Philip Dean, Media Lab at the University of Art and Design Helsinki (TaiK)

The Beta Lounge

The 2006 Ars Electonica Campus exhibition, the *Beta Lounge,* features the work of the Media Lab faculty of the University of Art and Design Helsinki, Finland (TaiK). The Media Lab was established in 1994. Since then it has been an extremely active player, as part of one of the world's leading universities of art and design, in the development of interdisciplinary Masters and Doctoral-level education, as well as international research & development. The lab's work encompasses the broad spectrum of subjects within the emerging fields of interactive digital media and digital design. The last 12 years have been a time of experimentation, searching and innovation. Today the Media Lab Helsinki is the most international university faculty in Finland; a community of over 150 persons with staff and students originating from all corners of the globe.

Within the context of academia the Media Lab is a complex hybrid unit whose efforts and results often defy simple explanation due to their multidisciplinary and multicultural nature.

The mission of the Media Lab Helsinki is to explore, discover and comprehend the new digital technology and its impact on society; to find and exploit the possibilities it opens to communication, interaction and expression, and to evaluate, understand and deal with the challenges it poses to design and creative production. The *Beta Lounge* exhibition aims to illuminate the challenges and results of the lab's ongoing mission according to its agenda of recent years. The agenda has changed and grown constantly during the lab's brief history. *New* Media are a 'fast moving target', they rely on new technologies and much of the potential of new media has also been realised through rapid development of technologies and their deployment and applications as mass-market consumer products.

As a faculty of an art and design university, the Media Lab Helsinki does not adhere to any one particular theoretical, cultural or philosophical standpoint. The education and research of the lab is a well-balanced mixture of theory and practice, of *minds on* and *hands on.* Within this area of design the nature of the resulting products is significantly different from traditional designs. Results exist typically in the constraints of computers and computer systems and are often best described as *software.* Their development, dissemination and critical evaluation cannot be based on traditional art and design practices and values. The development of new media has subsequently spawned new areas of art and design that demand knowledge exchange and research collaboration between groups of experts in diverse fields in an international context.

The *Beta Lounge* exhibition presents the work of Master (MA) students, Doctor of Art (DA) students and the Media Lab's four established research groups. This is not a retrospective show, but several alumni students have been invited to show their prized work in the exhibition.

Education within the Media Lab Helsinki at TaiK is typically problem-based and students are encouraged to experiment and develop innovative concepts for their joint projects. The interdisciplinary nature of the faculty is furthered by the involvement of foreign exchange students and students from other Finnish universities and other faculties of TaiK. Students are encouraged to find their own particular strengths and areas of expertise. There is no one formula for study in the lab and there is no one particular sector of industry in which graduates are expected to find employment. Graduates are expected to gain positions within companies and organisations where they can influence development processes and bring their multi-disciplinary and multicultural understanding into play. Some graduates form companies and others undertake research careers.

The development of research has played a major role in the Media Lab since 1995. Within the

numerous national and international R&D projects the Media Lab's responsibility has typically been in digital design, experimental practice-based production, design research and also in project creation, leadership and management. Considerable R&D efforts have been made within applied research framework projects of the EU's Information Society Technologies programmes (IST) as well as other Finnish and EU programmes. The projects shown fall into many fields; in digital cultural heritage, e-learning, advanced interactive audiovisual narrative systems as well as the enablement of people to take advantage of digital development and to design their own lives with digital tools.

Finland is the birthplace and home to Nokia, and a land where nowadays innovation in the field of mobile technologies is expected to be prevalent. As may be seen in the *Beta Lounge* the students and staff of the Media Lab are increasingly interested in designing mobile devices and experimenting with new interaction possibilities in which the phone becomes an input device and/or terminal connecting people to local and global systems of information, collaboration or to entertainment or scholarly content.

Since 1994 the Media Lab Helsinki has served as a pioneering and efficient experimental environment, a *Beta Lounge,* for study and the development of New Media. The lab's students, designers, researchers and artists attempt to develop meaningful solutions that apply mastery of the new possibilities and technologies within the context of people's real needs and desires.

Die Ausstellung *Beta Lounge* auf dem Campus der Ars Electronica zeigt die Arbeit des Media Lab der Universität für Kunst & Design Helsinki (TaiK), Finnland. Seit seiner Gründung im Jahr 1994 spielt das Media Lab als Fakultät einer der führenden Universitäten für Kunst & Design eine äußerst aktive Rolle in der Entwicklung einer interdisziplinären universitären Ausbildung sowie im Bereich internationale Forschung & Entwicklung. Das Media Lab befasst sich mit dem breiten Themenspektrum, das sich in den neu entstehenden Wirkungsfeldern der interaktiven digitalen Medien und des digitalen Designs eröffnet. Die letzten zwölf Jahre waren eine Zeit der Experimente, der Suche und der Innovation. Heute ist das Media Lab Helsinki die am stärksten international ausgerichtete Universitätsfakultät Finnlands, deren insgesamt über 150 Mitarbeiter und Studenten aus allen Teilen der Welt kommen.

Das Media Lab ist im Kontext der Academia ein komplexer Hybrid, der aufgrund seines multidisziplinären und multikulturellen Charakters nicht so einfach zu beschreiben ist.

Die Aufgabe des Media Lab besteht darin, die neue digitale Technik und ihren Einfluss auf die Gesellschaft zu erforschen, zu sondieren und zu verstehen, Möglichkeiten, die diese in den Bereichen Kommunikation, Interaktion und Ausdruck eröffnet, zu entdecken und auszuwerten, sowie die Herausforderungen, vor die sie das Design und die kreative Produktion stellt, zu evaluieren, zu verstehen und zu bewältigen. Die *Beta Lounge* möchte die Herausforderungen aufzeigen, denen sich das Media Lab gemäß seinem Programm der letzten Jahre gestellt hat, sowie die Ergebnisse dieser Auseinandersetzung. Das Programm hat sich verändert und wurde in der kurzen Geschichte des Media Lab ständig erweitert. Neue Medien sind ein „sich schnell bewegendes Ziel", sie sind von neuen Techniken abhängig, wobei ihr Potenzial zu einem Großteil auch durch die rasche technische Entwicklung und die Anwendung der Neuerungen als Konsumgüter für den Massenmarkt verwirklicht wurde.

Als Fakultät einer Universität für Kunst & Design ist das Media Lab Helsinki keinem bestimmten theoretischen, kulturellen oder philosophischen Standpunkt verpflichtet. Ausbildung und For-

schung beruhen auf einem ausgewogenen Verhältnis von Theorie und Praxis, von Kopf- und Handarbeit. Die in diesem Rahmen entstehenden Produkte unterscheiden sich deutlich von traditionellen Entwicklungen. Sie existieren ausschließlich innerhalb von Computersystemen und lassen sich häufig am besten als Software beschreiben. Ihre Entwicklung, Verbreitung und kritische Einschätzung kann daher nicht auf den traditionellen Methoden und Werten von Kunst & Design basieren. Die Entwicklung neuer Medien hat in weiterer Folge auch neue Möglichkeiten im Bereich Kunst & Design hervorgebracht, die Wissensaustausch und Forschungskooperation zwischen Expertengruppen unterschiedlicher Fachrichtungen in einem internationalen Kontext verlangen.

