



09 FINAL REPORT



Ludwig Boltzmann Institute
Media.Art.Research.



Media. Art. Research.

In the research program of the LBI Media.Art.Research., interdisciplinarity becomes part of everyday practice. Its research projects combine competencies from the fields of art history, cultural studies, media theory, media technology, and computer science.

The structure of the institute thus corresponds to the complexity and diversity of its main theme: media art.

Beyond this specialized field, the LBI positions itself at the intersection of the dialogue between the “two cultures” of the humanities and cultural studies, on the one hand, and the natural and technological sciences, on the other. The first part of the report presents the concept and the research program of the Institute, as well as its events and publications. The individual research projects are then introduced according to five topics, which constitute the basic elements of a methodology of media art research.

▶ LBI Media.Art.Research.	Page 5
▶ Partners of the Institute	Page 12
▶ A Picture of the Institute in Numbers	Page 14
▶ Workshops, 2005 – 2009	Page 15
▶ Conferences, 2005 – 2009	Page 21
▶ Media.Art.Research Award, 2007 – 2009	Page 29
▶ Publications and Lectures	Page 34
▶ Team	Page 48
▶ Cooperations	Page 51
▶ Research Projects	Page 52

1	LBI Media.Art.Research.....	5
1.1	Mission Statement.....	6
1.2	The Three Research Lines of the Institute.....	8
1.3	Five Topics on the Methodology of Media Art Research.....	10
2	Partners of the Institute.....	12
3	A Picture of the Institute in Numbers / Projects with Outside Funding.....	14
4	Workshops, 2005–2009.....	15
4.1	Survival and Maintenance of Media-Based Art.....	15
4.2	Placing and Re-placing Media Art.....	16
4.3	Online Archives of Media Art Contextualization, Metadata, Translation.....	17
4.4	The Scent of Information.....	18
4.5	Archiving Media Art: Politics and Strategies / GAMA Launch.....	19
5	Conferences, 2005–2009.....	21
5.1	Digital Archives.....	21
5.2	When Cybernetics Meets Aesthetics.....	21
5.3	The Return of Wireless Imagination: One Hundred Years of Radio.....	23
5.4	Closeness vs. Dislocation: Contextualizing Net-Based Art.....	25
5.5	Interaction, Interactivity, Interactive Art.....	26
5.6	See This Sound: Sound-Image Relations in Art, Media, and Perception.....	27
5.7	The LBI Salon.....	28
6	Media.Art.Research Award, 2007–2009.....	29
6.1	Media.Art.Research Award 2007: Net-based Art Forms.....	29
6.1	Media.Art.Research Award 2008: Interactive Art Forms.....	31
6.3	Media.Art.Research Award 2009: Sound-Image Relations in Audiovisual Art.....	32
7	Publications and Lectures.....	34
7.1	Publications from the Institute.....	34
7.1.1	Artists as Inventors, Inventors as Artists.....	34
7.1.2	Re-Inventing Radio.....	35
7.1.3	Netpioneers 1.0: Contextualizing Early Net-based Art.....	36
7.1.4	Audiovisuology. Compendium. An Interdisciplinary Compendium of Audiovisual Culture.....	36
7.1.5	Audiovisuology. Essays. Histories, and Theories of Audiovisual Media and Art.....	37
7.1.6	See This Sound. Promises in Sound and Vision, Exhibition Catalogue.....	38
7.1.7	Aesthetics of Interaction in Digital Art.....	38
7.1.8	Ars Electronica Operating System.....	39

7.2 Essays.....	39
7.3 lectures.....	42
8 Team.....	48
9 Cooperations.....	51
Topic I. ARCHIVING.....	52
1 SAMY – Single Point of Access Semantic Media Repository Framework.....	53
2 Preservation of the Material and Data Stock of the Ars Electronica.....	55
Topic II. INDEXING.....	57
1 Metadata in the context of online databases.....	58
2 Taxonomies for Media Art.....	60
3 Applied Basic Research: “netzpioniere.at”.....	62
Topic III. ANALYSIS and CONTEXTUALIZATION.....	65
1 Discourse Analysis: Ars Electronica Operating System.....	66
2 Source Criticism: Work, Replica and Source. Art Historical Contexts for Archiving, Documenting and Re-Presenting Net-Based Art Forms.....	68
3 Reception Aesthetics: The Aesthetics of Interactivity in Digital Art.....	70
4 Reception Research Interactive Art I: Ideas about Production and the Reality of Reception in the Context of Ars Electronica 2007.....	72
5 Reception Research Interactive Art II: Document Collections on Blast Theory, David Rokeby, Tmema.....	74
Topic IV. VISUALIZATION.....	76
1 Visualization Showcase: Information Visualization of Media Art Archives.....	77
2 Media Art as Social Process — Network Analysis of the Juries and Their Decisions.....	78
3 X by Y: Ars Electronica Prix Submissions.....	80
4 Textass: An annotated text browser/reader.....	81
5 Texty – texts at a glance.....	82
6 Proxemantics – meaning is in the air.....	83
7 Prix Landscape Interactive Art.....	84
8 Prix Submissions with Area.....	85
9 Synchronoptic Timeline.....	86
10 Faceted Search Interactive Art.....	87
11 Visualization Framework.....	88

Topic V. MEDIATION.....	89
1 The Ars Electronica Online-Archive.....	90
2 GAMA – Gateway to Archives of Media Art.....	92
3 Online Presence of the Institute.....	94
4 See this Sound.....	95
5 Timeline of Audiovisual Culture.....	99
6 Exhibition: netpioneers 1.0.....	100
7 Mapping the Archive: 30 Years of Prix Ars Electronica.....	101
8 Online Resources for the Scholarly Documentation and Archiving of Media Art.....	102

1 LBI Media.Art.Research.

The Ludwig Boltzmann Institute Media.Art.Research. was in operation from October 1, 2005, to December 31, 2009.

During this period, the Institute employed, on average, twelve researchers from the disciplines of art history, cultural studies, computer science, and media art.

The following report offers an overview of the research program, the projects, and the results of the institute's four plus years in operation. During its brief lifetime, the institute was able to realize numerous projects, while several others only reached the conceptual stage. For that reason, the present overview of the research projects also includes proposals and perspectives for further developments. Given the broad spectrum of the interdisciplinary field of the history and research of media art, this report is therefore intended to show how important research in this area will be in the future. The same is true of activities in the area of digital cultural heritage, which were also supported by the LBI.

In addition to this report, the LBI Media.Art.Research's Web site (<http://www.media.lbg.ac.at>), which will be archived by the University of Art and Industrial Design, Linz, and remain accessible online, will contain additional information about the institute, important resources and reports, and links to the online projects.



LBI Media.Art.Research. in the Building of the University of Art Linz

1.1 Mission Statement

The Ludwig Boltzmann Institute Media.Art.Research. pursues innovative research in the areas of indexing, analyzing, and presenting media art within the broader context of media technology and art history. Bringing together science, art, technology, and cultural mediation improves the quality of research on our media-oriented society. Within the framework of establishing a methodology for media art research, basic research, and the development of theory in scholarship on art and media has been accomplished. Moreover, in the spirit of an overall strategy of applied basic research, innovative technical infrastructure and variable models for metadata as well as strategies for visualization and mediation have been developed in order to do justice to the complex field of this art form. Thus we have already identified the three research lines that constitute the LBI:

- Media Art History and Media Theory (Research Line A)
- Content Management Design (Research Line B)
- Knowledge Representation and Visualization (Research Line C)

The scholarly methods applied here are pluralistic (art history, cultural studies, reception aesthetics, source criticism, media theory) and are pursued in a close dialogue with neighboring disciplines. The processes of media technology are, on the one hand, measured against the state of the art of current data storage and, on the other hand, focus data storage on the specific characteristics of media art research (scholarly requirements, process-based works, and internal systems of authorship). Strategies of visualization reveal paradigms of both content and technology in media art research as well as their networked contexts. In so doing, they support the research process itself (visual exploration), on the one hand; on the other hand, they serve to communicate research results and questions relevant to



Team-members and guests discussing a visualization

media art to a broader audience (scientific demonstration). The continuous focus on the specificity of individual research projects during the developmental phase of the LBI entailed both a differentiation of subject matter and a dovetailing of strategy. For that reason, in our institutional practice the research lines, which are based primarily on a categorization by discipline, are secondary to interdisciplinary research projects and an all-encompassing methodology for media art research. In what follows, therefore, after introducing the general premises of research activity we will first present the disciplinary focuses and perspectives of the research lines as already laid out in the application proposal and then explain the newly worked-out methodology according to which the projects documented in greater detail below are structured. The following premises guide the activities of the LBI:

Applied Basic Research

The institute conceived its research projects in the spirit of applied basic research: research is oriented around the concrete object, case studies concerning content, and concrete tasks for technical realization. At the same time, however, great value is placed on the exemplary nature and potential applicability of research results.

In this context, the Ars Electronica archive is particularly significant to the LBI's work; it represents one of the world's most comprehensive collections of documents on media art. These holdings provide a unique fund for scholarly work and for research projects, which can, however, only process this material within thematic focuses. Furthermore, the institute's research themes are by no means limited exclusively to questions that could be studied using the material in the Ars Electronica archive. They deliberately incorporate forms and concepts from media art that offer perspectives on this heterogeneous field that are distinct from the concept of media art represented by Ars Electronica.

Integrated Interdisciplinarity

In the LBI's research program, interdisciplinarity becomes part of everyday practice. Its research projects combine competencies from the fields of art history, cultural studies, media theory, media technology, and computer science. These tasks correspond to the spectrum of qualifications of our staff members, each of whom works at a point of intersection between these areas. In that sense, our interdisciplinary orientation is not an additional feature or an external objective of cooperation but is rather anchored as an everyday practice in the institute's core tasks. The structure of the institute thus corresponds to the complexity and diversity of its main theme: media art. Beyond this specialized field, the LBI positions itself at the intersection of the dialogue between the "two cultures" of the humanities and cultural studies, on the one hand, and the natural and technological sciences, on the other.

Historicity and Innovation

The field of media art is, as a consequence of its close connection to current media culture and technology, a site of constant innovation. Yet precisely because of its relation to processes of social change, it can only be studied within a larger historical context. Although media art in the strict sense has only existed for about forty years, it is already threatened by massive decay and loss today because of the constant changes in the technologies on which it is based and in particular because of the limited stability of storage media. The institute's research work is therefore closely connected to questions of archiving and preservation. Scholarly research on works of media art that have already become historical (including placing them in the context of the history of the evolution of art and technology) and the activities of documentation and preservation are thus mutually dependent. Developing methods to document and archive media art, of which the broader public is only now becoming aware, should also make it available to future generations. At the same time, the goal is to encourage that the concerns of documentation and archiving are better addressed at the time media art is created and presented. As part of the LBI's research work (in close cooperation with an emerging international community working on related questions), models, case studies, and specific applications are developed.

International Singularity

An international comparison reveals that, although a series of high-quality institutions in the area of media art have emerged since the 1990s, there is no comparable institute that concentrates primarily on scholarly research and addresses additional tasks in the areas of education, production, exhibition, or collection.

1.2 The Three Research Lines of the Institute



Hence the LBI is confronted with a large area of research that has only begun to be explored. That includes the interaction of the fields of contemporary art and media art, which remain separate even today, and the potential synergies of multiple disciplines as points of reference for work (art history; media studies and theory; cultural studies; theory of film, music, and theater; history of technology). Then there are connection lines to current points of intersection between technology and culture (digital

cultural heritage, knowledge management, e-learning).

The research lines were formulated in the grant application for the foundation of the LBI and have become more concrete and specific over the course of the institute's life. They provided the strategic basis for research within the LBI's mix of competencies and methods. Most of the research projects are not, however, restricted to the framework of a single research line but, in keeping with the interdisciplinary approach, are worked out in various combinations of these competencies, and their all-encompassing character is represented in the five topics of research into media art (see 1.3).

Media Art History and Media Theory (Research Line A)

Research in the area of media art history and media theory serves to describe, analyze, and contextualize media art against the backdrop of lines of question relating to art history, cultural studies, and media theory.

The field of media art, combining the literary (digital poetry, in some cases Internet and communications art), visual (installations and environments), and performing (music, theater, and dance) arts as well as time-based audiovisual media (film, video, and audio) under one umbrella term, is symptomatic of the current breakdown of institutional borders and media categories. Their positioning between artistic and technological development, on the one hand, and discourses on culture and media, on the other hand, leads to a wealth of possible perspectives on "media art," toward which the LBI shows as much openness as possible, though it can only focus on exemplary lines of questioning within its concrete research activity. Accordingly, the scientific methods of Research Line A are also characterized by a pluralistic approach in order to do justice to the necessity of differentiation when the object of study is necessarily heterogeneous. For example, the project "See This Sound" (Dieter Daniels and Sandra Naumann) explores the relationships of art history to media

history and media theory against the backdrop of a broad technical and cultural context. By contrast, the project “Work, Replica, and Source: Art Historical Contexts for Archiving, Documenting, and Representing Works of Internet Art” (Gunther Reisinger) focuses methodologically on digital source criticism, while research into interactive art (Katja Kwastek) puts questions of reception aesthetics in the foreground. The analysis of cultural studies institutions in the framework of the Ars Electronica Operating System project (Barbara U. Schmidt), in turn, takes into account the central importance of cultural studies.

In addition to research projects committed to the methodology of the humanities in the broadest sense, Research Line A is intensely engaged in the conception of art historical scholarship addressing questions of archiving, documentation, and indexing, in the sense of providing a basic structure for its own research area. This includes work that crosses research lines such as the conception of asset management systems, models for metadata, and taxonomies as well as concepts for archiving. Moreover, given the central importance of a humanities approach to these questions, a separate position was created as a link between Research Lines A and B (Gabriele Blome). She is dedicated to working out metadata models and scholarly concepts for archives of media art and concrete concepts for the archival holdings relevant to the LBI and also works on establishing a network among archives of media art.

Content Management Design (Research Line B)

Research Line B is based on computer science and deals with techniques of storage, description, and dissemination of digital media art in all its diverse forms. These techniques are closely related to one another, since it must be possible to convert solutions for specific areas into an integrated solution. For the storage and management of data and data structures, appropriate methods and tools have to be developed that also satisfy concerns of long-term archiving. Appropriate formats must be selected. Digital-born data has to be preserved through migration, emulation, or technological conservation, which requires in any case that the original system environment can be recreated.

Another important task of Research Line B is creating structures to enhance the data material with information. This includes metadata, which structure large quantities of data and make it possible to search and find content or to help navigate it. Metadata include technical and structural metadata as well as administrative metadata. For those working on Research Line A, this will offer opportunities to add the results of research based on scholarly criteria from art history and media theory to the data holdings.

The third large area with which Research Line B is concerned is the dissemination of content—that is, the presentation of stored works in online archives and on Web sites. The artifacts of media art consist of descriptions and of image, audio, and visual files. The representation of these artifacts has to function independently of platform and not only satisfy existing conventions and standards but also address aspects of usability and accessibility. Issues of interoperability were considered especially, since they make it possible to have all-encompassing functions when integrating various online archives. That in turn increases the value and the possibilities for implementing and using each individual online archive.

Representation and Visualization of Knowledge (Research Line C)

Research Line C explores possibilities of exploiting the potential for visualizing information and methods of visual analysis to the ends of media art research. The field of tasks is interdisciplinary and unites the approaches and requirements of art history, computer science, and media design.

The goal is to develop interactive visual tools for the representation and generation of knowledge. These tools will be in a position to show complex connections that cannot be conveyed using traditional methods.

Visualization fulfills two fundamental tasks here: the support of research processes (visual exploration) and the representation of research results (scientific demonstration). These two tasks cannot, however, be regarded separately, since they influence each other considerably. The goal of this research line is to produce a continuity between collecting and presenting data, using tools that employ a common visual language.

The importance of visualizing research on media art is obvious: media art is predominantly audiovisual; nevertheless, it is primarily communicated via linear text. Visualization is not intended to replace text-based representation but rather to support it in many relevant areas. This is achieved with a series of modular tools that address various research topics and methods.

Taken together, these tools will make it possible to sketch a meaningful picture of the data held in digital archives and how it relates, differentiating according to the strength and nature of the relationship. Whereas traditional methods of representation are often limited to the essential core of the information, interactive visual applications make it possible to sketch purlieus of the information, that is, to take into account the ambiguity and complexity that characterize the realities of archives.

1.3 Five Topics on the Methodology of Media Art Research

In order to provide structure and specificity to its research program, the institute's research projects were conceived in relation to five topics, which as the basic elements of a methodology of media art research on all levels call for interdisciplinary collaboration of competencies in the computer sciences and the humanities. Accordingly, many of the projects and also the institute's three research lines integrate several of these topics. The individual projects are thus categorized in terms of methodological emphases. (The projects are presented in detail below based on the structure outlined here.)

I. ARCHIVING: Archiving Digital Data and Physical Storage Media

Media art is time-based, context-dependent, procedure-oriented, and ephemeral in terms of its technical standards. Established methods and tried-and-tested models for preserving cultural assets quickly reach their limits: neither the collection of an art museum, a municipal or state archive, or a radio or television archive can do justice to the uniqueness and complexity of media art. For that reason, research and development of specific methods for the (long-term) archiving of media art and documentations of such art forms is a central task for the LBI.

II. INDEXING: Metadata, Taxonomies, and Digital Sources

In order to make extensive data holdings useful for scholarly research, they have to be indexed using metadata. Three strategies are employed: enhancing existing data holdings with better metadata, producing semantic data models for new holdings or systematizing existing holdings, and enabling interoperability with other archives for all-encompassing representation and research. These strategies are the foundation for the conception of a generic, expandable, modular database schema for archives of media art.

III. ANALYSIS and CONTEXTUALIZATION: Discourse Analysis, Source Criticism, Reception Aesthetics

Deeper scholarly analysis of media art and its contextual conditions is currently pursued by three methodological approaches: source criticism, reception research, and discourse analysis. These approaches in the humanities make use of findings from the areas of archiving and indexing and simultaneously structure them.

IV. VISUALIZATION: Knowledge Representation and Visualization

The complex aesthetic, technical, social, and institutional conditions for the creation and reception of media cannot be represented comprehensively using a classical, text-based description. For that reason, the research line “Knowledge Representation and Visualization” integrates the topics of indexing, analysis, and mediation on a metalevel. The tools to be developed here aid both the representation of scholarly results and the research and analysis of existing data.

V. MEDIATION: Online Access and Mediation of Multimedia Resources on Media Art

Specific forms of the (online) presentation of media art help process complex thematic contexts both for a broad audience and for the world of specialized scholars. Both existing archival holdings and newly processed, thematically focused content are mediated and networked. At the same time, each presentation format—online presentation, conference, book publication, and exhibition—requires specific strategies for mediating and providing access to the relevant multimedia and often ephemeral projects.

2 Partners of the Institute

Kunstuniversität Linz: University of Artistic and Industrial Design

The Art School of the City of Linz was founded in 1947. It was intended to send a clear signal of differentiation from the National Socialist art policies that preceded it while at the same time taking up, in theory and practice, the principles of the Bauhaus in the 1920s and 1930s. In 1973 the Art School became the University of Artistic and Industrial Design and in 2000 the University of Art: University of Artistic and Industrial Design. The curriculum was expanded considerably and now includes various areas of the visual arts (painting, sculpture, experimental design), cultural studies, textile design, teacher training, architecture, industrial design, spatial and design strategies, and various study courses and a research laboratory in the field of (new) media and at the intersection of design, organization, and media.

Ars Electronica Linz



Since 1979, Ars Electronica has been a platform for digital art and media culture whose specific orientation and years of continuity make it unique in the world. It is supported by four pillars: *Ars Electronica Festival* Since 1979, the Ars Electronica Festival has presented annually symposia, exhibitions, performances, and events

dedicated to artistic and scholarly discussions of social and cultural phenomena resulting from technological change.

Prix Ars Electronica

As the world's premier competition in the "cyberarts," the Prix Ars Electronica has offered since 1987 a forum for artistic achievements and innovations. The enormous archive of the Prix Ars Electronica offers detailed insights in the evolution of media art as well as its openness and diversity.

Ars Electronica Center

The Ars Electronica Center, which opened in 1996, is a prototype for a "museum of the future." With its interactive forms of mediation, virtual reality, digital networks, and modern media, it speaks to a broad audience. The Ars Electronica Center moved into its expanded building in January 2009.

Ars Electronica Future Lab

The Future Lab is a model for a new kind of media art laboratory, where artistic innovation and technological innovation inspire each other. The laboratory's teams come from a wide variety of disciplines and their approach is marked by transdisciplinarity and international networks.

Lentos Kunstmuseum, Linz



Lentos Museum of Art, Linz

Linz's main square, and it provides the city with an architecturally outstanding museum in a great location.

The Lentos Kunstmuseum, Linz, opened in May 2003 as the successor to the New Gallery of the City of Linz and has become one of the most important museums of modern and contemporary art in Austria. Its collecting and exhibiting activity focuses on international contemporary art. Its clear, elegant building, designed by the Swiss architects Weber & Hofer (8,000 square meters of floor space, 2,800 square meters of exhibition space), is located right on the Danube, near

3 A Picture of the Institute in Numbers / Projects with Outside Funding

The budget of the Ludwig Boltzmann Institute Media.Art.Research. amounted to around 3.1 million euros over four years; 58 percent was contributed by the Ludwig Boltzmann Society and 42 percent by a consortium of partners composed of the University of Artistic and Industrial Design, Linz, the Ars Electronica Linz GmbH, and the Lentos Museum of Art, Linz.

In order to conclude ongoing projects in a sensible way, to ensure the results produced, and to enable the LBI to fulfill all its obligations to its partners in projects with outside funding, the Ludwig Boltzmann Society made additional funding of 142,500 euros available for the fourth quarter of 2009.

Project with Outside Funding: See this Sound

This project, developed in collaboration with the Lentos Museum of Art, is supported with funds from Linz 2009: European Capital of Culture, with a total of 1.3 million euros for the exhibition and research project. The contract between the LBG, Linz 2009: European Capital of Culture, and the City of Linz was signed in July 2008. The portion for the research project for which the LBI was responsible was 396,200 euros (see p. 95).

Project with Outside Funding: GAMA: Gateway to Archives of Media Art

This project is being carried out by 19 European organizations for culture, the arts, and research as part of the program *eContentplus* and is supported by the European Union with 1.2 million euros, or 50% of the total funding. The LBI receives a subsidy of 44,000 euros for its total costs of 89,625 euros (see p. 92).

Project with Outside Funding: SAMY: Single Point of Access Semantic Media Repository Framework

This project for the conception and implementation of a semantic archival framework is carried out by the Salzburg New Media Lab (Salzburg Research Council) and basis wien (Archive und Documentation Center for Contemporary Art) as a strategic research partnership and has a budget of 234,000 euros. As one of the research partners, the LBI contributed personnel resources to the project totaling 26 person months (see p. 53).

4 Workshops, 2005–2009

4.1 Survival and Maintenance of Media-Based Art

An Overview of Existing and Developing Strategies of Documentation / Archiving / Conservation

June 17–18, 2006 / Ludwig Boltzmann Institute Media.Art.Research. (University of Art and Industrial Design, Linz)



Workshop: Survival and Maintenance of Media-Based Art

This workshop was a two-day meeting of experts (not open to the public) on the state of research in the area of the documentation and preservation of media art. The invited speakers presented their projects and research results, and time was also reserved for discussions and for developing collaborations.

During the workshop, numerous contacts were established and the consortium for the EU project GAVA: Gateway to Audiovisual Archives was reconfigured. This led to a new application for GAMA (see also p. 92).

The main topics were various strategies for the “survival” and “maintenance” of media-based works of art:

- Describing and documenting complex, changing, or ephemeral structures
- Categorizing and possible standardizing of controlled vocabularies: Contextualization of media art under conditions of historical changes in art, technology, and society
- Maintenance, emulation of data formats, archiving, storage

The goal of the workshop was to establish knowledge networks and develop models for collaboration.

Concept: Dieter Daniels

Moderators: Katja Kwastek and Dieter Daniels

Panels and Speakers:

Description / Documentation / Contextualizing

Alain Depocas, Caitlin Jones, Kathy High, Mona Jimenez, and Anne-Marie Duguet

Description / Documentation / Metadata

Rens Frommé, Dominick Chen, Eva Krátká, Sabine Mostegl, and Robert Sakrowski

Preservation / Emulation / Data Formats / Reconstruction

Rudolf Frieling, Johannes Gfeller, Richard Rinehart, Alexandra Wessels, Stefan Weinzierl, and Jackie Hatfield

Tools / Databases / Visualization / Sonification

Andreas Leo Findeisen, Gerhard Dirmoser, Dietmar Offenhuber, Mona Schieren, and Jürgen Enge
Reviews by Inke Arns and Christa Sommerer

An extensive online documentation of the workshop may be found on the LBI's Web site.

4.2 Placing and Re-placing Media Art

September 4, 2006 / Ars Electronica 2006 (Brucknerhaus)

An event organized in cooperation with re:place 2007: The Second International Conference on the Histories of Media, Art, Science, and Technology (Berlin, November 2007)

This discussion round was preparation for the re:place 2007 international conference on the history of media art. The following questions were discussed: At which venues of artistic production does art enter into a dialogue with media, science, and technology? What can these locations tell us about the unique aspects of working in media art? How are they connected to various scientific, academic, military, economic and other contexts? What is the source of the legitimacy ascribed nowadays to the existence of a separate discourse and special institutions dedicated to media art? What are the specific features of these places, and where might their future lie?

Speakers: Andreas Broeckmann, Dieter Daniels, Timothy Druckrey, José-Carlos Mariátegui, Gunalan Nadarajan, and Edward A. Shanken

4.3 Online Archives of Media Art Contextualization, Metadata, Translation

November 14–15, 2007 / re:place 2007 (House of World Cultures, Berlin)



Workshop: Online Archives of Media Art

The series of workshops of experts on the documentation, archiving, and conservation of media art, launched by the LBI in 2006, was continued in 2007 and formed part of re:place 2007: The Second International Conference on the Histories of Media, Art, Science, and Technology in Berlin. Structures and strategies of online archives were discussed by three panels.

Panels and Speakers:

Content vs. Context

The first panel, moderated by Gabriele Blome and Barbara U. Schmidt, was concerned with the necessity of documenting sociocultural and institutional circumstances in order to contextualize data in a meaningful way.

Jean Gagnon, Daniel Langlois Foundation; Julien Masanès, europarchive.org; and Gerd Zillner, and basis wien

Community vs. Institution

The second panel, moderated by Andreas Hirsch and Ingrid Fischer, discussed the role of institutions in relation to community-oriented (self-)archiving strategies, including the tendency to institutionalization.

Dominick Chen, ICC Tokyo; Olga Goriunova, runme.org; and Marisa Olson, rhizome

Experience and Authenticity

The third panel, moderated by Dieter Daniels and Katja Kwastek, was dedicated, on the one hand, to the relationship of claims of authenticity to historical artifacts and, on the other hand, to the necessity for various forms of reactivation and updating artifacts in order to preserve the ability to experience them actively.

Inke Arns, Hartware Medienkunstverein; Gabriella Giannachi, Center for Intermedia, University of Exeter; Gunther Reisinger, LBI; and Daniel Teruggi, Institut National de l'Audiovisuel.

An extensive online documentation of the panels may be found on the LBI's Web site.

