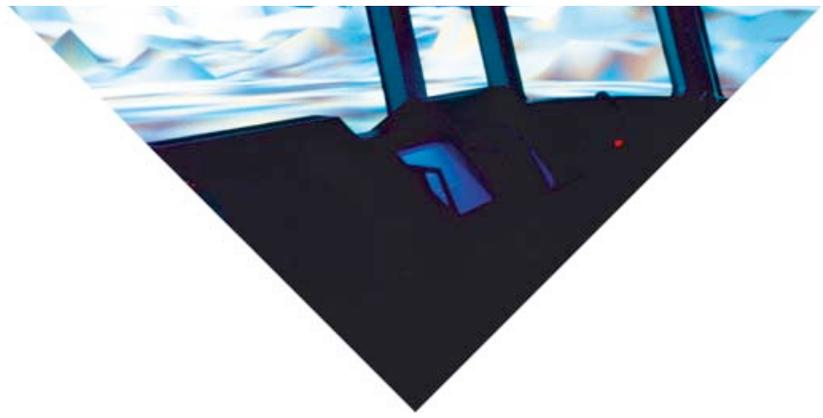
The Tactical Media Files, CultureBase, ISEA Online Archive
David Garcia (NL), Michiel van der Haagen (NL) and Nadia Palliser (NL)
<http://www.next5minutes.org>
<http://www.debalie.nl/dossierpagina.jsp?dossierid=34144>
<http://www.isea-web.org>

V2_'s archive and terminology resources for media art
Sandra Fauconnier (B/NL)
<http://archive.v2.nl>

Daniel Langlois Foundation: Centre for Research and Documentation
Alain Depocas (CDN)
<http://www.fondation-langlois.org>

Database of Virtual Art / MediaArHistories
Oliver Grau (A) and Wendy Jo Coones (A)
<http://www.virtualart.at>

Semantic Connections
Monika Fleischmann (D) and Wolfgang Strauss (D)
<http://www.netzspannung.org>



**CREATE seminar introduction
and programme Friday 13 April
10.00 – 13.30 Location: V2_
Endrachtsstraat**

**CREATE (CREative and
Technology Exchange)** is an
initiative of the IT professional organisation ICT~Office designed to encourage
collaboration between IT and the creative industry. Successful practical examples will
be presented at a series of meetings, which will feature lectures by representatives
from the worlds of business, art and IT. Four IT companies will hold a pitch
competition for the creative industry during the year. The first pitch will be presented
at this

Welcome, opening: Anne Nigten, (NL), manager V2_Lab

Introduction CREATE, Machiel the Rooij, (NL) project manager, presents the
CREative and Technology Exchange, this network project of the ICT branch organised
by the ICT~Office, stimulates cooperation between ICT industry and the creative
industry through a variety of activities.

Passepartout, a project by Keith Baker (NL), Open Innovation Manager, Philips
Applied Technologies, DSE. The Passepartout project focuses on the convergence of
digital systems and applications in home media-centers, in compliance with the ITEA
roadmap: "The Road towards Convergence" thus matching the vision of industries,
institutions, SME and government partners. DEAF07 presents the installation Soft(n)
by Thecla Schiphorst (CDN) which is one of the outcomes of the Passepartout
project.

Joost 'A perfect synergy between (old) media and ICT', is presented by Tatiana de
la O, (RA) Community project manager at Joost, focussing on new features and
bridging between external communities and developers. Joost is a IPTV solution
based on peer to peer which provides the first secure, scalable and reliable
distribution platform that is global and which yet maintains the individual touch of
the Internet. <http://www.joost.com/>

How to chase Venture Capital? Herman Hintzen (NL), partner of Henq Invest,
gives a lecture, with practical examples, about Venture Capital in the creative sector.
It is a known fact that many SME's are in need of capital investors to transfer their
concept from the drawing board towards marketable products, only very few of them
succeed in doing so, Hintzen reveals the 'triggers' for success from a venture
capitalist perspective.

Launch: 'The Match' an ICT company offers creative companies the chance to pitch
on a business issue. The winners of the four different pitches will have the budget to
realise their ideas. The aim of The Match is to create business value for both creative
companies and ICT companies. All the finalists of The Match will be able to present
themselves to potential business partners during the CREATE networking events.

Introduction of the demonstration: Graham Smith (CND/D/NL) introduces his Telemoby robot demonstration. Telemoby is a robot with TV's, WiFi and Apple isight cameras that allow users to see and hear each other via the cameras and screens on each robot. <http://telemoby.hku.nl/>

Network lunch, 12:30 - 13:30 hrs interact with Telemoby and the other visitors.

Machiel de Rooij (NL) project manager, ICT~Office, **Collaborating ICT and creative industry create added value**

Fact Sheet

ICT~Office along with Design Connection Eindhoven, iMMovator, Mediagilde and V2_ is initiating the CREATE (CREative And Technology Exchange) network project. By doing so the sector association for IT, Telecom, Office and Internet companies and these leading creative industry platforms intend to make a significant contribution to reinforcement of collaboration between the ICT sector and the creative industry⁸. CREATE is supported by Syntens, ISM eCompany and Snakeware.

Objective

The purpose of CREATE is to generate economically added value for the creative industry and the ICT sector by reinforcing collaboration between the two sectors. The success of the project will be expressed in new orders and financial collaboration relations.

Background

The idea behind CREATE is that the creative industry can make a contribution to the innovative force of the ICT sector, while the ICT sector can function as a leverage for the creative industry in obtaining an ampler reach for its products and services. The objective is simple: creating more added value together for the customer.

In order to increase the innovative force, the ICT sector continuously searches for connections with other branches of business. The appointment of ICT as Innovation Axis by the Innovation platform was a significant incentive for this. The creative industry is looking for new sales opportunities for their innovative applications.

CREATE is supported by the Creative Challenge Call subsidy programme of the Ministries of Economical Affairs and Education, Culture and Science.

Activities

The CREATE partners will stage the following activities in 2007:

1. Network meetings

^{8 8} The Creative Industry can be differentiated into a number of partial fields: arts, new media, media and entertainment and creative business service provision. The creative sector clearly shares borders with the ICT sector.

The essential activity of CREATE. In addition to ICT~Office, one of the four creative platforms involved is the host per meeting. The meetings are in Amsterdam (host: Mediagilde), Eindhoven (host: Design Connection Eindhoven/region), Hilversum (host: iMMovator) and Rotterdam (host: V2_). During these meetings, attention will be focused on The Match (see below) and other CREATE activities. Each organising host will also make its own contribution.

2. The Match

During The Match, one ICT company poses a concrete question to which creative companies can make a pitch. The best five proposals are selected from the entries. In a final round, the five selected compete for the order, valued at 40,000 euros. The finals take place during the network meetings (see above). Innovative entrepreneurs from the creative industry thus have the opportunity to be in the spotlight by presenting themselves to ICT companies as a potential partner or supplier.

3. Manager traineeships

Managers of big ICT companies participate for a day in a company in the creative industry, thereby focusing their attention on possible cooperation between the ICT sector and the creative industry. The managers' assignment is to take home at least one new business idea or collaboration idea.

4. Techno Master classes

Creative people often lack a good impression of the technical (im)possibilities of ICT. Well-known ICT experts therefore discuss the most recent developments in the area of technology in a master class and indicate possible applications for creative professionals. The focus is on creative application possibilities in products and services. Depending on the topics, a Master Class may be in the form of a workshop or a brainstorming session.

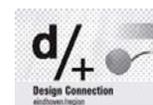
5. Best practice cases

There are examples of successful cooperation between the creative industry and ICT companies. These projects are made available via the website as 'best practice cases' and presented during one or more meetings. The critical success factors round the process of creation and mutual cooperation are the pivotal elements in the cases.

6. Online environment

CREATE has a website (www.creativexchange.nl) which can be accessed independently and can also be accessed via the websites of the associated partners. This website presents information on the various activities and information about the partners, an agenda plus a summary of the best practices. Over the long term, an online market place can be developed where ICT and creative companies can post supply and demand anonymously.

The following companies collaborate in CREATE:



Keith Baker

Passepartout Project: Brings Standards and Architecture to High Definition Rich Media

This abstract describes the history and results of the Passepartout project a co-operation of Philips and Thomson with academic and SME partners to bring together the technology for rich high definition media distribution in the home. The project aimed to provide a rich interactive media environment based on the use of Blu-ray Java (MHP-GEM) coupled to new IP based services that allow greater participation and more effective localization of content. User adaptation and participation is seen as a key feature of the new media to allow parents to participation with families in a media centric experience. To accommodate for the range of display terminal technologies (QCIF - 1080ip) used in the future, media needs to be both scalable and adaptable for the user home environment. Moreover to avoid the ravages of piracy, the media industry needs to migrate to easily manipulated formats and protocols to personalize the content to the users' immediate needs, by creating an open invitation for the advertising industry to participate in the lives of their customers.

Role of ITEA Programme

As European society moves towards a digital economy, a key enabler in this trend is software technology. For companies to software effectively in their products both architecture and standards needed to be applied with an effective business focus. ITEA provides an excellent framework for European industry. This project focused on the convergence of digital systems and applications in home media-centers in compliance with the ITEA roadmap "The Road towards Convergence" thus matching the vision of industries, institutions, SME and government partners. During the project new technologies emerged that propelled the European software industries on to convergence, over terminals and network towards the final goal of ambient intelligence.

The ITEA project Passepartout has coupled new devices from the CE industry to home networks for rendering scalable content for high definition television (HDTV) with lesser quality in a seamless fashion. Integral to the content was reactive access and interactivity of high-resolution graphics using ISO and W3C standards for object oriented TV. With the project's goal to make a step towards ambient intelligence through mass personalization of reactive content (used the most practical elements of MPEG-4 and MHP-GEM as BD-J supported by W3C standards such as SMIL and related content synthesis and syndication in XML). Implications stretched far beyond infrastructure and basic services but also affected content, human system interaction and engineering.

Implementation was based on content access using a PVR and distributed storage as in home carrier to new generations of distribution and access networks, including

Blu-ray optical storage and wireless technology. These networks supported the creation of new ambient experience concepts such as smart tables and pillows that moved beyond earlier non-networked STBs and DVD players using MPEG-2 technology. These new devices allowed the creation of true rich-media network for family entertainment and participation in the mass-media, with participation using content packaging and personalization to match the cultural and linguistic needs of society.