Die *Beta Lounge* präsentiert die Arbeit von Studenten und der vier Forschungsgruppen des Media Lab. Sie versteht sich nicht als Retrospektive; vielmehr wurden mehrere Absolventen eingeladen, ihre ausgezeichneten Arbeiten in der Ausstellung zu zeigen.

Die Ausbildung am Media Lab Helsinki ist problemorientiert, die Studenten werden ermutigt, zu experimentieren und innovative Konzepte für ihre gemeinsamen Projekte zu entwickeln. Der interdisziplinäre Charakter der Fakultät wird durch die Einbindung von Austauschstudenten, von Studenten anderer finnischer Universitäten und Fakultäten des TaiK verstärkt. Die Studenten werden darüber hinaus ermutigt, ihre eigenen Stärken und Fachgebiete zu entdecken. Das Studium am Lab folgt keinem schematischen Lehrplan, und es wird auch nicht erwartet, dass die Absolventen eine Beschäftigung in einem bestimmten Industriesektor finden. Man hofft vielmehr, dass sie Positionen in Firmen und Organisationen einnehmen, in denen sie Entwicklungsprozesse beeinflussen und ihr multidisziplinäres und multikulturelles Verständnis einbringen können. Manche Absolventen gründen auch eigene Firmen oder entscheiden sich für eine Laufbahn in der Forschung.

Die Entwicklung der Forschung ist seit 1995 ein Schwerpunkt des Media Lab. Im Rahmen der zahlreichen nationalen und internationalen Projekte zu Forschung und Entwicklung konzentrierte sich das Media Lab auf digitales Design, experimentelle praxisorientierte Produktion, Designforschung sowie auf Projekterstellung, Führungsstil und Management. Beachtliche Bemühungen wurden auch in Rahmenprojekten zu angewandter Forschung der IST-Programme *(Information Society Technologies Programmes)* der EU sowie weiterer finnischer und EU-Programme unternommen. Die gezeigten Projekte beschäftigen sich mit so unterschiedlichen Themen wie digitalem Kulturerbe, E-Learning, hoch entwickelten interaktiven audiovisuellen Erzählsystemen sowie der Befähigung von Menschen, von der digitalen Entwicklung zu profitieren und ihr Leben mit digitalen Werkzeugen zu gestalten.

Finnland ist die Geburtsstätte und die Heimat von Nokia, und ein Land, von dem heute Innovation im Bereich mobiler Techniken erwartet wird. Wie in der *Beta Lounge* zu sehen ist, sind die Studenten und die Lehrenden des Media Lab zunehmend daran interessiert, für mobile Geräte zu designen und mit neuen Möglichkeiten der Interaktion zu experimentieren, bei denen das Telefon zu einem Eingabegerät und/oder Terminal wird, das die Menschen mit lokalen und globalen Informations-, Kooperations- und Unterhaltungssystemen oder wissenschaftlichen Inhalten verbindet.

Das Media Lab Helsinki ist seit 1994 ein richtungweisendes und leistungsfähiges experimentelles Umfeld, eine *Beta Lounge* für das Studium und die Entwicklung Neuer Medien. Die Studenten, Designer, Forscher und Künstler des Lab versuchen sinnvolle Lösungen zu entwickeln, die die neuen Möglichkeiten und Techniken an die wahren Bedürfnisse und Sehnsüchte der Menschen heranführen.

Aus dem Englischen von Martina Bauer

██████ **Arki Research Group**

How will our everyday life be transformed by all the digital devices, networks and software that are invading our activities and environments? Is this development programmed by others or do we have ways to influence it? These questions motivate the work of the Arki research group.

"Arki" is a Finnish word for "everyday life", and expresses the focus of the group. Its work is not motivated by product design but instead by the interests, practices and the quality of life of individuals and those close to them.

The two main research and development directions of Arki are

• to find ways to enable more people to take advantage of the digital development and to design their own lives with digital tools, and

• to study the evolution of the media environment and design new interesting media formats and tools.

The 18-member group is involved in projects that envision future information environments and develop social media applications and tools for designing them. The activities are based on co-design with both future users and industry.

http://arki.uiah.fi

Wie wird sich unser Alltag durch all die digitalen Geräte, Netzwerke und Software-lösungen verändern, die in unser Umfeld eindringen und unsere Handlungen mitbestimmen? Wurde uns diese Entwicklung von anderen vorgegeben oder haben wir noch die Möglichkeit, darauf Einfluss zu nehmen? Auf Fragen wie diesen basiert die Arbeit der Forschungsgruppe Arki.

„Arki" ist ein finnisches Wort für „Alltag" und spricht das zentrale Thema der Gruppe an, deren Arbeit nicht auf Produktdesign ausgerichtet ist, sondern sich an den Interessen, Praktiken und der Lebensqualität von Individuen und ihrem Umfeld orientiert.

Die zwei wesentlichen Forschungs- und Entwicklungsansätze von Arki sind:

• Möglichkeiten zu finden, die mehr Menschen erlauben, von der digitalen Entwicklung zu profitieren und ihr Leben mit digitalen Werkzeugen zu gestalten, und

• die Entwicklung des Medien-Environments zu untersuchen und neue interessante Medienformate und -tools zu entwickeln.

Die aus 18 Mitgliedern bestehende Gruppe befasst sich mit Projekten, bei denen zukünftige Informationsumgebungen erforscht und gesellschaftliche Medienanwendungen und Tools für deren Gestaltung entwickelt werden. Prägend für die Aktivitäten ist die gemeinsame Gestaltung mit den zukünftigern Usern und der Industrie.

http://arki-uiah.fi

■ **Arki projects**

Arki Research group shows the following works in the Campus exhibition of Ars Electronica Festival 2006:

Mediaspaces creates insight about how the media environment changes in digital convergence, and what new media formats and social uses of media emerge, enabled by the new possibilities.

P2P-FUSION creates a peer-to-peer system for creative reuse and collaborative editing of audio-visual programs as well as new social media practices that take advantage of it.

Media Lab at the University of Art and Design Helsinki (TaiK).

ADIK studies different practices of communities and how they evolve in interaction with the rapid development of digital technology. How do people, through their practices, transform and complement new tools? How do new tools enable new practices?

EnComPAs is a EUREKA CELTIC project of 12 partners from 5 countries. Arki leads the codesign activities and develops multidevice media sharing applications.

ICING is an EU-IST project that develops e-Government solutions for Helsinki, Dublin and Barcelona. Arki develops the Urban Mediator, an interface for citizen interaction with the city.

Systems of Representation (SysRep)

The group was created in 1997 by Lily Díaz-Kommonen. The group conducts research into the representation of knowledge with particular emphasis on digital cultural heritage. Within this area, the research explores these topics:

- Visualization methods and tools
- Digital cartography
- Ontology design and implementation
- 3-D user interface design.

What is Digital Cultural Heritage?

Cultural heritage is a broad term used to refer to forms of cultural and artistic expression inherited from the near or distant past of a given country or cultural area. As precious evidence, cultural heritage is seen both as a record and manifestation of human presence throughout history.