4.4 The Scent of Information

February 13–14, 2009 / Ludwig Boltzmann Institute Media.Art.Research. (University of Art and Industrial Design, Linz)



Workshop: The Scent of Information: Lev Manovic

contextualize information resources that already exist. For example, the past ten years have seen numerous initiatives for the documentation and preservation of media art, each contributing to knowledge in the field. However, their content is usually fragmentary and employs a different form of knowledge organization. This workshop is also dedicated to current approaches that can help to bridge these islands of information. We compared methods for the exploration, contextualization and disambiguation of information through computational analysis, social approaches, and interaction design. We also discussed frameworks for knowledge architectures that are flexible enough to accommodate heterogeneous and often ambiguous information. We brought together international experts who work in relevant areas, such as machine learning, visual analytics, knowledge technologies, and interface design.

This two-day meeting of experts was dedicated to the discussion and comparison of new approaches to organize, analyze, and visualize large bodies of archival information. Archives like the Ars Electronica archive present themselves as massive collections of heterogeneous and, in some ways, conflicting data organized in many different formats. Traditional database structures and query interfaces are not sufficient to make sense of this information.

At the same time, it becomes more and more important to connect and

Concept: Dietmar Offenhuber

Moderators: Dietmar Offenhuber, Sandor Herramhof, and Evelyn Münster

Panels and Speakers:

Knowledge Discovery: Strategies for Knowledge Discovery through Content Analysis, Statistics, or Social Context

Lev Manovich, Silvia Miksch, and Moritz Stefaner

Structuring Information: Strategies for Structuring Knowledge

Sabrina Bresciani, Martin J. Eppler, Georg Güntner, and Boris Müller

Keynote Lecture

CULTURAL ANALYTICS: Visualizing Cultural Patterns, Lev Manovich

Knowledge Interfaces: Interfaces and Access Methods for Hybrid Archives

Gerhard M. Buurman, Miguel Cardoso, Andres Ortiz, and Wolfgang Strauss

4.5 Archiving Media Art: Politics and Strategies / GAMA Launch

September 5, 2009 / University of Art and Industrial Design, Linz (Ars Electronica 2009)



Workshop: Archiving Media Art

The preservation of media art has to rely on specific documentation models. It becomes increasingly obvious that these models have to take into account not only the ephemeral and often systemic nature of media art, but also the fact that the user experience is a key element of the works. Not only museums and research institutions, also the artists themselves are reflecting on how process-based or performative works can be kept alive, documented, and presented. On the basis of current research activities, experts and artists discussed new ways of evaluating user experience and integrating it into a documentation strategy for media art works—or even into the works themselves.

Matt Adams, Gabriella Giannachi, Caitlin Jones, and Lizzie Muller

Prospects and Positioning of Media Art Archives

The establishment of media art was closely related to the development of new channels of production, distribution and presentation for this art form. Early initiatives grew into institutions that are now holding archives or collections, which are closely related to the institution's profile and mandate. The panel discusses the significance of the institutional setting with respect to the creation of the repository, the significance of the archive within the institution's activities and its accessibility for the public and researchers. Where do the institutions see the future role of their archives? How do the holders act to preserve their collections? Will they be able to provide access to media art in the future? What will be their main purpose if—as some argue—media art is being integrated into the contemporary art world?

Annet Dekker, Anna-Karin Larsson, Lioba Reddeker, and Gerfried Stocker

In this workshop, experts discussed recent strategies of archiving and documenting media art and the importance of the institutional context for the constitution and perspectives of media art archives and collections. On this occasion the new European online portal, the Gateway to Archives of Media Art (GAMA), was launched and presented.

Concept: Gabriele Blome

Moderators: Gabriele Blome, Katja Kwastek, and Gaby Wijers

Panels and Speakers:

New Approaches to Archiving Media Art

Launch of the Gateway to Archives of Media Art

The GAMA portal provides access to a wealth of information about the works of both well-known and emerging European and non-European media artists. The material on media art initially comes from eight European media art archives and can be searched and browsed on this common platform. The art projects presented include (previews of) experimental film and video art, performances, installations, and Internet art; they are documented and further contextualized with texts, lectures, and events.

<http://gama-gateway.eu>

Screening and Presentation

September 3–8, 2009 / Ars Electronica, Linz, Austria, Brucknerhaus

On the occasion of the launch of www.gama-gateway.eu, the archives screened highlights from their collections. For instance, works by Lars Arrhenius, Yael Bartana, Robert Cahen, Gerard Cairaschi, Mounir Fatmi, Toshio Iwai, Ema Kugler, Rafael Lozano-Hemmer, Cecilia Lundqvist, Vincent Meessen, Jean-Gabriel Périot, Sašo Podgoršek, Semiconductor, Shelly Silver, János Sugár, and Gianni Toti were presented.

In addition to the screening, the GAMA portal was presented.

5 Conferences, 2005–2009

5.1 Digital Archives

September 1, 2005 / Ars Electronica 2005 (Lentos Museum of Art)

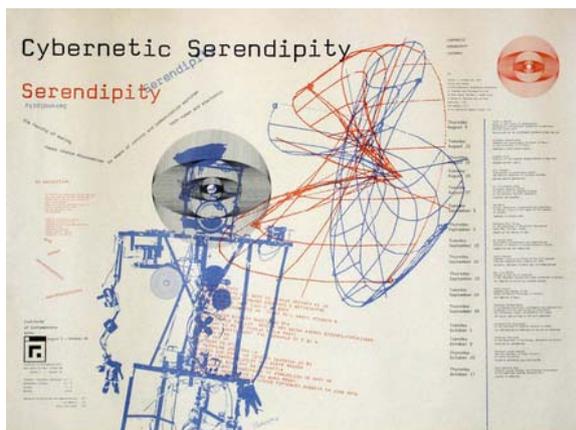
For the launch of the Ludwig Boltzmann Institute Media.Art.Research., experts met in an international conference to address the institute’s topics and presented projects on research into and the archiving of media art.

Speakers:

Dieter Daniels, Alain Depocas, Gerhard Dirmoser, Monika Fleischmann, Rudolf Frieling, Oliver Grau, and Matt Locke

5.2 When Cybernetics Meets Aesthetics

August 31, 2006 / Ars Electronica 2006 (Lentos Museum of Art)



Exhibition: Cybernetic Serendipity, 1968, curated by Jasia Reichardt, speaker of the conference

In the 1950s and 1960s, cybernetics was a source of new ideas and engendered new approaches in fields ranging from the natural sciences to politics and even art. The transdisciplinary analysis of control, regulation, and feedback processes was said to be the way to bridge the gap between “two cultures”—technology and the natural sciences, on one hand, and the arts and humanities, on the other. The basic principles of such a “third culture” had already begun to be formulated at the Macy Conferences (1946–53), whose think tank gave rise to cybernetics.

The scornfully dismissed and long-forgotten utopian potential of cybernetics was rediscovered a few years ago and has since been put forth as a model accurately describing the current state of a networked, transdisciplinary society. The gist of this hypothesis is that yesterday’s science fiction has, in the meantime, quietly come true but there’s still been no sign of a grand, all-encompassing theory about a society’s conception of self that results from this. The term “cyberspace”—derived from cybernetics and widely used in the 1980s and 1990s—has, in retrospect, rather confused matters with respect to cybernetic concepts or reduced them to technical solutions.

The scornfully dismissed and long-forgotten utopian potential of cybernetics was rediscovered a few years ago and has since been put forth as a model accurately describing the current state of a networked, transdisciplinary society. The gist of this hypothesis is that yesterday’s science fiction has, in the meantime, quietly come true but there’s still been no sign of a grand, all-encompassing theory about a society’s conception of self that results from this. The term “cyberspace”—derived from cybernetics and widely used in the 1980s and 1990s—has, in retrospect, rather confused matters with respect to cybernetic concepts or reduced them to technical solutions.

To this day, technically advanced media art stands—both ideologically and factually—with one foot in each of these “two cultures,” a situation manifested very poignantly by its unsuitability for either display in a traditional museum setting or implementation in the technology of everyday life. And this is precisely why the media art euphoria of the 1990s has since given way to increasing uncertainty about what such pieces have in common and what sets them apart from works in other genres, since, in

the wake of the complete mediatization of society and culture, media art seems to have lost its special uniqueness and thus the credentials entitling it to legitimacy and esteem.

The conference *When Cybernetics Meets Aesthetics* brought the reevaluation of cybernetics to bear as a potentially decisive contribution to the dialog focused on the necessary redefinition of the status of media art. Can the ever-more-blatant opposition of the “two cultures” ultimately attain convergence in artistic-technical work with media? Can the modern-day “art of complexity” of simulating social networks, natural systems of rules, and the dynamics of feedback effects at work in the economy be understood as cybernetic processes? Which current prospects are opened up by reviewing the theory and practice of the cybernetic art of the 1950s and 1960s?

The speakers at this conference were scholars of media, culture, and art who are contributing to the reevaluation of cybernetics as well as contemporary eyewitnesses to the origins of cybernetic art.

Concept: Dieter Daniels in collaboration with Claus Pias (University of Vienna)

Moderator: Dieter Daniels

Speakers: Cornelius Borck, Barbara Büscher, Claus Pias, Jasia Reichardt, Stefan Rieger, Margit Rosen, and Edward A. Shanken

5.3 The Return of Wireless Imagination: One Hundred Years of Radio

January 17–19, 2007 / RadioKulturhaus Wien

An event organized in collaboration with Ö1 Kunstradio



Concept: Dieter Daniels, Heidi Grundmann, and Elisabeth Zimmermann

Moderator: Ina Zwerger

This conference, organized in collaboration with Ö1 Kunstradio, established a connection between the history and future of radio. In particular, the “reinvention” of radio by radio art demonstrates the significance of this underappreciated history of the medium.

There were good reasons to celebrate radio’s first century in 2006, though the occasion had little impact on public awareness. On December 24, 1906, Reginald Fessenden, a Canadian, broadcast the first ur-form of a radio program with music (“O Holy Night”) and the spoken word (Bible quotations) from Brant Rock, Massachusetts. Even if it would still take 15 years after this experiment for radio to achieve its breakthrough as a mass medium during the Roaring 20s, this was the beginning of the transition from technical telegraphic code to the audio broadcast as we know it. This Christmas broadcast marked the transition from the code of telegraphy to the sound of radio, and at the same time the transition from wireless communication to the paradigm of radio. The perplexing realm of the ether, whose cosmic hissing and crackling now included a mixture of more and more technical signals, thus went on to become one of the very pillars of civilization over the next hundred

years, and it is still by far the most commonly used medium for information, entertainment, culture, and propaganda. In the final decades of the twentieth century, with digitalization and the Internet, all traditional media, including radio, were transformed radically. The beginning of the twenty-first century is very much influenced by a rapid development of wireless radio technologies as forms of communication between people (mobile phones) and to transmit data (satellites, WLAN). To a surprising extent, radio is finding its way back to its original potential as a wireless communication technology. One consequence of this is that the electromagnetic spectrum has long since ceased to be an inexhaustible natural resource and has become a commercial and political battleground over frequencies and licenses.

Panels and Speakers:

On the Long History of Radio Art

Manfred Jochum, Christian Scheib, Reinhard Braun, Knut Aufermann, Heidi Grundmann, Armin Medosch, and Anne Thurmann-Jajes

On the Archaeology of Radio as a Medium

Dieter Daniels, Wolfgang Ernst, Wolfgang Hagen, and Daniel Gethmann

The Return of Wireless Imagination

Inke Arns, Katja Kwastek, and Gerfried Stocker

An extensive documentation of the conference may be found on the kunstradio Web site:

<http://kunstradio.at/PROJECTS/AB2007/>

An extensive book on the subject was published in German and English in 2007 (see p. 34).

5.4 Closeness vs. Dislocation: Contextualizing Net-Based Art

September 10, 2007, Ars Electronica 2007 (University of Art and Industrial Design, Linz)



Conference: Closeness vs. Dislocation: Ted Nelson

Moderator: Dieter Daniels

Concept: Gunther Reisinger

The LBI's annual conference as part of the Ars Electronica Festivals has taken place with success since 2005 and offers a forum for research work with an international audience of specialists. In 2007 the conference was tied thematically to the "netzpioniere.at" research project (see Project 2.4) and was dedicated to the topic of Internet art.

The field of media art was expanded in the 1990s to include the genre of Internet art. Exploratory and dynamically creative, critically probing, and transcending the boundaries of both the medium and the very concept of art itself, it has nevertheless often been declared obsolete.

The LBI has taken on the task of integrating this relatively young genre of media art into the research activities of art scholars, developing forms of description custom-tailored to these types of works, and combining existing theoretical approaches to the source material. On the basis of a discussion of the different methodologies that can be utilized in going about this, the conference "Closeness vs. Dislocation: Contextualizing Net-Based Art" will attempt to place Internet art into a necessarily interdisciplinary context of media art research and, as part of the effort to preserve mankind's digital cultural heritage, address issues having to do with the archiving and presentation of artworks of this genre.

Panels and Speakers:

In addition to a historical elaboration of how the Internet came to be constituted as an artistic medium and the resulting consequences for the process of artistic creativity (Ted Nelson, Lev Manovich, and Marc Ries), conference participants will explicitly scrutinize approaches and references in the field of art history that interlink Net-based art and traditional art forms (Julian Stallabrass, Verena Kuni, and Charlie Gere). The presentation of the netzpioniere.at archiving and documentation project (Gunther Reisinger, and Dieter Daniels) will establish the connection between the theoretical basis, on the one hand, and restoration and archiving applications, on the other, and, as applied basic research, thereby complete the conference's agenda.

An extensive online documentation of the conference may be found on the LBI's Web site.

5.5 Interaction, Interactivity, Interactive Art

A Buzzword of New Media under Scrutiny

September 4, 2008, Ars Electronica 2008 (Brucknerhaus)



*Conference: Interaction, Interactivity, Interactive Art:
Wendy Hui Kyong Chun*

Concept: Katja Kwastek

Moderators: Katja Kwastek and Dieter Daniels

This conference invited experts from different disciplines to discuss concepts, expectations, and fields of application associated with the concept of interactivity. The concepts of “interaction,” “interactivity,” and “interactive art” were placed in context from the multidisciplinary perspective of sociology, information theory, interface design, game research, art history, and media art. Whereas interaction originally described the reciprocity of

influences—e.g., in biological systems—the concept was already applied to social interaction at the beginning of the twentieth century. In the 1950s, cybernetics employed the notion for a comparison of social, technological, and physiological feedback processes. With the rise of digital technology, interactivity became a key paradigm of human-computer relations and interface design. At the same time, the importance of social interaction and active participation was emphasized within postwar society and the arts alike. In the framework of a thorough investigation of the often diverging concepts of interaction and interactivity stemming from these developments, the conference further invites a comparison and discussion of the heterogeneous interactive strategies of analogue and digital arts.

Panels and Speakers:

Interactive Art—with and without Media

Lars Blunck, Suzanne Lacy, and Christiane Paul

Interactivity: A Key Paradigm of Modern Society

Wendy Hui Kyong Chun, Gillian Crampton Smith, Christoph Neuberger, Philip Tabor, and Noah Wardrip-Fruin

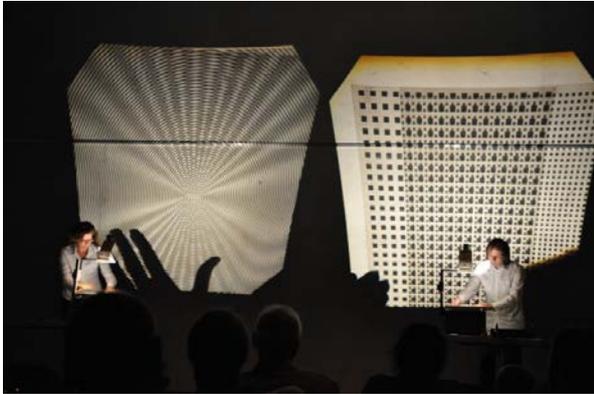
Interactive Art Reconsidered

Marie-Louise Angerer and Arjen Mulder (winner of the Media.Art.Research Award 2008)

An extensive online documentation of the conference may be found on the LBI’s Web site and the Website of Ars Electronica.

5.6 See This Sound: Sound-Image Relations in Art, Media, and Perception

September 2–3, 2009, Ars Electronica 2009 (Lentos Museum of Art, Linz)
as part of See This Sound, a European Capital of Culture project



Conference: See this Sound: Performance Mikomikona

Concept:

Dieter Daniels and Sandra Naumann

Moderators:

Dieter Daniels and Sandra Naumann

This international conference, like the See This Sound project as a whole (see also Project V.4), addressed the history and present state of the connection of sound and image in the arts, media, and perception. The frames of reference ranged from popular culture to perception theory

and media technology. The goal of the conference was an interdisciplinary exchange between theoretical and aesthetic thematic subjects of the project. At the intersection of various scholarly disciplines, the conference touched on, among other things, art history and musicology, media and art theory, media archaeology, and the history of media technology. Integrated into the course of the conference were artistic presentations intended to encourage a dialogue between art and science.

Panels and Speakers:

Opening Event

Tony Conrad in conversation with Chris Salter, followed by a performance by Tony Conrad

Introduction

Dieter Daniels and Sandra Naumann

Media Art, Visual Art: Divergence or Dialogue?

Christian Höller, Chris Salter, and David Rokeby

Art, Science, and Technology: Instruments or Works of Art?

Birgit Schneider, Yvonne Spielmann, Golan Levin, and Katja Kwastek

Art and Music: Intermediality, Intermodality, and Interdisciplinarity?

Helga de la Motte-Haber and Simon Shaw-Miller (winner of the Media.Art.Research Award 2009)

Final Performance

Mikomikona (Birgit Schneider and Andreas Eberlein, Berlin)

An extensive documentation of the conference has been published as part of the Web archive

<http://www.see-this-sound.at>.

In addition, an extensive program of events, developed by LBI (Sandra Naumann) and Lentos, including lectures, film screenings, performances, and guided tours with curators, accompanied the exhibition SEE THIS SOUND.

The LBI invited Cindy Keefer and David E. James for lectures and Sandra Naumann presented a lecture with film examples on the subject “How Sound Comes into the Pictures: Visual Music and Early Sound-Image Experiments in Film”.

5.7 The LBI Salon

In March 2007, the Institute started a series of 'Salons' which took place at irregular intervals until December 2009. The «Salon» served as basis for a public discussion about the main areas of research at the institute and other topics of media art research.

Topics and Speakers:

- Konnektive Performances (Josef Bairlein)
- Of the Untouchability of Embodiment: Rafael Lozano-Hemmer (Ulrik Ekman)
- Wissensbilder der Kunst im vordigitalen Zeitalter (Astrit Schmidt-Burkhardt)
- Montagebeziehung Bild-Ton (Hans Beller)
- VISUALIZAR (José Luis de Vicente)
- to paint for the ear : Music's Synaesthetic Shadow (Simon Shaw-Miller)
- Why Have There Been No Great Net Art Histories? (Charlotte Frost)
- Music and Media Art (Werner Jauk)
- Visual tools for the socio-semantic Web (Moritz Stefaner)
- Net art and Urheberrecht / Moral Rights / Copyright (Sophia Grote)
- mediafiles.at (Reinhard Braun)
- Video-art is getting old (Andreas Weisser)
- TIME'S UP – Laboratory for the construction of experimental Situations (Tina Auer, Tim Boykett)
- Interaction – Interactivity – Interactive Art (Katja Kwastek)
- Web 2.0, YouTube, Second Life & Co (Karin When)
- The exhibition «Les Immatériaux» by Jean-François Lyotard (Antonia Wunderlich)

see more information at <http://www.media.lbg.ac.at>

6 Media.Art.Research Award, 2007–2009

In conjunction with the Prix Ars Electronica, the Ludwig Boltzmann Institute Media.Art.Research initiated an award for outstanding studies in 2007. With this new annual award for theoretical works, due recognition will be given to research on media art conducted within the context of art history and media theory, which over the past two decades has emerged as a broad and innovative discipline in its own right. The Media.Art.Research Award supports scientific exploration of forms of media art that have not yet become established in a museum or commercial context, based on process, concept, or interactivity and functioning in a subversive, situational, and engaged way at the intersection of art, technology, and society. The range of scholarly fields eligible for the Media.Art.Research Award is in keeping with the pluralism of artistic practices: art history, media theory, cultural studies, visual studies, the history of technology, and media-specific aspects of literary studies, film theory, and musicology. The winner receives 5,000 euros in prize money. This sum is intended to fund the publication of the prizewinner's scholarly work.

The annual prize has a different subject focus each year.

6.1 Media.Art.Research Award 2007: Net-based Art Forms

The forty submissions testify to the spectrum of methodological approaches that can find application to a specific topic such as “Net-based art forms.”

The jury's discussion took into account three different types of the production of theory on this topic: first, basic scholarly research that explores the specific qualities of media art in the context of the reference fields listed above; second, Net criticism that analyzes the social and discursive significance of the Internet from the perspective of contemporaries; third, theme-specific art mediation whose goal is to connect to current events in art and art history. The three outstanding contributions by Florian Cramer, Geert Lovink, and Thomas Dreher were selected in part to do justice to these different approaches. They also reflect three different forms of publication: academic thesis, journalistic book, and Net-based art theory.



The Winner:

The main award goes to **Florian Cramer** for his work *Exe.cut[up]able statements: Poetische Kalküle und Phantasmen des selbstausführenden Texts* (**Exe.cut[up]able Statements: Poetic Computations and Phantasms of Self-Executing Texts**) (dissertation, 2006). The jury's unanimous decision to select this work, which conducts fundamental research at the interface of net art, literary history and computer linguistics, sets a high standard for the prize in the future as well. Cramer's study investigates everything from ancient algorithmic literature to present-day software and net-based poetry. By doing so, it broadens the horizons of media art within the context of the humanities far beyond the customary. Moreover, instead of furthering an often rampant sense of zeitgeist, it advocates a theoretical sustainability.

Nevertheless, this new interpretation of code as a component of literary history is only possible from today's perspective, for it is in looking back from digitized society that we recognize the past history

of linguistic algorithmics as a cultural constant. And it is in this spirit that Florian Cramer succeeds in developing a new understanding of history, one that has emerged from the present. This highly specialized topic is not light reading, and may be seen as exemplary for the little explored significance of media art as an epistemic model that transcends what is happening in art at the moment. He deliberately avoids the term “media”, which he views as too vague and redundant. Instead his methodological approach presents the “executability” of a text as a basic principle of all literature. The imagination of self-executing texts is not dependent on their technical implementation. Contrary to all scenarios of a post-human cyber world that would leave humans behind as relics, Cramer demonstrates the elemental nature of the relation between the fantastic and algorithmic, and how it is at all times dependent on people and not necessarily on machines.

Acknowledgments of a Contribution to the Field



The first Acknowledgment of a Contribution to the Field goes to **Geert Lovink’s *Zero Comments*** (book manuscript, 2006) for its critical analysis of the current situation, one that oscillates between Web 2.0 euphoria and the disappointments of media art. Based on his experience of net culture since the early 1990s, Lovink presents a state-of-the-art analysis, while also considering the importance of the Internet in the non-Western world. He provides forceful arguments that are especially effective for a broad discussion certain to attract interest not only among experts.



The second Acknowledgment of a Contribution to the Field goes to **Thomas Dreher, *IASLonline Lektionen / Lessons in NetArt*** (online publication 2000–2006), for his committed mediation of net art via the net, and an overview of the entire field of net-based art, which to date has been little explored by art historians. Individual studies, packed with facts, interact with interdisciplinary essays in a productive dialogue. Extensive links to primary and secondary sources also make the topic accessible to readers lacking previous knowledge of the field.

The Jury in 2007

Preliminary Jury: Dieter Daniels, Gunther Reisinger, and Barbara U. Schmidt

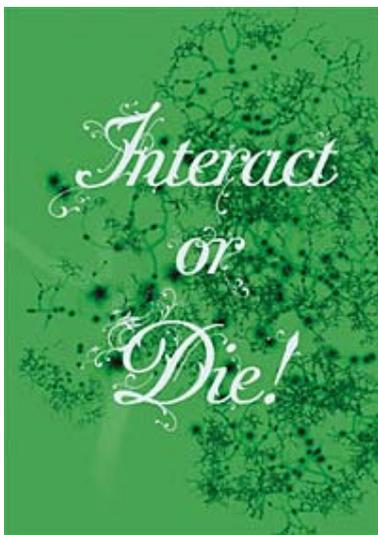
Main Jury: Dieter Daniels, Ludwig Boltzmann Institute Media.Art.Research., Linz (Austria and Germany); Olya Lialina, Merz Akademie Stuttgart (Germany and Russia); Christiane Paul, Whitney Museum of American Art New York (USA and Germany); Claus Pias, Institute for Philosophy, University of Vienna (Austria and Germany); and Felix Stalder, HGKZ Zürich (Switzerland)

6.1 Media.Art.Research Award 2008: Interactive Art Forms

The seventy-five submissions in 2008 included both published and unpublished books, essays, and anthologies. In contrast to 2007, no relevant media-based publications (e.g., online or hypertext) were submitted. In 2008 all three awards went to published books.

The submissions in 2008 documented a broad spectrum of approaches to the theme Interactive Art Forms. The jury identified the following focuses: the relationship of body and data space, models of interactivity for computer games, architecture and interactivity, and connections to organic, living processes.

The jury's discussion took into account the diversity of possible concepts of interactivity and attempted to do justice to this spectrum by awarding the prizes to contributions by Arjen Mulder, Mark B. Hansen, and Anna Munster. The extensive, academically based studies of Munster and Hansen represent a more detailed analysis of the history and practice of digital art, while Mulder's conceptually broader anthology opens up the concept of interactivity to a large number of artistic practices.



The Winner

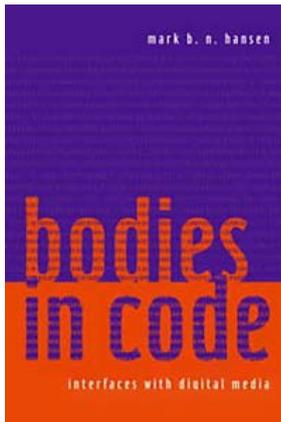
The 2008 Media.Art.Research Award goes to *Interact or Die!* edited by **Arjen Mulder** in collaboration with Joke Brower and published by V2. This book with its collection of theoretical essays (including one by Arjen Mulder himself), interviews with artists and scholars, as well as presentations of outstanding individual works, puts the term “interactivity” in a wider frame of reference. In an open form and attractive design, this work does not focus primarily on a final theory but rather on an ongoing thinking process within a network of experts. Alongside human-computer-interaction, organic life forms, processual architecture and system theory, as well as the social, ethic and affective dimensions of interactivity are taken into consideration. Historical references to artistic positions of the 1960s (e.g., Lygia Clark) as well as philosophical models from the 1950s

(Gilbert Simondon) are integrated meaningfully into the current discourse. By doing so, a seminal perspective emerges that goes beyond the set ideas associated with the term “digital media art” in the 1990s. Mulder does not shy from expanding his thesis to issues related to the cultural and epistemological, and allows it to be extrapolated to “big” themes involving the interconnectedness of people, apparatuses, and social structures in a contemporary interactive form of life.



Acknowledgments of a Contribution to the Field

The first Acknowledgment of a Contribution to the Field goes to **Anna Munster** for her work: *Materializing New Media: Embodiment in Information Aesthetics*, which critically analyzes embodiment and materiality in relation to interactive digital media art.



The second Acknowledgment of a Contribution to the Field went to **Mark B. N. Hansen** for his *Bodies in Code: Interfaces with Digital Media*. In a similar way as Munster, Hansen foregrounds the role that affect plays, as well as that of the body and human-machine agencies in interactive media art and architectural practices.