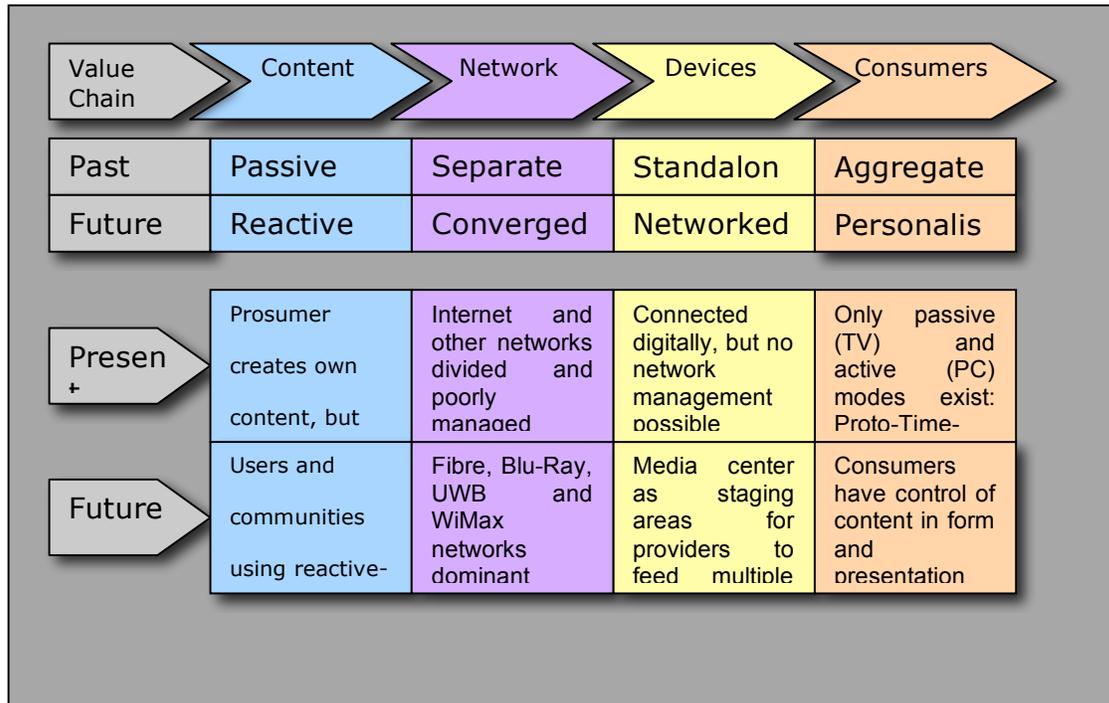


Figure 1 shows the roadmap towards future reactive content that can be accessed with personalised home networks. Consumers will have control over content in form and presentation. (ref: Pricewaterhouse The Broadband Future 2004 : exhibit 2).

The project has integrated with MEDEA+ projects in the area of DRM platform and IC chip-set development for Blu-ray and wireless technology to ensure that the European semiconductor and software industries could offer integrated solutions for networks and devices in the next decade. Contributions to emerging linguistic standards for content adaptation and to content packaging were a priority. European technology was enhanced with the addition of strategic partners: such as ETRI, the Korean Broadcast Research Centre.

General goals

A pivotal report in formulation of the project’s plans was ICT study report “Rethinking the European ICT Agenda”, Sept. 2004 (Dutch Min. of Eco. Aff.) which has part of the chairmanship of Eureka had allowed the public authorities to identified the issue of adaptable High Definition video content technologies to provide a scalable service for “any content, anytime, any platform, anywhere and anytime” as key to the EU Lisbon goals.

The goals of this project were to take four key technologies:

- HDTV and scalable content
- Blu-ray and Mediacenter (PVR) technologies
- Reactive and interactive content flows
- Wireless Access network

Also to show how scalable content could be achieved for a broad class of terminals in a home network. Moreover to provide content that was more closely adapted to the consumers needs and desires, thus matching languages, learning needs, opinions, lifestyles and habits, in a fashion that conventional broadcast TV could not offer.

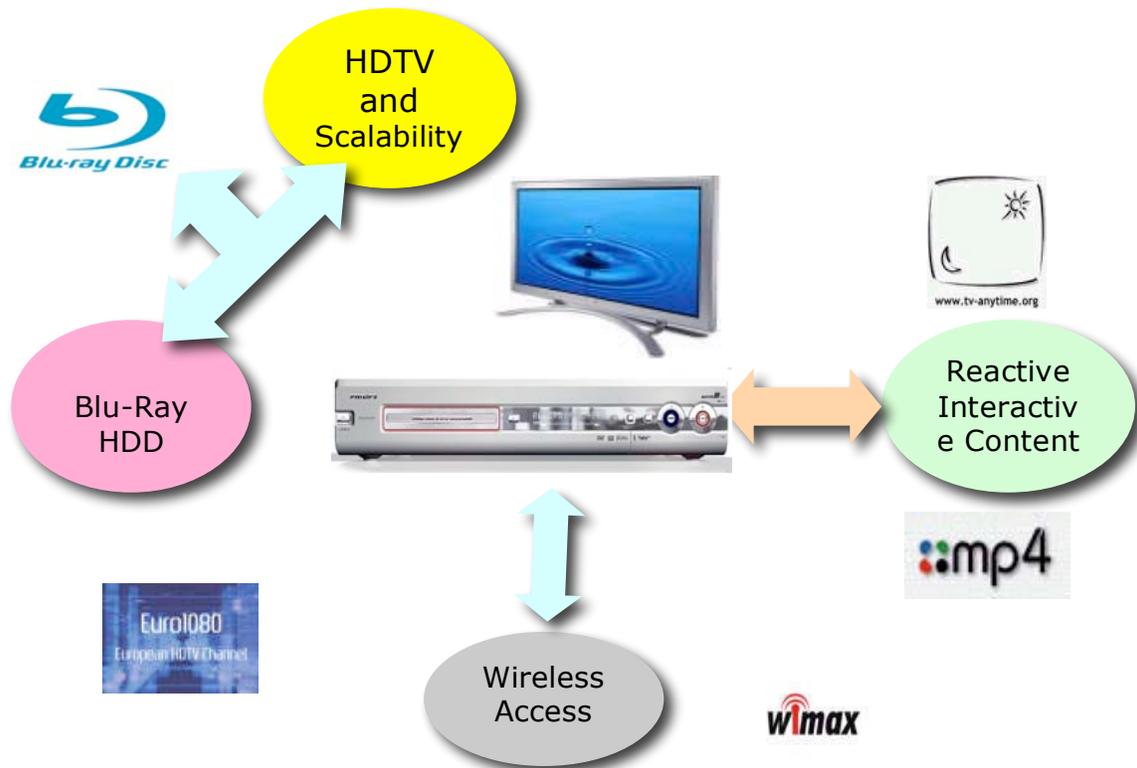


Figure 2 :

The consortium has demonstrated and validated a system concept as shown in Figure 2. This included a number of new system components such as Blu-ray, wireless technology, MPEG-4-AVC, and TV-Anytime, as well as exciting innovation from University partners in topics such a reactive media, multi-lingual standards, software development frameworks, media ontologies, all of which formed the basis for the project’s common-reference platforms.

An essential vision in the Project “Maxima Report”

Bringing complex technology into the service of society requires a clear vision of the social benefits that the users and the business partners can share. There has to be a clear balance between the benefits to the users and the economic viability for the service providers. The traditional broadcast industry had satisfied that need for many

decades based on the established model of time based TV channels. This business model had been weakly challenge by the VCR in the 1980s, and then strongly by the PVR in this decade. Nevertheless on its own the PVR had yet to seriously undermine the role of broadcasters. However, the arrival of IP networks with P2P technology and a host of new innovation such as greater user participation, i.e. Youtube, was a much greater challenge. The Linear content only model of the broadcasters faced serious challenge, and at the same time the technical innovation of HDTV demands vigorous investment in new technologies. Yet without a clear vision on what these change mean to the viewers in the home, it not possible to refine the architecture to satisfy the viewers' needs. To aid the project in this task the family of Maxima was created within the project to allow all the partners to share the vision of a future home, where the parent had infinitely more influence over the media than a simple remote control, but would also allow the children to develop as active participants according to their own skills and needs.



Figure 3 : Maxima at home sharing content with her son Thomas

Conclusions

The Passepartout project has recently completed a 2 year programme of co-operation under the aegis of the ITEA programme. One of the key results of a project have been to bring the needs of European society into the emerging media standards that come with introduction of rich high definition media into the home. As an ITEA project the partners are focussed on the issues of architecture and standards that are needed for European industry to participate in creating new consumer products. The new consumer media products that will replace the STB and PVR of the current broadcast networks with network based systems. These network based system offer an ambient experience based co-operation and interacting terminals that better served the needs of a family for participation and localization of non-linear content.

HENQ Invest and HENQ Innovation Fund 1

Small businesses and young companies often find it difficult to raise money from banks and investors. HENQ Innovation Fund 1 has been launched by HENQ Invest to improve the availability of finance for start-up and early stage tech companies in The Netherlands. HENQ typically provides funding between 200.000 and 500.000 Eur per investment round in both equity and subordinated loans. The investors behind the fund are a mix of (serial) entrepreneurs and institutionals, providing experience and distribution power for starting companies on the one hand, and financial power in subsequent investment rounds on the other hand. HENQ means to leverage this built in potential and provide more than only money, giving support to entrepreneurs in the fields of finance, back office, distribution, logistics, office space, staffing etc. Eligible companies. The Fund will invest in start ups and early stage companies at end stage product development and/or commercialisation. In deciding if we can invest, we will consider:

- * the nature, age and stage of the business;
- * management skills and experience of the entrepreneurs;
- technology in end stage development, preferably patented;
- potential for innovation and growth;
- availability of other funding; and
- how the funding will be used.

We will give priority to businesses demonstrating high growth potential - in terms of launching new products, entering new markets and increasing employment. The Fund is limited to supporting smaller businesses, located in The Netherlands, not older than 5 years and with a focus on (new) technology.

Graham Smith Telemoby robot demonstration

For over 25 years I have been creating both scientific discoveries and art works using my robotic, virtual reality, photographic and telepresence inventions and have exhibited my artwork and deployed my inventions internationally. As a researcher I directed the Virtual Reality Artist Access Program at the McLuhan Program in Culture and Technology at the University of Toronto from 1993 to 1995 and continue to conduct research with Ryerson University on the beneficial effects of linking sick children to their schools using videoconferencing. 1987 I started my 1st company, HorizonScan Inc. and worked with Virtual Reality pioneer Jaron Lanier to incorporate my panoramic imaging inventions into Virtual Reality simulations.