In recent years, partly through the development of the Information Society with its associated trends of globalisation, growing interconnectedness and instant multi-modal communications, which simultaneously merge communities as well as erode the boundaries of traditional societies, the concept of digital cultural heritage evolved to reflect the use of digital practices in the recording and preservation of cultural heritage artefacts.

Key research projects:

Digital Facsimile of the Map of Mexico 1550 (1997–present)
Exploring Carta Marina (2002–2004)
Illuminating History, Through the Eyes of Media (1996–2000)

http://mlab.uiah.fi/www/research/research_groups/systems_of_representation

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Die Gruppe wurde 1997 von Lily Díaz-Kommonen gegründet und forscht im Bereich der Wissensrepräsentation mit Schwerpunkt „digitales Kulturerbe". Folgende Themen stehen dabei im Mittelpunkt:

- Visualisierungsmethoden und -tools,
- digitale Kartografie,
- Ontologie-Design und Implementierung,
- Entwicklung von 3D-Schnittstellen.

Was versteht man unter digitalem Kulturerbe?

Der Begriff Kulturerbe bezeichnet kulturelle und künstlerische Ausdrucksformen aus der jüngeren oder älteren Vergangenheit eines bestimmten Landes oder einer Kulturregion, die für eine Epoche oder künstlerische Entwicklung beispielhaft sind. Als wertvolles Relikt der Vergangenheit wird Kulturerbe sowohl als Zeugnis wie auch als Manifestation menschlicher Gegenwart quer durch die Geschichte gesehen.

Nicht zuletzt durch die Entwicklung der Informationsgesellschaft und die damit verbundenen Tendenzen der Globalisierung, der wachsenden Vernetzung und der Möglichkeiten multimodaler Direktkommunikation, die gleichzeitig Gemeinschaften zusammenschließt und die Grenzen traditioneller Gesellschaften unterminiert, entwickelte sich in den letzten Jahren der Begriff des digitalen Kulturerbes für die Verwendung digitaler Methoden bei der Aufzeichnung und Bewahrung von Artefakten des Kulturerbes.

Schlüsselprojekte in der Forschung:

Digitales Faksimile der Landkarte von Mexiko 1550 (1997–Gegenwart)
Untersuchung der *Carta marina* (2002–2004)
Geschichtsbetrachtung aus der Sicht der Medien (1996–2000)

http://mlab.uiah.fi/www/research/research_groups/systems_of_representation

■ Digital Facsimile of Map of Mexico 1550

Built around the notion of Design of the Artificial, this project by the Systems of Representation research group is a collaboration between the University of Art and Design, Media Lab, Helsinki University of Technology, the Institute of Photogrammetry, and Uppsala University Library in Sweden.

The project develops information technology tools and content in the area of digital cultural heritage. Among the tools created is an OpenGL interactive installation for the Map. The DisplayMap Tool that enabled exhibiting the map on the World Wide Web was developed in 2003.

This tool was refined into an advanced Open Source tool called ImaNote, now distributed through Savanna.

In 2005 a video narrative workshop was held with Universidad Iberoamericana de Ciudad de México, in which students created an anthology of Legends of the Historic Center of Mexico City that is licensed through Creative Commons.

The project won 1st Prize in the 2004 Digital Storytelling Competition sponsored by Art Center Nabi in South Korea with the collaboration of UNESCO and the International Council of Museums (ICOM).

Detail of the Digital Facsimile of the Map of Mexico 1550 attributed to Alonzo de Santa Cruz, Cosmographer to His Majesty Charles V of Spain. From the original in Uppsala University Library, Sweden.

Media Lab at the University of Art and Design Helsinki (TaiK)

■■■■■ **Crucible Studio for the Art and Design of Storytelling in New Media**

Crucible Studio is dedicated to exploring, defining and creating new forms of story-telling in dialog with contemporary and upcoming media technologies and traditions of performance and drama. Founded in 2002, the research studio is situated between the Media Lab and Media Centre Lume of the University of Art and Design Helsinki, which provides a unique environment where professionally equipped and maintained production facilities are linked with a content-led, practice-based and multidisciplinary research group. The experienced professional artists, scholars, designers and engineers, in collaboration with both Doctor of Arts (DA) and MA students, aim to deepen the emotional perception of interactive media through staging the drama for the interactor in a shared collective experience. The research takes place mainly through international, academic and corporate collaboration funded by the European Union's framework, cultural and IST programmes, while some basic and applied research is funded nationally by the Finnish Academy and the Finnish Funding Agency for Technology and Innovation, TEKES.
http://crucible.lume.fi

Das *Crucible Studio* widmet sich der Erforschung, Definition und Kreation neuer Formen des Geschichtenerzählens im Dialog mit aktuellen und zukünftigen Medientechnologien und Traditionen in Performance und Drama. Das 2002 gegründete Forschungsstudio befindet sich zwischen dem Media Lab und dem Media Centre Lume der Universität für Kunst & Design Helsinki, wodurch einer inhaltlich orientierten, praxisnahen und multidisziplinären Forschungs-gruppe ein einzigartiges Umfeld mit professionell ausgestatteten und geführten Produktions-einrichtungen zur Verfügung steht. Die erfahrenen Künstler, Wissenschaftler, Designer und Ingenieure arbeiten mit Kunststudenten zusammen, um die emotionelle Wahrnehmung interaktiver Medien zu intensivieren, indem sie das interaktive Drama als kollektive Erfahrung inszenieren. Die Forschung basiert in erster Linie auf der internationalen Unterstützung von Universitäten und Firmen und wird durch die Rahmen-, Kultur- und IST-Programme der Europäischen Union finanziert, während die Grundlagen- und angewandte Forschung teilweise von der Finnischen Akademie und der TEKES, der Technologieagentur Finnlands, unterstützt werden.
http://crucible.lume.fi

■ **New Millennium, New Media & Accidental Lovers**

New Millennium, New Media (nm2) is a collaborative research project which unites leading creative and technology experts from across Europe to address a great opportunity for businesses and consumers: how to develop compelling new media forms which take advantage of the unique characteristics of broadband networks.
http://www.ist-nm2.org/
Among the seven nm2 research productions is Crucible Studio's *Accidental Lovers* that is being tested with a mass audience during 2006–2007 through a series of national interactive broad-casts by the Finnish National Broadcasting Company (YLE Channel 1). The participatory and episodic black musical comedy explores the variations of a deadly love relationship between a 61 year old cabaret singer Juulia and her 31 year old pop star lover, Roope. Viewers affect the unfolding drama by sending SMS messages with their mobile phones to a system that triggers story events based on keyword recognition.

Photo by Heli Sorjonen

Roope (Lorenz Backman) singing a serenade to Juulia (Kristiina Elstelä).

Photo by Heli Sorjonen

Juulia's (Kristiina Elstelä) and Roope's (Lorenz Backman) wedding with the Fates (Mia Renwall, Minna Rimpilä, Riitta Elstelä).

Photo by Kebede Mergia

Solitary Juulia (Kristiina Elstelä) with her cat Pörhö.