The Jury in 2008:

Preliminary Jury: Gunther Reisinger, Katja Kwastek

Main Jury: Marie-Luise Angerer, Kunsthochschule für Medien, Cologne (Germany); Dieter Daniels, Ludwig Boltzmann Institute Media.Art.Research., Linz (Austria and Germany); Söke Dinkla, Kulturhauptstadtbüro RUHR.2010, Duisburg (Germany); Marie-Laure Ryan, freelance scholar, Colorado (USA and Switzerland); and Chris Salter, Concordia University, Montreal (Canada and the USA)

6.3 Media.Art.Research Award 2009: Sound-Image Relations in Audiovisual Art

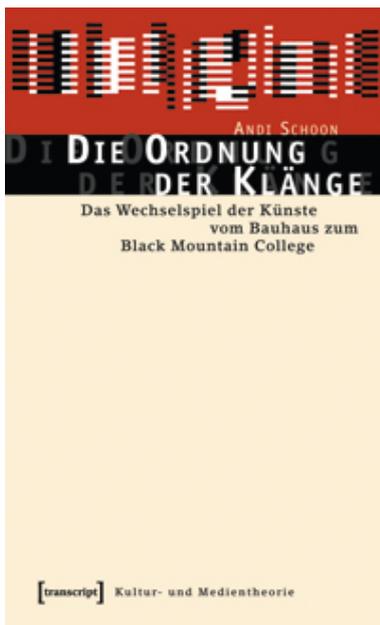
With its choice of themes in 2009, the Ludwig Boltzmann Institute Media.Art.Research. reacted to the current explosive growth of forms of audiovisual art, which has produced a need for reflection, and hence the institute encouraged texts concerned with questions of concept-, media-, and/or perception-based relationships between acoustic and visual phenomena. Forty-five works were submitted. Whereas in 2008 all three of the works that received awards were previously published books, the winner of last year's prize and one of the Acknowledgments of a Contribution to the Field had not been published. The submissions reflected a broad spectrum of studies on the topic Sound-Image Relations in Audiovisual Art. The jury identified the following focuses: the relationship of artistic genres to historical and contemporary perspectives, audiovisual media as points of intersection between image and sound, and interdisciplinarity in an academic context. Unlike the two preceding years, the jury had a theme that spanned from the nineteenth century to the present: from the Wagnerian total work of art to the most recent audiovisual pop culture. Because the theme was inherently interdisciplinary—art history, musicology, media history and theory, the history of science and technology, theories of cross-modal and modal perception—no clearly established canon of literature exists that could treat the subject in a comprehensive way. The spectrum of contributions made it clear that relatively few fundamental studies exist given the breadth of this research field.

The Winner

The Media.Art.Research award for 2009 goes to **Simon Shaw-Miller**, an art historian and senior lecturer in the history of art at Birkbeck College in London, for his unpublished manuscript *Eye hEar: Music, Art, Film & the Culture of Synesthesia*, an extensive publication about the visual aspects of music. The book regains the cross-disciplinary concept of synesthesia with strong references to earlier nineteenth and twentieth century notions of the concept. Furthermore, Shaw-Miller proposes a methodology in understanding the differences among cross-disciplinary, multidisciplinary, and interdisciplinary practices. Especially convincing is the combination of theoretical investigations concerning the aesthetic differences of visual and acoustic art forms alongside a series of in depth case studies. This almost encyclopedic approach documents the broad knowledge of different historical epochs and genres including philosophical aesthetics. The winning entry continues the theoretical and historical track which Shaw-Miller began with his earlier book (*Visible Deeds of Music: Art and Music from Wagner to Cage*, Yale Univ. Press, 2002). In both cases, the specific point of view is that of an art historian “looking” at music. This affords a great degree of interdisciplinarity, which is not always acknowledged by the established disciplines involved (art history, musicology, media studies).

Acknowledgments of a Contribution to the Field

Jan Philip Müller’s essay “**Dickson Experimental: Wie im Jahr 2000 der älteste Tonfilm der Geschichte entstand**” [published in Butis Butis, ed., *Goofy History: Fehler machen Geschichte*



(Cologne: Böhlau, 2009)] takes on the historical reconstruction in 2000 by fabled Hollywood editor and sound designer Walter Murch of the supposedly first synchronized sound film—shot by William Dickson in Thomas Edison's Black Maria laboratory in 1895. Combining contemporary ideas from science and technology studies with media theory, Müller explores the connection between human and machine perception by investigating the question of where synchronization actually takes place.

The second Contribution to the Field is awarded to **Andreas Schoon** for his publication *Die Ordnung der Klänge: Das Wechselspiel der Künste vom Bauhaus zum Black Mountain College* (Bielefeld: transcript, 2006). Written from a musicological perspective, Schoon's book is unusual in that it addresses the relationship of music not only to the visual arts but also to the histories of theater and performance in the burgeoning avant-garde of the early and mid-twentieth century in Europe and its

continuation in America after the Second World War.

The Jury in 2009:

Preliminary Jury: Sandra Naumann, Dietmar Offenhuber, Jan Thoben, and Gunther Reisinger

Main Jury: Dieter Daniels, Ludwig Boltzmann Institute Media.Art.Research., Linz (Austria and Germany); Christoph Grunenberg, director, Tate Liverpool (United Kingdom); Cornelia Lund, “fluctuating images,” Stuttgart and Berlin (Germany); Helga de la Motte-Haber, Technische Universität Berlin (Germany); and Chris Salter, Concordia University, Montreal (Canada and the USA)

7 Publications and Lectures

7.1 Publications from the Institute

7.1.1 Artists as Inventors, Inventors as Artists

Edited by Dieter Daniels and Barbara U. Schmidt
May 2008, Hatje Cantz, Ostfildern, English

Using both historical and contemporary examples, this publication traces the complex relationships among art, technology, and science, focusing on technological and artistic media from the nineteenth century to the present day. The interplay of technological invention and artistic innovation requires a variety of methods, ranging from the fine arts and cultural studies to the history of science and media archaeology. Among the key themes, which the contributions examine from a variety of perspectives, are:

- the status of technology as a shared feature of or “boundary object” between art and science;
- the conflicts among ethical, aesthetic, and economic values in the system of art versus that of technology;
- the paradox that inventions are regarded as achievements of individual geniuses but can actually only be made and successfully applied if they have been sanctioned by the sociohistorical zeitgeist.



Authors: Cornelius Borck, Dieter Daniels, Wolfgang Hagen, Karin Harrasser, Katja Kwastek, Sylvie Lacerte, Simon Penny, and Simon Werrett.

Interviews: Inke Arns with Amy Alexander, Dieter Daniels with Paul DeMarinis, Edward Shanken with Billy Klüver, Barbara U. Schmidt with Kirsten Pieroth, and Dominik Landwehr with Gebhard Sengmüller

Contributions by Institute's members:

- **Dieter Daniels, Barbara U. Schmidt:** *Introduction*, 7-17
- **Dieter Daniels:** *Artists as Inventors and Invention as Art – A Paradigm Shift from 1840 to 1900*, 19-53
- **Barbara U. Schmidt:** *Everyday Inventing*. Interview with Kirsten Pieroth, 218-227
- Edward Shanken: *I believed in the art world as the only serious world that existed*. Interview with Billy Klüver, 1996, ed. **Barbara U. Schmidt**, 176-181
- Katja Kwastek: *The invention of interactive art*, 182-195

7.1.2 Re-Inventing Radio

Edited by the Verein werks in cooperation with Ö1 Kunstradio, Neues Museum Weserburg Bremen, and the LBI Media.Art.Research, by Heidi Grundmann, Elisabeth Zimmermann, Reinhard Braun, Dieter Daniels, Andreas Hirsch, and Anne Thurmman-Jajes
February 2008, revolver verlag, English

Re-Inventing Radio sheds lights on the past twenty years in the evolution of radio art, making use of the extensive archive of radio program ORF Kunstradio/Radiokunst and numerous exemplary projects by an international group of renowned artists. A series of theoretical contributions explores two lively decades in the history of radio and media art and addresses in particular the current “return to the wireless imagination” and “re-invention of radio” in the wake of the massive increase in significance of wireless technologies in communication and media.



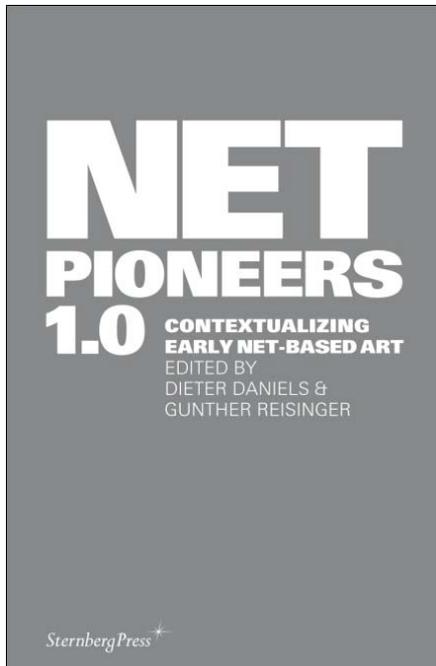
Authors: Robert Adrian, Inke Arns, Johannes Auer, Robert Barry, Gottfried Bechtold, August Black, Reinhard Braun, Hank Bull, Peter Courtemanche, Nina Czegledy, Dieter Daniels, Wolfgang Ernst, Bill Fontana, Anna Friz, Andrew Garton, Daniel Gethmann, Daniel Gilfillan, Heidi Grundmann, Wolfgang Hagen, Honor Harger, Candice Hopkins, José Iges, GX Jupiter-Larsen, Douglas Kahn, Friedrich Kittler, Tetsuo Kogawa, Richard Kriesche, Katja Kwastek, Brandon LaBelle, Caoimhín Mac Giolla Léith, Norbert Math, Doreen Mende, Sergio Messina, Roberto Paci Dalò, Garrett Phelan, Sarah Pierce, Winfried Ritsch, Christian Scheib, Tom Sherman, Rasa Šmite, Matt Smith, Raitis Šmits, Anne Thurmman-Jajes, Lori Weidenhammer, and Sandra Wintner

Contributions by Institute's members:

- **Dieter Daniels:** *Inventing and re-inventing Radio*, 27-47
- **Katja Kwastek:** *Art without Time and Space?, Radio in the Visual Arts of the Twentieth and Twenty-First Centuries*, 131-146

7.1.3 Netpioneers 1.0: Contextualizing Early Net-based Art

Edited by Dieter Daniels and Gunther Reisinger
November 2009, Sternberg Press, English



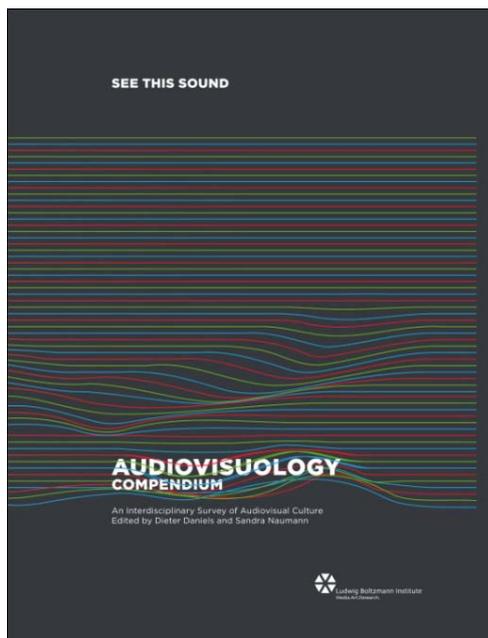
This book brings together both theoretical and applied basic research from the LBI projects “Work, Replica, and Source” and “netzpioniere.at” and documents the state of international research on the chosen themes (see projects II 3, p. 62 and III 2, p. 68).

Authors: Anna Bentkofska-Kafel, Wolfgang Ernst, Dieter Daniels, Barbara London, Verena Kuni, Gunther Reisinger, Marc Ries, Julian Stallabrass, and Robert Sakrowski

Contributions by Institute's members:

- **Dieter Daniels, Gunther Reisinger:** *Introduction*, 5 – 15
- **Dieter Daniels:** *Reverse Engineering Modernism with the last Avant-Garde*, 15 – 65
- **Gunther Reisinger:** *Digital Source Criticism: Net Art as a methodological Case Study*, 123 - 145

7.1.4 Audiovisuology. Compendium. An Interdisciplinary Compendium of Audiovisual Culture



Edited by Dieter Daniels and Sandra Naumann

Published in late 2009, Verlag der Buchhandlung Walther König

This extensive compendium consists of a collection of texts that explore both the different art forms in which image-sound relationships play a significant role as well as the methods that have been used to link acoustic and visual phenomena. Thirty-five separate articles describe the entire spectrum of the audiovisual arts and of audiovisual phenomena by means of longitudinal sections of history and systematic cross sections, while examples are presented in abundantly illustrated analyses of individual works.

Audiovisuology is not a new science. It represents the intersection of all existing research on audiovisual art forms and related disciplines.

Themes: Abstract Film / Animation / Architecture / Artist Musicians / Cinedance / Color Organs / Dance / Expanded Cinema / Film Score / Games / Gesamtkunstwerk / Graphic Notation / Interactive Art / Light Shows / Literature / Live Visuals / Music / Music Video / Musical Theatre / Painting / Performance Art / Software Art / Sonification / Sound Art / Sound Design / Video
 Audiovisual Perception / Color-Tone-Analogies / Conceptual Correlation / Montage / Parameter Mapping / Structural Analogies / Synchronization / Synesthesia / Transformation

Authors: Claudia Albert, Amy Alexander, Rainer Bellenbaum, Hans Beller, Sabeth Buchmann, Gerhard Daurer, Hinderk M. Emrich, Barbara Flückiger, Golo Föllmer, Tina Frank, Maureen Furniss, Marc Glöde, Andrea Gott dang, Florian Grond, Boris von Haken, Justin Hoffmann, David E. James, Jörg Jewanski, Barbara John, Henry Keazor, Barbara Kienscherf, Constanze Klementz, Katja Kwastek, Jörg Lensing, Golan Levin, Lia, Cornelia Lund, Helga de la Motte-Haber, Jan-Philipp Müller, Sandra Naumann, Janina Neufeld, Julia H. Schröder, Theresa Schubert-Minski, Marcel Schwierin, and Simon Shaw-Miller

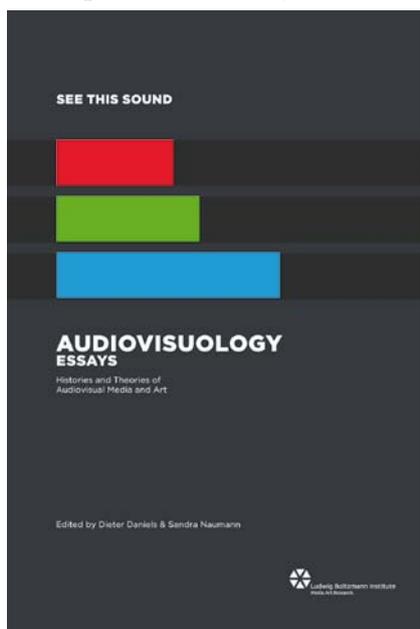
Contributions by Institute's members:

- **Dieter Daniels, Sandra Naumann:** *Introduction*, 5-16
- **Sandra Naumann, Marcel Schwierin:** *Abstract Film* , 19-31
- **Sandra Naumann, Jörg Jewanski:** *Structural Analogies*, 389-399
- **Sandra Naumann, Justin Hoffmann:** *Artists Musicians*, 53-65
- **Katja Kwastek:** *Relations of Sound and Image in Interactive Art*, 163-175

7.1.5 Audiovisuology. Essays. Histories, and Theories of Audiovisual Media and Art

Edited by Dieter Daniels and Sandra Naumann

To be published in early 2010, Verlag der Buchhandlung Walther König



The essays include cross thematic boundaries and deal with such topics as the relationship between pop culture and the visual arts, the role of technical equipment in the process of artistic production, and the creation of environments for specifically audiovisual experience with a focus on their bases in the psychology of perception.

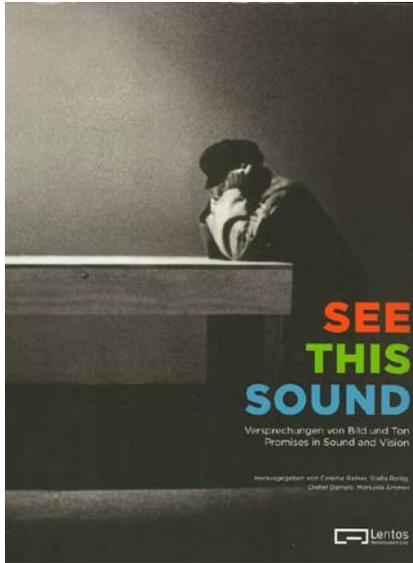
Authors: Hans Beller, Michel Chion, Dieter Daniels, Diederich Diederichsen, Christian Höller, Katja Kwastek, Chris Salter, Simon Shaw-Miller, and Birgit Schneider

Contributions by Institute's members:

- **Dieter Daniels, Sandra Naumann:** *Introduction*
- **Katja Kwastek:** *Audiovisual interactive art – from artwork to device and back*

7.1.6 See This Sound. Promises in Sound and Vision, Exhibition Catalogue

Cooperation with Lentos Kunstmuseum Linz



Edited by Cosima Rainer, Stella Rollig, Dieter Daniels, Manuela Ammer, Verlag der Buchhandlung Walther König, Köln 2009,

Authors: Manuela Ammer, Dieter Daniels, Diedrich Diedrichsen, Helmut Draxler, Matthias Dusini & Thomas Edlinger, Heidi Grundmann, Christian Höller, Gabriele Jutz, Liz Kotz, Sandra Naumann, Cosima Rainer, Jan Thoben.

Contributions by Institute's members:

- **Dieter Daniels**, Stella Rollig: *Preface*, p. 12 - 16
- **Dieter Daniels**, *From Visual Music to Intermedia Art*, pp. 240 - 253
- **Katja Kwastek**, **Sandra Naumann**, **Jan Thoben**, *catalogue entries*

7.1.7 Aesthetics of Interaction in Digital Art

Author: Katja Kwastek (habilitation thesis)
To be published in 2010

The scholarly discussion of works and projects characterized as “interactive art” calls for methods that do justice to their process- and participation-based character. Various strategies of interactivity within the framework of connections between the work and its effect must be taken into account, and an adequate vocabulary to describe them must be developed.

Detailed analysis of exemplary works explores the specific role of interactivity within the overall context of strategies related to aesthetics, content, and form. In parallel with that, a theoretical framework is developed that describes fundamental elements of an aesthetics of interactivity in digital art by making use of analyses of aesthetic processes produced by other scholarly disciplines (see Project III 3, p. 70).

7.1.8 Ars Electronica Operating System

Author: Barbara U. Schmidt

To be published in 2010

This publication explores the institutionalization of media art using the example of Ars Electronica in Linz. Particular attention is paid to fields of discourse and the cultural, political, and geographical contexts within which this institutionalization takes place.

This study covers the period from 1979, when Ars Electronica was founded, to 1999 (see Project III 1, p. 66).

7.2 Essays

(chapters in institute's publications are mentioned above)

2009:

Gabriele Blome, Jürgen Enge, Andree Lüdtke: *Vernetzte Archive. Das Gateway to Archives of Media Art (GAMA)*, Proceedings Conference EVA Berlin. Elektronische Medien & Kunst, Kultur, Historie. 11.-13. November 2009, Staatliche Museen zu Berlin, ed.: Andreas Bienert / Gerd Stanke / James Hemsley / Vito Cappellini, 91-97.

Gabriele Blome: *Gateway of Archives of Media Art (GAMA). Network-Linked Archives*, in: Ars Electronica 2009. Human Nature. Festival für Kunst, Technologie und Gesellschaft, ed.: Hannes Leopoldseder / Christine Schöpf / Gerfried Stocker. Ostfildern 2009, 284-285.

Gabriele Blome: *Archiv-Inszenierungen. Zugänge zu Online-Ressourcen zur Medienkunst*, in: Media Archive Performance, #1 Beweglicher Zugang™ - Eine Eröffnung, ed.: Barbara Büscher / Franz Anton Cramer, 2009. <http://perfomap.de/current/iv.-digitale-archiv-szenarien>.

Sandra Naumann: *Cut & Splice*, in: *Sound:Frame. Festival for the Visualization of Electronic Music* (Exhibition Catalogue), ed.: Eva Fischer / Künstlerhaus Vienna 2009, 36-39.

Dieter Daniels: *Die Transformation des historischen Augenblicks im Zeitalter der transatlantischen Telegrafie und der Reportagefotografie*, in: *Bilderschlachten, 2000 Jahre Nachrichten aus dem Krieg, Technik – Medien – Kunst*, ed.: Hermann Nöring / Thomas F. Schneider, Göttingen 2009, 214 – 223

Dieter Daniels, Christoph Grunenberg, Cornelia Lund, Helga de la Motte-Haber, Christopher Salter: *Jury Statement Prix Ars Electronica, Media. Art. Research Award 2009, Sound-Image Relations in Audiovisual Art*, in: *CyberArts 2009*, ed.: Hannes Leopoldseder / Christine Schöpf / Gerfried Stocker, Ostfildern 2009. 240 – 243

Dieter Daniels: Statement, in: *Für die Kunst*, ed.: Klaus Werner / Stiftung Neue Kultur, Potsdam / Berlin, Köln 2009, 279

Gerhard Dirmoser, **Katja Kwastek**, Evelyn Münster, Jaume Nualart, Dietmar Offenhuber, Moritz Stefaner: *Mapping the Ars Electronica Archive*, in: Human Nature, Ars Electronica 2009, ed.: Gerfried Stocker / Christine Schöpf, Ostfildern 2009, 262-271

Katja Kwastek: *Classification vs. Diversification. The Value of Taxonomies for New Media Art*, in: Peter Gendolla: Beyond the Screen, Bielefeld 2009.

Katja Kwastek: *Embodiment and Instrumentality*, in: Conference Proceedings: Digital Art and Culture 2009: After Media. Embodiment and Context, Irvine 2009, <http://escholarship.org/uc/item/0zg3t13v>

Katja Kwastek: *Your number is 96 – please be patient”. Modes of Liveness and Presence Investigated Through the Lens of Interactive Artworks*, in: Conference Proceedings: re:live conference, ed.: Sean Cubitt / Paul Thomas, Melbourne 2009. 89-94

Katja Kwastek: *Geo-Poetry: The Locative Art of Stefan Schemat and Teri Rueb*, in: Performing Digital Literature, ed. Francisco Riccardo, London/New York 2009.

Gunther Reisinger: *Bildabfall. Digitale Quellen zwischen kunsthistorischer Methodik und Recycling*, in: Abfallmoderne, ed.: Anselm Wagner / Johann Konrad Eberlein, Wien 2009

Gunther Reisinger: *Netzkunst, Kunstgeschichte und Musikwissenschaft. Eine Methodensuche*, in: Intermediale Inszenierungen im Zeitalter der Digitalisierung. Medientheoretische Analysen und ästhetische Konzepte, ed.: Andy Blättler / Doris Gassert et al., Bielefeld 2009

Gunther Reisinger: *Netzkunst & Medienkunstforschung*, in: Ars Electronica 1979-2009: Netzwerk für Kunst, Technologie und Gesellschaft, ed.: Hannes Leopoldseeder / Gerfried Stocker / Christine Schöpf, Ostfildern 2009

2008

Gabriele Blome / Dietmar Offenhuber: *Zugangsstrategien für Online-Archive zur Medienkunst*, in: Konferenzband EVA 2008 Berlin. Elektronische Medien & Kunst, Kultur, Historie. 12.-14. November 2008, Staatliche Museen zu Berlin, Kulturforum Potsdamer Platz, ed.: Andreas Bienert, Gerd Stanke, James Hemsley, Vito Cappellini, Berlin 2008, 113-119.

Dieter Daniels: *Strategies of Interactivity*, in: The Art and Science of Interface and Interaction Design (Studies in Computational Intelligence, Vol. 141), ed.: L.C. Jain / Laurent Mignonneau / Christa Sommerer, Berlin, Heidelberg 2008, 27-62.

Katja Kwastek: *Interactivity - A word in process*, in: The Art and Science of Interface and Interaction Design, ed.: L.C. Jain / Laurent Mignonneau / Christa Sommerer, Berlin/Heidelberg 2008, 15-26.

Sandra Naumann: *Seeing Sound: The Short Films of Mary Ellen Bute*, in: Audio · Visual → on Visual Music and Related Media, ed.: Cornelia Lund / Holger Lund, Stuttgart 2008, 40-54

Dietmar Offenhuber, Judith Donath: *Comment Flow – Visualizing Communication Along Network Path*, in: *Interface Cultures. Artistic Aspects of Interaction*, ed.: Christa Sommerer / Laurent Mignonneau / Dorothee King, Bielefeld 2008

Katja Kwastek: *Opus Ludens. Towards an aesthetics of interactivity*, in: *Interface Cultures. Artistic Aspects of Interaction*, ed.: Christa Sommerer / Laurent Mignonneau / Dorothee King, Bielefeld 2008, 153-163.

Katja Kwastek: *Interaktion, Interaktivität, Interaktive Kunst*, in: *Our new Cultural Economy*, Ars Electronica 2008, ed.: Gerfried Stocker / Hannes Leopoldseeder / Christine Schoepf, Ostfildern 2008.

Dietmar Offenhuber: *The Invisible Display – Design Strategies for Ambient Media in the Urban Context*, in: *Ambient Information Systems*. Seoul, Korea 2008.

Dietmar Offenhuber: D. Harry, Judith Donath: *Function Follows Form - The social Role of Virtual Architecture* in: *Space Between People: How the Virtual Changes Physical Architecture*, ed.: S. Doesinger, USA 2008

Gunther Reisinger: *Rezension/Review: Medien vor den Medien. Übertragung, Störung, Speicherung bis 1700*, ed.: Friedrich Kittler / Ana Ofak, München 2007, in: sehepunkte 8 (2008), Nr. 2 [15.02.2008], URL: <<http://www.sehepunkte.de/2008/02/13827.html>>

Barbara U. Schmidt: *Mapping Gender. Re- und De-Konstruktionen von Geschlechterverhältnissen am Beispiel der Computerwerbung*, in: *Alles Gender? Feministische Standortbestimmungen. Studien zur Frauen- und Geschlechterforschung* 8, ed.: Maria Buchmay, Innsbruck/Wien/Bozen 2008.

Barbara U. Schmidt: *Rezension/Review: Joline Blais, Jon Ippolito: At The Edge Of Art* London 2006, in: *LBI-MKF Online Reviews*, 29. 01. 2008, URL: http://media.lbg.ac.at/de/buch_detail.php?iMenuID=84&iProjectID=572

2007

Dieter Daniels: *Paik's Global Media Vision / Paik y los medias globales*, in: Katalog Nam June Paik 1932–2006. Nam June Paik and Korea: From fantasy to hyperreality / Nam June Paik y Corea: de lo fantástico a lo iperreal, Madrid 2007, 282–308.

Dieter Daniels: *Fluxus and more / Fluxus y mas*, Interview mit Nam June Paik, in: Katalog Nam June Paik 1932 – 2006. Nam June Paik and Korea: From fantasy to hyperreality / Nam June Paik y Corea: de lo fantástico a lo iperreal, Madrid 2007, 309–316.

Dieter Daniels: *On Television Manifesto of the Spatial Movement*, in: Rett Kopi: Dokumenter Fremtiden, Manifest, Oslo 2007, 114.

Dieter Daniels: *Introducing Theory: Contextualising Net-Based Art* (Jury Statement Media.Art.Research Award 2007) in: *CyberArts 2007, International Compendium Prix Ars Electronica*, ed. Hannes Leopoldseder, Christine Schöpf, Gefried Stocker, Ostfildern 2007, 244–247.