This technology called Videosphere was first demonstrated at the 1990 SIGGRAPH conference in Dallas, Texas. In 1996 I started my 2nd company,

Telbotics Inc. www.telbotics.com to commercialize my co-invention PEBBLES (Providing Education By Bringing Learning Environments to Students) which is currently installed in over 50 hospitals and schools around the world and links sick children to their learning environments via videoconferencing. In 2006 I developed with my HKU students the first versions of MOBI (Mobile Operated Bidirectional Interface) the

telepresence robot and have been displaying it at art and technology centers around the world. Currently I am deploying my latest telepresence invention, the Webchair into Dutch schools to link ill kids back to their learning environments, showcasing a new work called Morphing machinery at DEAF with my WdKA students and filing my 5th patent for my newest invention, the Underwater Video Display, which will allow audiences the ability to experience panoramic video projections while weightless to re-create the sensation of being in orbit around the earth.





Transdisciplinary Innovation
Friday 13 April, 15:00–17:30
V2_ Building, Eendrachtsstraat
10, 3012XL Rotterdam

The seminar Transdisciplinary Innovation, organized by the Economic Development Board Rotterdam, Kennisalliantie Zuid-Holland and V2_ during the Dutch Electronic Art Festival. DEAF is an international and interdisciplinary biennial that focuses on art, technology and society and is organized by V2_, Institute for the Unstable Media, in Rotterdam. www.deaf07.nl

This seminar investigates the current state of affairs of trans- and interdisciplinary collaborations between the arts, sciences, design and technology, and their effects on the innovation landscape and our social environment. The internationally acknowledged group of speakers from different settings brings forward their specific interest in research and development from other disciplines. With casestudies they illustrate successful approaches and experienced obstacles. In the plenary session, lead by Bert van Meggelen (NL), director of Bureau Maatwerk, the basic conditions for new types of trans disciplinary innovation are among the topics of debate and how these can be fostered and supported in an urban environment such as Rotterdam. The seminar will close down with a drink for socializing and networking.

Speakers:

Mark van Doorn (NL), ambient intelligence researcher for Philips
<http://www.research.philips.com>

Anne Nigten (NL), manager at V2_Lab and initiator of the Patchingzone
<http://www.v2.nl>
<http://www.processpatching.net/>

Sally Jane Norman, (UK), cultural historian and theorist, Director, Culture Lab, Newcastle University
<http://www.ncl.ac.uk/culturelab/>

Provocateur:

Rob van Kranenburg (NL), program manager for Virtueel Platform, lecturer and consultant
<http://oxossi.metareciclagem.org/moin/BricolabsNet>
<http://experiencedesign.hku.nl/index.php>



Mark van Doorn Philips Research

Ambient Narratives

Ambient Intelligence is a vision on the future of consumer electronics, telecommunications and computing in which devices move into the background while at the same time placing the user experience in the foreground. Ambient intelligence is related to ubiquitous computing, pervasive computing but has a stronger connection to human computer interaction and design. Technically, Ambient Intelligence refers to the presence of a digital environment that is sensitive, adaptive, and responsive to the presence of people. Producing Ambient Intelligent environments on a large scale is problematic however. First, it is technologically not possible in the foreseeable future to mass produce a product or service that generates Ambient Intelligence out of the box, given the current state-of-the-art in machine learning and artificial intelligence. Second, it is economically not feasible to manually design and produce Ambient Intelligence applications for each person individually. One of the main challenges in creating such environments is the design of a system capable of supporting mass customization of ambient experiences. In this presentation, this example will be taken as a case for trans-disciplinary innovation.

While addressing this research challenge it became clear that we would quickly lose ourselves in the wide variety of prototypes, scenarios and examples that could be found in literature or gathered by doing empirical studies with users. To really understand the problem and narrow down the solution space, it is necessary to follow an integral, holistic approach that takes insights and knowledge derived from diverse disciplines such as philosophy, psychology, sociology, marketing & innovation, culture and the arts as well as technology. At the same time it is important to test whether any analytically derived concept is supported by empirical data, so repeatedly switching between both perspectives is important. This analysis led us to the notion of ambient narratives. From a reader's (consumer) point of view, interaction with the ambient narrative creates the perception of Ambient Intelligence. Interaction should be taken very broad here, any action in the real or virtual world may influence the plot of the ambient narrative, the emerging story. From a writer's (producer) point of view, the ambient narrative contains the ambient fragments and their interrelationships that are defined for a particular space and time. Real-life environments are however highly complex and constantly changing so it is impossible for a producer to write ambient narratives for a given space in advance. To design meaningful and memorable ambient narratives for public, commercial or private spaces, different disciplines need to work in concert. To support this community in this task, the underlying technological platform must be easily programmable so that end-users can easily change or modify the ambient narrative.

In ShopLab, part of the ExperienceLab at the High Tech Campus in Eindhoven, people from different disciplines are working together in this case to analyze and evaluate how retailers and shoppers interact with new application prototypes. To test our ideas in practice, we are in the process of implementing an ambient narrative for an intelligent shop window of a high-tech clothing store. The shop window reacts to the presence of people: If nobody is nearby, transparent displays in the shop window express the style of the store. When people are walking past, the shop window tries to attract people with localized audio and video. Finally, when people are standing in front of the shop window, they can interact with the products on display using

different interaction techniques (touch or gaze). Figure 1 shows one of the scenes in the shop window ambient narrative.



Figure 6: People can look up extra information about products, by simply touching or looking at the products in the shop window.

The intelligent shop window environment is an interesting and practical example but to make real progress and develop more applications and application domains, widespread experimentation is needed to discover the aesthetic rules and guidelines for what can become an upcoming genre. Just like great movies are more than a sequence of photos, memorable ambient narratives will be more than a set of interrelated, context-aware application fragments. Collaboration between technology and art is needed to innovate in today's experience economy. However, cross-disciplinary teams are hard to set-up and keep alive over time. Reduced budgets, changed priorities, incompatible organizational cultures, there are many possible causes. Part of the underlying reason may be that our mass education system has prepared and trained entire generations and organizations to think in parts and short-term transactions. Unlearning this will take time and considerable experimentation in society, economy, culture and technology.

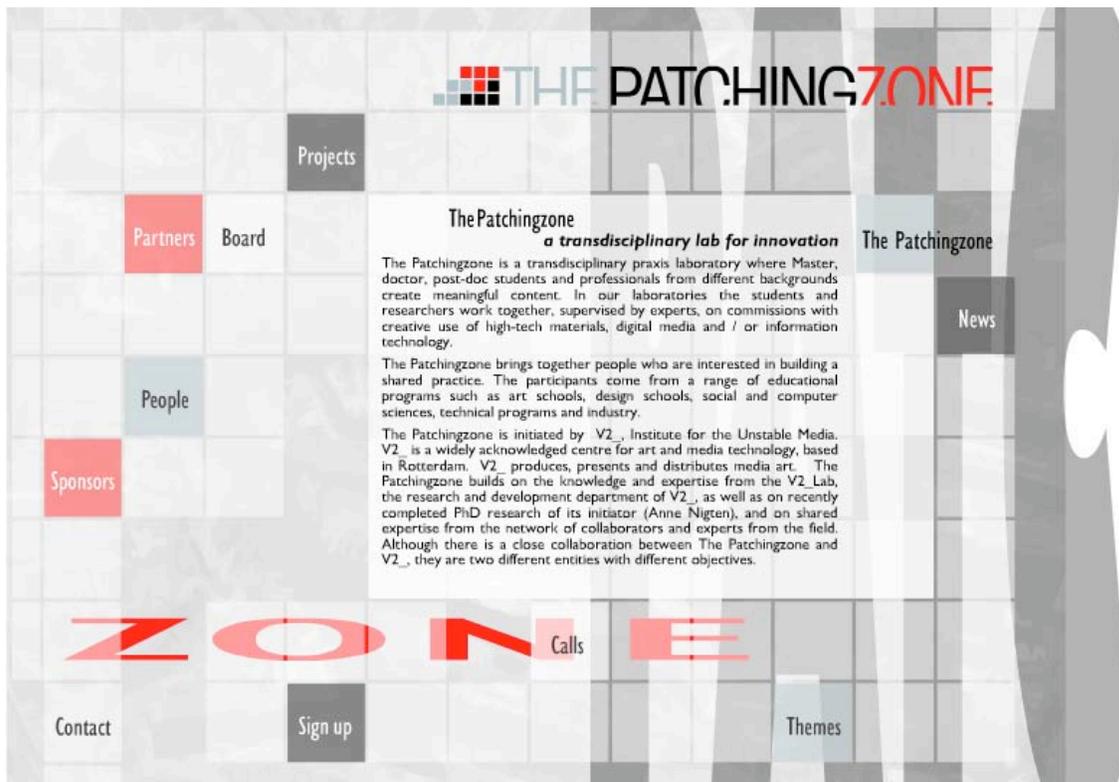
Anne Nigten V2_, lab Manager.

The Patchingzone, a transdisciplinary laboratory for innovation, a work in progress to be launched soon.

www.patchingzone.net

The Patchingzone is a transdisciplinary praxis laboratory where Master, doctor, post-doc students and professionals from different backgrounds create meaningful content. In our laboratories the students and researchers work together, supervised by experts, on commissions with creative use of high-tech materials, digital media and / or information technology.

The Patchingzone brings together people who are interested in building a shared practice. The participants come from a range of educational programs such as art schools, design schools, social and computer sciences, technical programs and industry.



The Patchingzone is initiated by V2_, Institute for the Unstable Media. V2_ is a widely acknowledged centre for art and media technology, based in Rotterdam. V2_ produces, presents and distributes media art. The Patchingzone builds on the knowledge and expertise from the V2_Lab, the research and development department of V2_, as well as on recently completed PhD research of its initiator (Anne Nigten), and on shared expertise from the network of collaborators and experts from the field. Although there is a close collaboration between The Patchingzone and V2_, they are two different entities with different objectives.

Motivation

Today's and tomorrow's interactive media applications, which represent a significant part of the creative industry, demand new types of collaborations by heterogeneous research and development teams. Especially R&D issues around human centred design (human computer interaction) and experience design require expertise from a range of disciplines. This brings us to a key motive to establish The Patchingzone: In numerous upcoming creative professions, there is a need for transdisciplinary collaboration, however this is a very difficult issue to host and support in the (current) education programmes. Most programmes are not in the possession of knowledge and resources to cover all these other disciplines, which might be of relevance in the future professional creative practice.