Photo by Kebede Mergia

Mika "Lumi" Tuomola directing Kristiina Elstelä (Juulia) in a conclusion music video "Poikkisahattu nainen" ("Die zersägte Dame" by Friedrich Hollaender, Finnish translation by Vesa Tapio Valo). The young Fates (Mia Renwall, Minna Rimpilä) get into their characters.

Production stills from Accidental Lovers
(Crucible Studio/University of Art and Design Helsinki 2006, director Mika Tuomola).

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Media Lab at the University of Art and Design Helsinki (TaiK)

Learning Environments Research Group

The Learning Environments group, formed in 1998, is a thematic research group of the Media Lab at the University of Art and Design Helsinki. The group is involved in research, design and development of learning environments that are meaningfully enhanced with information and communication technologies including applications for computer supported collaborative learning (CSCL), ubiquitous and mobile tools and tools for creative group work and design. The group's approach to research and design of New Media and learning is theory-based but design-oriented. The group's works are based on the social constructivist theory that sees learning as a participation in social processes of knowledge construction.

The group's research and design takes place in applied multidisciplinary research projects funded by The European Commission in the Information Society Technologies (IST), National Technology Agency of Finland (TEKES), the Nordic Council of Ministers, UNESCO and corporations. The group collaborates with a number of national and international public, academic and corporate partners.

http://mlab.uiah.fi/www/research/research_groups/learning_environments
http://legroup.uiah.fi/

Die 1998 gegründete Gruppe für Lernumgebungen ist eine eigenständige Forschungsgruppe des Media Lab an der Universität für Kunst & Design Helsinki. Die Gruppe beschäftigt sich mit Forschung, Design und Entwicklung von Lernumgebungen, die durch Informations- und Kommunikationstechnologien wie u. a. Anwendungen für CSCL (computerunterstütztes kooperatives Lernen), Tools für Ubiquitous Computing sowie solche für kreative Gruppenarbeit und Design unterstützt werden. Der Ansatz der Gruppe bei der Forschung und dem Design neuer Medien und Lernen ist theoriebasiert, aber designorientiert. Die Arbeiten der Gruppe beruhen auf der konstruktivistischen Gesellschaftstheorie, der zufolge Lernen Partizipation an gesellschaftlichen Prozessen der Wissenskonstruktion ist.

Die Forschungs- und Designarbeit der Gruppe ist in ein angewandtes multidisziplinäres Forschungsprojekt eingebunden, das von der EU im Rahmen der IST-Programme, der Technologieagentur Finnlands (TEKES), dem nordischen Ministerrat, der UNESCO und von Firmen finanziert wird. Die Gruppe kooperiert mit nationalen und internationalern Partnern aus dem öffentlichen, universitären und wirtschaftlichen Bereich.

Aus dem Englischen von Martina Bauer.

MobilED

The MobilED project presented by the Learning Environments Research Group in the Campus exhibition 2006 involves research and design of learning environments that are meaningfully enhanced with mobile technologies and services. In the MobilED project we have designed scenarios, prototypes and practices of how mobile technologies could be used for teaching, learning and empowerment of students within and outside the school context. The MobilED SERVER is an audio wiki service for mobile phones. You can make queries to wiki content, such as the Wikipedia Free Encyclopaedia, by sending your search term with SMS to the MobilED SERVER. After a while you will receive a call back and a speech synthesizer will read you the content found from the server. You can navigate the content with your phone's number buttons and contribute to the wiki with your own voice by recording your entry. MobilED is a two-year cooperative project with the Council for Scientific and Industrial Research (CSIR) of South Africa and several other partners in India, Brazil and Finland.

Perttu Hämäläinen, Mikko Lindholm, Ari Nykänen
Animaatiokone

Animaatiokone is an easy-to-use, futuristic installation that turns you into a master animator. It is built on custom animation software and technology that make animating quicker and more fun than ever. All you need to start is a piece of plasticine.

Animaatiokone aims to teach people about animation and show how easy it can be to create stop-motion animation. Award winning *Animaatiokone* combines technological and user interface innovations into a novel collaborative storytelling tool. The transparent studio dome and the overhead monitor allow the public to watch the animator at work and they can learn from each other. The dome contains a miniature studio with a backdrop and a movable camera and set pieces. Animations are captured one after another, each animator continuing from where the previous one stopped. The results vary from absurdly twisting drama to a fragmented animation sketch-book and subliminal glimpses. All animations are presented on the *Animaatiokone* website. The website features the contributions of more than a thousand users, many of whom are first-timers.

Johanna Höysniemi, Perttu Hämäläinen
QuiQui's Giant Bounce

QuiQui's Giant Bounce is a physically and vocally interactive computer game aimed at 4 to 9 year old children. The game is not controlled using a joystick or a keyboard. Instead, the user's body movements and voice are sensed via a webcam and a microphone. The main character QuiQui is a curious little green dragon that mimics the user's movements and shouts and exhales sparkles when the user shouts. The game is based on research on children's physical development, augmented with usability tests and interviews at schools and daycare centers. The goal is to provide an immersive and physically engaging alternative to traditional computer games: QuiQui animates children to use their

whole body and develops their physical skills such as coordination and balance. The ways of moving in a game are motivated by an enticing storyline and rich audiovisual content. The game features technological innovations that enable physical interaction in every home. Compared to games based on sensory devices like a dance mat, QuiQui's user interface is full-body and wireless.

Concept and user interface design, technical design and implementation, sound design: Perttu Hämäläinen
Concept and user interface design, children's usability testing, sport science, animation, www design: Johanna Höysniemi
Visual design, illustration and animation: Teppo Rouvi
Story: Laura Turkki

**Janne Kaasalainen, Tanja Bastamow, Miikka Junnila,
Miska Natunen, Jürgen Scheible**
Snowman in Hell

Hell is no place for a snowman—but some days are worse than others. You start a desperate journey through the perils of evil and treachery. Listening to the voice of a murdered man inside your head, you begin to realize that your fortune is bound to the souls burning in the eternal flames ...

Snowman in Hell is an experimental computer game with hectic action and sophisticated puzzles. It's also an epic horror story about a snowman with nothing to lose, inspired by Dante's *Inferno* and film noir. There is a need for games that do things differently. Even a traditional platform game can feel fresh if there is something new in the mix: schizophrenic dialog during the levels, graphics made from garbage and clay, para-realistic simulation of physics, delicately grotesque soundscape ... Quoting Pelit, the biggest game magazine in Finland: "Snowman in Hell guarantees an unforgettable experience."

http://mlab.uiah.fi/snowman

Helena Hyvärinen, Reka Kiraly, Cvijeta Miljak
Päämaja/Headquarters
An interactive DVD film

Päämaja/Headquarters is an interactive film on a DVD platform. The story is situated in a surreal world of elevators, and introduces a liftboy being challenged by an almost invisible antagonist—a flea in a quest for power. An interactive point in the film reveals the possible outcomes of their struggle, and leads to three different conclusions. In general, the film explores aspects of the omnipresent theme of human relationships to power and plays with ideas of hierarchy and self-perception. *Päämaja/Headquarters* was inspired by ideas from Dostoevsky's novel *Crime and Punishment*.