Dieter Daniels / Sandra Naumann: *Audiovisualogie, 150 Jahre medialer Bild-Ton-Relationen in der Wechselwirkung von Kunst, Technik und Wahrnehmung*, in: k60. ed.: Kunstuniversität Linz, Forum – Freunde und AbsolventInnen der Kunstuniversität Linz, Linz 2007, 34–53.

Dieter Daniels: *Die Videoprojektionen von Sebastian Stumpf / Sebastian Stumpf's Videoprojections*, in: Sebastian Stumpf: Weiße Räume verlassen / Leaving White Spaces, Leipzig 2007, n.p.

Günther Kolar: *Preserving Interactive Multimedia Art: A Case Study in Preservation Planning*, Conference-Proceedings: 10th International Conference on Asian Digital Libraries, Hanoi, 10.–13. Dezember 2007

Günther Kolar: *Spatial Applications as Social Knowledge Provider. An Approach for Regional Virtual Communities*, in: Proceedings of I-MEDIA '07 and I-Semantics '07, Graz, 5–7. September 2007, (Journal of Universal Computer Science), 196–199

Katja Kwastek: *Rezension/review: Feedback : Art responsive to input, instructions or its environment*, ed.: Ana Botella Diez del Corral, Gijón : LABoral Centre for art and creative industries 2007, in: *LBI-MKF Online Reviews*, URL: <http://media.lbg.ac.at/de/review/?584> [12.12.2008]

Katja Kwastek: *An den Grenzen der Darstellbarkeit. Katastrophen als Thema der Medienkunst*, in: *AngstBilderSchauLust. Katastrophenerfahrungen in Kunst, Musik und Theater*, ed.: Jürgen Schläder / Regina Wohlfarth Berlin 2007, 196–211.

Sandra Naumann: *A Visual Visionary. Avant-garde Filmmaker Mary Ellen Bute*, in: *a mínima. New Media Art Now*, Vol. 22, 2007, 122–127.

Gunther Reisinger: *Kunstwissenschaftliche Quellenkritik als Interpretation der medialen Konstitution* [7.9.2007], auf Projektseite netzpioniere.at, URL: <http://media.lbg.ac.at/netzpioniere/?o:np-079-107&iMenuID=4>

Barbara U. Schmidt: *Kapu Corner*, in: Camera Austria, #98/Mai 2007

Barbara U. Schmidt: *Bibliografie zu Medienkunst, Mediengeschichte, Technologie*, in: Re:place 2007 – Programme und Abstracts, ed.: Ulla Drenckhan, Thomas Munz: Kulturprojekte Berlin, Berlin 2007

2006

Dieter Daniels: *Medien Momente, Leipzig 1989 – 1994*, in: Nur hier? Die Galerie der Hochschule für Grafik und Buchkunst Leipzig 1980–2005, ed.: Beatrice von Bismarck, Christine Rink, Leipzig 2006, 72–79.

Dieter Daniels: *Video / Kunst / Markt, Video / Art / Market* in: 40jahrevideokunst.de, Teil 1, Digitales Erbe: Videokunst in Deutschland von 1963 bis heute, ed.: Rudolf Frieling / Wulf Herzogenrath, Ostfildern 2006, 40–49.

Dieter Daniels: *Morsen, Morsen, Morsen / morse, morse, morse*, in: morse by horse, Manual, Dellbrügge & de Moll, 2006, 28–39, 74–85.

Dieter Daniels: *Über das Medium, E-Mail Dialog / About the Medium, Email Dialogue*, in: Alba d'Urbano, whomai: in ordine sparso, Nürnberg 2006, 18–28.

Dieter Daniels: *Pioniere der Medienkunst* (Transkript Radiosendung), in: Intermedialität und offene Form. Hörspiel und Medienkunst im Bayrischen Rundfunk, ed.: Herbert Kapfer u. a., München 2006, 146–153.

Dieter Daniels: *A Hundred Years of Radio's Potential*, in: Relating Radio. Communities. Aesthetics. Access, Beiträge zur Zukunft des Radios, ed.: Golo Foellmer, Sven Thiermann, Leipzig 2006, 34–49.

Dieter Daniels: *Auf der Suche nach dem Land der Ahnungslosen*, in: Grauzone 8 mm. Materialien zum autonomen Künstlerfilm in der DDR, ed.: Dieter Daniels, Jeannette Stoschek, Ostfildern 2007.

Katja Kwastek: Projektberichte ›PETAL und Hyperimage. Die Idee eines bildbasierten Forschungsnetzwerks‹ und ›Der Aufbaustudiengang Digitale Kunstgeschichte am Institut für Kunstgeschichte der LMU München‹, in: Simon, Holger und Büttner, Sabine (Ed.): Digitale Medien und Wissenskulturen. Zeitenblicke 5 (2006), Nr. 3, [03.12.2006]
‹http://www.zeitenblicke.de/2006/3/Kwastek1/index_html›
‹http://www.zeitenblicke.de/2006/3/Kwastek2/index_html›

Barbara U. Schmidt: *Unwire the future. Mobiles Arbeiten im Stadtraum*, in: sinn-haft Nr. 20/ 2006, city-contest, ed. Barbara U. Schmidt et al., 17–26.

Gunther Reisinger: *Die digitale Quelle. Ihre Rolle zwischen Konstitution des Mediums und kunstwissenschaftlicher Methodik*, Dissertation, Graz 2006.

7.3 lectures

Gabriele Blome

[lecture] *Vernetzte Archive. Das Gateway to Archives of Media Art (GAMA)*. Lecture together with Jürgen Enge (HfG Karlsruhe) and Andree Lütke (Universität Bremen). Conference EVA Berlin, 12. November 2009.

[lecture] *Online Resources of Media Art: Conditions, Access & Perspectives*. Digital arts, new technologies, new cultural practices. Organized by Les Rencontres, Association of European Cities and Regions for Culture. Linz, 23. Oktober 2009.

[lecture] *An Ontology for Media Art Archives*. TransISTor, Workshop on preservation of audiovisual and digital records, Prag (Tschechien), 20. Mai 2009.

[lecture] *Archiv-Interfaces: Zugänge zu Online-Ressourcen zur Medienkunst im Kontext*. European Media Art Festival, Themenschwerpunkt „Medienarchive“, Osnabrück, 24. April 2009.

[lecture] *Im Kontext: Online-Ressourcen zur Medienkunst*. Symposium "Open Archive – Grenzen und Möglichkeiten von partizipativen Archivprozessen", Videonale 12, Bonn, 27. März 2009.

[workshop-moderation] *Archiving Media Art: Politics and Strategies*, together with Gaby Wijers (NIMk), Ars Electronica Festival 2009, Linz, 5. September 2009.

[lecture] *Access Strategies for Online Archives of Media Art (Zugangsstrategien für Online-Archive zur Medienkunst)*; EVA-Conference 2008 Berlin. Electronic Media and Visual Arts. Elektronische Medien & Kunst, Kultur, Historie, Staatliche Museen zu Berlin am Kulturforum Potsdamer Platz, 13. November 2008.

Dieter Daniels

[keynote] *Broadcast yourself – 25 Jahre Videonale*, Symposium *Videokunst und Internet – Die Zukunft des bewegten Bildes*, Videonale 12, Kunstmuseum Bonn, 26. März 2009.

[keynote] *Ubiquity and Simultaneity of Media from the 19th to the 21st Century* Conference *Digital Art and Culture in the Age of Pervasive Computing*; University of Copenhagen, 12. November 2008.

Präsentation des Ludwig Boltzmann Instituts Medien.Kunst.Forschung. Serie: Tomorrow now. Work without center. Conferences on the nature of art work in the digital age, Bevilacqua La Masa Foundation, Venedig, 10. Juni 2008.

[conference-moderation] *Interaktion, Interaktivität, Interaktive Kunst. Ein Schlüsselbegriff der neuen Medien auf dem Prüfstand*, Linz, Ars Electronica 2008, 4. September 2008.

[keynote] *Presentation of the Ludwig Boltzmann Institute Media.Art.Research.*, Sommet international DOCAM 2007, Musée des beaux-arts de Montréal, Fondation Langlois, Montreal, 27. November 2007.

Presentation of the Ludwig Boltzmann Institute Media.Art.Research., fastforward on new media art / Second international forum PAN, Palazzo delle arti, Neapel, 22.–24. November 2007.

[lecture] *Hundert Jahre Radio – oder: Wann haben Medien Geburtstag?*, Conference: Die Wiederkehr der drahtlosen Fantasie – 100 Jahre Radio, RadioKulturhaus Wien, 19. Januar 2007.

[lecture] *Was war die Medienkunst?*, Universität Wien, lecture series: Was waren Medien? (Prof.Dr. Claus Pias), Wien, 13. Juni 2007.

[lecture] *Ton_Film, Bewegte Visuelle Kunst und Neue Musik*, Hochschule für Bildende Künste Braunschweig, 21. Juni 2007.

[lecture] *Gordon Pask und Marcel Duchamp*, Conference, kulturwissenschaftliches Forschungskollegs Medien und kulturelle Kommunikation: Just not in Time, Inframedialität und die Genealogie des Unerwarteten, Köln, 28.–30. Juni 2007.

[lecture] *Digital Cultural Heritage*, Conference: Closeness vs Dislocation – Contextualising Net-Based Art, Festival Ars Electronica 2007, Linz, 10. September 2007.

[lecture] *Duchamps ›Großes Glas‹ – eine Antizipation der Kybernetik?*, Symposion: Künstler als Wissenschaftler und Kunsthistoriker, Studienzentrum für Künstlerpublikationen/ ASPC, Neues Museum Weserburg, Bremen, Hochschule für Künste, Bremen, 18.–19. Oktober 2007.

[interview], Zehn Jahre ZKM, *SWR 2 Radio, Landeskultur-Redaktion Baden-Württemberg*, 16. Oktober 2007.

[panel-participation] *Jeder Kunst ihre Krise? Neue Medienkunst*, further participants: Katharina Gsöllpointner, LOOP. Institut für systemische Medienforschung, Wien, Margarete Jahrmann, ZHdK Hochschule der Künste, Zürich, Peter Pakesch, Landesmuseum Joanneum, Kunsthaus Graz, Moderation: Sonja Bettel, matrix Ö1, Depot Wien 10. Dezember 2006.

[lecture] *Medien-Kunst als Modellfall der Digital Cultural Heritage*, Conference: An Expedition to European Digital Cultural Heritage: Collecting, Connecting – and Conserving? Salzburg, 21. bis 22. Juni 2006.

[keynote] *Hundert Jahre Radio Potentiale*, Festival RadioREVOLTEN, Halle an der Saale, 4. bis 5. Oktober 2006 .

Günther Kolar

[lecture] *Das Archiv der Ars Electronica*, Kick-off: Arbeitskreis Langzeitarchivierung, Wien, 19. April 2007.

[lecture] *Archivierung von Medienkunst*, Conference: Conservare il digitale. Un confronto internazionale, Asolo, 29. September 2007.

[lecture] *Aspekte der Vertrauenswürdigkeit Digitaler Langzeitarchive*, Conference: Digital Asset Management an Hochschulen, Universitätsbibliothek Wien, Wien, 12.–13. November 2007.

[lecture] *Archiving Media Art*, Conference: Conservare Il Digitale. Un Confronto Internazionale / Long Term Digital Preservation. An International Focus, Asolo, 30. September 2006.

Katja Kwastek

[lecture] *Embodiment and Instrumentality*, Conference: Digital Art and Culture 2009: After Media. Embodiment and Context, University of California, Irvine (CA) 13. Dezember 2009.

[lecture] *“Your number is 96 – please be patient”. Modes of Liveness and Presence Investigated Through the Lens of Interactive Artworks* , Conference: re:live. Third International Conference on the Histories of Media Art, Science and Technology, Melbourne, 27. November 2009.

[lecture] *“I am an interactive artist – I create experiences”*, Invited Lecture Series Interface Culture, Institut für Medien, Kunstuniversität Linz 20. Oktober 2009.

[panel-moderation] *New approaches towards archiving media art*, Workshop: Archiving Media Art: Politics and Strategies, Linz, Ars Electronica, 5. September 2009.

[discussion] *On the creation, experience and research of audiovisual interactive art*, discussion with Golan Levin, Symposion: See this Sound: Ton-Bild-Relationen in Kunst, Medien und Wahrnehmung, Lentos Kunstmuseum Linz, 3. September 2009.

[panel-participation]: *Cultural Heritage: The role of (digital) Archives*, Ars Electronica 80+1 Projekt, Linz, Hauptplatz, 30. Juli 2009.

[lecture] *Between potential and property: presence and liveness in interactive artworks*, Conference: Performing Presence: from the live to the simulated, University of Exeter, 27. März 2009.

[lecture] *How to select New Media Art*, Conference at exhibition "Synthetic Times. Media Art China", Peking, National Museum of the Imperial City, 10. Juni 2008.

[lecture] *Archival strategies of the Ludwig Boltzmann Institute Media.Art.Research. in Linz*, Second Bremen Symposium on Early Digital Art: Machinic Art, Art History, and Data Base, Bremen, Kunsthalle, 12. Juli 2008.

[lecture] *Die Konservierung der Echtzeit. Zeit- und Raumschichten in der Interaktiven Kunst*, Symposium: Es ist JETZTZEIT, Künstlerhaus Wien, 17. Oktober 2008.

[conference-moderation] *Interaktion, Interaktivität, Interaktive Kunst. Ein Schlüsselbegriff der neuen Medien auf dem Prüfstand*, Linz, Ars Electronica 2008, 4. September 2008.

[panel-participation] *How to archive New Media Art*, exhibition "Synthetic Times. Media Art China", Peking, National Museum of the Imperial City, 11. Juni 2008.

[panel-moderation] *experience and authenticity*, Conference: Online Archives of Media Art - Contextualization, Metadata, Translation, re:place, HKW Berlin, 15. November 2007.

[lecture] *Interaktion – Interaktivität – Interaktive Kunst. Über die Ursprünge eines Begriffs und seinen Nutzen für die Kunst*, Salon des LBI Medien.Kunst.Forschung., Linz, 10. Oktober 2007.

[lecture] *Aesthetics of Interactive Art*, Invited Lecture Series, Interface Culture, Institut für Medien, Kunstuniversität Linz, 19. Juni 2007.

[lecture] *aesthetics of interaction*, Conference: Interaction and Embodiment, University of California Irvine, Department Arts Computation Engineering, Irvine (CA) 7. Mai 2007.

[lecture] *global games and mobile feelings*, Department Design/Media Arts, University of California Los Angeles (CA), 4. Mai 2007.

[lecture] *Lost and found: Wireless Art und die (Re-) Eroberung des Hertzian Space*, Conference: Die Wiederkehr der drahtlosen Fantasie - 100 Jahre Radio, RadioKulturhaus Wien, 19. Januar 2007.

[lecture] *Medienkunst in Forschung und Lehre*, Symposium: Bild Transfer. Medienkunst erhalten, vermitteln, erschließen, imai inter media art Institute Düsseldorf, Düsseldorf, 30. November bis 1. Dezember 2006.

Sandra Naumann

[film-presentation] *Mary Ellen Bute*. Film programs presented at Experimenta Festival, Bangalore, India, 17.-20. Dezember 2009.

[lecture] *From Color Light Music to Live Cinema. A Journey through the history of audiovisual Live Performances*. Paper presented at Experimenta Festival, Bangalore, India, December 17.-20. Dezember 2009.

[lecture/film-presentation] *Wie der Klang in die Bilder kommt: Visual Music und frühe Ton-Bild-Experimente im Film*, Lentos Kunstmuseum Linz, 19. November 2009.

[lecture] *Seeing Sound: Mary Ellen Bute's Short Films*. Symposion: Seeing Sound, Practice-Led Visual Music Research, Bath Spa University, 19.-20. September 2009.

[lecture] *Musical Images*. Conference: Structures Node 2: Blind Capture, Club Transmediale, Berlin, 11.-12. September 2009.

[lecture] *Seeing Sound: The Short Films of Mary Ellen Bute*. Conference: Locating Media, 3rd Annual Conference of NECS, European Network for Film and Media Studies, Lund, 25. -28. Juni 2009.

[lecture/film-presentation] *Cut & Splice: A Journey through the history of visual ReMix*. Festival: Sound:Frame, Festival for the Visualization of Electronic Music, Wien, 24. April 2009.

[panel-participation] Departure Conference: *Evolution Remixed, in the framework of Sound:Frame, Festival for the Visualization of Electronic Music*, Wien, 3.-5. April 2009.

[lecture/film-presentation] *Seeing Sound: Mary Ellen Bute*. Festival: Tricky Women Film Festival, Wien, 7.-8. März 2009.

[lecture] *Visual Music and Live Cinema*. (mit/with Mia Makela aka Solu) at Connecting Animation, International Forum, Statements, Discussion, Tricky Women Film Festival, Wien, 6. März 2009.

[lecture] *Mary Ellen Bute: Frühes elektronisches Kino*, Arsenal - Institut für Film und Videokunst e.V., Berlin, 22. Mai 2008.

[lecture], Salon Resonierende Gedächtnisspuren des Instituts für Medienarchäologie, Transmediale.07, Berlin, 31. Januar bis 4. Februar 2007.

[lecture] *Mary Ellen Bute: A Forgotten Avant-Garde Film Pioneer*, Feminism(s): Film, Video, Politics University of Hartford, Hartford (CT), 20.-22. April 2007.

[lecture] *Lichtmusik #1: Mary Ellen Bute*, Festival Ars Electronica, IMA Salon #7 des Instituts für Medienarchäologie, Linz, 5.-11. September 2007.

Dietmar Offenhuber

[lecture] *The Invisible Display – Design Strategies for Ambient Media in the Urban Context*, Ambient Information Systems, Ubicomp, Seoul, 21. September 2008.

[lecture] *knowledge representation for shared media art archives*, Open Archives Conference, Jihlava, 25. Oktober 2008.

[lecture] *The Invisible Display*, Visualizar 2008, Medialab Prado, Madrid, 4. November 2008.

[participation] Werkgespräche Medienwerkstatt Wien, moderated by Marc Ries, 23. Mai 2008.

[lecture] *Semaspace*, Gerhard Dirmoser, Quitch, Linz, 7. Mai 2008.

Gunther Reisinger

[lecture] *0 oder 1? Computerkünstlerische Spiele mit dem binären Zufall*. SpielKunstGlück Kongreß des Instituts für Kunstgeschichte der Karl-Franzens-Universität Graz, 15.-16. Juni 2009

[lecture] *Eine Trias der medialen Einheit? Performative Kunstwissenschaft am Fallbeispiel net.art*. Netzkulturen Symposion des Instituts für Theaterwissenschaft, Ludwig-Maximilians-Universität (LMUexcellent-Projekt), 9.-11. Oktober 2009.

[lecture] *Zum Sinn und Unsinn der Archivierung netzbasierter Kunst*. Not in Archive. Zum Internet als Dispositiv der Archivierung. Conference, Universität Innsbruck/Institut für Translationswissenschaften, 23. - 24. Oktober 2009.

[lecture] *Kunst- und musikwissenschaftliche Ansätze zur Analyse, Beschreibung und Archivierung netzbasierter Kunst*, Conference, Intermediale Inszenierungen – Fallstudien und theoretische Konzepte, Universität Basel (CH), 10.–11. Juli 2008.

[lecture] *Art-Historical Aspects of digital Archiving*, Conference ‚The Work of Art History in the Digital Age‘ (Colloquium) held by ‘The Council on Library and Information Resources’ at the Sterling and Francine Clark Art Institute, Williamstown (Massachusetts, USA), 27.–28. Juni 2008.

[lecture] *Bildabfall. Digitale Quellen zwischen kunsthistorischer Methodik und Recycling*, Conference, ‚Abfallmoderne. Ein Symposium zu den Schmutzrändern der Kultur‘, Karl-Franzens Universität Graz, 4. – 5. Juni 2008.

[lecture] *Symbiotic Methods. Interdisciplinary Approaches towards netbased art*, Conference: Closeness vs. Dislocation. Contextualising netbased Art, Festival Ars Electronica 2007, Linz, 10. September 2007.

[lecture] *Digitale Quellen: Asset Management in kunsthistorischer Forschung und Lehre*, Conference: Digital Asset Management an Hochschulen, Universitätsbibliothek Wien, Wien, 12.–13. November 2007.

[lecture] *Source-critical contexts of archiving and re-presenting net-based art*, Workshop: Online Archives of Media Art – Contextualisation, Metadata, Translation, Conference: re:place, Berlin, Haus der Kulturen der Welt, 15. November 2007.

[lecture] *The Art Historical Context of the Categorization, Description and Archiving of net-based art*, Cross-Media-Week, Amsterdam, 27. September 2006.

Barbara U. Schmidt

[lecture] *Ars Electronica ist (nicht) vom Himmel gefallen Entwicklung von Programmatik und institutioneller Eigenständigkeit in den Anfangsjahren*. History Talk, Ars Electronica Festival 2009, Linz, 5. September 2009.

[participation] invited as participant of YASMIN Online-Forum, month of March, on the topic „Artists as Inventors“ http://estia.media.uoa.gr/pipermail/yasmin_discussions/

[lecture] *ARS ELECTRONICA: Diversity of “New” Audiences of Media Art*, Symposium: NEW MEDIA ART AUDIENCES, CIANT GALLERY, Prag, 23. Mai 2008.

[lecture] *Systems of Media Art Presentation*, Institut für Interface Culture der Kunstuniversität Linz, 7. November 2008.

[lecture] *Verknüpfung von Kompetenz- und Körperdiskursen in Technologiewerbung*, Conference: Gender und eEducation, Akademie der bildenden Künste, Wien, 10. Mai 2007.

[lecture] *Mapping Gender. Re- und De-Konstruktionen von Geschlechterverhältnissen am Beispiel der Computerwerbung*, AbsolventInnentag: Alles Gender? Feministische Standortbestimmungen, Johannes Kepler Universität, Linz, 11. Mai 2007.

8 Team

DIRECTOR

10/2005-9/2009

Prof. Dr. **Dieter Daniels** has been a professor of Art History and Media Theory at the Academy of Visual Arts in Leipzig since 1993.

10/2009-12/2009

Dr. **Katja Kwastek** is an art historian and was assistant at the Institute of Art History at Ludwig Maximilian University in Munich from 2001–2006.

DEPUTY DIRECTOR

until 4/2008

Mag. **Ingrid Fischer-Schreiber** is a translator and copy editor who has worked at Ars Electronica since 1996 (including catalogue editing, conception and project management for the online archive, as well as conceiving and organizing symposia).

5/2008-9/2009

Dr. **Katja Kwastek** (see above)

COORDINATION

until 4/2008

Mag. **Ingrid Fischer-Schreiber** (see above)

8/2008-12/2009

Michaela Schörflinger studied art history. She has worked in the eFIT-project digitization of the Albertina, Vienna and worked as a mediator in the Schlossmuseum Linz.

OFFICE MANAGER

Gertrude Hörlesberger (10/2005-12/2009)

Office Assistant: Gerlinde Pöschko (10/2008-12/2009)

KEY RESEARCHERS

Research Line A

Prof. Dr. Dieter Daniels / Dr. Katja Kwastek – see above

Research Line B

DI **Günther Kolar** (10/2005-9/2008)

studied Information Science and has worked at the Ars Electronica Futurelab (web development & management) since 2001.

Research Line C

Univ.-Prof. DI **Dietmar Offenhuber** (10/2007-9/2009)

studied architecture and was a founding member of the Ars Electronica Futurelab and professor for Animation and Interactive Media at the Upper Austria University of Applied Sciences in Hagenberg. From 2006–2007 he completed an M.S. degree and worked as researcher in the Sociable Media Group at MIT Media Lab in Cambridge, MA.

Evelyn Münster (10/2009-12/2009)

(before, 5/2008-9/2009 Researcher)

is media artist and software developer. She has worked as IT Consultant in the field of Java/JEE and has developed multimedia archives, enterprise content management systems, knowledge management systems, social / collaborative software, portals and shops.

RESEARCHERS

Mag. **Gabriele Blome** (11/2007-12/2009)

an art historian and social education worker, worked from 1997–1999 at the ZKM Medienmuseum in Karlsruhe and from 2000–2007 as a research assistant at the Fraunhofer Institute for Intelligent Analysis and Information Systems.

Philipp Haindl (9/2008-9/2009)

(before, 2/2008-8/2008 Junior Researcher)

studied informatics in Linz and has been involved in the development of knowledge management systems (a. o. Bundesministerium für Finanzen, voest alpine)

DI Mag. **Sandor Herramhof** (11/2008-12/2009)

studied informatics and biology, has worked from 2004 to 2006 at the Johannes Kepler University, Linz, in the field of barrier-free web-design.

Mag. **Sandra Naumann** (11/2007-12/2009, third-party-sponsored project »See this Sound«)

studied Communication and Media Studies, Art History, and German Language & Literature and has worked since 1994 for arthouse cinemas, film distributors, film producers and film festivals.

Llic. **Jaume Nualart i Vilaplana** (8/2008-11/2009)

worked as software developer and independent researcher in the fields of data visualisation and digital media, within several European projects and artist/scholar residencies.

Dr. Gunther Reisinger (3/2006-12/2009)

an art historian and music scholar, did a research and work stay in Karlsruhe (HFG – University of Design, and ZKM – Center for Art and Media) from 2002–2005. He has been an assistant at the Institute of Art History at Karl Franzens University, Graz since 2007.

Mario Röhrle (8/2008-12/2009)

(before, 2/2007-8/2008 Research Assistant)

a photographer and artist, was involved in the conception, development and implementation of the database and content management systems

Dr. Barbara U. Schmidt (10/2005-9/2009)

studied Art History and Literature and was a curator and assistant at the Institute for Media/ Department of Media Theory at the University of Art and Industrial Design in Linz.

JUNIOR RESEARCHERS

Nina Wenhart (4/2006-7/2008)

worked at the Ars Electronica Futurelab from 1999–2004 (director of the video studio, setting up the archive, conception and production of exhibitions) and until 2004 as a copywriter and concept designer for various advertising agencies.

Theresa Schubert-Minski (10/2008-12/2009)

is media designer and has worked on a project for an interactive online museum, and in art mediation. She also realized a radio feature on the topic of sonification.

GUEST RESEARCHERS

Caitlin Jones, New York

Dr. Lizzie Muller, Sydney

Ingrid Spörl, Halle

Heike Helfert, Stuttgart

Jan Thoben, Berlin

RESEARCH ASSISTANTS

Mag. Nina Fuchs

Mag. Robert Sakrowski

Fadil Kujundciz

Milena Rieser

STUDENT ASSISTANTS

Gerda Haunschmid

Julia Lehner

Ulrike Pimminger

Bernhard Pusch

Simone Sailer

Gerlinde Schmierer

9 Cooperations

GAMA – Gateway to Archives of Media Art

- **EU project with 19 international partner institutions**

See this Sound

- **Lentos Kunstmuseum Linz**
- **Linz09 Cultural Capital of Europe**

Netpioneers

- **Lentos Kunstmuseum Linz**
- **Institut für Kunstgeschichte, KFU Graz**
- **Austrian Cultural Forum New York**

Media.Art.Research Award / Taxonomies for Media Art

- **Ars Electronica**

SAMY

- **Salzburg New Media Lab**
- **basis wien**

Reception Research

- **Johannes Kepler Universität Linz**
- **University of Exeter, Department of Drama**
- **Mixed Reality Lab Nottingham**



ARCHIVING

Archiving Digital Data and Physical Data Media

Media art is time-based, context-dependent, procedure-oriented, and ephemeral in terms of its technical standards. Established methods and tried-and-tested models for preserving cultural assets quickly reach their limits: neither the collection of an art museum, a municipal or state archive, or a radio or television archive can do justice to the uniqueness and complexity of media art. For that reason, research and development of specific methods for the (long-term) archiving of media art and documentations of such art forms is a central task for the LBI.