In contrast to most education programmes, The Patchingzone is not addressing one particular practice based research discipline, on the contrary, it operates in the space between the disciplines, where there is hardly any structural research activities carried out yet. We are convinced that this zone between the disciplines deserves attention and funding, because working outside the known established single or multi disciplinary boundaries seems of crucial importance for groundbreaking innovation. (See also Novak 2005, Somerville and Rapport 2000)

The Patchingzone is a flexible laboratory where artists, designers, scientists and industry meet and establish new practice lead collaborations. The Patchingzone aims to bring together the best students who are interested and perfectly equipped for the collaborative process in a specific commission. Due to the rapidly changing creative field, it is of crucial importance that The Patchingzone works in a flexible way, operates independently and therefore has the freedom to renew and update itself constantly while working with the most talented students and junior researchers. The Patchingzone is not aiming for an educational status, the praxis laboratory should work as a practice extension for the existing education programmes. Their own institutes evaluate the students and where desired and feasible the mentors from the Patchingzone could act as external supervisors and so on.

Themes

The Patchingzone's first year projects focus on two major themes

- Social interaction in public spaces; audience participation in art and cultural applications in (urban) public spaces
- Ecological and physical computing; wearable computing that is charged and activated by alternative, environment-friendly energy

Both themes are approached from a transdisciplinary perspective and include a strong focus on playfulness and a dialogue between the makers and the participants. In the theme around social interaction in public spaces, the Patchingzone plans two pilot projects with socially engaged organisations such as Pact op Zuid, which are focussing on revitalizing the deprived areas in the south of Rotterdam.

Products

The Patchingzone is a praxis laboratory, which is assignment driven and thus delivers products. The products are the outcome of commissions by socially engaged organisations, governments (national, local) and industry. These commissions are executed according to very original interpretations by the talented teams. The deliverables and the outcomes of the commissions represent the sum of the involved education programmes and disciplines and the surplus of their collaborative effort.

During the development process, the gained knowledge will be disseminated and shared in seminars and conferences. So The Patchingzone delivers highly innovative products, brilliant students, conferences, seminars and a continuous interaction of the so called '*processpatching method*', this is the defined method for transdisciplinary innovation (see Nigten 2006). It is expected that the Patchingzone will have its first prototypes available from year 2 or 3, after this pre-competitive product design process, industry will be approached to investigate opportunities for spin-offs, the target group and details might vary according to each specific product.

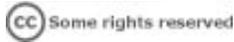
Market and place of business

The 'creative industry' is a rapidly growing in Europe, with content production as its centre point. The concept of The Patchingzone fits seamlessly in this concept, due to its objective to educate future creative designers, producers, researchers and technicians, and due to its development of innovative creative content and products. The Patchingzone starts its headquarters in Rotterdam, the Netherlands. Rotterdam offers fertile ground and needs to attract creative talents for the continuation of its glooming creative industry (see Rutten et al). From the region around Rotterdam, The Patchingzone aims to collaborate on a national level already in the first and second year and from year three onwards we hope to start a network with European satellites.

Anne Nigten

March 2007

Anne@v2.nl



References:

Markos Novak ISEA2006 call for project proposals, U.S.A. 2005,

<http://isea2006.sjsu.edu/>

Margaret A. Somerville and David J. Rapport, eds., 'Transdisciplinarity: Recreating Integrated Knowledge', 2000, EOLSS, Oxford, U.K, ISBN 0773525459

Anne Nigten, 'Processpatching Defining New Methods in aRt&D', The Netherlands 2006, <http://processpatching.net/>

Rutten, IJdens, Jacobs, Koch, 'Knelpunten in creatieve productie: creatieve industrie', the Netherlands 2005,

www.cultuureconomie.nl/_pdf/Knelpunten_in_creatieve_productie_17_juli.pdf

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Sally Jane Norman Culture Lab Newcastle: Transdisciplinarity in and as Research Strategy *

Currency - something which is current - applies to the wealth of vocabularies, terminologies and syntactical tendencies that are the stuff of our verbal transactions, as much as to the monetary systems subtending commercial intercourse. Changes in currency designate cultural changes, producing the unevenness and instability that arise, for better and for worse, when unlike things are grouped, compared and traded. Specialisation in a given knowledge field may inflate value of the corresponding epistemological currency if rarity limits its use to a select group of initiates, yet this same rarity leads to devaluation if the initiates lose meaningful connections with the community at large. Conversely, massively exchangeable and shareable forms of knowledge tend to be blunted and worn thin in the course of their traffic, before boiling down to common sense.

In higher education and research institutions, where knowledge seeking activities are formally shaped and organised, specialist domains are usually defined as disciplines. Efforts to mitigate what may be construed as repressive connotations of this term – discipline having to do with establishing authority – have spawned much productive inter-, pluri-/ multi-, and trans-disciplinary discourse and/or practice. In creative arts institutions in particular, where challenging disciplinary confines is an essential part of learning processes, terms like “nomadology” (Siegfried Zielinski) may be favoured for their resonance with contemporary cultural theory and attitudes. Similarly, the concept of “transvergence” (Marcos Novak) arises from emphasis on transversal movement, as opposed to constituted disciplines. The experiment in building a new university lab described here is anchored in and vindicates specialist knowledge, i.e. disciplines, while seeking to privilege mobility and mutual enrichment of disparate mindsets.

SOCIALLY AND PHYSICALLY GROUNDED BLUE SKY RESEARCH

Newcastle University recently undertook major restructuring, involving the creation of interdisciplinary institutes susceptible to foster original research orientations. A weighty organisation like a university prompts queries as to how vigorously it can effectively redefine epistemological boundaries, and how far this activity can be aligned with its imperatives to affirm an institutional identity. [Culture Lab's](#) set-up is part of Newcastle's wilful dislocation/ relocation of the boundaries that tend to legitimate and strengthen specialist knowledge, and sometimes perversely entrain its atrophy.

The Lab is housed in historically loaded premises which represent a potent mix of social and physical culture: the 1889 “Assembly Rooms” built as a communal space for professional organisations and more recently used as the university sports centre were refurbished for their 2006 opening as [Culture Lab](#), a site for creative debate and the sweat of creative practice. Large rooms serve as open plan research, seminar and exhibition/ performance spaces, and small rooms as media labs and workshops. Generic technical infrastructure respects the Lab's status as a transient platform for constantly evolving projects. Permanent staffing is light and likewise offers a “generic” resource because specific competencies are considered to be integral to individual projects created and driven by interdisciplinary teams. Project shapes, sizes and intra muros life-spans are likely to vary considerably, as are the kinds of resources they tap into (human effort and technical means, exchange and funding schemes, etc).

[Culture Lab](#) is a physical, intellectual, and fundamentally social, project-driven environment where associations of usually separate disciplines across concrete undertakings can spear-head innovation. Rather than show-casing best practice by contracting opportune marriages of well-rated disciplines, the Lab favours the emergence of unexpected alliances likely to shape future research. Tightly predefined lines of exploration tend to underpin applied research facilities which spin out prototypes in answer to short-term demands, but cannot fire long-term innovation. Conversely, lines of exploration left too loose for too long are unlikely to yield socially meaningful and/ or translatable findings. The blue sky needs to be linked to the earth and vice-versa. This linkage is reinforced by [Culture Lab's](#) collaborative dimension, since the diverse disciplinary groundings of shared research agendas reflect a wide range of relations with the broader community.

Newcastle's research fields embrace a vast nexus of potential interrelations: input of interface design skills and artistic virtuosity into the creation of "meta-instruments", use of biometric and choreographic modelling to extrapolate life-style data from anthropological relics, mapping of online community behavioural patterns by biologists and by social and technical network specialists, implication of economists and legal historians in art works fostering new conceptions of identity and authorship, etc. The list could go on forever, yet the disciplinary hallmarks of projects are ultimately secondary to their aptitude to further intellectual exchange. Because alliances in a conceptually open arena are formidably unforeseeable, [Culture Lab's](#) ethos is conceived first and foremost in terms of interactions of discourse, terms, and methodologies, rather than in terms of disciplinary specificities.

PATTERNS OF COLLABORATION AND RESISTANCE

To make an effective contribution to the broader community, [Culture Lab's](#) focus on collaborative processes is being formally documented and reviewed to provide a corpus of transmissible, exploitable research findings. This means endowing projects with strongly reflexive dimensions and/ or openness to third party analysis, to ensure that interactions across disciplines are adequately recorded and studied. To implement dialogue between distinct epistemological systems, their respective terms, goals, means, methods, results and conclusions must be collegially defined. Identification of areas of resistance and irreducibility when negotiating definitions is as important as the identification of areas of ready translation and transposition, these differentials being valuable markers of transdisciplinary dynamics.

[Culture Lab](#) aims to constitute a body of methodological know-how based on its experience hosting innovative transdisciplinary research. Parallel to traditional records pertaining to the content of individual projects, new kinds of documentation are being invented to monitor their collaborative profiles. To this end, conventional textual materials are being complemented by audiovisual resources and, in particular, networked media apt to provide insights into social aspects of collective work. While the resultant histories are as idiosyncratic as the project teams and themes they recount, this information forms a unique base for comparing behavioural and conceptual patterns encountered in transdisciplinary collaborations. The cohabitation of diverse groups under the same roof, and the organisation of documented sessions to share their respective work processes and discuss them with a wider public, enhances [Culture Lab's](#) ability to engender novel research methodologies.

CULTURE LAB AS A THEATRE OF LIVING INTERACTION

The creative dynamics of transvergence (definable as a turning across and beyond) depends on upholding a balance between inwardly-directed specialisation, and outward movement amongst diverse epistemological systems. Movement is aimless without the discrete resources constituted by specialist knowledge, but it is equally aimless if specialist knowledge is limited to inaccessible enclaves. A capacity to listen, a need to roam unfamiliar domains to acquire fresh insights into a given field of investigation, and willingness to adapt specialist discourse for non-specialist understanding, are essential drivers of transdisciplinary activity, which may inspire researchers of all provenances (the notion of transdisciplinary expertise being something of a contradiction in terms). [Culture Lab](#) projects are being instantiated with a view to highlighting the human interactions that underpin innovative research, elucidating new potential avenues for collaborative work.

Just as ICT developments testify to growing interest in the systemics of interactive networks, rather than in their discrete components, so the potential of a transdisciplinary research environment depends on quality of the collaborations it affords, rather than on the discrete – however desirable – advances of individually participating disciplines. By forging strange alliances in a hands-on, brains-on environment, and by staging the resultant theoretical models and physical artefacts as mnemonic triggers to new collaborative processes, [Culture Lab](#) is a theatre of eminently living interaction and human-centred research.