Cvijeta Miljak

Story created by: Helena Hyvärinen, Reka Kiraly, Cvijeta Miljak; Director: Helena Hyvärinen; Cinematographer: Cvijeta Miljak; Assistant director: Reka Kiraly; Editing: Cvijeta Miljak; Sound designer: Helena Hyvärinen; Actor: Aapo Korkeaoja (+ additional scenes: Aki Kotkas, Riikka Paavola); Original music: Kaapo Huttunen; Virtual world animator: Cvijeta Miljak; Set designers: Helena Hyvärinen, Reka Kiraly, Cvijeta Miljak; Costume designer: Reka Kiraly; Virtual flea animator: Reka Kiraly; Studio technicians: Toni Tolin, Mazdak Nassir; Graphic designer: Reka Kiraly; Producer: Cvijeta Miljak

Li Xin, Eirik Fatland
Credits NeverEnding

Credits NeverEnding is an interactive TV program, created for the Finnish television channel Dina. *Credits NeverEnding* is intended for television's off hours, and was developed as part of a project to produce intentionally boring TV—"Boredom is a luxury anyone can afford". The sight of movie credits on television is usually taken to signify the ending of one program, and the beginning of another. *Credits NeverEnding* subverts this convention by being credits for a movie that never existed, and holding the viewer in suspense for a program that never comes. The credits loop and change, but may scroll over the screen for hours on end.
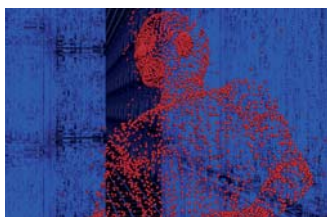

Li Xin

The names and titles on the list come from the viewers themselves. A viewer with the right mix of attentiveness and time to kill will eventually discover the URL of the website where new credits may be entered. Viewers enjoy nearly total freedom to shape the neverending credits, including promoting themselves. *Nothing is true until it is on television.*

Design & Concept: Li Xin
Programming & Design: Eirik Fatland
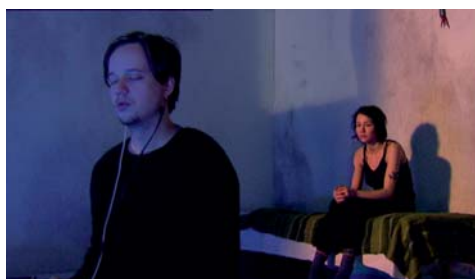Music: Anthony Rajiekov (used under a Creative Commons license)

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**Miikka Junnila, Andrii Khrupa, Anssi Mutanen,
Noora Ojala, Karoliina Talvitie-Lamberg**

Molly | Case

Molly | Case is an interactive short film inspired by William Gibson's *Neuromancer*. Two people are longing for a connection with each other in a little hotel room of the future, but the different realities of the world as we know it, cyberspace and the world of dreams, don't allow real contact. A mirror acts as a gate between the subjective realities of Case and Molly, and the user can change his/her point of view whenever he/she likes.
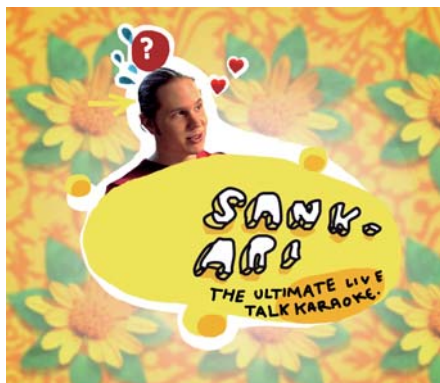
ICE, the invisible barrier software in the cyberspace makes sure data remains untouched. Similar psychological barriers keep all levels of reality cold and distant, from the electric, dynamic blues of the cyberspace to the lack of light in reality. This mood is the heart of the film. The mixed reality levels make the story complicated, and multiple viewings are needed to understand the whole tragedy. This also emphasizes the need for interaction to open up the different perspectives.

The project group: Miikka Junnila, Andrii Khrupa, Anssi Mutanen, Noora Ojala, Karoliina Talvitie-Lamberg
Starring: Samu Loijas, Hanna Seppä
Composer: Tuukka Tarma

Minna Nurminen, Petri Kola

Sankari Show—The Ultimate Live Talk Karaoke

Sankari ("hero" in Finnish) is a new type of improvisational show. In the *Sankari Show* members of the audience make up and perform the lines for Elias, the main character, as he tries to navigate his way through everyday life's rough patches. Sankari is both media art and a TV format. It received an honorable mention at the Transmediale05 digital art festival in Berlin and took the top prize at the 2003 MindTrek event. Currently *Sankari* is being developed as a TV show.

Participants in the *Sankari Show* compete against each other in the areas of verbal and improvisational ability. The hero of the show is Elias, but he doesn't have a voice—alone he is helpless. Contestants give him a voice and what they say determines his fate. Sankari offers people a fun way to perform in front of an audience. It's karaoke, a TV drama and a video game.

Sankari was created at UIAH as the final thesis of Minna Nurminen and Petri Kola. From the very beginning, the idea was to create a media piece equally at home on television or as a performance at bars and festivals.

Game design & Script writing: Petri Kola, Minna Nurminen, Mikko Lindholm; Director, interaction design & programming: Petri Kola; Game & video editing: Minna Nurminen; Executive producer: Pipsa Asiala, TaiK Medialab; Producers: Markku Nousiainen, Satu Lavinen, Petri Kola, Minna Nurminen; Cinematography: Toke Lahti; Sound design: Aura Neuvonen; Set design: Riikka Paavola; Music: Seppo Santala; Graphic design: Jarno Luotonen; Elias: Heikki Pitkänen; Laura: Olga Koskikallio; Anders: Ilkka Villi; Boss: Markku Nousiainen

Michihito Mizutani
Emotional Communication

The *Emotional Communication* project provides a series of communication tools. These tools are not intended to substitute the existing communication tools such as mobile phones. The Emotional Communication tools are subtle and quiet tools. They are useless when you need to convey a clear message to others. We can use mobile phones for this. The Emotional Communication tools will help you feel others who you want to be connected to. They can fill the gap of physical and mental distance between friends and family.

The communication tools are called Talking Glass, Sharing the Moment and Narrowcasting TV. Talking Glass is a cup, which enables users to enjoy interaction while they raise their glasses for a toast. In Sharing the Moment, a couple with a long distance relationship can share a moment of living together. Finally in Narrowcasting TV, elderly people can receive photos on their TV screens, taken with a mobile phone by their children or grandchildren.

Collaboration partner for Talking Glass: Ida Blekeli

Wille Mäkelä
Painted into air

Painted into air is an immersive fine art exhibition, originally presented at the Museum of Contemporary Art Kiasma, Helsinki, in 2005. Spectators can step into the stereo display of a two-screen corner, and move among three-dimensional free hand traces. Wille Mäkelä and ten well-known Finnish and Estonian artists have sketched experimental paintings. During their brief but astonishing new experience of painting into air, each of the guest artists found a personal way to study the depth. Among others, one artist described the process as starting everything from the beginning, just like a young child. Exploring the traces in immersion, spectators may now find bridges between the new medium and traditional handwork.