▼ ARCHIVING PROJECTS

- ▶ **SAMY – SINGLE POINT OF ACCESS SEMANTIC MEDIA REPOSITORY FRAMEWORK**
Philipp Haindl, Gabriele Blome, Mario Röhrle, Katja Kwastek, Sandor Herramhof
Cooperation Partner: Salzburg New Media Lab; basis wien



- ▶ **PRESERVATION OF THE MATERIAL AND DATA OF THE ARS ELECTRONICA**
Gabriele Blome, Günther Kolar, Ingrid Fischer-Schreiber, Mario Röhrle, Barbara U. Schmidt, Theresa Schubert-Minski, Nina Wenhart



1 SAMY – Single Point of Access Semantic Media Repository Framework

(Follow-up project to “Technical and Formal Conception of Digital Archives”, see annual report 2007).

Project Coordinator: Mario Röhrle, Katja Kwastek

Project Team: Gabriele Blome, Philipp Haindl, Sandor Herramhof, Angela Puchner (07 – 11/2008),

Cooperation Partners: basis wien, Salzburg New Media Lab

Project Period: 07/2008 – 12/2009

Project Objective: Developing and implementing archiving systems for media art

Project Description

The project SAMY (“Single Point of Access Semantic Media Repository Framework”) deals with the typical issues of media art archives that have evolved historically, developing a generic solution for these issues based on an Open Source Software framework, which supports both the functions of an asset management system and the administration of semantic networks based on an ontology.

Archives for media art and for contemporary art in general, such as the archive of the Ars Electronica in Linz or the cultural documentation center *basis wien*, for example, have heterogeneous, partially historically evolved data structures. At the same time, the archive mainly consists of a multitude of multimedia digital data, texts, data sets on persons, institutions, etc., and complex relations between these entities. The physical (real) or digital objects and their metadata are usually administered in different file systems and/or database systems.

To ensure uniform access to processing and communicating and uniform procedures for long-term archiving, from the perspective of the archive operators there is a need for a media art archive platform, into which existing and new archives can be integrated. The standardization of cross-archive characteristics is just as important here as taking special features of an individual archive into consideration.

The objective of SAMY consists in the conception, preparation, implementation and evaluation of a generic software framework for media art archives. Since existing systems do not optimally meet both requirements, the project has set itself the goal of expanding an existing Open Source solution for media management (Fedora) to implement a “single point of access” for the administration of and access to media assets as well as (semantic) metadata.

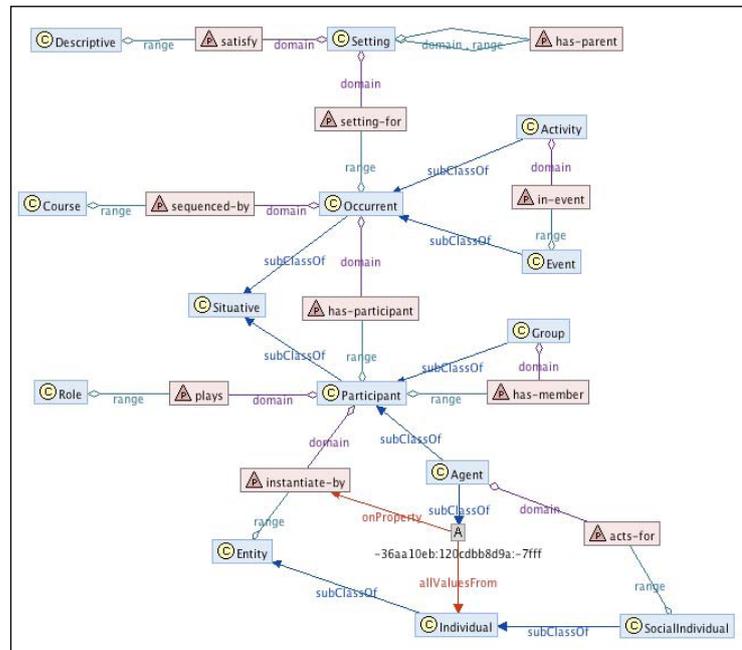
SAMY is developed as a cooperation project between basis wien, Salzburg New Media Lab (SNML) and the Ludwig Boltzmann Institute Media.Art.Research. Here the Institute takes responsibility for coordinating the contents of the project, the development of the persistence layer (data maintenance), and contributes substantially to the content development of the ontology. *basis wien* is especially responsible for the technical conception and implementation of the data model (ontology). SNML is responsible for the project supervision of the overall project and the specification, conception and development of the admin client and administration and entry interface, which at the same time enables simple navigation through the existing data and the semantic concepts.

Project Progress and Intermediate Results

As a continuation of the research project “Technical and Formal Concepts of Digital Archives” (see annual report 07), work was begun on SAMY in July 2008 after a preparation and transition phase. The total project period therefore takes up 18 months until December 2009.

In 2008 comprehensive Use Cases were produced, which describe the workflow to be visualized within the Admin-Client and the data that are to be allocated by the system. On this foundation a data model (ontology) was developed accommodate such varied requirements as long-term archiving, online access for various user groups and the scholarly description of works of media-art.

Focal points of the LBI’s work in 2009 were, in addition to finalization of the persistence layer, the implementation of architecture-specific software patterns in order to guarantee a better modulization, which is easier to maintain, beyond the time frame of the project. In the course of quality assurance current tools for automatic code analysis and continual integration were introduced into the development cycle. On the component level additional options for data queries from the system were implemented, which allows



developers easier access even at the technical level and facilitates access for external developers.

One of the objectives of the SAMY project with regard to sustainability and expandability is to offer the SAMY framework as an open source solution. For this reason measures for quality assurance in the software development process and the documentation of code were taken early on.

Results and Perspectives

With the finalization of the persistence layer in February 2009, the projects now boasts a unified technical component for semantic data maintenance and query. Based on the ontology already prepared and specifically refined, queries of any complexity can be directed now to the system.

Another important milestone from a technical perspective was the finalization of the components for generating domain objects during run-time. This makes it possible to work with standardized, typed domain objects throughout the software architecture without being dependent on the specific requirements of the persistence layer. Therefore, in spite of the complex data model used, no specialist technical knowledge is required on the part of potential additional developers of successive components, which facilitates sustainable further development and maintenance.

The development of a component for the semi-automatic generation of queries from SAMY based on a project-specific syntax made it possible to lastingly shorten the development time for semantic queries for the defined application scenarios.

The first phase of the project is being brought to a close with the productive deployment of the framework at *basis wien*, the preparation of concluding reports, and the open source deployment of the developed software components and documents. It is anticipated that many of the ideas that were brought in during the conception phase, especially through the LBI, will only be possible to implement

in a later phase. In addition, consultations about continuing the research and development activity are being conducted with the partners and other media art archives (eg. Ars Electronica Archive, House of World Cultures, Linz Art University, Mozarteum University Salzburg), with a view towards sustainable further development of the open source project and a focus on the expansion of concepts for the integration of communities (Social Media Art Archive).

2 Preservation of the Material and Data Stock of the Ars Electronica



Ars Electronica Archive

Project Directors: Gabriele Blome (since 11/07) Günther Kolar (until 09/08), Ingrid Fischer (until 04/08)

Project Team: Mario Röhrle, Barbara U. Schmidt, Nina Wenhart (until 08/08), Theresa Schubert-Minski (10/08), Ulrike Pimminger (03-04/09), Katerina Galani (07-10/08)

Project Period: 09/2006-10/09

Project Objective: To improve the storage and access conditions for the material and data stock of the Ars Electronica

Project Description

The aim of the project was to support Ars Electronica in preserving and cataloging its archive holdings and to assist with issues of long-term archiving.

Ars Electronica possesses an extensive collection of audiovisual data storage media, print media and submission documents, primarily from entries to the Prix Ars Electronica, which has been taking place since 1987. The holdings also include numerous photographs and festival material. In technical terms the archive holds potentially all commonly used audio and video formats of the last thirty years. The content consists for the most part of the documentation of artistic works or (in the case of submissions for the Prix categories Digital Music and Computer Animation) copies of the works. Ars Electronica additionally plans to integrate the extensive holdings of in-house video and audio documentation into the archive.

In the course of the research project “Ars Electronica Operating System” (Project III 1), an extensive collection of print material on the festival has additionally been compiled (catalogues, programs, press clippings, Prix announcements, etc.) in the Institute. This material covers the period from 1979, the founding year of the Ars Electronica, to the present, and makes an important contribution to the contextualization of the holdings described above.

Project Progress

Compilation

The project consisted of several subprojects. The first part to be tackled was the compilation of the holdings, with a focus on listing the data carriers that exist in the festival office and the Futurelab. The LBI assisted the Ars Electronica in taking inventory of the holdings, when the archive holdings were relocated in early 2009.

Digitalization/migration

One subproject was concerned with the archiving of websites. In order to create a foundation for future procedures for archiving websites submitted by artists in the context of the Prix Ars Electronica, websites submitted in the category Net Art in 2006 were archived as an example. Additionally, in 2006-2007 a majority of the CDs and DVDs submitted up to 2003 were migrated and systematically compiled, in order to prevent a potential loss of data saved on DVD and CD-ROM due to the degeneration of the carrier layers.

Preservation of the Archive Material

The LBI advised the Ars Electronica in 2007/2008 with regard to professional preservation of its archive material, which until its relocation into a new building was kept in a non-air-conditioned room that was not suitable for long-term storage of media. In order to contribute to an improved situation, the LBI commissioned Andreas Weisser, a restorer of AV media, to draw up an expert report on the preservation of the archive material in late 2007. Ars Electronica adapted its building plans for the archive room in accordance with the expert recommendations by separating the air conditioning for the archive from that of the exhibition rooms. Unfortunately, the recommended separate storage of print material and AV data carriers, the latter with their own air conditioning, could not be implemented. Staff from the LBI cooperated in relocating the archive holdings in early 2009. For an appropriate inventory, handling and, if necessary, restoration of the holdings, substantial funds for packaging material, equipment and personnel are required; however, these can only be financed in part by the running budget of the Ars Electronica, so that the acquisition of additional funds is necessary. For this reason the LBI put together a statement of interest and calculated the research and funding requirements for such a project in summer 2008 in response to a call from the program “Netzwerk Initiative Kulturelles Erbe” (NIKE, Cultural Heritage Network Initiative). The program planned by the federal ministry has, however, still not been announced.

Long-term digital archiving of video and audio tapes

Ars Electronica began the digitalization of festival recordings from the holdings of the ORF in Autumn and is now digitalizing its in-house AV productions and recordings of the festival in Digital Video Standard. The LBI advised its partner about compiling metadata. The two institutions have coordinated how they compile and describe the material to ensure that in future all data can be compiled and managed within a shared system.

The uncompressed digitalization recommended by the LBI and necessary for a long-term digital archiving of the AV media holdings would require a large amount of memory. In the case of sensitive tapes, they should also be dealt with by an expert. Comprehensive and professional long-term archiving therefore demands substantial funds for personnel and infrastructure.



INDEXING

Metadata, Taxonomies, and Digital Sources

In order to make extensive data holdings useful for scholarly research, they have to be indexed using metadata. Three strategies are employed: enhancing existing data holdings with better metadata, producing semantic data models for new holdings or systematizing existing holdings, and enabling interoperation with other archives for all-encompassing representation and research. These strategies are the foundation for the conception of a generic, expandable, modular database schema for archives of media art.

▼ INDEXING PROJECTS

- ▶ METADATA IN THE CONTEXT OF ONLINE DATABASES
Günther Kolar



- ▶ TAXONOMIES FOR MEDIA ART
Katja Kwastek, Günther Kolar, Ingrid Spörl, Heike Helfert



- ▶ APPLIED BASIC RESEARCH: "NETZPIONIERS.AT"
Gunther Reisinger, Dieter Daniels, Mario Röhrle
Cooperation Partner: Karl-Franzens-Universität Graz



1 Metadata in the context of online databases

Project Director: Günther Kolar (on sabbatical since 10/2008, continuation of the project)

Project Period: 10/2006 – 12/2009

Project Objective: Publication (Dissertation)

Project Description

Online databases, in other words, information resources that are consistent in amounts of content or stored formats, are a substantial part of the World Wide Web. Organizing these often very large amounts of information into a usable format is an important precondition for an efficient handling of information. Assigning metadata is absolutely necessary for all the functions and applications for searching information that are available to the user.

The goal of this work is the creation of a model for the planning and conception of functions for supporting the search, navigation, selection and assessment of contents from online databases. In order to be able to exactly assess the possibilities of the metadata that have been added to the information resources, the characteristics, standards, formats and representations of metadata are first considered analytically.

An important factor is the syntactic and semantic interoperability, which enables the metadata to be both machine-readable and machine-interpretable. This improves the preconditions for automated processing. Other exigencies arise from the formal basic conditions for the creation of digital long-term archives, as well as from the demands regarding reliability of digital archives. The meta information can be added in a structured way through taxonomies and other keyword systems (cf. Project II 2, p. 60).

The selected standards and representations of the meta information can flow into improving/refining navigation, labeling, filtering or search, for example.

The relevant metadata are also indispensable for the long-term archiving of digital data: these are mainly intended to describe the formats used and the original system environment. This information should make it possible to read and interpret the data in the future as well.

Project Progress

The primary impetus for this project was the theoretical work accompanying the development of the Ars Electronica Online Archive (Project V I, p. 90). In keeping with applied basic research, results of investigations using the example of the Ars Electronica Online Archive were evaluated, while the results in turn flowed into the work on improving the archive.

After preparatory work in 2006, in 2007 a detailed research concept was produced and focal points as well as structure of the planned dissertation were produced on the basis on comprehensive research. A focus on the thematic complex of metadata followed in September 2007. The work was written up in 2008 and 2009.

Division of the work:

Introduction

Digitalization and networking are the most significant factors in the changes to current handling of information and knowledge. The introduction provides an overview of the state of technology, with regard to the interplay of metadata and applications in online databases, and a point of departure for further observations.

Metadata for online databases

Beginning with the general definition of metadata, the types of metadata, special demands are analyzed in the context of online databases.

Metadata formats

In this chapter the use and necessity of normalized and standardized metadata formats is discussed and the development of formats for saving meta-information is considered from a historical perspective. Some examples of current formats are considered which demonstrate the possibilities that have been created with the respective standards.

Representation of the metadata

In order to optimize use of the metadata, relevant syntactical representations must be chosen which guarantee semantic uniqueness, interoperability and machine-readability. One example of this is the representation of data through RDF (Resource Description Framework), one of the significant preconditions for the realization of the “semantic web”. The representation of the data of the Dublin Core can be uniformed by taking standardized qualifiers into consideration.

Applications of Metadata

Functions and applications of online databases that support the user during searches, navigation and assessment are the goal of the measures described in the previous chapters. This chapter classifies types of metadata according to their fields of effect. Functions that create a connection to other areas of the World Wide Web are one type. The second type operates only on the data provided in an online database, while the third type is not visible to the user, as it is only used for the organization and administration of data.

Procedure model

Following the description of the preconditions and possibilities in the previous chapters, a procedure model is now suggested for the creation of online databases, with a particular focus on a convenient use of these data collections for the user. A discussion of the relevant questions elucidates all significant aspects, even for future solutions in the provision of information via online databases. Günther Kolar has been on sabbatical since October 2008 while doing occasional work for the LBI. The dissertation will be finished in December 2009.

2 Taxonomies for Media Art

ausgewählte Schlagwörter

- form of artwork
 - installation
- range of artwork
 - stand-alone
- interaction partners
 - human < human (audience interaction)
 - human < computer
- the visitor (performer) does
 - explore
 - control
- the work (project) does
 - serve as an instrument/tool
 - enable/invite communication
 - transform
- media
 - computer graphics/animation
 - monitor/display
 - electronic sound
 - speakers
- processing technology
 - motion capture

Schlagwörter zuordnen

- form of artwork
 - installation
 - sculpture
 - object/device
 - performance
 - (primarily) software application/program
 - experiment
 - project
- range of artwork
 - stand-alone
 - public space
 - separate sites
 - mobile
 - networked
 - virtual worlds (e.g. Second Life)
- interaction partners
 - human < human (artist interaction)
 - human < human (audience interaction)
 - human < computer

save

Interface Taxonomy Interactive Art

Project Director:

Katja Kwastek

Project Team: Günther Kolar (programming), Ingrid Spörl (keywords, development, research report), Heike Helfert (development taxonomy hybrid, key words), Nicole Sudhoff (key words)

Project Period: 10/2006-09/2009

Project Objective: Research report, metadata for online archive, tools for the application of the taxonomy, visualization

Project Description

One possible strategy to take for generating metadata (see Project II 1, p. 58) is the application of taxonomies. The relevance of these kinds of taxonomy is to be evaluated in this project, which in the sense of applied basic research will make use of central data holdings in the Ars Electronica archive as a model. The scholarly development of taxonomies serves to generate and evaluate a differentiated vocabulary for describing the heterogeneous field of art forms known as “media art”. Furthermore, their application to larger pools of data makes the data easier to search for and visualize in online offerings. In addition to the attribution – also retrospectively – of key words by experts, the project will test the extent to which the collaborative attribution of key words – in this case through artist submissions – can profit from structured taxonomies.

Project progress

Interactive Art

On the foundation of research and evaluation of existing systems of concepts, a taxonomy for interactive art keywords was developed and integrated into the administration interface of the Prix Ars Electronica. In 2007 the taxonomy was evaluated and modified within the framework of classification and keywords for the 350 works submitted this year to the category “Interactive art” of the Prix Ars Electronica. In 2008 the taxonomy was applied and further elaborated upon within the framework of a retrospective attribution of key words for the prize-winning works since 1990. In addition, the taxonomy was integrated into the submission process for the Prix Ars Electronica so that since 2008 artists have been able to create keywords and taxonomy for their own works. In 2009 the taxonomy was expanded with definitions of terms, the data gained were evaluated (see research report) as well as visualized in the form of a thematic landscape and a faceted search. (see Projects IV 7, p. 84, and IV 10, p. 87).

Hybrid Art

In winter 2007/08 Heike Helfert developed a comparable taxonomy for the category *Hybrid Art* using the submissions from 2007, which was integrated into the submission form. In this process numerous works were classified and ca. 250 submissions were given key words. In April 2008 Heike Helfert continued the attribution of key words in the context of classifying the works submitted in that year in the category of Hybrid Art in analogy to work in the category Interactive Art 2007. Since the works submitted in this year had also already been given key words by the artists themselves, a comparison between scholarly attribution and that of the artists themselves could be made (see research report).

Digital Musics

For the category Digital Musics, the option of free attribution of key words by artists has been offered since the submission process for the Prix Ars Electronica 2008, in order to allow an evaluation of this non-hierarchical collection of key words.

Results and Perspectives

The taxonomy for interactive art that has been developed is an important contribution to more specific differentiation of the artistic works subsumed under the term “Interactive Art”.

For the works submitted to the Prix Ars Electronica in the category Interactive Art, a detailed attribution of key words is now available for all submissions from the years 2007 and 2008 and all of 15 winning projects from the years 1990-2009. These data form an important component of content indexing for the archive holdings of Ars Electronica.

A particular focus of the taxonomy that has been developed is the description of the interaction processes themselves and their aesthetic effect. One important result of the relevant research was the recognition that for interaction-aesthetic categories a description in verb form is preferable to the usual formulation of key words as nouns. Moreover, the taxonomy was divided into four “perspectives” (formal, aesthetic, technical, contextual), which made it clear that every classification system should be considered in the context of the research questions on which it is based. It delivers a description model as an important basis of communication and discussion, without laying claim to an alleged objectivity or universal validity.

Even if a vocabulary for description of media art represents a foundational instrument for investigating strategies, tendencies and characteristics of this art form, it is also clear that the one-time creation of a normative, fixed taxonomy is not appropriate to the works or to the research.

This raises the question of how the flexibility of both the work process and the resulting key word system, which is regarded as necessary from a humanities perspective, can be connected with the informational feasibility of the taxonomy as well as a statistical comparability of the uploaded data. Examination of this problem was identified as a future task for the SAMY archive framework (see Project I 1, p. 53), which allows the integration of different systems of concepts through the implementation of semantic technologies and the integration of SKOS (Simple Knowledge Organisation System). The implementation of this system would make it possible to carry out a detailed evaluation of possible clusterings (consolidation of different spellings, attributing detailed terms to existing generic terms, etc.) through respective search interfaces and also to develop visualizations relevant to the representation of complex systems of concepts. The research reports on the project have been published online at the LBI's website.

See also: Katja Kwastek: Classification vs. Diversification – the value of taxonomies for new media art, in: Peter Gendolla, Jürgen Schaefer (Ed.): *Beyond the Screen*, Bielefeld: transcript 2010 (awaiting publication)

3 Applied Basic Research: “netzpioniere.at”

Project Director: Gunther Reisinger, Dieter Daniels

Project Team: Mario Röhrle, Nina Fuchs, Robert Sakrowski, Julia Lehner

Project Period: 01/2007 – 12/2009

Cooperation Partners: Digitalization Center of the University Library KFU Graz | Center for Information Modelling at the KFU Graz

Project Objective: Publication / online sources edition on net-based art

Project Description

In the early 1990s when the Internet had yet to impinge on the public consciousness to any great extent, there was not only “net.art” in the narrower sense, but also net projects developed through collaborations between artists and programmers, which could today be called “communities”. Beyond their significance for art, the importance of these communities for media history can be found in the way they contributed to the social implementation of online media and at the same time anticipated their political dimension. Technical feasibility, artistic concepts and social and communicative innovation were closely tied together here, the foremost rule being autonomy from any commercial or state control. The historical importance of these net pioneers has become even more apparent in view of the state of things today (i.e. Web 2.0). And yet no type of institution feels responsible for the maintenance and archiving of their artworks, which fall between the cracks of the traditional cultural genres and are thus available neither in libraries nor media archives.

With this issue of our “digital cultural heritage” in mind, the project sets out to incorporate this body of work into critical art scholarship while determining the appropriate software technology for this task. In addition, it aims to place the early net.art projects in their contemporary media and art context. The focus is not only on the individual net.art works, but also on early community building. The bundling of such pioneer projects in Austria suggests an initial stage of examination at the national level.

Based on the exemplary re-publication and art historical documentation of the net-based artists’ cooperatives “THE THING Vienna” (1993–2004) and “THE THING New York” (1993–2002) as well as a reappraisal of the early phase of “public netbase” (1994–2006) and selected works by the artist group “etoy” (1994–the present), source-critical considerations of digital net.art will be put into practice (cf. Applied Basic Research). By involving the artists and organizers in the content of the project, issues of work-appropriate documentation, representation and museum incorporation of genuinely digital artworks in digital media will be discussed and practical solutions developed for these ends.

Project Progress

The practical part of the work comprises taking over, compiling and digitizing the work and source material, their storage in the digital asset management system (DAMS) and re-presentation on the project website. The necessary steps comprise in particular the development and evaluation of a workflow for the digitalization of analog sources and their enhancement with metadata and incorporation of the acquired data in the DAMS as well as the programming and design of the project website on the basis of the existing CMS System and its connection to the DAMS.

The migration of “THE THING Vienna” onto the server of the LBI, an initial technical restoration of the exemplary case “THE THING Vienna” and the setup of an internal research system (Mario

Röhrle) in 2006 served as a foundation for the subsequent study from the perspectives of art history and information science. In 2007, operative work began with the digital asset management system. For the exemplary case “etoy” a detailed archive classification was undertaken in Zurich (Nina Fuchs) on two works from this group of artists (“The Digital Hijack” and “Tanksystem 1.0”) and a workflow for the transfer of both digital and artefact materials from the archives in Vienna (Gunther Reisinger) and Zurich (Nina Fuchs) was produced. For the exemplary case “public netbase”, following a technical transfer of the data by LBI and a structuring of the material, a content-based focus on the early phase of the project (1995-1998) was undertaken and a prototypical source-based contextualization was drawn up (Clemens Apprich). By means of the completed digitalization and indexing (Julia Lehner) of a first portion of the artefact sources for two works from “etoy”, concrete workflow for transformation, archiving, indexing and re-presentation was tested and optimized. Furthermore, using the prototypical contextualizations (Nina Fuchs and Clemens Apprich), the planned text-related semantic workflow (semantic distinction, TEI coding and the integration of online sources) was established.

During 2008 the newly added artefact and digital source holdings (THE THING New York) were indexed to the exemplary cases, provided with metadata appropriate to the works, and transferred into a temporary database system (Mario Röhrle, Julia Lehner). With a view to integrating artists and collaborators into the contextualization process, interviews were held to discuss the difficulties involved between April and August 2008 (Nina Fuchs and Dieter Daniels). Afterwards, concrete contextualization began on the exemplary cases from the research project. With the cooperation of Wolfgang Staehle (New York), Max Kossatz (Vienna) and Walter Palmeshofer (New York/Vienna), the historical web appearance of “THE THING New York” has now been fully restored and is being used for internal research purposes. Similarly, a cooperative relationship with the digitalization center of the KFU Graz enabled the complete digitalization of the artefact holdings of the exemplary cases “THE THING New York” and “public netbase” in 2008. In 2009 the series of interviews was concluded (with Wolfgang Staehle, Konrad Becker, Robert Adrian X, Helmut Mark and the Belgian net.art duo “jodi”), ca. 3500 data sets were indexed and relationalized (Robert Sakrowski, Heike Helfert, Severin Christl), an online visualization tool was developed (Dietmar Offenhuber), and the work reconstruction of THE THING New York, THE THING Vienna and a selection of works by the artist duo “jodi” were prepared. In addition, all of the archive items (artefact sources, analog and digital data carriers as well as analog and digital video documents) at the disposal of the LBI were integrated into the workflow and archived, indexed and processed in specialized database structures for purposes of research and publication.

Reconstruction of the works from THE THING Vienna and “jodi” are to be completed at the end of 2009 and made available online through cooperation with the Center for Information Modelling.

Results and Perspectives

The pool of prototypically archived, digitalized and partially indexed sources currently consists of a total of 1177 artefacts that were originally in analog format and the 3241 digital assets derived from them.

As part of the transfer of the whole project to the Center for Information Modelling in the humanities faculty of Karl Franzens University Graz, all data holdings and database structures were transferred to Graz by the end of September 2009, integrated into the server environments there, and made permanently available for further research under the domain name *netpioneers.info*.

As a whole the internal evaluation undertaken in January 2008 shows that the larger prospective strategy could be realized through close cooperation with humanities and information science issues, but adaptation to art studies and information science practices is absolutely necessary: the concrete

translation of art theory requirements to informatic structures first enables the conceptual proximation between theory and practice that is aspired to. In particular, foundations must be established on the one hand in storage and re-presentation possibilities on the technical side, whereas on the other hand, missing terminology must be derived from the semantic structures at the art studies level and integrated into the technical workflow.

See project publication, p. 35.

<http://www.netzpioniere.at>



ANALYSIS AND CONTEXTUALIZATION

Discourse Analysis, Source Criticism, Reception Aesthetics

Deeper scholarly analysis of media art and its contextual conditions is currently pursued by three methodological approaches: source criticism, reception research, and discourse analysis. These approaches in the humanities make use of findings from the areas of archiving and indexing and simultaneously structure them.