March 2007

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www.ncl.ac.uk/culturelab* *This text largely draws on the author's contribution to Issue 20 of SWITCH, the new media art journal of the [CADRE Laboratory for New Media](#) of the School of Art and Design at San Jose State University*
<http://switch.sjsu.edu/switch/Articles/newcastle>

Rob van Kranenburg

Reader Text 01 [Space And Perception] SLEEPING GIANTS. THE ENVIRONMENT AS DRAMATIS PERSONAE.

This then is the decisive moment of moving into the 21st century; not the cameras as such, not the disciplining design that scripts our bodily movements into even narrower circles and boundaries, not the convergence of macro, meso and micro levels of technological surveillance and control (from satellite, RFID to smart dust), but the awakening of our environment as a personage, as a dramatis personae, and a very smart one at that. Sleeping giant, surely.

"There was a strawman argument put forward in an essay sceptical of government RFID-based surveillance to the effect that it would cost \$1T for the government to instrument every door in every mall, bank, airport, etc.

(<http://www.stapleton-gray.com/surpriv/archives/000016.html>), but that's not the way it would happen; the more likely scenario is that when there are enough tags and enough readers, all the various parties will knit themselves together into multiple surveillance systems, e.g., Arpan's bank, and Lloyd's, and all the others, will join "Bank Situational Awareness Net," where all the parties agree to pool RFID-derived information for mutual benefit (e.g., distinguish cherished customers from potential bank-robbing scum). And *that*, in turn, might be tapped by law enforcement, or other government interests, perhaps in return for favored treatment under some regulatory scheme. (From: Ross Stapleton-Gray amicus@well.com Sender: SV_RFID@yahoogroups.com Date: Sat, 07 May 2005 21:48:59 -0700)"

In Dreams of a Final Theory, Steven Weinberg speaks of the "spooky ability of mathematicians to anticipate structures that are relevant to the real world". This conference is about our spooky ability to do just that, to anticipate structures that are relevant to the real world, however spooky the real world might become.

It took me five years to figure out, to grasp, - understand - let me use the word resonate - these lines of Heraclitus: and I rephrase them in my own lines - "of all that which is dispersed haphazardly, the order is most beautiful." In the Fragments you read that these lines are incomprehensible as far as the Heraclitus scholars are concerned. They can not link it as a line of verse with other words in other lines in verse. I read it and in reading I knew it to be true. Knowing that only as experience is not very productive in a society that has no non-iconic medium for transmitting these kinds of experiences. In order to make this experience productive; read: make it politically viable and socially constructive - in order to find ways of transmitting, ways of teaching experiences like this - we textualise them. We find analogies; we read initial lines as metaphor, as metonymy.

I went for a walk one day in the woods near F., in the Belgian Ardennes. A beautiful walk it was, steep down, hued autumn colours, leaves fading into black. In the quiet meadow that we passed I saw autumn leaves, small twigs, pebbles sometimes - hurdled into the most beautiful of patterns by the strength of water moving. I looked hard realizing there was indeed no other way of arranging them.

I recognized leaves as data. I recognized data as data. And I recognized the inability to find a way to come to terms with Heraclitus' line without walking, without taking a stroll in the woods and look around you, look around you and find the strength of streams arranging.

Rob van Kranenburg - Reader Text 02

I was searching dance message boards and discussion groups everywhere for an interesting email volley or "thread"—VoiceofDance, Tribe.net, Yahoo.com, criticaldance.com, newdance.com, edfring.com (the Edinburgh Fringe Festival) etc.—and given up, when by chance Rob van Kranenburg sent this along with the permission to print his abstract "Sleeping Giants." New York University Forum discussion groups are by subscription and meant mainly for faculty, staff, and students, although others can subscribe by request. Performance Studies Discussion Group, New York University

Mark van Doorn's question below, to Schechner, testifies to the deep entanglement of products, services and embodied interaction in such a way that we can speak of a move from 'usability' (individual interaction) to 'sociability' (embodied connectivity).

www.forums.nyu.edu **EXCERPTS**

Date: Mon, 08 Mar 2004 16:38:33 +0100

From: mark.van.doorn

Subject: media enhanced environments designed to support everyday life rituals

Dear Mr. Schechner,

My name is Mark van Doorn and I work as a scientific researcher at Philips Research in the Netherlands. In particular I do computer science research in a field known as

Ambient Intelligence. Ambient Intelligence (AmI) is a vision on the future of consumer electronics that refers to the presence of a digital environment that is sensitive, adaptive and responsive to the presence of people. The goal of AmI is to make people perform their daily tasks better by supporting them with interactive media applications. To give an example, when a child picks up his toothbrush, a cartoon could be projected in a bathroom mirror that invites him to brush his teeth for two minutes. In our approach, we view AmI as a personal story that emerges out of the continuous interaction that a user/actor has with what we call an 'ambient narrative' that has been written in advance by an experience designer. An ambient narrative is basically an interactive narrative that is situated in the realworld like the script of a live action role playing game but augmented with digital interactive media (somewhat like the special effects that add to the drama in a theater play or movie).

Before you can augment performances with interactive media applications, you need to have an understanding of what performances are and what it means to perform. I really enjoyed reading your book "Performance Studies: An Introduction" because it gave some basic answers to these questions in an understandable manner. I was wondering if you might know about any specific research in performance studies that investigates the role of digital media in relation to everyday rituals or performances in professional service environments (hospitals, hotels, shopping malls and so on).

Understanding how to write these kinds of ambient narratives will be a multidisciplinary exercise that requires not only knowledge of interactive media design but also interior & product design, architecture and performances in general. I can see that this understanding becomes increasingly relevant as we move into what some call an experience economy! .

kind regards,

Mark van Doorn"

Media Interaction

Philips Research Eindhoven

From: Theresa K Smalec

To: "Performance Studies Discussions"

... you suggest (above) that the goal of AmI is in fact to help humans "get with the program": to help them excel in performing boring tasks like brushing one's teeth, or opening one's door by talking to it. I am not so sure that I want to go to the mall and talk to cans of paint. I am also not sure that I require an "intelligent" doorknob, since I am (usually) intelligent enough to use my apartment keys. Finally, I am not sure that I want my kids learning how to improve their teethbrushing skills by interacting with a bathroom mirror... Do you see what I mean? If this great interactive technology is out there, then why can't humans figure out something more interesting to do with it than sticking in shopping malls and professional service environments?

From: Theresa K Smalec

To: "Performance Studies Discussions"

Date: Fri, 12 Mar 2004 21:07:57 -0500

Hi Again,

Apology: it's not that these recent applications of AmI are uninteresting (as I hastily suggested before). Rather, they are somehow deeply unnerving.

To think about microprocessors being implanted into "everyday objects" like the ones named in the excerpt at the bottom of this page is very strange: how can microprocessors be implanted into things like furniture or paint?

And then to think about "ambient narratives" being designed for "everyday rituals" like brushing teeth, shopping, checking into hotels, visiting hospitals, etc... is even stranger. If the point is to help employees at such venues do a better job, then who am I to argue with improved customer service? But a lot of this technology seems geared towards cutting costs, cutting out human error, and cutting out human experience in the process. Am I wrong here?

In my understanding of "performance," it is hard to appreciate without human agents/human screwups. In the course of making a play, you often end up "keeping" the things that happen during rehearsal by mistake. AmI does not seem to appreciate mistakes. Also, when I think about interacting with the environment in a "personalized" way, I think about going for a walk in the city, along my favorite and notsofavorite streets, bumping into all sorts of pleasant and irritating scenarios.

I think my problem with this technology is that it suggests the possibility of interacting with ONLY those things/environments/people that make me feel happy, secure, and comfortable. If that's the point, then why not just stay in bed all day with my preferred cats and watch my preferred t.v shows? But I am just griping now. Maybe I need to learn more about this technology rather than being afraid of it?

Date: Sat, 13 Mar 2004 13:36:54 +0100

To: "Performance Studies Discussions"

From: Rob van Kranenburg

Subject: Re: Apology for rash characterization of AmI technologies

Hi Theresa and list,

You are quite justified in your hesitations and in your being unnerved. After all, for quite some number of people cultural studies as a field has become just another marketing tool. We don't want any of this indeed to happen with performance practice and studies: "In Smile, You're on InStore Camera, Erik Baard describes how the web shopping process of following your customer every step of the way, might now become effectively used in an ordinary supermarket: "The algorithm looks for shapes of people and (passes) the same individual off from camera to camera by, for example, looking for a yellow color leaving the left side of one camera view to enter the overlapping right side of the next. " The algorithm is tuned with pressuresensitive carpets. Neither Identix (formerly Visionics), nor the originator of the pressuresensitive magic carpet, MIT Media Lab researcher Joe Paradisso, thought of these ways of using their work for tracking consumers: "I was thinking of music. I never thought about this for retail at all," said Paradisso, who has designed performance spaces where footsteps trigger bass or percussive sounds and torso, head and arm movements elicit higher, 'twinkling' notes." "Smile, You're on InStore Camera", by Erik Baard

<http://www.wired.com/news/privacy/0,1848,54078,00.html>

It is definitely not the idea to reinvest a sterile theorypractice debate, having people taking a deep look at people's lives and rituals in order to tailor specific products to their supposed needs.

...

"Maybe I need to learn more about this technology rather than being afraid of it?" Maybe we all do before it will be only described and formatted at the level of code and nodes as in logistics and retail needs. These new technologies will reformat our environments and our ways of organizing so very profoundly that we need all the k[on]text, all the liveness, all the very humanness, all our corporeal literacies to invest it with, well, yes what do we call it? Passion? Love? Trust? Definitely not the dominant feelings that are around now, which are mistrust, distrust, fear and uncertainty, If you want to read science fiction just take a look at what New Yorks Police Captain Cowper is thinking about as concrete problems:

http://www.google.be/search?q=cache:Ts_O71KgpDYJ:www7.nationalacademies.org/cstb/wireless_ppt_cowper.pdf+cowper+ppt+wireless&hl=nl&ie=UTF8

After all, "Nacirema" <http://www.msu.edu/~jdowell/miner.html>

can happen again, only not as text now, but as our everyday life,

Greetings, Rob

From: Theresa K Smalec

To: "Performance Studies Discussions"

Date: Tue, 16 Mar 2004 12:03:10 •0500

Subject: RFID Objects as Props: D.W. Winnicott?

Dear Mark,

<http://www.grenoblesoc.com/proceedings03/Pdf/Van%20Loenen.pdf>

The article you sent is fascinating! I'm shocked by the amount of research that has gone into studying the kinds of interactive situations that human "actors" will feel comfortable

in, and the kinds of scenarios that will make them feel uneasy. (For example, people get nervous about talking to their walls, but they feel good about handling a magic

wand)!