Experimental Virtual Environment in TML—laboratory of Helsinki University of Technology, 2003–2005: Design of the immersive free hand tool and the immersive viewer corner by Tommi Ilmonen and Wille Mäkelä. Software by Tommi Ilmonen.
Painted into air: Experimental spatial paintings by Wille Mäkelä and well-known fine art professionals.
Finnish painters: Anna Tuori, Elina Merenmies, Jukka Korkeila and Markus Konttinen; sculptors: Joakim Sederholm, Pekka Kauhanen and Martti Aiha; graphic artist: Outi Heiskanen; architect: Hannele Grönlund, and Estonian animation director and graphic artist Priit Pärn.

Sanna Ikäläinen, Wille Mäkelä / Finnish Central Art Archives

Marianne Decoster-Taivalkoski
Aquatic

Aquatic is an enveloping, interactive water soundscape installation. The visitors are invited to participate in a multisensorial experience by exploring the soundscape through bodily movements within the empty space of the installation. They hear it as the accurate feedback of their movements.

Aquatic proposes an immersive and poetic experience of imaginary water worlds playing with kinaesthesia and sound images. It gives the main role to one's imagination in the building of the experience of immersion. It proposes a reflection about the influence of sounds on our sense of space and our imagination. How sounds, bodily movements and interaction arouse in us body memories and sensations.
The soundscape handles three emotional states free to one's interpretation: soft and quiet waters, refreshing streaming waters and tempest waters.

The system uses David Rokeby's VNS software and Max MSP to generate a real-time sound feed-back to bodily movements registered with video sensors. Since its development in 2001–2003, *Aquatic* has been installed in various art museums and public places within the city of Helsinki since 2004.
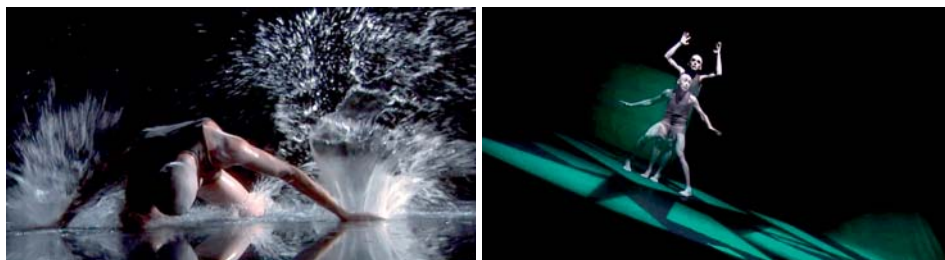
Supported by AVEK (Veli Granö), The Finnish Promotion Center for Audiovisual Culture

Kati Åberg
Emotions in Man

Emotions in Man is a interactive contemporary dance dvd. The piece investigates the use of interaction as a means of enlivening the viewing experience for recordings of performing arts and also ways of using interactive functions in a dvd.

In this light-hearted piece, the viewer decides, which of five basic emotions—joy, sorrow, anger, love or fear—to give to the dancer. There are many levels of intensity for each emotion, so the viewer can choose to give the dancer ever more of one emotion, or suddenly plunge him into a totally new emotion. These moments of decision-making occur throughout the piece and determine how the choreography evolves. The viewer must make choices or else the dancer gets bored, walks out and the piece ends. The piece is sold at art book shops, is in the selection of public libraries in Finland and has also toured festivals around Europe as an installation. Shall we dance?

Directing, editing, concept, multimedia authoring, production: Kati Åberg; Choreography, dance: Jyrki Karttunen; Music, voice: Anna-Kaisa Liedes; Cinematography: Peter Flinckenberg

In the picture: choreographer and dancer Jyrki Karttunen

Markku Nousiainen and workgroup

UMBRA
Creating Theatrical Illusions with Digital Media

Umbra is a dance performance where live performers meet a virtual world created with the aid of digital media. It's a fantasy tale inspired by old innovations and the aesthetics of magic lanterns and early cinema. The story of *Umbra* is about an innovator who tries to accomplish a perpetual motion machine with the aid of his dance movements. He is assisted by a robot servant (actually, a small remote-controlled robot prototype). One day, the innovator is confronted by a stranger who enters his lab. The style of the performance is determined by monochromatic silhouette animations, worn-out costumes and futuristic but rusty technology.

My motivation for the project was to experiment with different elements in storytelling: live dancers, virtual characters and virtual scenography, and a mechanical robot, to see how they can be combined. I wanted to create a performance reminiscent of the pre-cinema magic, but with today's digital tools. The resulting performance is both highly technological and old-fashioned, in the sense that the projections have a role similar to that of traditional theatrical illusions. *Umbra* is exhibited as a video installation.

Markku Nousiainen

Markku Nousiainen

Kristian Simolin and Pauli Laine
Joutokäynti—Idle Running

Joutokäynti—Idle Running is an animated media art work. The center stage is given to a group of workmen, who have been placed in simplified, industrial surroundings. Each of the workmen repeats his individual, restless and inward movement, which changes only slightly when repeated. The rhythm and the repeated movements of the characters, together with the soundtrack, form a hypnotic rhythm. In the animation, the world consists of a short, unchanging moment that continues forever. The characters are in constant motion, but the movement does not have a goal.
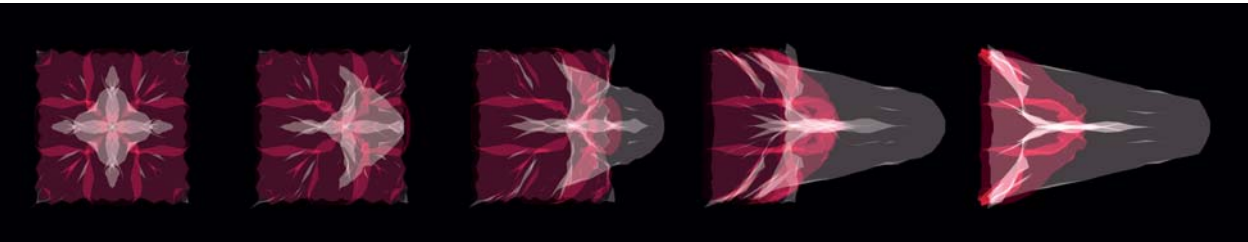
The starting point of *Idle Running's* animated movements are those small repetitive motions people make when they are nervous or frustrated: the rhythmic tapping of the foot or the hand, or the fiddling about with an object or a garment. Tiny movements like these form a restless world of motions characteristic of queues, public transport, and waiting rooms. The psychological meaning of the small, recurring movements is adaptation to oppressive surroundings and situations.

Concept & 3-D: Kristian Simolin; music: Pauli Laine

Meeri Mäkäräinen
Ruby

Ruby is a computer program that produces an animation of a gemstone brought to life. The program performs a physical simulation of two elastic membranes vibrating in an environment where the laws of physics have been modified. In a perfect physical simulation vibrating membranes would gradually lose their kinetic energy due to resistant forces. In this simulation, however, membranes gain energy from vibration instead of consuming it. The extra energy is a source of complex emergent behaviour of the membranes—the membranes make movements that could not have been predicted. The simulation is visualised with an animation in which two translucent square-shaped membranes vibrate together. The membranes are rendered with polygons, which is why we see angular forms. The angular look of the polygons combines with the organic nature of the elastic membranes to create a continuous metamorphosis between a faceted gemstone and a flourishing flower.