▼ ANALYSIS AND CONTEXTUALIZATION PROJECTS

- ▶ DISCOURSE ANALYSIS: ARS ELECTRONICA OPERATING SYSTEM
Barbara U. Schmidt  Publication
- ▶ SOURCE CRITICISM: WORK, REPLICA AND SOURCE.
ART HISTORICAL CONTEXTS FOR ARCHIVING, DOCUMENTING
AND RE-PRESENTING NET-BASED ART FORMS
Gunther Reisinger  Publication  Conference
- ▶ RECEPTION AESTHETICS: THE AESTHETICS OF INTERACTIVITY
IN DIGITAL ART
Katja Kwastek  Publication  Conference
- ▶ RECEPTION RESEARCH ON INTERACTIVE ART I:
CONCEPTS OF PRODUCTION AND THE REALITY OF RECEPTION
IN THE CONTEXT OF ARS ELECTRONICA 2007
Katja Kwastek
Cooperation Partner: Johannes-Kepler Universität Linz  Report
- ▶ RECEPTION RESEARCH ON INTERACTIVE ART II:
DOCUMENTARY COLLECTIONS ON BLAST THEORY,
DAVID ROKEBY, TMEMA
Katja Kwastek, Gabriella Giannachi, Caitlin Jones,
Lizzie Muller, Ingrid Spörl
Cooperation Partner: Daniel Langlois Foundation, Montreal;
University of Exeter; Mixed Reality Lab, Nottingham  Online

1 Discourse Analysis: Ars Electronica Operating System



Opening of Ars Electronica Center, 1996

Project Director: Barbara U. Schmidt

Project Period: 04/2006-12/2009 (based on preliminary work 10/2005-03/2006)

Project Objective: book publication

Project Description

This research project examines the institutionalization of media art, taking Ars Electronica in Linz as an example. Special attention will be paid to the discourse fields and the cultural, political and geographic contexts within which this institutionalization takes place.

A body of texts with pertinent themes, organized according to chronological criteria (catalogue essays by the organizers and artistic directors, as well as recourse to key texts such as programmatic speeches at openings and press conferences), which are available in printed form or in film documents, will be assessed for significant themes and leitmotifs, using the methods of qualitative content analysis. To interpret the material, the relevant cultural, political and local contexts will also be reconstructed, since this historical and spatial localization forms an epistemological field that plays a key role in determining the discourse structure and practice (contextualization function). The reciprocal effects of discursive formations and institutional development will also be interrogated: how are programmatic focuses and models reflected in institutional structures, architectural facilities and regulatory decisions, and how do these in turn have a legitimizing or stabilizing effect on themes and models, or instead work to exclude them?

The study covers the period from 1979, the year the Ars Electronica was founded, up to the year 1999. It thus enables a diachronic view of the phases of the establishment, institutionalization and consolidation of the Festival Ars Electronica (longitudinal perspective). Individual years that were especially hallmarked by change, consolidations or crises will also be looked at in depth (cross-section perspective).

Project Progress

Research began on materials and literature in 2006 (focus: media art, historical development of the city of Linz with regard to the founding circumstances of Ars Electronica, development phases of media art). At the same time in-depth interviews took place with contemporary witnesses. A public survey on the Ars Electronica was conceived, carried out through questionnaires, and evaluated. The data collection served as a point of access to the research field and provided new information about the relationship between the festival and the city of Linz as well as the local population.

In 2007 the research in the literature continued, with a focus on selecting methods and making them operable (discourse analysis, qualitative content analysis, institutional analysis). As additional source material, the film stock from the Austrian Broadcasting Corporation on Ars Electronica was viewed (for the period 1979-1986). The body of material to be subjected to discourse analysis was selected by

means of “theoretical sampling,” and the reappraisal of the source material thus procured was begun (description and initial formation of categories). In connection with this Chapter 1 (Introduction) and Chapter 2 (Backstory of the Ars Electronica) of the research project were written.

During the course of the research a comprehensive material archive was added to Ars Electronica (press portfolios, press reviews, special publications, programs, event announcements, etc.), and an overall index was developed in consultation with the projects “netzpioniere.at” and “Ars Electronica Online Archive” (see project V 1, p. 90) .

In 2008 the body of material was complemented by continuation of the research in the Upper Austrian ORF studio and further interviews with contemporary witnesses. The third chapter of the research project was drafted. Work was also begun on a glossary for Ars Electronica. The lexicon-style entries provide sketches of historical, institutional and discursive relationships that were significant for the development of the festival.

In 2009 the fourth chapter of the research project was written, the remaining research was conducted and plans were made for the final chapter. In the course of this it emerged that central discussions and developments around the presentation of media art in the context of Ars Electronica took place primarily during the founding phase of the Ars Electronica Center and the following years. In order to represent this programmatic development appropriately, the time period under investigation was shortened to encompass the years 1979-1999. In addition, the focus is now on the period of the increasing museumization of media art while simultaneously moving to the Internet.

Results and Perspectives

The adaption of discourse analysis models has been shown by this research project to be sustainable. Through intensive analysis of texts, it is possible firstly to reconstruct central fields of terms. The further analysis, which interprets statements with regard to the speakers and the context of the statement, makes it possible to ascertain more precisely which concepts of (media) art, technology and new media, which values and standards a given speaker associates with the concepts. Compiling the basic concepts finally allows us to take the step from discourse analysis to institutional analysis. Which guiding ideas prevail, which competitions and transformations take place are reflected in the structure of the festival, in the processes of legitimizing, regulating and arranging the contents, in short: in its program or operating system.

The analysis pursued with this project demonstrates the distinctiveness of Ars Electronica. While other festivals are usually arranged very specifically in terms of both content and programming, the Ars has at its disposal a wide variety of program formats, which deal with just as wide a range of content and cater to a broad spectrum of interests and needs. It is no coincidence that this case is similar to the complexity of radio or television programs, which also offer a variety of subjects and approaches. Because of this, the central aspects of this program cannot be grasped merely by analyzing which content is included or excluded. Rather, with the aid of institutional analysis, an examination is made of how the program structure organizes the multiplicity of offerings, and what hierarchy and distinctions emerge from this.

Versions of the following chapters are currently available:

- Ch. 1 Methods and Design of Research
- Ch. 2. Background of the Ars Electronica
- Ch. 3. Founding and Development from 1979 to 1986
- Ch. 4. The Consolidation Phase 1987-1995

The fifth and final chapter with the title *The Phase of Maintenance and Expansion 1996-1999* will be finished in January 2010. Printing and publication will follow.

2 Source Criticism: Work, Replica and Source. Art Historical Contexts for Archiving, Documenting and Re-Presenting Net-Based Art Forms

Project Director: Gunther Reisinger
Project Period: 5/2006 – 12/2009
Cooperation: Institute of Art History, KFU Graz
Project Objective: Publication (Habilitation)



net.art: etoy: digital hijack

Project Description

This research project conjoins source-critical art scholarship methods and the media art category of “net.art” as a genre-based case study. Unlike originally analog art that has been digitized, net.art does not genealogically leave its production medium during scenarios of archiving, documentation and contextualization. It therefore constitutes a hybrid of work,

archiving and re-presentation in its own medium (digital network).

The interdisciplinary combination of methods (art scholarship, music studies and information science) serves as a prime example for the localization of new art historical approaches and description patterns (including metadata) for current media art forms and their digital sources. The special properties inherent to “net.art” in its qualities as art and media allow for the development of flexible categorizations (borrowing from art history and media constitutions).

Taking this theoretical basis as starting point, the research project will take into account the striving for both international and inter-institutional development and synchronization of metadata descriptions (for archiving and representing net.art), as well as the likewise pending reconfiguration of the art historical terminology canon for application to the latest media art (in particular to net-based art). The art scholarly method of work description and the archiving, documentation and re-presentation of net-based art forms in digitally networked media form a unit in terms of both terminology and method. Issues of source criticism will be treated within the framework of the applied project “netzpioniere.at”, among others: as a practice-based comparison of theoretical considerations, early Austrian net art and net activism (partly already offline) will be contextualized and re-presented online for the purposes of art scholarly research. With the integration of informatics distinction structures (XML, TEI), these source-based contextualizations supply the foundation for further art scholarly research, while at the

same time supporting the identification of terminology with database technology through the semantic indexing that has already been carried out.

Project Progress

The conception phase for the various levels of the research project was begun in June 2006. After evaluating the current status of the research, the detailed bibliography and an initial formulation of the methodical approach, work was carried out on the preparation of a basic hypothesis for future research: because of the interdisciplinary nature of the formulated hypothesis (a symbiosis of methods from the disciplines art and musicology as well as information technology), a cooperation was agreed upon with the “Center for Information Modelling in the Humanities (ZIM)” at the Karl Franzen University Graz and integrated into the methods of the research project (theory of asset management systems in humanities fields, metadata).

In 2007, advice was given on the concepts for the attempt to set up a technical environment within the technical partner Ars Electronica and relevant prototypical workflows for an academically acknowledged treatment of the exemplary cases within the project were developed for the related research project “netzpioniere.at” (Project II 3, p. 62). In keeping with the theoretical foundation for the practice-oriented works in the project “netzpioniere.at”, specifications for media transformation were delineated at the level of source criticism for indexing and archiving the available sources. Another focus of activities in 2007 was the comparison of theoretical considerations for artistic source work with the resulting practical requirements.

During the year 2008 the various inputs (Ars Electronica Conference 2007, Media.Art.Research Award 2007, “netzpioniere.at” project, knowledge gained from workshops in Linz, Cologne, Berlin and Williamstown (USA) and cooperation with the KFU Graz) were applied to the questions at hand in the form of lectures and book contributions (see Results) and converted into practice in the context of the related research project “netzpioniere.at” (see Applied Basic Research: “netzpioniere.at”). The comparison with international standards as well as enterprises outside of Europe in similar fields was achieved in part through an invitation to the Clark Art Institute (Massachusetts, USA).

In 2009 the content of the dissertation was further underpinned and in Autumn an exposé was successfully submitted at the Institute for Art History at the KFU Graz. The adapted findings were publicly presented and discussed at lectures in Graz, Munich and Innsbruck (see conference contributions)

Results and Perspectives

On the theoretical level, the methodology underlying the project can be summarized as follows: in order to support the presented thesis, an expansion of the methodological spectrum in the direction of analysis methods of time-based art forms (such as music) is necessary. Traditional art history does not have adequate tools within its own method of “formal description of works” to appropriately analyze and describe ephemeral, time-, process-, and code-based art forms. The characteristic method of the neighboring artistic discipline of musicology - “musical analysis” - has developed validated workflows over the last 150 years for examining music (as with net art, a time and code-based art form) both in its structure (score analysis, composition) as well as in its aesthetic effect (performance). Therefore, with regard to the net art to be analysed within this research project, a methodological symbiosis of the disciplines of art history and musicology is a key to success. For this purpose a cooperative relationship was initiated with the Institute for Musicology in Graz (Prof. Dr. Werner Jauk). At the same time a connection to the research taking place at the Institute for Art History at Karl Franzens University Graz allows for consideration of current discussions of art-historical methods.

At the level of developing appropriate archiving and description strategies for art, a schema of the necessary differentiation levels was created: archiving strategies for net-based art are directly related to their description patterns; in the case of “media unity” inherent to net art, these descriptions conversely have a recursive effect on necessary metadata standards.

The first public presentation of this orientation occurred in the presentation of the developed concept of the “media unity” of work, image and source (in the case of net art) for Ars Electronica 2007: with the aid of the lecture “Symbiotic Methods. Interdisciplinary Approaches towards Net-based Art”, a first attempt was made to outline this approach by bringing in selected fields from “formal picture analysis” (art history) as well as “musical analysis” (musicology). Interim results based on this were subsequently presented to the public in 2008 at the Clark Art Institute (Mass., USA) as well as at the Universities of Basel and Graz.

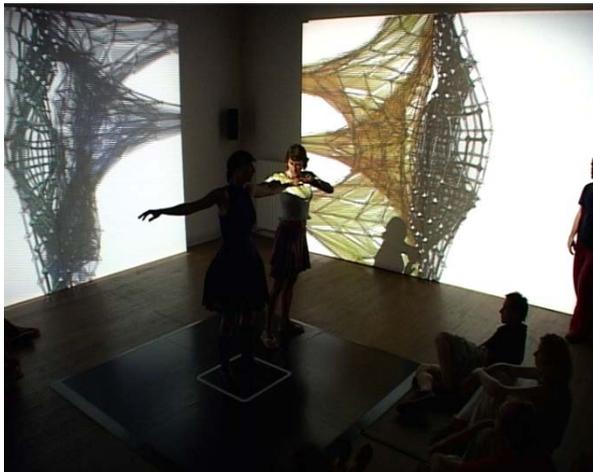
Other results of research were presented in the form of a contribution to a project-related publication (see p. 35). Furthermore, the field of knowledge is being more precisely defined discursively through the finished concept work and ongoing supervision of a thesis on the subject of work-specific metadata for netart (Institute for Art History, KFU Graz).

3 Reception Aesthetics: The Aesthetics of Interactivity in Digital Art

Project Director: Katja Kwastek

Project Director: 10/2006 – 12/2009

Project Objective: Publication (Habilitation)



Sonia Cillari: Se mi sei vicino, interactive installation

Project Description

The scholarly analysis of works and projects commonly referred to as interactive art calls for methods that do justice to its processual and participatory character. Various strategies for interactivity with regard to the relationship between work and effect must be examined and an adequate vocabulary developed to describe them. A detailed analysis will be conducted of sample works and the context of their creation and reception in order to study the respective significance of interactivity in the overall context of aesthetic, content-related and formal strategies. At the same time, a theoretical

framework will be developed to describe fundamental elements of an aesthetic of interaction in digital art.

Although interactive artworks are usually classified in the context of visual art, art scholarship has not yet developed a set of tools for analyzing this kind of art adequately. While its frequently installation-based structure enables parallels to be drawn with “traditional” contemporary art, its use of time-based media also places it in the realm of film and video art.

Due to their processual and action-centered character, these works are related to performance art, but are distinguished by the fact that viewer interaction is indispensable while the co-presence of artist and viewer is not required.

The activity called for on the part of the viewers, which takes place in a situation remote from their everyday dealings, places interactive art in the realm of games, which are already the subject of

sociological, anthropological, ethnographic, and cultural studies investigations. An aesthetic analysis of interactive art can therefore build on research done in the fields of art history, theater studies and multidisciplinary game research.

Project Progress

The development of the theoretical foundations of the project and their application is carried out as a hermeneutical process: the research and identification of the relevant theories is conducted parallel to exemplary case studies (assessment of existing material, interviews with artists, observations on their own work) and a wide-ranging consultation and systematizing of the available materials in the Ars Electronica archive. In addition to the ongoing assessment of literature, especially in the area of performance and game theory, interviews with artists were conducted and evaluated and a logical selection and categorization of the case studies was developed. An initial series of case studies was carried out in early 2007 in the context of studio visits and artist interviews in the USA and then evaluated. In 2008 and 2009, other case studies were carried out and data collected in the context of reception research projects (see Projects III 4 and III 5, p. 72, 74). The results of the “taxonomies for media art” project also flowed into the research. The aforementioned projects also led to a crystallization of further approaches to interactive art from within a broad field, which further strengthened the research focus on reception aesthetics, although at the same time they opened up wider perspectives on the subject and were treated interdisciplinary cooperation.

The research project also took place in conjunction with the announcement of the Prix Ars Electronica Media.Art.Research Award 2008 on the subject “Interactive Art Forms” (see p. 31) as well as the conference event “Interaction, Interactivity, Interactive Art” at the Ars Electronica 2008 (see p. 26).

Results and Perspectives

The exposé of the habilitation was submitted to the department for History and Art Studies at Ludwig Maximilian University in Munich in summer 2008.

The publication is divided into the following chapters:

- Ch. I: Introduction
- Ch. II: Interactive Art – Definition and Origins
- Ch. III: Interaction as an Aesthetic Experience
- Ch. IV: The Game as Boundary Concept
- Ch. V: Theory of Aesthetic Interaction
- Ch. VI: Case studies

The theory of aesthetic interaction at the center of the thesis investigates

- Actors
- Interaction and interface
- Time concepts and spatial structures
- Frameworks and rules
- Effect vs. meaning / Materiality and Signification
- Work vs. Event / Production and Performance
- Modes of Experience

The manuscript should be finished by summer 2010.

4 Reception Research Interactive Art I: Ideas about Production and the Reality of Reception in the Context of Ars Electronica 2007

Cooperation Project with the Johannes-Kepler University Linz, Institute of Cultural Industry and Cultural Research, A. Univ. Prof. Dr. Ingo Moerth, Mag. Cornelia Hochmayr

Project Director at the Ludwig Boltzmann Institute Media.Art.Research.: Katja Kwastek

Project Period: 04/2007- 04/2008

Project Objective: Research report

Project Description

If interaction is to be analyzed as a constitutive factor in the genesis of interactive artworks, not only the reception intended by the artist must be studied, but also the interaction process itself. This is only possible through a closer examination of the act of reception. We must therefore cease to base our research results on the exemplary reception of the respective scholar as is customary in art history (combined with context research or artist interviews), but instead study the behavior of the actual recipients. This is where critical art methodology comes up against its limits. The project is thus designed to probe the extent to which collaboration with disciplines that can contribute competencies in the field of empirical social research, in particular in the form of qualitative and quantitative studies of viewer reception, can enrich the critical analysis of media art. The project was carried out in cooperation with the Institute of Cultural Industry and Cultural Research at the Johannes Kepler University in Linz, which has already conducted numerous projects in the field of media and culture research in Linz.

Project Progress

In the course of a two-semester research internship at the Institute for Sociology at the JKU, the sociology students created, under the direction of the teaching personnel, a research design for analysing the reception of interactive art. It was realized at the Ars Electronica Festival in 2007 and subsequently evaluated. During the Ars Electronica Festival, interviews with artists, surveys and observation of visitors, a group discussion with experts, an online survey and a Semi-Delphi opinion survey were conducted by experts. In winter 2007/08, these materials were transcribed and evaluated with the help of sociological software.

The Institute was the initiator of this project, provided the necessary background content, and arranged the various subprojects in logistical organization. The Institute for Cultural Studies developed and realized survey and discussion scenarios as well as a subsequent evaluation of same. An ongoing mutual discussion of goals and methods accompanied the project.

Results and Perspectives

The project, which was realized as hands-on research training for students, primarily contributed to the collection of experiences with regard to the relevance of sociological methods for research into media art. The most important result was that the elements of the research project that inquired into expert knowledge (of artists, academics and jury members) yielded disproportionately more than the observations and surveys of the general public (visitors to Ars Electronica and respondents to an online survey). The experiment of using a research team with little prior knowledge, in order to reduce influencing the audience as far as possible, proved feasible to some extent. Although general demographic data and general attitudes to questions of art and technology could be statistically

ascertained, aesthetic issues can hardly be formulated without intensively exploring the thematic complex, both on the part of the interviewers as well as the interviewees.

Artist Interviews

The queried positions of the artists (with a focus on the relation of technological and artistic aspects as well as the process through which the work comes about, allowing room for the recipient in this process) showed the great variety of possible approaches to interactive art. With regard to work methods and self-understanding, however, all the artists made it clear that for them the process of work genesis, the continuing development of work on the basis of their own experience, technical possibilities and observation of recipients is seen as the most important aspect of their artistic activity. It is precisely the ongoing, intensive observation of recipients by artists as observers of their own project that shows the significance of the inclusion of artists as an “expert audience for their own works” for the examination of interactive art.

It can be seen that a fruitful observation of interaction processes requires each observer to have an exact knowledge of the interaction processes that are possible in the work and a general familiarity with interactive art.

(Lay) Public

Observation and surveying of visitors yielded, because of the issues mentioned above, primarily general results about the demographic characteristics of the visitors and general attitudes towards and ideas about interactive art. With regard to aesthetic questions it was clear that it is much easier for the visitors to express their perception and interpretation of individual works than general assessments of interactive art as such. Because of this the multiple-choice form for the online survey had to be very general with regard to content-related statements on interactive art, and focused on examining the connection between demographic data and ideas about the nature of interactive art (technologically determined, playful etc.).

Discussion with experts

In contrast to the statements from the general public, which were very vague at the level of content and theory, participants in the expert discussion had precise ideas about the historical contextualization of interactive art. They drew distinctions between various tendencies, and engaged with the work concept, the various institutional contexts and the relationship to traditional art on the one hand and media society on the other. The e-mail survey of jury members focused on the special role of Ars Electronica for the development and mediation of interactive art. The framework conditions of a competition were particularly addressed, as well as the relationship between art creation and technological development. The results are available in the form of a research report:

<http://www.kuwi.jku.at/interaktive_kunst.pdf>

5 Reception Research Interactive Art II: Document Collections on Blast Theory, David Rokeby, Tmema

Project Director: Katja Kwastek

Project Team: (Fellows) at the LBI: Caitlin Jones, Lizzie Muller, Ingrid Spörl

Cooperation Partners Rokeby, Tmema: Daniel Langlois Foundation, Montreal

Cooperation Partner Blast Theory: Gabriella Giannachi, University of Exeter, Department of Drama / Duncan Rowland, Mixed Reality Lab, Nottingham

Project Period: 8/2009- 12/2009

Project Objective: Online publication

Project Description and Progress

After the possibility of documenting interactions with sociological methods was investigated during a cooperative project with Johannes Kepler University in 2007, (Project III 4, p. 72), cooperations were set up with international academics. Through three case studies related to the exhibition “See this Sound” and the Ars Electronica 2009/Linz09 Theater Mania Festival, a substantial amount of documentation material was collected, with video documentation occupying a central place along with surveys.



audience interview

First case study: Blast Theory: Rider Spoke

Gabriella Giannachi from the University of Exeter is developing concepts for a “replay archive” together with the Mixed Reality Lab in Nottingham. It aims to provide interactive access to audiovisual documentation material along with data acquired from the interaction itself (e.g. GPS data, but also recordings of the system’s audiodata). The LBI, in cooperation with the University of Exeter, the Mixed Reality Lab in Nottingham and the group of artists, has developed a concept for a replay archive of “Rider Spoke”, with plans for an installation and an (online) archive. This research should also investigate how it could be possible to subsequently experience this project later, which is arranged for live performance, through an interactive multimedia documentation, combined with further documentation materials such as interviews with recipients, which contribute to further academic analysis.

With this aim the interactions of various recipients were thoroughly documented (recipient interviews, video documentation of the interaction from various perspectives, compilation of GPS data, compilation of in-game audio data), and an interview was conducted with the artists. The material was evaluated in the context of the project “Aesthetics of Interaction” (Project III 3, p. 70) and also forms the basis of the replay archive to be realized by the University of Exeter and the Mixed Reality Lab.

Second case study: David Rokeby: Very Nervous System

Caitlin Jones and Lizzie Muller have developed a method for creating document collections of interactive works, which they have now renewed and developed further within a fellowship at LBI for a pioneering work of interactive art. The goal of the collection is to compare information on the technical setup of interactive installations with the artistic concept of documentation of the most varied

visitor reactions, in order to incorporate not only perspectives of production and performance but also reception into the documentation. An important process in this context is the so-called video cued recalls. This process allows visitors to comment on video recordings of their own interactions. Video and commentary are then edited together.

David Rokeby's "Very Nervous System", a groundbreaking work of interactive art also presented in the exhibition "See this Sound", was treated according to the methods described. The documentary collection is published on the Daniels Langlois Foundation website (excerpts also appear in the "See this Sound" web archive and the LBI website).

Third case study: Tmema: Manual Input Workstation

Parallel to this, Katja Kwastek and Ingrid Spörl prepared a documentary collection on Tmema's "Manual Input Workstation", which is also shown in the "See this Sound" exhibition. This documentation material has also been developed and published on the Daniels Langlois Foundation website.

The LBI initiated this project and took over the on-site logistical organization, the video recording as well as the postproduction for the case studies Rokeby and Tmema. It played a substantial role in the conception of interviews for the case studies Blast Theory and Tmema, in addition to conducting many of the interviews. An ongoing discussion of the goals and methods took place during the project period. Basic principles of the method were presented at the workshop "Strategies and Politics of Media Archives".

Results and Perspectives

In contrast to the previous project based on sociological methodology, here the emphasis was on cooperation with media-art experts, so that case studies could be used to investigate and discuss the potential of various documentation resources and their value to the study of art. At the same time an effort was made to find a large number of people among the interview partners who were not experts in this field. It became clear that the professional status of the interviewers has a decisive effect on the result and is a precondition for appropriate documentation of the experiences of the very different test subjects. The video cued recall method is especially productive, since it enables after-the-fact description and engagement with one's own interaction. In-depth discussion were held during this project on the question of to what extent Replay Archive and documentary collections can be viewed as sources for academic research, presentations for the interested public, or independent research. Because of the static viewpoint of the small number of test subjects as well as the clear influence on the results by the various research interests, the documentations make no claim to be representative. In spite of this, the combination of a multiplicity of data provides important information and enables a multi-faceted documentation of interactive art projects. It is precisely the comparison of individual and singular perspectives on a work that opens up a scope of production and reception aesthetics that can be ideally represented and documented with this process.

Documentary Collection on Tmema, Manual Input Workstation:

<http://www.fondation-langlois.org/html/e/page.php?NumPage=2220>

Documentary Collection on David Rokeby, Very Nervous System:

<http://www.fondation-langlois.org/html/e/page.php?NumPage=2186>



VISUALIZATION

Representation of Knowledge and Visualization

The complex aesthetic, technical, social, and institutional conditions for the creation and reception of media cannot be represented comprehensively using a classical, text-based description. For that reason, the Representation of Knowledge and Visualization research line integrates the topics of indexing, analysis, and mediation on a metalevel. The tools to be developed here aid both the representation of scholarly results and the research and analysis of existing data.

▼ VISUALIZATION PROJECTS

- ▶ VISUALIZATION SHOWCASE: INFORMATION VISUALIZATION OF MEDIA ART ARCHIVES

Dietmar Offenhuber, Sandor Herramhof, Evelyn Münster, Jaume Nualart, Mahir Javuz



Online

- ▶ MEDIA ART AS SOCIAL PROCESS — NETWORK ANALYSIS OF THE JURIES AND THEIR DECISIONS

Dietmar Offenhuber



Development



Online

- ▶ X BY Y: ARS ELECTRONICA PRIX SUBMISSIONS

Dietmar Offenhuber, Moritz Stefaner, Sandor Herramhof



Online

- ▶ TEXTASS: AN ANNOTATED TEXT BROWSER/READER

Jaume Nualart, Dietmar Offenhuber, Anika Hirt



Development



Online

- ▶ TEXTY – TEXTS AT A GLANCE

Jaume Nualart



Development



Online

- ▶ PROXEMANTICS – MEANING IS IN THE AIR

Jaume Nualart



Development



Online

- ▶ PRIX LANDSCAPE INTERACTIVE ART

Evelyn Münster, Anika Hirt, Katja Kwastek, Ingrid Spörl



Development



Online

- ▶ PRIX SUBMISSIONS WITH AREA

Jaume Nualart



Development



Online

- ▶ SYNCHRONOPTIC TIMELINE

Dietmar Offenhuber, Evelyn Münster, Mar Canet Sola



Development



Online

- ▶ FACETED SEARCH INTERACTIVE ART

Evelyn Münster, Moritz Stefaner



Development



Online

- ▶ VISUALIZATION FRAMEWORK

Evelyn Münster



Development



Infrastructure

1 Visualization Showcase: Information Visualization of Media Art Archives

Project Director: Dietmar Offenhuber

Project Team: Sandor Herramhof, Evelyn Münster, Jaume Nualart, Mahir Javuz

Project Period: 03/2009 - 09/2009

Project Objective: Online presentation of all visualization projects and tools

Project Description

In order to present all projects from the research line “Visualization and Representation of Knowledge”, a showcase website was set up that could present all the projects in a suitable way.