I laughed with delight when I came to the section about the "magic wands" that make tinkling sounds when humans pick them up. This human fascination with being able to manipulate "magic" and "power" is very basic, I think: it's something that goes back to the earliest days of childhood.

Do you know a theorist of human behavior named Donald Winnicott? Please click on the link below and scroll down to the section about "Transitional Objects." I think Winnicott's studies of human relations to "transitional objects" may help us to understand why humans desire the type of interactive and "intelligent" technology that you describe.

We want our transitional objects back! We want objects that allow us to relate our "subjective" (inner) reality to the "shared" reality that other people can see, that can be objectively observed.

<http://www.wkac.ac.uk/edstudies/archjun02/level%20one/WIN.htm>

Performance art and theatre are one way of regaining one's childhood relations to a "transitional object." Through the process of working on a play, we turn our diverse, subjective realities into a "shared" reality that other people (other members of the cast, as well as the audience who ultimately comes) can see. This "shared" reality may not always be "objectively" observed, since some people will love it and some will hate it, but it is definitely there. It can be seen and experienced.

I am curious what you think: is Ami technology a more expensive, more sophisticated, more private means of "staging performance?" Or is it more like having an "imaginary friend" that is actually REAL? Of course, one obvious difference between the scenarios described in your article, and those that transpire in the theatre, is that the former take place in one's living room, whereas the latter usually take place in a public space.

In the context of one's living room, the "audience" usually consists of family members or friends: people who know most of your tricks.

Unlike a paying audience at the theatre who comes to see the magic "once," the people who live with you everyday may not be the most enthusiastic audience when you try to demonstrate your magic for them. "Shut up, honey! Can't you see I'm busy right now?"

Yet even as the performance may or may not be appreciated, there seems to be no denying it: Ami technology allows people to turn their homes into a sort of "theatre" where you can conjure up personal memories/realities by waving a magic wand: thus invoking favorite photographs, favorite songs, or favorite television programs.

I love your "haunted house" comment! That's the kind of Ami technology that would really make your friends pay attention when they came over. Instead of conjuring up favorite photos, imagine that you conjure photos of a horrible accident, or photos of absolute strangers who nobody knows. Instead of your favorite songs, you wave the magic wand and hear the sounds of the ocean, or dogs howling, or the sounds of a carnival. Instead of your favorite television programs, you conjure up images of foreign countries, warzones, cemeteries, beautiful fields of flowers.

I like the idea of "everyday rituals" that suddenly become full of unexpected surprises, twists and turns: kind of like going to the theatre!

UbiScribe: Collocollaboracontentquery?
Public colloquium
Date: Sunday 15 April, 10.00 – 18.00
Location: V2_
Co-produced by V2_ and the Jan van Eyck Academie

About UbiScribe

UbiScribe is a nomadic research project about pervasive publishing in networked media. This public colloquium presents topical issues raised from current research conducted for UbiScribe, at the Design Department of the Jan van Eyck Academie Maastricht. The work of four UbiScribe researchers – Jouke Kleerebezem, Arie Altena, Sandra Fauconnier and Tsila Hassine – is presented in dialogue with practices, thoughts and projects by several international guests.

Moderator:

Florian Cramer (D/NL), course director, Piet Zwart Institute
<http://cramer.plaintext.cc:70/>
<http://pzwart.wdka.hro.nl/mdr/research/fcramer/>

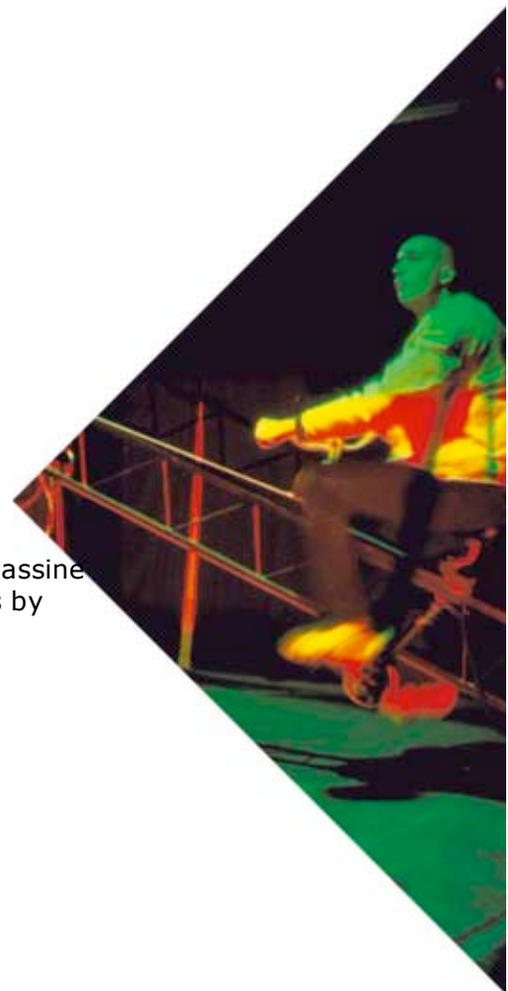
Paired presentations:

Jouke Kleerebezem (NL/F), artist
<http://www.nqpaofu.com>
and
Paul Perry (NL), artist (tbc)
<http://www.alamut.com>

Arie Altena (NL), researcher
<http://www.ariealt.net>
and
De Geuzen (NL), artists' collective
<http://www.geuzen.org>

Sandra Fauconnier (B/NL), researcher and archivist
<http://www.spinster.be/participation>
and
Saul Albert (UK), artist and cultural producer
<http://www.twentiethcentury.com/saulcv>
<http://thepts.net>

Tsila Hassine (IL), artist and media designer
<http://www.geuzen.org/tracer>
and
Jorge Blasco Gallardo (E), writer and organizer





Collocollaboracontentquery?

Früher (seit Platon und noch vorher) ging es darum, vorhandenem Stoff zu formen, um ihn zum Erscheinen zu bringen, und jetzt geht es eher darum, einen aus unserem

theoretischen Schau und unserem Apparaten hervorquellenden und sich übersprudelnden Strom von Formen mit Stoff zu füllen, um die Formen zu 'materialisieren'.

– Vilém Flusser in „Form und Material“ (1987), published in Vom Stand der Dinge: eine kleine Philosophie des Design, 1993

Vilém Flusser was early to recognize the informative power of (computational) media. Clearly in music and architecture many examples of computer-enhanced creation exist, but also in typography and text and image creation we find algorithmically processed emerging form. Most importantly, also new habits and types of interaction emerge as "forms" or ways of understanding, discussing and collaborating on artistic content. With this colloquium, we want to investigate how digital media and communication technologies provide production, processing and access to content in such a way as that by these technologies alone emerge manifest forms.

Where once form resulted from minute design, construction and fabrication, increasingly we see it wildly emerge from the technological (read: computational) processing of data, providing abundant proposals for designers, artists and authors to be thoughtfully selected and proceeded in cultural production.

Program

- 9.30 Doors open
 - 10.00 Introduction – Florian Cramer and Jouke Kleerebezem
 - 10.15 Arie Altena / De Geuzen
 - 11.30 Sandra Fauconnier / Saul Albert

 - 12.30 Lunch break with several options for the audience
 - Guided tour, DEAF07 exhibition, or
 - Participation in an informal "breakout meeting"

 - 14.30 Tsila Hassine / Jorge Blasco Gallardo
 - 15.45 Jouke Kleerebezem / Paul Perry (tbc)
 - 16.45 Report of breakout meeting and plenary discussion
 - 17.30 End
-

DEAF07 'Interact or Die' Seminar Programme



Participants' biographies



Alain Depocas (CDN)

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. After studying art history at the Université de Montréal, he worked from 1991 to 1999 as a researcher and then documentalist at the Musée d'art contemporain de Montréal (MACM). Among other duties there, he was responsible for the MACM Media Centre's Web site and was involved in developing a contemporary art thematic scan project. From 2002 to 2004 he codirected the Variable media Network in the context of a partnership between the Guggenheim Museum in new York and the Daniel Langlois Foundation. It's also in the context of this project that he co-edited in 2003 a publication entitled Permanence Through Change: The Variable Media Approach. Since 2005, he is the Research Director of DOCAM: Documentation and Conservation of the Media Arts Heritage, an important international multidisciplinary research alliance involving many universities and museums.



Alejandra Pérez Núñez (CL)

Elpueblodechina a.k.a. Alejandra Perez Nunez is a sound artist and performer working with FLOSS tools, DIY electronics and critical writing. She has a degree in psychology and aesthetics from Universidad Catolica de Chile and a M.A. in media design from Piet Zwart Institute in Rotterdam.

She is developing a practice with radio transmitters and radio performance, recycling content from internet radios like chilean feminist online radio, Radio Numero Critico (<http://radionumerocritico.cl/>). She is currently based in Europe where she has worked in cartography and the activation of social networks with Barcelona based group RedActiva (<http://www.redactiva.org>), local graffiti writers (i.e.1984) and cartography practitioners around mapOmatix (<http://mapomatix.sourceforge.net/>). She makes collaborations with Universite Tangente, okno.be and works as a freelance for V2_organisation for the unstable media. As a performer she is developing her own instruments to improve expression and free gestures from the tyranny of Human Computer Interface. She was recently a resident at the theremin center in Moscow where she was researching on sensors, radio and history of russian technology based arts.



Dr. Alma Schaafstal (NL)

has over twenty years of experience in the field of training and simulation, from a number of perspectives: research, research management, business development, and consultancy. Some of those years were spend abroad: University of Manchester, UK, Carnegie-Mellon University, Pittsburgh, PA, and more recently the Naval Air Warfare Center Training Systems Division (Orlando, FL). She is currently Business Director of the Center for Advanced Gaming and Simulation and project manager of the GATE-program (Gaming for Training and Entertainment), recently awarded with 10 mio Euro from the Dutch Government.



Anne Nigten

is the manager of V2_Lab, the aRt&D department of V2_, Institute for the Unstable Media in Rotterdam, the Netherlands. ANne is lecturing on research and development in the interdisciplinary field from an art perspective. She is advisor for several media art and science initiatives in Europe and board member of ISEA. She completed her PhD at the University of the Arts London (UK), and frequently publishes papers on art, engineering and (computer) science collaboration and software development. Before her current position at V2_ she has been working as an independent media artist, and simultaneously fulfilled several management jobs for the media art sector in the Netherlands.