Heli Ellis, Laura Palosaari, Anne Dahlgren, Anne Parkkali, Liz Lehtonen, Ville Raitio, Taneli Bruun, Maria Palaväki, Katja Pällijef

Tikki

Tikki is an animated short film about a woman who gradually realizes that sewing a never-ending straight stitch under the control of long-gone parents isn't necessarily the only way to live one's life. The change is, however, easier said than done. In *Tikki* the classical tempter appears in the form of a bright red thread, the only fully saturated spot of color in the earthy color scheme of the film. The red thread curves playfully around the direct black stitch, enticing it to deviate from the beaten track.

The chosen medium, animation, allows the filmmakers to freely use symbolic elements such as a chalk line drawn onto the fabric that represents the supervision of the parents. Although *Tikki* is mainly animated in 3-D, it also employs 2-D techniques, which creates a parallel method of storytelling in multiple realities. In 2-D we jump into the main character's thoughts, whereas in 3-D we remain in a more coherent, "real" world.

Richard Widerberg, Zeenath Hasan

IMPROVe

IMPROVe is an aural architecture for socio-cultural exchange. Sonic realities of the everyday are improvised live in a non-linear mode. *IMPROVe* explores the role of the mobile phone user as a creator of her/ his own content. It attempts to define the mobile device as a tool for environment awareness by making the user conscious of their immediate sonic surrounding.

Scenario

A group of friends record sound objects and soundscapes from their daily life through a mobile device. The group meets in a local pub with a soundsystem. Here they perform a live-remix of
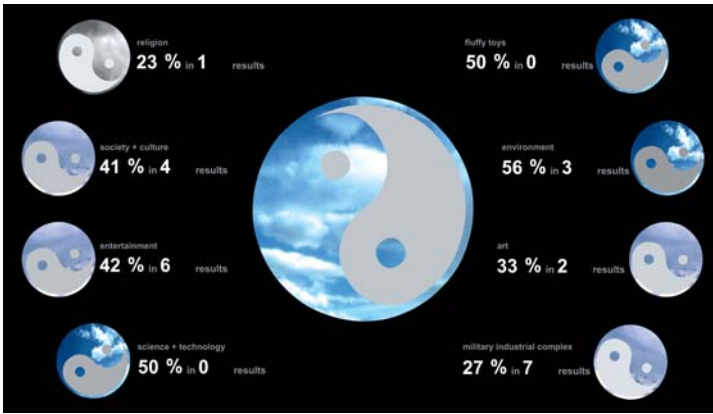

© Antti Ahonen

the sounds on their mobile devices. Through the sonic improvisation of their everyday sound-scape, they affect their experience of the here and the now.

Functionality

IMPROVe collects sounds via a mobile device and sends them to a location where they can be played back into a soundsystem. The same mobile device controls the playback of the collected sounds in the soundsystem. Playback control occurs in the physical location of the soundsystem. The playbacked sounds are processed live via interaction on the mobile device. The output of the processed sound can be directly heard through the soundsystem.

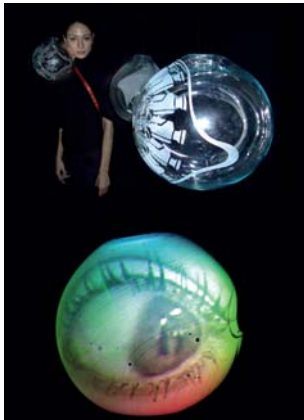Development Partners: MAHITI; Project Partners: Åsa Ståhl, Kristina Lindström

Media Arsonists

Equilibrium

This project is a visual representation of the balance of "power" or state of equilibrium in the world. The visualization is based on live news feeds, which are refreshed in real-time in 12–24 hour periods.

News articles from live RSS feeds, such as BBC World and CNN are passed through a PHP server, which obtains a set of results for each article's content. We use Google API searches with positive/negative keyword sets to determine the "contemporary" value of the news. I.e. if the number of search results that Google returns from the news article is higher for positive keywords, then the article gets a percentage of 50–100, or 0–50 conversely. The results from Google are based on a cross-section of the current Internet population's views, and therefore are not necessarily biased or attached to any particular political, national or regional model. Each article is categorised using a set of specific keywords, The category which yields the highest number of search results becomes the article's category. The purpose of this project is to provide a live and changing picture of global news trends that influence our everyday lives. In a sense it's like a clock, but rather than show the time, it shows the direction or state of current affairs. Equilibrium.

Concept, UI design and implementation: Dominic Baudish; UI design, implementation and programming: Lauri Huikuri; Graphic Design: Vilja Helkiö; Server-side programming: Wesa Aapro

Viki Ølgod, Viara Gentchev, Ksenia Avetisova
The Eyesight Project

The *Eyesight Project* is an interactive sculpture created to increase the awareness of our post-modern approach to surveillance. Visibility in a way replaces force as a tool of control, we ask ourselves what the contemporary definition of privacy is or may become in the future.

Eyesight's concept explores the archetype of total surveillance; a way to improve discipline in society such as the architectural form invented in the early 1780s by Samuel Bentham (Panopticon).

The idea of a closed circuit television system monitored by a handful of functionaries is one way for our contemporary mind to grasp the idea.

In a world of constant society-driven need for security, surveillance becomes the calming factor in achieving this inner peace, and thus a familiar part of our daily life. The installation displays the omni-present icon of surveillance: the eye in the sky. As a spectator trying to grasp the pulse of the surveillance society the installation visualizes the never-encountered observer.

Kalle Määttä—Dignity Nation Representative
Dignity Nation / Global Dignity Project

Dignity Nation is a movement and community created around the Dignity Principles introduced in *Global Dignity Project (www.globaldignity.org)*. The goal of the Nation is to create such a force that the voice of dignity can be heard even on the highest levels of power!

The mission of the *Dignity Project* is to implement globally the universal right of every human being to lead a dignified life. By signing the five Dignity Principles (introduced under *http:// globaldignity.org/index.php*) you express your adoption of these principles for your action. To give your voice a face, you also become a "citizen" of the virtual Dignity Nation, where your name is shown along with your picture. It's not a real country but a community that exists to concretize the idea that you belong to a group of people that calls for more dignity in our world.

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Jürgen Scheible
Lenin's Godson's MobileArtBlog

The *MobileArtBlog* is a blog of digital art images created with a mobile phone. It is the travel journal of artist Lenin's Godson. Instead of ordinary images and text, this blog holds a collection of popart images, each in phone screen size, which the artist creates out of stimulating experiences along his travels. Inspired by shapes, colors and forms of objects in different cities, places and situations, he attempts to capture the moment by turning it into a memorable art piece on the spot.

By using Python programming on the phone for making collages through taking a photo, resizing, copying and placing it freely on the canvas, the art image is instantly created and uploaded incl. GPS data.