Projects are discussed in greater detail below. The website contains information about:

- Projects
 - Prix Submissions with X by Y
 - Media Art as Social Process
 - TEXTY – texts at a glance
 - PROXEMANTICS – meaning is in the air
 - Prix Landscape Interactive Art
 - Timeline of Audiovisual Culture
 - Prix Submissions with Area
 - Netpioneers in time (in progress)
 - Faceted Browse Interactive Art (in progress)
- Visualization Tools
 - Area
 - Semaspace
 - Textass
 - Theme Landscape
 - Proxemantics
 - Synchronoptic Timeline
- Datasets
 - Ars Electronica Submissions
 - Ars Electronica Thesaurus
 - Jury Statements
 - Taxonomy for Interactive Art
- Exhibition Mapping the Archive
- About us

Project progress

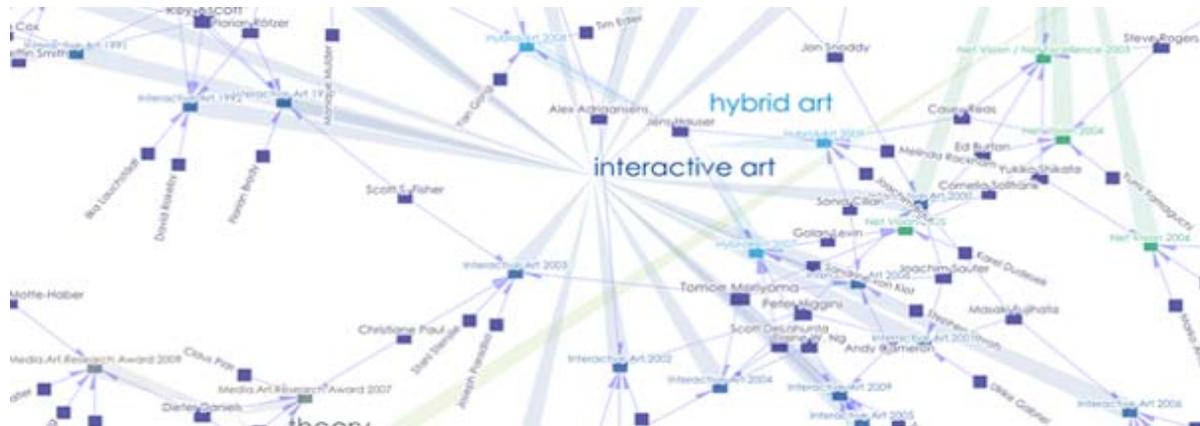
After a conception phase ending in May 2009, the showcase was programmed and edited in summer 2009. The launch took place at Ars Electronica on 3 September 2009.

Results and Perspectives

The website is finished and online. In the future, it will be hosted and maintained by Ars Electronica in order to keep the projects accessible to the public. The status of the project will be frozen at the end of 2009 to document the work on the visualization research line at the LBI. Many of the projects were also presented in the installation “Mapping the Archive” at Ars Electronica 2009. (Project V 7, p. 100)

<http://vis.mediaartresearch.at>

2 Media Art as Social Process — Network Analysis of the Juries and Their Decisions



Project Director: Dietmar Offenhuber

Project Team Member: Gerhard Dirmoser (external)

Project Period: 01/2008 - 08/2009

Project Objective: Network visualization of the Ars Electronica jury data

Tool: Semaspace

Data: Ars Electronica Thesaurus

Project Description

The annual jury sessions for deciding on the winning projects constitute an interesting topic. It raises the question of to what extent the content development of media art is connected to the social structures of the actors involved (artists and jurors).

The juries get new members every year, but the categories themselves are also subject to change over time: existing divisions are done away with, new ones are created, and others are programatically redefined. The application of social-network analysis methods suggests itself. If the jurors are correlated with their respective jury meetings, this results in a bipartite network that was subsequently more closely examined.

Project Progress

The visualization was achieved through SemaSpace, a compact graph editor and browser for the creation and analysis of semantic networks. The main focus is the fluid manipulation of very large and complex data. Dietmar Offenhuber and Gerhard Dirmoser have been actively developing the product since 2004 and it has been applied to an analysis of the jury networks.

Semaspace was first expanded and adapted to the special demands of the jury data. The data pool was uploaded into Semaspace and analysed. Interesting perspectives were then saved and exported as SVG files. These were prepared for printing along with the explanatory texts and printed on the poster “Mapping the Archive”.

Results and Perspectives

It is noteworthy that this network consists of a single connected piece as opposed to various subnetworks reflecting the Prix categories. This means that (with one exception: Digital Communities 2008) it never presented a jury session that did not share personnel with a previous jury, and, more

importantly, that various jurors are represented in several categories over the years. This is immediately noticeable on observation of the network visualization, much more so than on a textual basis. The network visualization further reveals that some categories appear clearly delimited and dominated by central actors, while other categories are more interconnected and do not seem to possess a core personnel. By using the centrality mass from the network analysis, we can also differentiate the various roles of the jurors. While some jurors seem to dominate a single category, other people appear in several contexts and function as bridges between the categories. The practice of inviting prize-winning artists to act as jurors in subsequent years also brings their contacts and contexts of knowledge into play and contributes to a greater differentiation of the categories. These interdisciplinary overlaps can also be seen in the network of prize-winning artists. Here, too, a surprisingly high degree of interconnectedness emerges. It is dominated by two subnetworks which are as yet unconnected: the “microcosm” of the young talent competitions U19 and Next Idea and the rest of the categories of the Prix Ars Electronica. If we reduce the whole network to people with several prizes, the content bridges between the two categories become clear. The information content of these relationships should of course not be over-interpreted, but the resulting network does provide a surprisingly rich and differentiated picture that is comprehensible to those familiar with the material, who can find or confirm their own experiences in it.

The results are primarily available on the poster Mapping the Archive, but also at

<http://vis.mediaartresearch.at/webarchive/public/view/mid:6>

Semaspace can also be accessed there as an interactive tool with the jury data.

3 X by Y: Ars Electronica Prix Submissions

Project Director: Dietmar Offenhuber



Project Team: Moritz Stefaner, Sandor Herramhof

Project Period: 06/2009 - 08/2009

Project Objective: Visualization of all submission data for the Prix Ars Electronica

Data: Ars Electronica Submission

Project Description

The visualization series “X by Y” by Moritz Stefaner in cooperation with the LBI represents a quantitative visual research into the submissions for the Prix Ars Electronica. The visual representation of combinations of attributes (such as categories about countries or entrants over the years) and the number of submissions allows us not only to observe the history of the prize, but also to generate hypotheses about the mechanisms of the “world of the Ars”.

Project Progress

These data were collected and prepared by the LBI. Following a joint development of the topic, the visualization by Moritz Stefaner, an expert in information visualization, was developed in conjunction with two project meetings on presentation and discussion of the concept at the LBI. The work was prepared for printing by Ule Münster.

Results and Perspectives

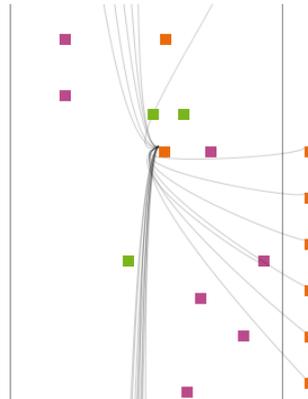
Presented in “Mapping the Archive” and on

<http://vis.mediaartresearch.at/webarchive/public/view/mid:35>

4 Textass: An annotated text browser/reader

There were also many mechatronic artworks involving varying degrees of **programming**, ranging from scripted (i.e. animatronic) to autonomous, to more "intelligent" or "responsive." These, furthermore, varied from earnest formal studies to ironic social operators. We felt strongly that this work deserved a home in the **Hybrid** Art category and were glad to note the incorporation of mechatronic techniques into projects such as **Cloaca** and **Nothing Happens**. There were no prizewinning artworks this year that might be identified as "primarily robotic," but (noting excellent past works such as **D'Andrea** et al.'s **Robotic Chair**) we believe this field holds much potential.

A small number of submissions brought our attention to the creation of experience through senses beyond image and sound, e.g. smell, touch, etc. By engaging more of our senses, it could be argued that these works have a strong hybrid nature, and in the end, we selected **Cloaca** in part for its specific use of olfaction in the **context** of a powerful conceptual and material realization. While these multi-sensory works point towards an expansion of the parameters for **experiencing** art, another cluster surfaced in which a full range of senses is traditionally recognized to be constitutive of the work itself in the body of the actor or dancer performing on **stage**. While none of these performances made it into our final selection, several linked image, gesture and movement in real-time through various computer-based interfaces which by definition also qualifies them for the **Interactive Art** category.



Project Director: Jaume Nualart

Project Team: Dietmar Offenhuber, Anika Hirt

Project Period: 12/2008 - 10/2009

Project Objective: Prototype of an editor for annotated texts

Tool: Textass

Data: Ars Electronica Jury statements

Project Description

Interfaces and methods of representation for annotated text documents are another focus of the visualization field. Semantic relationships with metadata are offered in Textass with a view to embedding them into the document as a kind of visual footnote. The jury statements from the Prix Ars Electronica made up the body of texts. A functional prototype of an editor for annotated texts was produced, which shows the key words and how they are semantically linked in a column next to the text.

Project Progress

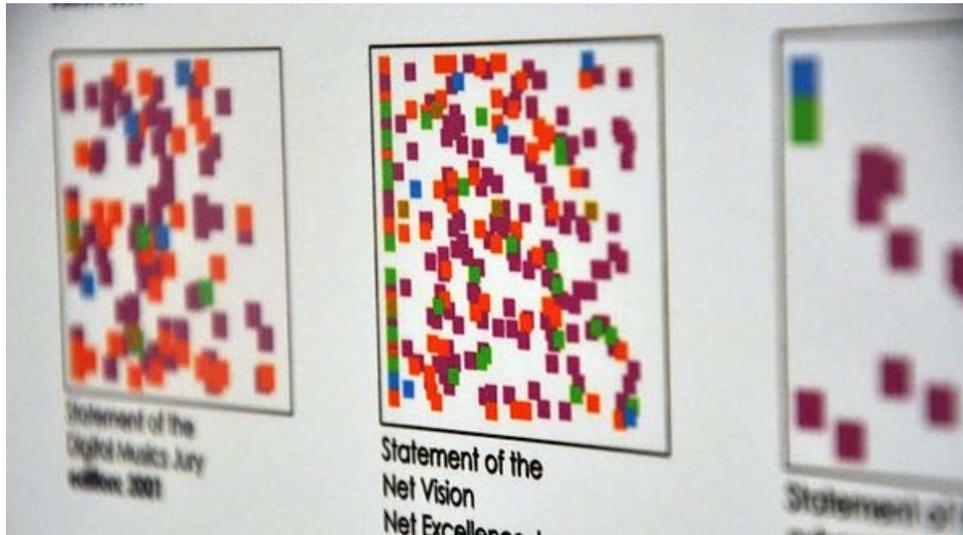
Following a conception phase in early 2009, the first prototype was available in May 2009. A functional alpha version was then realized and finalized in October 2009 after a bug fixing phase.

Results and Perspectives

Textass is in an alpha stage, a prototype right now and half developed. The idea is to find funds next year in 2010 to be able to go for a first version of textass. Presentation at:

<http://vis.mediaartresearch.at/webarchive/public/view/mid:7>

5 Texty – texts at a glance



Project Director: Jaume Nualart

Project Period: 01/2009 - 10/2009

Project Objective: Text icons for visualizing structure and content of texts

Tool: Texty

Data: Ars Electronica Jury Statements

Project Description

The project aimed to develop “Textys”, which provide an overview of texts and initial information about their structure and content. A Texty is an image of an annotated text, i.e. a text in which important key words are marked. All Prix Ars Electronica jury statements were represented in the form of Texty icons. Every text is represented by an image, which shows the structure, length and subjects of the text.

Project Progress

After a conception and implementation phase in the first half of 2009, the representations were ready for print in summer 2009.

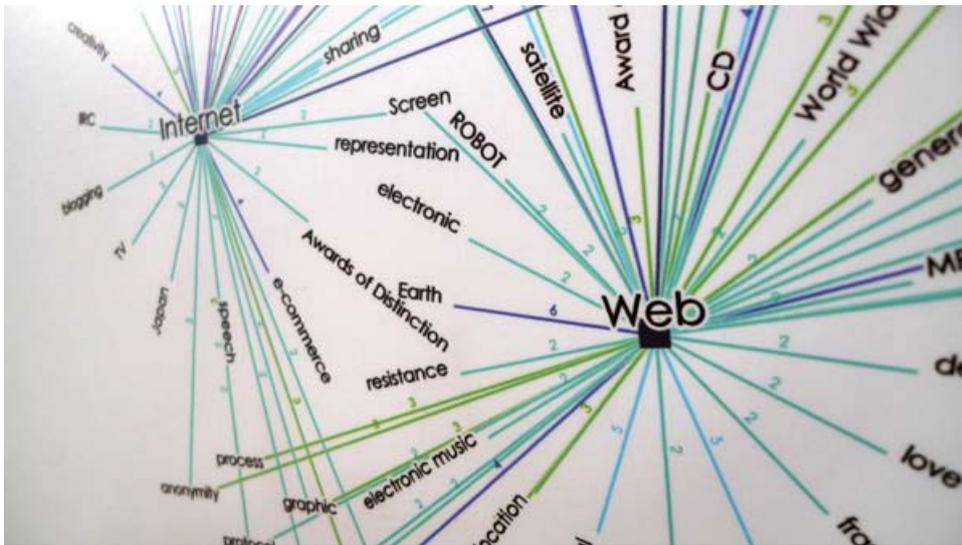
Results and Perspectives

Texty is only a case study release made with the texts from the Ars Electronica Jury Statements. In autumn 2009 Jaume Nualart wrote a paper explaining the experience and the ideas of using Texty. Next step for Texty is to design a way to create them dynamically and be able to use them in web contents and not only for text archives. Texty already has people and institutions interested in it, so the author will develop a downloadable version of Texty next year.

Texty was presented in “Mapping the Archive” and is accessible on the website as an interactive tool:

<http://vis.mediaartresearch.at/webarchive/public/view/mid:7>

6 Proxemantics – meaning is in the air



Project Director: Jaume Nualart

Project Period: 05/2009 - 08/2009

Project Objective: System for the automatized definition of semantic relationships

Project Description

Proxemantics is a software based system that automatically defines semantic relationships between key words on the basis of a key-word catalogue and a body of text. It was used for generating a network of the key words from all jury statements. Text structures such as sentences and clauses were used in order to determine semantic relationships between annotations based on their spatial proximity to each other. It formed part of the engagement with the question of whether it is possible to extract semantic meaning from the linguistic coding of a text.

Project Progress

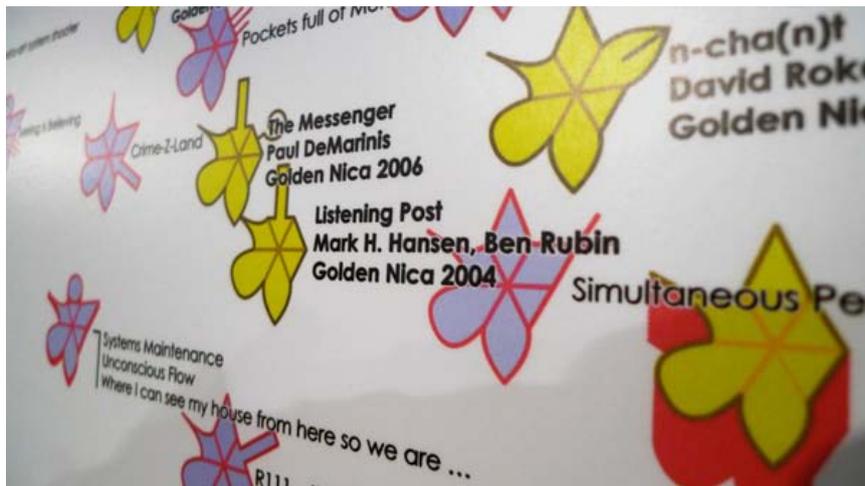
After a conception phase, the implementation took place until July 2009. In 2009 the results were prepared for printing.

Results and Perspectives

Proxemantics was presented in Mapping the Archive and is accessible as an interactive tool on the showcase website.

<http://vis.mediaartresearch.at/webarchive/public/view/mid:34>

7 Prix Landscape Interactive Art



Project Director: Evelyn Münster

Project Team: Anika Hirt, Katja Kwastek, Ingrid Spörl

Project Period: 06/2008 - 12/2009

Project Objective: interactive tool for visualizing multivariate data

Tool: Theme Landscape

Data: Interactive art taxonomy

Project Description

This project contributed to the development of a visualization method that can display multivariate data with a large number of nominal dimensions. An interactive tool was implemented and used for the visualization of media art archives that were produced at the LBI: between 1990 and 2009, prizes were awarded to about 300 works in the category Interactive Art. In the course of the art-historical analysis of these works at the LBI a taxonomy for interactive art was produced (see Project II 2, p. 60), which assigns about 150 terms to these works as key words; each work was described by 20 to 30 key words. The resulting implicit similarities between the works can now – coded as geometric distances – be represented in a “similarity space”.

Using a *Multidimensional Scaling Algorithm* (MDS) the works are projected onto a two-dimensional surface according to the extent to which they share subjects. Details about the individual works can be compared by means of their visual representation form. The terms assigned to them are shown metaphorically as flower petals for each work, with each key word resembling a unique petal shape. The resultant individual forms allow the observer to effortlessly recognize differences and analogies.

Project Progress

Following an initial conception and implementation phase (with the data from Taxonomies for Interactive Art), feedback and discussions took place in summer 2008. The second version was conceived and implemented in early 2009 and introduced at the workshop “The Scent of Information” (see p. 18). The taxonomy was integrated after some revision. On this basis, the third version was conceived and implemented until July 2009. The project was also adapted for the print version. Bug fixing and documentation took place in Autumn 2009.

Results and Perspectives

The tool “Theme Landscape” is available as a client-server application and can be used with any data sets. The source code is published on Google Code as Open Source. By the end of 2009, the material

will have undergone scholarly preparation with the goal of presenting a paper. The Prix Landscape Interactive Art project was presented in Mapping the Archive and is accessible as an interactive tool on the showcase website at

<http://vis.mediaartresearch.at/webarchive/public/view/mid:8>.

8 Prix Submissions with Area



Project Director: Jaume Nualart

Project Period: 09/2008 - 07/2009

Project Objective: Visualization of submission data for the Prix Ars Electronica

Tool: AREA

Data: Ars Electronica Submissions

Project Description

AREA is a visualization tool that allows user-friendly graphical browsing of data and the creation of intuitive and attractive representations. AREA creates treemaps visualisations from databases. AREA assumes that there is a multiplicity of points of view and permits choosing one's own perspective to approach any given data base. AREA is a treemap multi-generator, which means that AREA offers several ways to display a large amount of data entities.

The idea was to make an attractive web interface in order to configure an Area visualization from a mysql table. With a browser it is possible to choose the importance of table fields and the style of the Area visualization with the aim of presenting non-hierarchical visualisations. AREA is a non-hierarchical visualization because all the information entities of a representation belongs to a unique visual level with same visual weight. Area enables anyone to participate in navigating through the data, choosing which data they want to visualise and even introducing new data bases to be visualised. Area gives you an image of the databases. When you look for data using Area, you can get a view of all the data that you are looking for, for an unlimited amount of time. Currently, Area must be adapted to each data source.

With AREA it is also possible to correlate two different variables to permit bivariate analysis, as well as univariate analysis. The next step will be to write a web configurator. People will have the chance to fine tune and define the desired representation easily, using a simple browser. AREA can be a quantum treemap or a non-quantum treemap.

Here we present the entire number of art works and projects that have been submitted to the Prix Ars Electronica by artists from all over the world. Obviously only a fraction was awarded a prize and the rest has disappeared in the archive. We have examined and edited this valuable data and made it

accessible. The assignment of the submissions to the Prix categories (which have also changed over the years), to the countries of residence, and the Prix years, allows not only for a review of the history of the Prix, but also reveals hypotheses relating to the mechanisms of the “Ars world”.

Project Progress

Jaume Nualart had already developed Area before his work at LBI. The tool underwent further development at LBI, including as a Drupal module, and was used for the Prix Ars Electronica data.

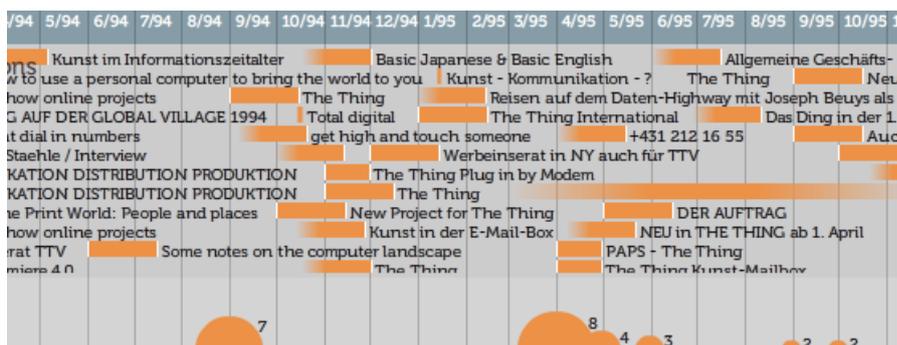
Results and Perspectives

The interactive project is accessible online:

<http://vis.mediaartresearch.at/webarchive/public/view/mid:5>

Area has also been implemented as a Drupal module: <http://drupal.org/project/area>

9 Synchronoptic Timeline



Project Director: Dietmar Offenhuber, Evelyn Münster (since 09/2009)

Project Team Member: Mar Canet Sola

Project Period: 01/2009 - 11/2009

Project Objective: modular software for synchronoptic representation of time-based information

Project Description

The purpose of the tool is to display multivariate temporal information as an array of highly configurable timelines focussing on different aspects of the data. Relational information can be explored through interactive highlighting.

Project Progress

Implementation was carried out by Mar Canet Sola with Dietmar Offenhuber in charge of content in the first half of 2009.

Results and Perspectives

The Synchronoptic Timeline is presented on the net pioneers website,

<http://www.netzpioniere.at/node/3>

10 Faceted Search Interactive Art

Prix Ars Electronica > Interactive Art > Winners 1990-2009 Start over

FORM/RANGE OF WORK	INTERACTION PARTNERS	THE VISITOR DOES	THE WORK DOES	MEDIA	CATCHWORD	TOPIC	YEAR
stand-alone 11	human+computer 13	activate 7	mediate 4	computer graphics/anim. 7	virtual reality 3	media [=self-reflexive] 2	2006 1
installation 15	human+human 3	explore 3	visualize 4	electronic sound 15	embodiment 2	perception 7	2003 1
networked 0	computer+computer 2	select 4	serve as instrument/tool 14	projection 6	augmented reality 3	social relations /issues 2	2002 3
public space 1	comp.>environment 1	control 6	significate 6	monitor/display 0	kinetics 1	no topic (abstract) 3	2001 1
performance 2		participate 2	transform 4	speakers 10	telepresence 3	artificial life 1	2000 1
sculpture 2		create 1	process 1	video 3	interface design 1	artistic/creative expression 5	1998 3
project 2		co-author 2	enable communication 3	sensors 8	artistic research 3	psychology 1	1994 2
separate sites 2			store 1	video camera 5	artificial intelligence 1	gaming 1	1993 2
			immerse 2	graphical interface 1		evolution 1	
				rotors 1		environmental issues 1	
				3D TVP 141111 1			

14 results

Project Director at LBI: Evelyn Münster

Project Team Member: Moritz Stefaner

Project Period: 10/2009 - 11/2009

Project Objective: Faceted Search Elastic Lists for taxonomy of interactive art

Project Description

The data and taxonomy of interactive art had already been adapted for visualization in the context of the Prix Landscape (see Project IV 7, p. 84). These are to be used again in another visualization, in order to enable viewing and examining the data from a broader perspective. The faceted browsing tool “Elastic Lists” was developed by Moritz Stefaner and is very well suited to the available data. The LBI has commissioned him to produce an adaption of the tool with these data.

Project Progress

After an initial discussion in October 2009, the final realization concept was produced in early November by means of a first prototype. The project was finalized in November 2009.

Results and Perspectives

The result is a functional faceted search that is accessible at

<http://vis.mediaartresearch.at/webarchive/public/view/mid:36>

11 Visualization Framework

Project Director: Evelyn Münster

Project Period: 3/2008 until 12/2009

Project Objective: framework for visualization projects

Project Description

Within the framework of research on “Knowledge Representation and Visualization” a portfolio of modular visualization gateways is to be developed. The modules complement each other and should be combinable, i.e. compatible. The data sources are a heterogeneous collection of structured media art archives, which need to be imported into the visualization modules in a consistent format. In order to guarantee a compatible, consistent system, and also in order not to have to reprogram the necessary functionalities in every case, the development of a framework is offered, which provides the framework and basic functions needed for the development of modules in a robust and expandable architecture.

The project objective includes design, technical conception and implementation of a generic, reusable framework as a central building block of modular visualization applications. The extent of functionality includes:

- Connection to databases and web services and definition of the exchange format for importing external data structures
- Interfaces for server-client communication
- Guidelines and reusable building blocks for the production of user front-ends and interaction models
- Implementation of an example application

Project Progress

The planning phase, consisting of preparation of a specification and a general software architecture, lasted until mid May 2008.

Firstly a needs analysis was made and possible technologies were evaluated and selected. On this basis an initial design for a modular system architecture was created in UML (Unified Modeling Language). The implementation of basic functions was finished in August 2008. In 2009 additional features were implemented. In addition to the MDS service, a hexboard service will offer the option of organizing objects in a hexagonal grid.

Results and Perspectives

In August 2008 the implementation of the basic functionalities was completed. The framework is now being used for the subject landscape visualization model. A connection to SAMY or the use of the framework for further visualization modules can no longer take place because of time limitations at the LBI.



MEDIATION

Online Access and Mediation of Multimedia Resources on Media Art

Specific forms of the (online) presentation of media art help process complex thematic contexts both for a broad audience and for the world of specialized scholars. Both existing archival holdings and newly processed, thematically focused content are mediated and networked. At the same time, each presentation format—online presentation, conference, book publication, and exhibition—requires specific strategies for mediating and providing access to the relevant multimedia and often ephemeral projects.

▼ MEDIATION PROJECTS

- ▶ **THE ARS ELECTRONICA ONLINE-ARCHIVE**
Gabriele Blome, Günther Kolar, Nina Wenhart,
Sandor Herramhof

 Development
  Conference
  Infrastructure
- ▶ **GAMA – GATEWAY TO ARCHIVES OF MEDIA ART**
Gabriele Blome, Günther Kolar,
Ingrid Fischer-Schreiber
Cooperation Project in the EU Program eContentplus

 co-funded by the
Community programme
eContentplus
  Development
  Online
  Conference
- ▶ **ONLINE PRESENCE OF THE INSTITUTE**
Mario Röhrle, Günther Kolar, Barbara U. Schmidt,
Michaela Schörflinger

 Online
- ▶ **SEE THIS SOUND**
Supported by funding from Linz 2009 – European
Capital of Culture
Dieter Daniels, Sandra Naumann, Jan Thoben
Cooperation Partner: Lentos Kunstmuseum Linz

 LINZ 2009
KULTURHAUPTSTADT
EUROPAS
  Online
  Conference
  Exhibition
  Publication
- ▶ **TIMELINE OF AUDIOVISUAL CULTURE**
Dietmar Offenhuber, Stefan Schilcher, Sandra Naumann,
Mario Röhrle

 Development
  Exhibition
- ▶ **EXHIBITION: NETPIONEERS 1.0**
Dieter Daniels, Gunther Reisinger, Robert Sakrowski

 Exhibition
  Publication
- ▶ **MAPPING THE ARCHIVE: 30 YEARS OF PRIX ARS ELECTRONICA**
Dietmar Offenhuber, Evelyn Münster, Gerhard Dirmoser,
Jaume Nualart, Moritz Stefaner, Sandor Herramhof

 Exhibition
- ▶ **ONLINE RESOURCES FOR THE SCHOLARLY DOCUMENTATION
AND ARCHIVING OF MEDIA ART**
Gabriele Blome

 Publication

1 The Ars Electronica Online-Archive

(integrates the project “Metadata generation LBI/Ars Electronica database”, see annual report 2007)

Project Director: Gabriele Blome (since 11/07) and Sandor Herramhof (since 11/08), previously Ingrid Fischer (until 4/08) and Günther Kolar until 9/08),

Project Team: Mario Röhrle (work database), Theresa Schubert-Minski (since 10/08), Barbara Schmidt (04/08-03/2009)

Project Period: 7/07 – 12/09

Project Objective: Upgrading the web presence of the Ars Electronica Archive and expansion of the archive holdings for academic research

Project Description

The Ars Electronica looks back on an almost 30-year history. This period largely covers the phase of cultural transformation characterized by the successive penetration of digital media into every area of society. With the symposiums and events of its annual festival and the award of a prize for computer-based art, the Ars Electronica has actively accompanied this transformation. The documents and documentations in its archive are therefore relevant not only to the history of this institutions, but are also important to the whole of society.