Anton Koning

(born 1968) received his M.Sc. in Computer Science from the University of Amsterdam in 1991, specializing in Robotics and Image Processing. His Ph.D. research on parallel volume visualization algorithms was done at the Computing Vision group of the University Hospital Utrecht. Having received his Ph.D. in 1996, he worked as a software engineer for SPC/Vision and Applicare Medical Imaging. From 1997 to 2003 Anton worked at SARA Computing and Networking Services as a consultant in the areas of high performance computing, visualization and virtual reality. Currently he is a research scientist and head of ICT at the Department of Bioinformatics of the Erasmus MC University Medical Center Rotterdam. His research interests include the use of virtual reality techniques for abstract and clinical data visualization, volume rendering and data mining.

Antony Hall (UK)

MA Art as Environment at Manchester Met University, Antony Hall investigates the way we interface with technology, visually physically and ideologically, and how these interactions effect us creatively and socially. Often working in collaboration with scientists and technologists, the work takes the form of long-term research projects, residencies, performance, web and sound art.

The ENKI project explores cross species communication, interaction, healing, diagnostic and therapeutic possibilities of electronically interfaced live electrogenic fish.

He is a founding member of the the 'Owl Project' (with Simon Blackmore & more recently Steve Symons), creating electronic music, instruments (iLog , and Log1k) and other physical computing projects. They regularly perform in the UK and Europe. Artist in residence, University Manchester Institute for Science and Technology - 2002-2003. 'Rouge Wave' FACT Liverpool. Artist in Residence Manchester Museum (Alchemy program 2004-5). Biotech Art workshop, The Arts Catalyst / Symbiotica, Kings College, London 2005. ENSADs Interactive Research Laboratory (ARI), Paris, Jan-March 2006 (Mapxxl, Pépinières program).



Armando Menicacci

is a musicologist and a dance scholar. He has studied several years of dance (Vaganova technique) piano and music composition in Italy. Has a BA in History of Music at the Rome University "La Sapienza" and a PhD in Paris 8 University on the use of digital technology in dance creation, research and education. Member of Anomos he organized with Emanuele Quinz a section of the international symposium ISEA (2000), on the new interfaces between body and machines. He's the director of Mediadanse, Paris 8 Dance Department laboratory (created with the support of the Anomos assiciation) mainly oriented towards now relationships between research, creation and pedagogy in dance and digital media. His last book is La Scena Digitale. Nuovi media per la danza (Venezia, Marsilio, 2001) edited with Emanuele Quinz is about the relationship between dance and new media. He's actually also working for different institutions and choreographers as an artistic consultant. As an artist he has done two interactive installations (Terra incognita: Fortaleza shown at the Museum of Contemporary art in Fortaleza, Brazil in 2005 and Terra Incognita: Paris shown in the exhibition "en:trance" in the Paris Observatory in 2006). He also has been leading a group that made website about generative dance score (www.under-score.info) and a choreography based on custom software shown at the Encontros Festival in Recife, Brazil in 2006.



DanCo yote (USA/Second Life)

An alumni of the San Francisco Art Institute, DC Spensley has lived

and worked in this most tolerant and beautiful of North American cities for 20 years. Co-founder of quasi art movements like "The Gomi School" and "Critical Mass", Spensley's latest project spoofing the meta-narrative is called Hyperformalism which describes formalist abstraction in a hyper construct. These neologisms are descriptive of the artist's perceived place in the larger context of cultural production, part "art movement" part marketing appliance and narrative license to create visual, aural and conceptual cohesion from the critical chaos of postmodern pluralism. A polymath, the artist wears the hat of writer, director, cinematographer, composer, performance artist and most recently has appeared as the avatar DanCoyote Antonelli in the virtual reality simulation entitled Second Life. Spensley professes to be the same artist in both worlds and has exhibited recently at the ZeroOne/ISEA conference in San Jose California, the Bumbershoots Festival under the auspices of Frye Art Museum of Seattle and numerous other venues in Second Life and real life since DanCoyotes birth in April of 2006.

Spensley/DanCoyote's ZeroG SkyDancers perform in Second Life and are often projected into real world venues, spanning the divide between continuums. The SkyDancers are a cross between water ballet and aerial acrobatics and have been said to invoke a sense of wonder and pageant similar to Cirque du Soleil.



David Garcia (NL)

is

Professor of Design for Digital Cultures, University of Portsmouth /Hogeschool voor de Kunsten Utrecht. His work combines making

personal installations, videotapes and TV programs, together with extensively published theoretical writing on critical media and Internet culture. This work is combined with organizing large-scale public events in the form of conferences and exhibitions. David is the founder and co-organiser of The Next 5 Minutes Festival for Tactical Media (94-2003) a series of international conferences and exhibitions on electronic communications and new social movements. Recently he has curated the international exhibition and symposium of art and media theory entitled 'Faith in Exposure' for the Dutch Media Institute. And April 2007 will see the launch of a book he has co-edited called 'Uncommon Ground' which maps the volatile landscape of cross-sector collaboration. He is currently developing the Tactical Media Files a living archive dedicated to tracking the changing shape of 'tactical media' from its inception and early theorisations in the 90's through to the present day.



Eric Kluitenberg

is a theorist, writer, and organiser on culture, media and technology.

He is head of the media program at De Balie - Centre for Culture and Politics in Amsterdam, where he also co-ordinates the CultureBase / Living Archive research trajectory. He lectures and publishes extensively on culture, new media, and cultural politics throughout Europe and beyond.

He taught media theory at the Institute for Interactive Media at the Hogeschool van Amsterdam, the New Media program of the University of Amsterdam, and for the post-graduate education programs in art & design and new media at Media-GN / Frank Mohr Institute and Academy Minerva in Groningen. He also worked on the scientific staff of the Academy of Media Arts Cologne.

Since 1988 he has been involved in a series of important international art and new media events, conferences and festivals.

Recent publications include *The Book of Imaginary Media* (2006) and the theme issue *Hybrid Space of Open*, *Cahier for Art and the Public Domain* (2006).



Eric Postma

is a professor in Artificial Intelligence at Maastricht University, The Netherlands. He received his M.Sc. at the University of Nijmegen and defended his Ph.D. at Maastricht University. His research focusses on machine learning, situated agents, image recognition, and cognitive modelling. His main interest is in understanding how intelligent behaviour in natural and artificial systems emerges through the interaction with the environment. In addition, he studies how artificial intelligence can support art experts in their analysis of paintings. Prof. Postma has published a large number of scientific papers on these subjects.

Florian Cramer (D/NL), born in Berlin in 1969, Course Director of the Media Design M. A. programme at Piet Zwart Institute, Willem de Kooning Academie Rotterdam, studied and taught Comparative Literature, writer on (among others) experimental and computational arts.<http://cramer.plaintext.cc>



Gazira Babeli

was born in Second Life on 31st March 2006. Second Life is a 3-D virtual world entirely built and owned by its residents. It is totally based on the religion of Gadgets just as the world we consider as real... or Western.

Gazira caused a stir with her code performance "grey goo", when Second Life was

overwhelmed by a flood of self-replicating objects, melting down the Linden Servers. "Grey goo" is shorthand for an apocalyptic nano-gone-wrong scenario wherein nanoassemblers replicate so profligately that they reduce the world to slurry. "Unlike other avatars," explains curator and art critic Domenico Quaranta, "Gazira doesn't pretend to be in a world made of objects and atoms, she's aware to be in a world made of codes and to be part of the code herself." Other works include Come To Heaven, DONTsay..., niceQUAKE, Singing Pizza, Second Soup, Performative Guns and ULTIMATE SUBMISSION. Her work was covered in Slatenight magazine, The AvaStar, Second Life Insider, We make money not art, La Stampa and El Pais. Gazira is also a member of the Second Life performance group Second Front, which might be the first example of Second Life as the embodiment of a "native" artistic proposal.

Graham Smith (CDN/NL) is an artist and inventor who has been creating both art and science using his robotic, virtual reality, photographic and telepresence projects. He has exhibited his art work in Canada, United States, Mexico, Brazil, France, Italy, Netherlands, Sweden and Germany. His co-invention PEBBLES (Providing Education By Bringing Learning Environments to Students) is currently installed in over 90 hospitals and schools around the world and links sick children to their learning environments via a videoconferencing robot.



Herman Hintzen (NL)

(1966)

likes to unleash his creativity in the world of entrepreneurship. After having started up several businesses himself, in 2005 he founded HENQ Invest with the aim to support startup tech companies in their early stage. To this end a 6,5 million fund was raised, part of which has by now been invested in several projects.

Ine Poppe (NL) (1960, NL) works in Amsterdam as an artist, writer, director -has her own company IP-productions. As a journalist Poppe writes extensively about digital culture. At the moment for the Art Section of the major Dutch newspaper NRC-Handelsblad. She also has researched and directed television documentaries for National Television. She lectures on the arts and multimedia and is Professor on Art Academy, Willem de Kooning in Rotterdam. Her documentary Hippies from Hell about Dutch Hackers was shown at the International Documentary Festival Amsterdam 2002, at several Universities, and at the exhibit WorldInformation.org. Poppe also wrote scenarios for several computer games, in 2002 for the Teylers Museum in Haarlem.

Poppe was winner of the 2002 Geneva-Europe Grand Prize for TVscenarios, with the scenario of Necrocam, about a webcam inside a coffin, an idea from her son Zoro, a

computerfreak. NY-Times Matt Mirapaul wrote about Necrocam after the film was online () and Poppe discussed webcasting on BBC-radio 4. She is in the process writing another teleplay about three women who make a humanoid for the Dutch National Broadcastcompany VARA.



Jan Willem Dol (NL), (1964) is coordinator of the Communications Department of Greenpeace Netherlands. Greenpeace is an international non-profit organisation, with a presence in 40 countries across Europe, the Americas, Asia and the Pacific. As a global organisation, Greenpeace focuses on the most crucial worldwide threats to our planet's biodiversity and environment. During his 7 years with Greenpeace, Jan Willem has been involved in public campaigns on saving the forests, climate change, shipbreaking, genetic engineering and toxic chemicals. Before joining Greenpeace he studied political science and worked for Friends of the Earth Netherlands (Milieudefensie).



Jo FRGMNT Grys (D)

Born 1963 in Essen/Germany. Studied chemistry, philosophy, mineralogy etc at the Justus-Liebig-University of Giessen then more & more turned towards arts using scientifically influenced thinking to investigate formation of structure from noise & order, from error & law and feedback as his main artistic themes. Grys is working with videosnow, electronics, computers, body & brain. Performs with noisiV (self-made electronics and video manipulations), TOB (transmitters and self-made electronics) since 2002 and 2VM (VJ team) since 2002. Grys makes electronic installations & workshops since 2004.