Fans and art lovers can receive the images in real time via a Konfabulator widget or RSS feed on their PC or mobile, enabling instant sharing on a global scale. People can instantly rate an image, triggering feedback to the phone of Lenin's Godson and making it vibrate.

Among the views of the imagery on his blog is a Google map, which shows where the artist has traveled.

www.leninsgodson.com/mobileartblog

Jürgen Scheible
Word in Space

Word in Space is an audience participatory art installation that invites people to use their mobile phone to post a word or image into a 3-D space onto a large public display. The posted words float slowly in the screen space as 3-D text, images as textures on small cubes, rotating around their X or Y axis, retreating gradually from the picture plane over time. The idea for this work originates from the German idiom "Ein Wort in den Raum stellen" meaning to "put a word up for discussion and thought".

By creating graphical objects, the audience can place their thoughts into space, which can then be observed visually. This allows meditating on them, letting the mind wander round, still helping to keep the focus. At the same time, the words and images posted by other people can spark new thoughts in each viewer's own thinking, connecting the minds.

The fading away of the objects into an ethereal space might remind the viewer that our human lives will also one day fade away—from the real space to where?
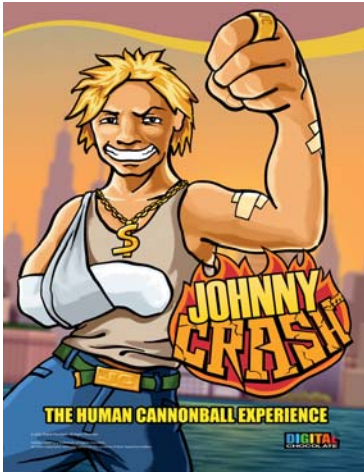
www.leninsgodson.com/wordinspace

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Teemu Kivikangas, Sumea Studio, Digital Chocolate, Inc.
Johnny Crash & Johnny Crash Stuntman Does Texas

Two critically acclaimed mobile games about a teenager who has watched way too many episodes of certain reality television shows and is determined to become a celebrity himself by doing crazy stunts. Your goal as Johnny is to perform outrageous stunt flights as a human cannonball. Fly inside a thundercloud and be electrocuted by lightning, or try crash landing into a cactus. Or maybe you need a haircut—trim your hair with helicopter blades! Never has performing pain-inflicting stunts been so freakishly entertaining.

Game play is simple and quick to learn—you need only one button to play—yet highly addictive and hard to master. After the flight you can review a replay of your flight and keep a scrapbook filled with snapshots of your "greatest hits". Titles are exhibited with focus on character development, illustrating the design process of game character from an initial idea into a finished product. Developed by Sumea Studio, Digital Chocolate Europe.

© Sumea Studio, Digital Chocolate, Inc.

Kalle Mäntsälä, Matthieu Savary
What You Do Is What You Hear!

An interactive, audiovisual installation designed to provide a meaningful environment for better understanding the major properties of sound and mainly for children to use, for educational purposes.

The user interface is based on a self-evident metaphor: the sound object, where graphical shapes incarnate sound sources that the user can manipulate on the virtual stage by moving his/her hands in front of the screen (one hand each if two people are playing together). By affecting the position of a certain sound object, the user plays with its pitch, volume & panning.

The installation has a two-level gameplay:
Level 1 (learning mode) offers varying combinations of positions (represented by holes in the 'shapes & colors' theme chosen for the installation) to be reached by each sound object. In musical terms, these combinations of positions are called chords.
Level 2 (free mode) offers a free stage to play with all objects in an uncensored, eventually non-harmonious way!

Wesa Aapro
Consumer Gadget

Consumer Gadget is a tool for consumers who would like to spend their money more ethically, supporting sustainable development and other good things. The main idea is to utilize the bar codes of consumer products for the cause of good: bar codes are unique identifiers that can be used to fetch ethical information about the product. *Consumer Gadget* is a software for mobile phones, so it can be used at the time of purchasing. Users can scan bar codes with the latest camera phones and get the ethical information over GPRS connection, but the information is also available for users with older phone models using WAP or SMS technologies. *Consumer Gadget* can be used free of charge and is based on open source technology.

Jürgen Scheible
MobiLenin—Mobile Group
Interaction with a Multi-track Music Video

MobiLenin is an audience participatory art installation that allows people to interact simultaneously with a multi-track music video shown on a large public display using their personal mobile phones, effectively empowering the group with the joint authorship of the video. It aims to provide enriched entertaining and social experiences by allowing people to interact with the musician "Lenin's Godson" in the virtual domain, exceeding the limitations of the physical domain, e.g. by turning him into a skeleton. By a collective vote using the mobile, the performance style of the artist can be changed in real time ranging from "not playing guitar", "not singing", to performing as a skeleton. Voting occurs in ongoing voting intervals triggered by the system. As an incentive for interaction, MobiLenin provides a lottery. The winner receives a coupon for free pizza or beer in the form of an image on the mobile phone.
MobiLenin provides a new form of interactive entertainment for pubs and other public places.
www.leninsgodson.com/mobilenin

Teemu Kivikangas, Richard Widerberg
Metamorphosis

© Teemu Kivikangas & Richard Widerberg

An audiovisual performance based on recordings of ice in both the Northern and the Southern hemisphere. The sounds used in the work are recordings from the ice of a lake in Northern Sweden. One can hear how the ice is constantly moving, affected by the wind, the temperature, the water beneath and the air pressure. Visual material depicts the same element, ice, in a very different context—South American megalopolises of Buenos Aires, Rio de Janeiro and Lima in the blazing heat of the summer—where it leads a short life before melting into water.

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The visuals contrast and juxtapose the sounds from the isolated nature of the extreme North with images from the busy, overcrowded cities of the extreme South. This audiovisual material is then manipulated, re-cut and re-interpreted by the performers in real-time with two synchronized computers. The result is an experimental movie creating an image of transition, transformation and adaptation.

Koray Tahiroglu and Joni Lyytikäinen
SolarDuo Project

The project began during a workshop in 2003 at Media Lab Helsinki when Koray Tahiroglu & Joni Lyytikainen tried to connect a solar panel directly to a sound mixer. However, they discovered that more electric components were needed to achieve different sound structures from a solar panel. The artists created circuits that are based on the example by Ralf Schreiber, which inspired them to create their own solar panel instruments.

SolarDuo Project experiments with the possible sound structures that light waves can create. The project utilizes analog sounds together with the algorithms that generate changing sets of sonic relations over time. Analog sounds and computer-generated sounds release an unexpected richness of the sound processing in real-time performances. In their performance they also sonify solar data, which is gathered from terrestrial and orbiting solar instruments.
http://mlab.uiah.fi/~korayt/solarduoprj.html

SolarDuo Project performed at Piksel05 Festival Bergen, Norway; Del Sound Art Festival—the 9th Istanbul Biennial Istanbul, Turkey; Aureobel Launch Event, Art's Birthday 2005 and Art's Birthday 2004 in Helsinki, Finland.

Joni Lyytikäinen

Jürgen Scheible

Koray Tahiroglu

Campus exhibition curated by:
Perttu Rastas, Philip Dean, Antti Ikonen, Kati Åberg, Teijo Pellinen, Lily Díaz-Kommonen