However, only part of the existing documentation is available online. Currently, the Ars Electronica website presents the following documents in its “Archive” section: text and image documentation on the works that have been distinguished in the Prix Ars Electronica since 1987, festival programs, festival catalogue texts since 1979, and video and audio recordings of the conferences since 2005. Information is missing, for example, about the large number of works that were not distinguished and documentation of earlier conferences and festival events. In addition, the current Ars Electronica content management system has no overarching metadata schema, and the organization and representation of the contents are oriented solely to Ars Electronica’s own production structures. In the course of the project, proposals were developed for a new concept for the Ars Electronica online archive and work was carried out to achieve their implementation. Here the following measures were in the foreground:

- description of the documents in keeping with scholarly standards
- expansion of the contents available in the database
- improved access to the contents in the database

Project Progress

The first priority with regard to content was to take stock of the available and potentially usable information and materials. In early 2008 a concept was presented for how existing holdings should be structured and provided with metadata in the database, in order to make the data more easily findable on one hand and on the other to ensure the perspective of interoperability with other online archives. Models for the description of materials (video, audio, text, and image data), works and events were worked out and presented. Ars Electronica welcomed the suggestions for reorganizing and expanding the contents and decided in June 2008 that the relevant data preparation should be undertaken in a new database to be created by them (hereafter referred to as the “interim solution”), which will later be imported into the planned SAMY archive framework. The various databases with relevant contents were also to be combined in the interim solution. These are the databases of the Ars Electronica website that was operated until December 2008, the database that was used until 2004 for conducting

the Prix Ars Electronica as well as the work database of the LBI. Unfortunately, the interim solution could not be realized by Ars Electronica.

Completion and correction of the data holdings

In 2008 work was begun on correcting titles for the festival catalog entries in the Ars Electronica website database as well as completing page references and adding missing festivals and events. The correction and completion of the data and the combination of all the people involved in Ars Electronica into one database was conceived as a further important measure for constructing an academic archive together with Ars Electronica.

Expansion of the data holdings

Ars Electronica currently has no detailed listing of the records and documentation for the works submitted to the Prix Ars Electronica up to 2003. In order to provide prospective researchers with easier access to this information, the LBI has set up a database with an index of which records and materials are available in the archive for the works submitted up to 2003. (Since 2004 the submission process has taken place online, so that this information is already in a database). The records and images of works that received awards in the categories Computer Graphics, Music/Digital Musics, Interactive Art and categories for network based projects were digitalized. At the end of the Institute's project timeframe the database including the digital assets will be transferred to Ars Electronica.

Evaluation of user requirements

A user survey during the Ars Electronica Festival 2008 was designed to ascertain the requirements of potential users of the online archive. A majority of those questioned supported a broad orientation of the online offerings for the general public, with an additional preference for research possibilities for cultural workers, artists and curators. With regard to the desired materials the greatest interest lay in the text, image and video materials for the works shown at the Ars Electronica. Less priority was placed on opportunities for participation in the archive, with tagging and commenting/annotating receiving the most votes.

Conception

The focus during the conception phase of the future archive was on establishing various points of access to the archive holdings and an improved linking of the data, in order to allow explorative navigation through the holdings. Because of the fact that rights for publication on the Internet are not available for all the documents, a management of rights was suggested that should make it possible to provide various materials to different user groups.

A faceted navigation is recommended as the main access to the archive contents – preferably in the form of elastic lists. Apart from this, various visualizations of the data holdings were developed in order to provide new insights and perceptions into how people involved with the Prix Ars Electronica are networked. (cf. Topic Visualization, p. 76 ff)

A glossary, developed from the results of the research project “Ars Electronica Operating System” (cf. Project III 1, p. 66), should provide further information on significant people, places and concepts in the context of the Ars Electronica Institution. The use of the taxonomy for interactive art developed at the LBI (cf. Project II 2, p. 60) for the winning projects of Ars Electronica was completed and prepared for online representation in its own visualizations (cf. Projects IV 7 and IV 10, p. 84, 87). Explanatory texts for individual Prix categories, together with the glossary, should result in an additional level of mediation for a broad, interested public.

The concept anticipates giving artists, academics and the audience of the Ars Electronica Festival the chance to complete or annotate the contents of the archive. For this purpose an infrastructure in the form of a mediawiki is to be set up, which would be separate from but closely connected to the archive.

In cooperation with the projects “netzpioniere.at”, “Ars Electronica Operating System” and “Ars Electronica Online Archive” a model was developed in April 2008 for consistently compiling and describing the materials collected during the projects. This model has flowed into the ontology of the SAMY project, which should form the technical platform for the future Ars Electronica Online Archive.

The project was realized in close cooperation with Ars Electronica. However, the brief timeframe of the project did not allow for such complex data holdings to be integrated into the SAMY framework. At the end of the project a stand-alone database will be handed over, in which the materials submitted to the projects that were distinguished with the Prix Ars Electronica can be researched.

2 GAMA – Gateway to Archives of Media Art

Cooperation Project in the EU Program eContentplus

Project Director: Gabriele Blome

Project Team: Günther Kolar (database and data preparation, until 09/08), Ingrid Fischer (Coordinator Ars Electronica until 04/08), Theresa Schubert-Minski (10/08-10/09), Ulrike Pimminger (07-10/09)

Project Period: 11/2007 – 10/2009

Project Objective: Integrating assets from the Ars Electronica Online Archive in the GAMA Portal



GAMA screenshot

Project Description

The goal of this interdisciplinary project is to furnish joint online access to European archives of media art by way of a shared portal. The project was launched on 1 November 2007 by 19 European organizations in the culture, art and research field as part of the eContentplus program and was supported by the EU until October 2009. Since the launch of the website

in September 2009, an online platform has been available where interested laypersons, curators, artists, professors and students can research various European media art collections simultaneously.

The Ludwig Boltzmann Institute Media.Art.Research. is participating in this project in order to present the Ars Electronica Archive and the institute's online projects in the context of European media art and to make them accessible to the public. Some 350 hours of video and 80 hours of audio material from the Ars Electronica Archive will be made available online through the portal, while the institute also participates in evaluating the functionalities of the portal (work package 7 “Assessment & Evaluation”) and publicizing the project results (work package 8 “Awareness & Dissemination”).

GAMA will create an online access point to the archives of the following institutions: Ars Electronica (Linz), C3 Center for Culture and Communication Foundation (Budapest), Stiftelsen Filmforum

(Stockholm), Heure Exquise! (Mons-en-Baroeul), Les INSTANT VIDEO Numériques et poétiques (Marseille), Netherlands Institut voor Mediakunst Montevideo/Time-Based Arts (Amsterdam), argos – interdisciplinary centre for art and audiovisual media (Brussels), SCCA Center for Contemporary Arts (Ljubljana).

Project Progress

In the first project phase the structures and contents of the databases represented in the project were compiled. It was decided that the exchange of metadata between the archives should be based on the Dublin Core standard. First, the data formats present in the Ars Electronica database were analyzed and listed. Then a concept was developed for extracting the metadata needed for the Dublin Core from the pool of data. The Institute additionally developed a questionnaire designed to more closely define participants' ideas as to the content concepts and their implementation in the portal, as well as a questionnaire to determine user needs. Evaluation of the questionnaire revealed that the portal should provide indices in addition to search options for the contents of the archive. This required a comparison of the names of persons and key words that appear in the archive. In order to create a unified list of people in which each name appearing in the archive was only listed once, the "Harmonisation Working Group" (in which the Argos center for art & media, the University of Science and Technology in Poland and the NIMK worked together under direction of the LBI) developed a tool that enables the retrieval of similar names and the manual organization of different spellings under one "preferred name", which is shown in GAMA. The harmonization of names appearing in GAMA was accomplished by the archive partners working together.

The preparation of audio and video data from the holdings of Ars Electronica proved more difficult, both technically and legally, than expected. In contrast to the original plan, which anticipated that the only metadata from the Ars Electronica archive would be represented in the GAMA-Portal, the EU and the project directors interpreted the project agreement to mean that in addition 30-second long previews as well as up to 20 key frames of each video should be visible on the GAMA website, in order to support the search for image similarity. The LBI also had to provide all AV files that were prepared for GAMA with additional metadata. To be able to provide audio and video material to the agreed extent, but also in order to fulfill the requirements for additional, unexpected features of the website – such as Featured Artists and Guided Tours – additional video material had to be digitalized and edited.

Results and Perspectives

The GAMA-Portal officially went online on the occasion of the Ars Electronica Festival 2009. In order to generate publicity for the event, the LBI conceived and organized a workshop on the subject "Media Art Archiving: Politics and Strategies" and held a screening jointly with Ars Electronica of selected works from the archives involved in GAMA in the History Lounge of the Bruckner house (see p. 19).

Since the launch on 5 September 2009, a platform has been ready for public use. The archives represented in GAMA boast a considerable range of works and documentation on media art, but cannot present without gaps the types and genres of European art that fall into this category. The project is therefore considered a first step towards meeting the technical, formal and content matter challenges associated with setting up a portal in a smaller association. The next step should be to connect other significant media cultural archives and collections of European media art with GAMA.

The consortium set up a society in October 2009 for recruiting new archives and partners and above all for acquiring new opportunities for financing and promoting applications. The EU evaluators distinguished this project in their very positive concluding assessment as a best-practice project.

<http://www.gama-gateway.eu/>

3 Online Presence of the Institute

Project Director: Mario Röhrle

Project Team: Gabriele Blome (workshop documentation), Gerda Haunschmid (implementation), Barbara U. Schmidt (online bibliography, link list)

Project Period: 3/2006-12/2009

Project Objective: To structure and publicize the research results from the Institute and further resources on media art.

Project Description

The website of the Ludwig Boltzmann Institute Media.Art.Research. is divided into an external and an internal section. In addition to publicizing the structure, goals and tasks of the institute and presenting its staff, the website also provides a platform for the online presentation of research projects and results as well as the announcement and documentation of events and the publication of resources on media art. In the internal section of the website, institute staff can access a number of tools.

Project Progress and Results

Building upon the website structure created in 2007, the main focus of the work was on maintaining the individual areas (e.g. research projects, online bibliography, self representation by the LBI) and preparing materials for online presentation (e.g. workshops, Media.Art.Research Award). The Institute's website is hosted by the Linz Art University as an archive version beginning in January 2010.

<http://www.media.lbg.ac.at>

4 See this Sound

Supported by funding from Linz 2009 – European Capital of Culture

Project Directors: Dieter Daniels and Sandra Naumann

Project Team: Mario Röhrle, Jan Thoben, Bernhard Pusch, Heike Helfert, Michaela Schörflinger, Adam Dörflinger, Carolina Hubelnig, Linda Thalmann, Dietmar Offenhuber, Stefan Schilcher

Cooperation Partners: Lentos Art Museum Linz, 5super.net, Vienna

Project Period: 11/2006 – 12/2009

Project Objective: Exhibition, conference, catalogue, scholarly publication and web platform

Project Description

The project explores the present and the past of the connection of image and sound in art, media and perception.

The starting point for this is the fact that our world of experience today is characterized by an omnipresence of audiovisual products and structures, in which cultural image and sound production is inextricably intertwined in terms of media technology, market strategy, and artistically. “See this Sound” reacts to this by presenting and discussing various realizations of contemporary art and art studies. The current fields of reference range from pop culture to theories of perception and media technology.

A thematic review of the historical deep layers of acoustic and optical culture and their radical transformation in the past 150 years forms the background for considering current developments. At the same time, we reflect on the omnipresence of audiovisual products that we experience everywhere – and often merely tolerate – but whose framework conditions or possible alternatives are not immediately visible or audible. Complex and surprising aesthetic experiences are created through the contextualized presentation of multifaceted works rich in references by contemporary artists, and processes of cultural insight are set in motion. The aim of the project is to link contemporary visual art and media art together with historical predecessors and aspects external to art.

Strategically, the project “See this Sound” stands for the function of the Institute as an intersection between the fields of contemporary art and media art, art history and media theory. In light of a growing tendency since the late 1990s towards a divergence of the respective discourses and increasing specialization with equally different audience segments, participating in a major, audience-magnet event presents an opportunity for the Institute to set this dialogue between media art and contemporary art in motion again.

Exhibition in the Lentos Art Museum Linz. "See this Sound – Promises in Sound and Vision" - 28. Aug. 2009 - 10. Jan. 2010



See this Sound / exhibition

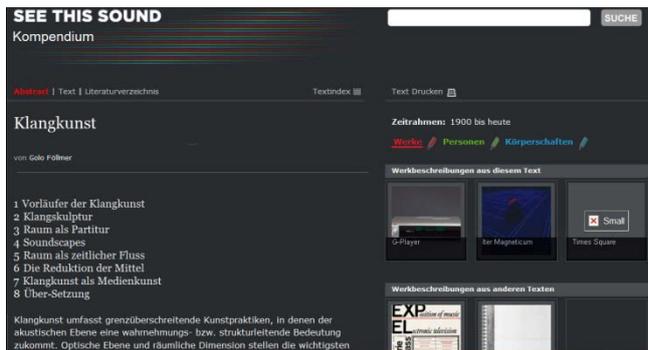
The exhibition shows technical, perception-related and media-reflexive aspects of the coupling of image and sound from the beginnings up to the present, as well as important poetic conceptual positions that are important for contemporary visual artists. This constellation will enable them to mutually contour and illuminate one another.

The exhibition at the Lentos Museum of Art gave a historical survey from the 1920s until today including 80 artists and 160 works. (see exhibition catalogue p. 37) In 8 chapters central aspects of the manifold relations between image and sound are shown, bringing together exemplary artistic works and cultural history perspectives.

The cooperation with the Ludwig Boltzmann Institute Media.Art.Research enables the integration of specific media history issues and research approaches in the exhibition.

Artists: Laurie Anderson, Martin Arnold, Atelier Hopfmann (Judith Hopf und Deborah Schamoni), John Baldessari, Gottfried Bechtold, Jordan Belson, Manon de Boer, George Brecht, Mary Ellen Bute, John Cage, Ira Cohen, Tony Conrad, Josef Dabernig, E.A.T. - Experiments in Art and Technology, Einstürzende Neubauten, Viking Eggeling, VALIE EXPORT, Oskar Fischinger, Andrea Fraser, William Furlong, Kerstin von Gabain, Jack Goldstein, Douglas Gordon, Dan Graham, Rodney Graham, Granular Synthesis, Brion Gysin, Carl Michael von Hausswolff, Gary Hill, Ludwig Hirschfeld-Mack, Heidrun Holzfeind, Derek Jarman, Jutta Koether, DIE KRUPPS, Peter Kubelka, Louise Lawler, Bernhard Leitner, LIA, Alvin Lucier, Len Lye, George Maciunas, Christian Marclay, Norman McLaren, Jonas Mekas, Michaela Melián, Robert Morris, Christian Philipp Müller, Wolfgang Müller, Max Neuhaus, Carsten Nicolai, Pauline Oliveros, Yoko Ono, Dennis Oppenheim, Nam June Paik, Nam June Paik & Jud Yalkut, Norbert Pfaffenbichler & Lotte Schreiber, Rudolf Pfenninger, Adrian Piper, Mathias Poledna, Hans Richter, Józef Robakowski, David Rokeby, Constanze Ruhm / Ekkehard Ehlers, Walter Ruttmann, Peter Saville, Michael Snow, Imogen Stidworthy, Matt Stokes, Nina Stuhldreher, Atsuko Tanaka, TeZ, Throbbing Gristle, Tmema (Golan Levin und Zachary Lieberman), Ultra-red, Steina Vasulka, Ryszard Waśko, Peter Weibel, Hans Weigand, Herwig Weiser, James Whitney, La Monte Young, La Monte Young & Marian Zazeela sowie Audiobeiträge von Matthias Dusini und Thomas Edlinger.

Online platform of the Ludwig Boltzmann Institute Media.Art.Research. “See this Sound - Audiovisuality”



See this Sound Online-Platform - screenshot

The scholarly interdisciplinary and artistic genre-crossing character of the project is expressed particularly in the framework of an online platform on the subject of sound-image relations (bilingual German-English). This interdisciplinary field of knowledge has previously only been developed from the perspective of different fields of expertise. For this reason, the audio-visual lexicon pursues the goal of establishing a cross-disciplinary knowledge base of image-sound

relations with contributions from experts. Experts from art history, musicology, film theory, media studies, theater studies, pop theory, cognitive psychology and neurology contribute their respective perspectives to an “audiovisuality” as a cross-section of these academic fields. Text contributions from research work at the institute will be conjoined here with contributions from external authors. The entire spectrum of audiovisual arts and phenomena will be represented in a lexicon-type form through a total of 35 historical longitudinal sections and systematic cross-sections. Interdisciplinary themes will be examined in depth in longer essays. Examples of work will be audiovisually documented and academically commented and contextualized. Audiovisuality is thus both the theme and the method of the online platform. The mutually complementary lexicon entries linked with key words and time sections and the audiovisual examples of work result in a totality opening up new conjunctions of meanings. This procedure also enables the overlapping and networking of artistic and scholarly elements of the project and the development of new ways of the multimedia communication and representation of science and art. An interface developed at the institute in collaboration with the line of research “Knowledge Representation and Visualization” will connect the online platform with the exhibition.

<http://www.see-this-sound.at>

Conference of the Ludwig Boltzmann Institute Media.Art.Research. “See this Sound – Sound-Image Relations in Art and Media”

An interdisciplinary exchange among the theoretical and aesthetic thematic fields of the project is the goal of an international conference of the institute. The conference touches on the points of contact among various academic disciplines, including art and music studies, media and art theory, media archeology and the history of technology. Artistic presentations will also be integrated in the course of the conference to stimulate a dialogue between art and science. (see p. 26).

Academic Publications

In addition to being published online, the compendium as well as the essays from the online platform will each be published in book form. (see p. 36)

Project Progress

After a development and phase and submission procedure of almost a year, the concrete implementation of the concepts began following the approval for funding from Linz09 in Autumn 2007.

The main focus of work in 2008 was on the detailed planning of the concept for the web archive. A subject structure was developed (texts on various art forms, in which sound-image relations play a significant role, texts on various processes for connecting acoustic and visual phenomena, texts on questions of perception), guidelines for text structure were produced, a system for connecting the essays was designed and the selection and assignment of authors was undertaken. Work was also started on researching and acquiring the audiovisual documents and the requisite publication rights. In addition, project-specific requirements for compiling the metadata for the online representation of the platform were formulated and modes of representation for the planned visualization were considered. This was accompanied by defining requirements for the web design, the programming and graphical design of which were realized by an external contractor beginning in January 2009.

The conclusion of the editorial work planned for Spring 2009 and its integration in the web archive was postponed, due to increased editorial effort and delays with SAMY and the consequently necessary development of an alternative solution for the database. Super.net joined as a cooperation partner for the programming of the database and the web front-end. A public beta version of the web archive was finally presented on 3 September 2009 in the course of a symposium. It will be revised and finalized by the end of the year.

The program for the conference was finalized by Spring and complemented with the winner of the Media.Art.Research Award, which was devoted this year to the theme of “Sound-Image Relations in Audiovisual Art”.

The planned historical anchors and contextualizations for the different exhibition chapters were developed in cooperation with the Lentos Art Museum Linz. In addition, LBI had an advisory function in the selection of work in the curatorial development process, especially for the chapter on “Promises of Eye Music”. A timeline was developed to convey the contents of the online platform, which can be seen in a separate exhibition room. (see Project V 5, p. 98).

Results and Perspectives

The exhibition opened on 29 August 2009 and met with a very positive response from visitors and the press. An extensive catalogue with various essays from LBI staff members was published at the same time.

The symposium took place on 2 and 3 September in the Lentos Art Museum Linz and was well attended. The complete program and documentation of the individual contributions are available from www.see-this-sound.at.

The public beta version of the web archive was also presented during the conference and has been well received by Internet users since then. Further presentations at various international festivals will follow.

The first volume of the academic publication will be published in winter, the second volume in Spring 2010 (see. p. 36, 37).

5 Timeline of Audiovisual Culture



Project Director: Dietmar Offenhuber

Project Team: Stefan Schilcher, Sandra Naumann, Mario Roehle

Project Period: 01/2009 - 08/2009

Project Objective: Interactive Exhibition Installation “See this Sound”

Project Description

Based on the texts written for the interdisciplinary compendium of audiovisual culture (<http://blog.see-this-sound.at/2009/08/19/zum-konzept-des-webarchivs/>), a “Timeline of Audiovisual Culture” was implemented for the exhibition context. An interface with a knob allows visitors to interact with the application.

The timeline shows the chronological development of the thematic fields and how they are linked. It provides a visual representation of the historical complexity. The detail view for a theme provides relevant context information for all the works and persons mentioned.

Project Progress

Parallel to the completion of the online platform, a data format and interaction concept was developed in consultation with the project staff for See this Sound. This concept then served as the basis for implementation as an interactive museum installation. Implementation was carried out from May to August 2009, the planning started in late 2008.

Results and Perspectives

The timeline is on display in the exhibition See this Sound – Promises in Sound and Vision (28.8.2009-10.01.2010).

See also <http://vis.mediaartresearch.at/webarchive/public/view/mid:40>

6 Exhibition: netpioneers 1.0

Project Director: Robert Sakrowski, Gunther Reisinger, Dieter Daniels

Project Team: Mario Röhrle, Julia Lehner, Nina Fuchs

Project Period: 08/2007-08/2009

Project Objective: exhibition, conference

Cooperation: Austrian Cultural Forum New York

Project Description

Based on the critical appraisal of early net.art, exhibition practices appropriate for net-based art were developed for both virtual and real spaces. Taking the research project “netzpioniere.at” as starting point, with its online contextualization and restoration of a set of case studies (including “THE THING Vienna” and “THE THING New York”, “public netbase” and early works by “jodi”), strategies were developed within the exhibition project for how to present genuinely net-based art and net activism in the museum context. The structure of the case studies at hand necessitated a division between the concepts of archive theory (taking “THE THING” as example), the problem of terminology for describing artworks (“jodi” as example) and actionist intervention (“public netbase”), which were reflected in the exhibition design.

Considerations as to the exhibition design were made in close collaboration with the artists and project sponsors, with archive material being made available to viewers in some cases online in digitized form and in other cases in the exhibition itself.

Project Progress

The exhibition, which is to be understood as the implementation of a research project in real space, was intended especially to address issues of the re-presentation of no longer accessible net-based work on the World Wide Web on the one hand and in real space on the other. Within the framework of prior research work, an evaluation of previous international exhibitions was started in 2007 along with the development of new exhibition displays suitable for art and the art works (Robert Sakrowski, Gunther Reisinger).

The overall concept for both subject matter and financing for the exhibition was developed until the end of 2008 (Robert Sakrowski, Gunther Reisinger) and agreed with the partner institution (Austrian Cultural Forum New York). Even though the planning was complete in terms of both content and logistics, the exhibition plans had to be cancelled in mid-2009 for financial reasons.

7 Mapping the Archive: 30 Years of Prix Ars Electronica



Project Director: Dietmar Offenhuber, Evelyn Münster

Project Team: Gerhard Dirmoser, Evelyn Münster, Jaume Nualart, Dietmar Offenhuber, Moritz Stefaner, Ule Münster, Sandor Herramhof, Günther Kolar, Gabriele Blome, Gerhard Dirmoser, Katja Kwastek, Theresa Schubert-Minski, Ingrid Spörl

Project Period: 06/2009 - 09/2009

Project Objective: Exhibition of visualization projects for Ars Electronica 2009

Project Description

The project presents the results of an interdisciplinary investigation of the Prix Ars Electronica archive in the form of interactive and static information visualization on a 3 x 10 m poster wall and on two terminals with interactive applications.

The archive is viewed here at three levels: first the entirety of the submissions since 1987 as a quantitative analysis, then the jury process as a social network analysis, finally the winning projects and their art studies contextualization.

Seven visualization projects were prepared for this and adapted or especially made for printing: X by Y (in cooperation with Moritz Stefaner), Media Art as Social Process, Texty, Proxemantics, Prix Landscape Interactive Art, Similarity (guest project by Gerhard Dirmoser) and the thesaurus “Electronic Media Art” (guest project by Gerhard Dirmoser).

Project Progress

Following a conception phase, the data and texts were prepared for printing in Summer 2009. The graphics and design of the print followed in August 2009.

The exhibition was on display from 3 to 8 September 2009 in the Brucknerhaus in Linz and is documented online at

<http://vis.mediaartresearch.at/webarchive/public/view/mid:5>

In addition, an article about “Mapping the Archive” was published in Infosthetics:

http://infosthetics.com/archives/2009/09/mapping_the_archive_30_years_of_ars_electronica.html

Newly presenting the poster in the Ars Electronica Center is being considered.

8 Online Resources for the Scholarly Documentation and Archiving of Media Art

Project Director: Gabriele Blome

Project Period: from 2008

Project Objective: Publication (Dissertation)

Project Description

The establishment of media art went hand in hand with the build up of new distribution, presentation and production contexts, which gradually became established beginning in the late 1970s, such as the initiative Monte Video, which began its activities in 1978, or the Ars Electronica Festival founded in 1979. Many initiatives were founded thereafter, and some developed into large institutions, which today have essential collections and archives of media art. Access to these, which the institutions provide through the Internet, provides important sources of information on media art. In addition, beginning in the mid-/late 1990s, artists and theorists founded collaborative art platforms, for example Ädaweb, Rhizome and runme.org. The first online offerings were set up, which were primarily oriented to mediation, such as Medien Kunst Netz and netzspannung.org. In the research context, databases were established, in which information on media art works was collected, such as the Database of Virtual Art.

These online resources are an essential part of the information sources on media art that are available on the Internet. In the course of the research project, a historical analysis of the set-up of collections was conducted, as well as an analysis of the mediation of the collections on the Internet and an evaluation of their potential for the scholarly documentation and archiving of media art. In the course of this, the different approaches were analyzed in terms of how the profile of online resources develops in the charged field between the mission of the institutions operating them and the expectations of the audience. The strategies associated with sometimes contradictory demands on archiving and mediation should be investigated. On the one hand, the research project intends to contribute to examining the significance of online resources for producing knowledge in research and society. On the other hand, the online resources to be investigated are also subject to constant transformation, and their existence is partly endangered, so that sustainability measures must be reflected on in terms of both the object of research and the research work.

Project Progress

In the course of extensive research on available online resources on media art, first different types of online resources were identified and examined in terms of the available access. A project plan was developed on the basis of the results.

Due to manifold responsibilities in the various development projects, this project is still in the conception phase.