Jorge Blasco Gallardo (E)



José van Dijck (NL)

is a Professor of Media and Culture at the University of Amsterdam and Chair of the Media Studies Department. She published a number of articles and books on medicine, technology and media, including Manufacturing Babies and Public Consent. Debating the New Reproductive Technologies (New York University Press 1995), ImagEnation. Popular Images of Genetics (New York University Press 1998) and The Transparent Body. A Cultural Analysis of Medical Imaging (Seattle: University of Washington Press, 2005). Her new book, Mediated Memories in the

Digital Age is forthcoming with Stanford University Press (Spring 2007).

Jouke Kleerebezem (NL/F)



Julien Ottavi (F)

Studied

drums and percussions and photography at the Art school of Nantes. Since 1997, he develops composition works on voice and his transformation by the computer.

Founder, artistic programmer, audio computer researcher (network and audio) and sound artist of the experimental music organisation APO33 created in 1997 with the aim of promoting some of the new types of music and sound practices that do not receive large media coverage. These kinds of music and sound practices include those called electronic music, concrete music, contemporary written music, sound poetry, sound art or those that have no name: we group these multiple practices under the name of audio art.

Keith Baker

Started his career in Research with GEC where he was very active in self-test and Design for Testability, and was one of the founders of the JTEG testability initiative. later IEEE 1149.1.

At Philips Research was very active in design for testability tools and the method of testing low power ICs called IDDQ. Since 1999 he has focused on multimedia applications and holds 15 patents in this area.

He has lead a number of Eureka project related to DVB/DVB technology, including early integrations of MPEG4-AVC in STB technologies. Since 2003, in the context of various Eureka projects has explored the value of P2P networks for long-tail content distribution. He has been fascinated by the interaction between the Systematizing groups in the population , and how in the last 200 years they have use science fiction through the media to focus the technical efforts of society, to both good and ill.

Machiel de Rooij (NL)

ICT~Office



Mark van Doorn (NL)

Scientific researcher, Media Interaction - Philips Research, Eindhoven. Since 1999 working for Philips Research on the topic of Ambient Intelligence and involved in ExperienceLab, the usability and feasibility center at the High-tech Campus in Eindhoven. Originally started in the area of multimedia information retrieval and web presentation technology for consumer electronics applications, but over time shifted towards intelligent media environments and in particular natural ways of authoring "ambient narratives". Prior

to working for Philips Research, studied computer science at the University of Twente in Enschede, the Netherlands.



Marnix de Nijs (NL)

is an artist who explores the dynamic clash between bodies, machines and other media. His works include mainly interactively experienced machines that play with the perception and control of image and sound. He has presented his works at several national and international media-festivals and won prizes in Madrid, Linz, Berlin and Taipei. He was awarded the Witteveen & Bos Art and Technology Prize 2005 for his complete oeuvre.



Matthew Fuller (UK)

is David Gee Reader in Digital Media at the Centre for Cultural Studies, Goldsmiths College, University of London. He has worked with the artist groups I/O/D and Mongrel and with www.runme.org. His books include, 'Media Ecologies, materialist energies in art and technoculture', 'Behind the Blip, essays on the culture of software' and the forthcoming 'Software Studies: a lexicon'.

Michiel van der Haagen (NL)

is by training a biologist, who holds an MFA Computing in Arts and Design from Middlesex University, London. He is the principal developer of the CultureBase Content Management System of De Balie, which is scheduled for open source release as part of the larger MMBase.org project in the Fall of 2007. Currently he works as a researcher for the media department of De Balie and the University of Portsmouth (UK).



Mitchell Whitelaw (AUS)

is an Australian academic, writer and artist with interests in new media art and culture, especially complex generative systems and digital sound and music. His work has appeared in journals including Leonardo, Digital Creativity and Contemporary Music Review. His work on a-life art was published in

the book *Metacreation: Art and Artificial Life* (MIT Press, 2004). His current theoretical and creative work spans generative art and sonic and visual data-aesthetics. He currently teaches new media at the School of Creative Communication, University of Canberra.



Oliver Grau (A)

Professor for Image Science and Dean of the Department for Image Science, Danube University Krems www.donau-uni.ac.at/dis/

He is the author of *Virtual Art: From Illusion to Immersion* (MIT Press, 2003), editor of *Mediale Emotionen* (2005) and *MediaArtHistories* (MIT Press 2007) and founder of the pioneering international digital art archive www.virtualart.at



Rens Kortmann (NL)

(1975) is a games developer and environment researcher at CE Delft. He received his PhD in Artificial Intelligence from Universiteit Maastricht in 2003. His work translates the factual science of environmental economy and technology into stimulating, comprehensive policy simulations and Serious Games. Whilst playing games, traditional opponents commonly drop their arms - thus promoting an open dialogue on pressing issues including global climate change. Building realistic, but safe, playing grounds enables experts and laymen alike to explore environmental challenges and the opportunities to tackle them.



Rob van Kranenburg (NL)

Bricolabs, Eperience Design HKU, freelance innovation theorist. Rob van Kranenburg (1964) works part time at Virtual Platform, Dutch policy and network organization for e-culture, as co-director. In 2000 he went to Amsterdam to work as programmer on media education at the centre for culture and politics de Balie and as teacher-coordinator of the new media program in the Film and Television Studies Department at the University of Amsterdam. Feeling it was too young a field to predominantly historicize it, he moved to Doors of Perception and co-programmed with John Thackara *Doors 7*, *Flow*, the design challenge of pervasive computing. In 2003 he mentored a postgraduate course in performance, theatre and the arts at APT, Arts Performance Theatricality. As innovation consultant he is involved with negociability strategies of new technologies, predominantly ubicomp and rfid (radio frequency identification), the relationship between the formal and

informal in cultural and economic policy, and the requirements for a sustainable cultural economy. <http://oxossi.metareciclagem.org/moin/BricolabsNet>
<http://experiencedesign.hku.nl/index.php>



Roman Kirschner (A)

lives and works in Cologne and Vienna. He studied at the Kunsthochschule für Medien in Keulen, and together with Tilman Reiffen Volker Morawe founded the artist collective ////////////////fur///// that realized the well-known interactive installation Painstation. His work had been presented on various festivals and has won several prizes.



Sally Jane Norman, (NZ/F)

is a cultural theorist/ practitioner whose research is focused on live art and technology, author of studies for UNESCO, the French Ministry of Culture, and the French National Scientific Research Centre (CNRS). Docteur d' état (Paris III), co-/organiser of workshops, performances, and seminars exploring human interactions in digital environments at institutions including the International Institute of Puppetry - Charleville-M é zi è res, Zentrum für Kunst und Medientechnologie - Karlsruhe, Studio for Electro-Instrumental Music - Amsterdam, IRCAM - Paris. Engaged on EU Framework projects since 1997. From 2001-2004, Director General of the Ecole sup é rieur de l'image (Angoulême/ Poitiers). Currently Director of Culture Lab, a new interdisciplinary research facility at Newcastle University which hosts creative practice-led collaborations that extend and challenge uses of digital tools.

Sandra Fauconnier (B/NL) is an art historian (MA, Ghent University, 1997) with a background in architecture and a solid interest in information architecture and the social and political aspects of networked media technology. She has worked as a content and interface designer for Ghent University's teacher training department (1997-2000). At this moment, she is part-time media archivist at V2_, Institute for the Unstable Media in Rotterdam (NL), where she co-develops a metadata model for the description of electronic art and did research on the preservation of electronic art, on copyright issues, archival interoperability and Semantic Web technologies. She is also a researcher at the Jan van Eyck Academie Maastricht (NL), Design department, with a project about online participatory media. Additionally, she is a freelance tutor, researcher and advisor.

Saul Albert (UK) Is a Londoner who works with other people to make events, software, organisations and things which are not-just-art. He also writes on many mailing lists and wikis, and works with networks and groups such as the The People Speak. The University of Openess, Dorkbot, the Espians, the Open Knowledge Foundation, the World Summit on Free Information Infrastructures, NODE.London, and many others. As of 27/01/07 his current interests are: free information infrastructures, media metadata and the semantic web, critiques of participatory art/democracy/culture/technology, personal neologisms. <http://www.thepe.net>
<http://uo.twentiethcentury.com>



Sher Doruff (NL)

is

currently Head of the Research Programme at Waag Society in Amsterdam. She received her PhD from University of the Arts London/Central Saint Martins College of Art and Design/SmartLab in 2006. Her research investigates the role of collaborative interplay and creative processes in networked performance practice. She lectures and mentors in the Dance Unlimited MA program in Amsterdam and in what spare time remains, nurtures a modest artistic practice. Her career has spanned various sectors of the visual and performing arts including conceptual art, music composition, digital design and scenography, interactive installation/performance and software development. She has worked with digital performance technologies in collaboration with interdisciplinary artists and performance-makers since the mid-80s. From 1998-2004 she was a core developer for Waag Society's distributed performance software framework, KeyStroke/KeyWorx, curating artist projects in the Sensing Presence department. She has published numerous papers, edited a book on Live Art, and regularly lectures and presents in academic and artistic contexts.



Sophie Gosselin (F)

Artist-philosopher. Active member of APO33, artistic, technological and theoretical laboratory based in Nantes, in which she initiates and coordinates research projects linking art, science and technology (<http://www.apo33.org>). She is part, of the CIA (Cellule d'Intervention d'Apo33), artistic group in which she participates to the conception and setting up of the projects (<http://www.apo33.org/cia>). Her research work focuses on the relations between power and technology, through the analysis of urban and environmental mutations, media-activism and the free software/culture movement. She is actualy

working on the research space « Constellations », which aims to bring together independent researchers, artists and activists at an international level, around the issues of technological poetics and free culture (<http://www.constellatio.info>).



Stan Wijnans (NL)

is an interactive sonic artist, interactive performance researcher, MAX/MSP programmer and worked as manager of multi media studio S.T.A.N., as a professional sound engineer and bass guitar player. Her work investigates the human-machine relationship in interactive sound performances exploring (3D-surround) sound, choreography, visuals, robotics and sensor systems. She holds an MA in interactive robotics and sound performance (MiddleSex University UK) and received a full fee PhD University bursary at Bath Spa University in 2005 to investigate the practical and theoretical potential of mapping parameters from spatial body movement into interactive 3D-sound composition using Sensor Systems and the programming environment MAX/MSP/Jitter.

Workspace Unlimited (B) organization, founded by new media artist Thomas Soetens and architect Kora Van den Bulcke, is a mobile laboratory and creation space dedicated to experimental new media production and research, situated at the point where art, architecture and digital technologies converge to create new contexts of hybrid and augmented reality.

