

Mediating Artistic and Scientific Knowledge and Experience to create Digital Culture

Monika Fleischmann, Salzburg 10/2003

mars - media arts research studies

- » **Based at Fraunhofer Institute for Media Communication, Sankt Augustin/Bonn**
- » **headed by research artist/architects Monika Fleischmann & Wolfgang Strauss**
- » **Multi-disciplinary team of 15 - 25 artists, scientists, researchers**
- » **Founded in 1997**

APPROACH: MEDIA ART UNDERSTOOD AS INNOVATIVE ARTISTIC RESEARCH

- » **Complex Research of Information Society Technology (IST)**
- » **Influence & Form IST by the Use of Art Oriented Strategies**

KEY AREAS

- » **Media Art - Digital Culture - Media Art Education**
- » **Explorative Interfaces - Interactive Processes**
- » **Ambient Space - Integration of digital & physical Media**
- » **Knowledge Discovery Tools - Information Visualization**
- » **Networked Communication - Nonlinear Structures**

GOAL: BRIDGING THE GAP BETWEEN MEDIA, ART AND TECHNOLOGY

- » **<http://mars.imk.fraunhofer.de>**

explorative interfaces - interactive processes

1 Liquid Views, media art installation 1993

» understanding by touch

2 Virtual Balance, human-machine interface 1995/96

» looking with the body

3 Info-Jukebox, multimedia terminal 2002

» touchless interaction

liquid views 1993 - fleischmann / strauss



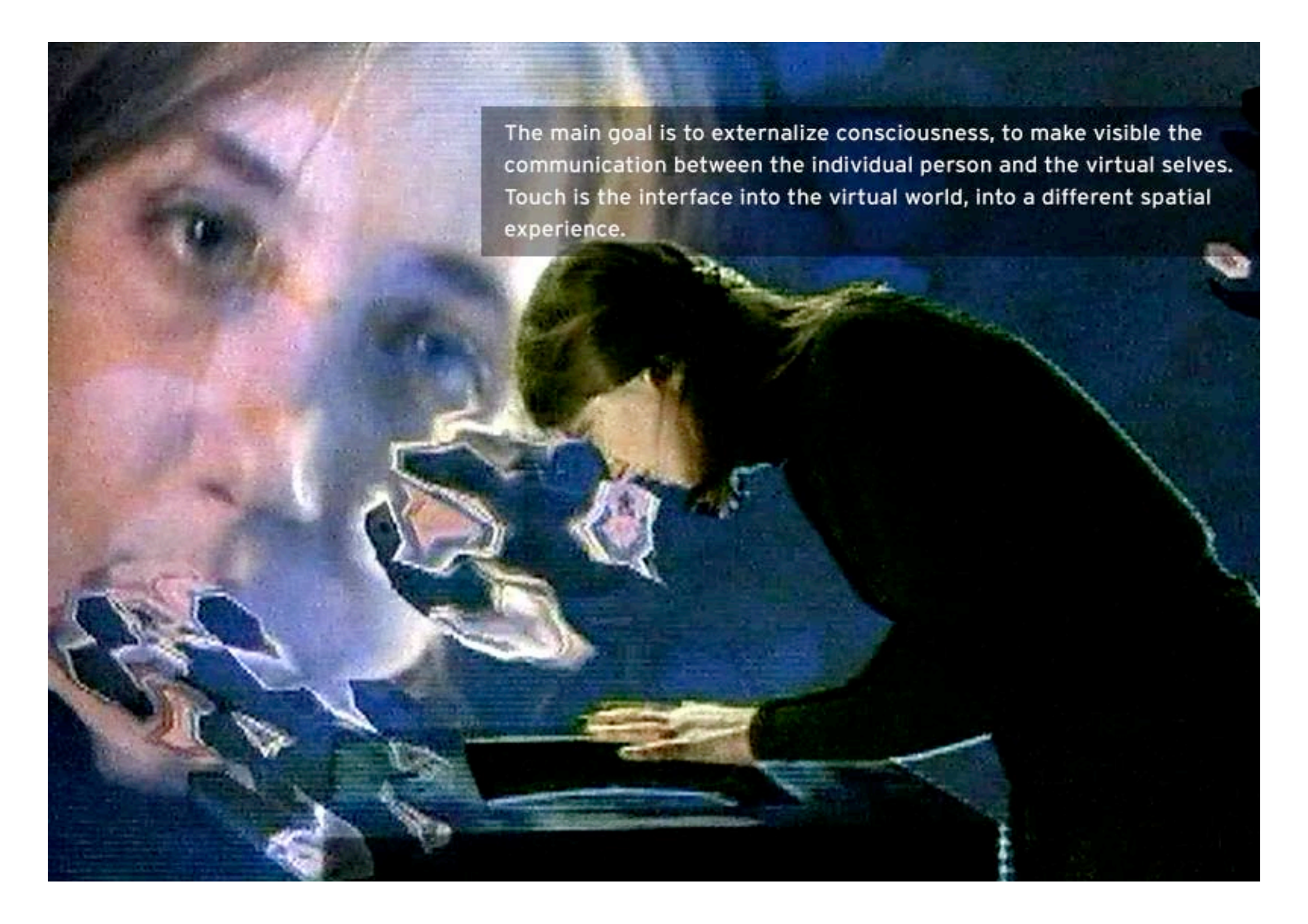
Story of Narcissus - the Observed Observer

Realtime interaction - Feeling of Presence

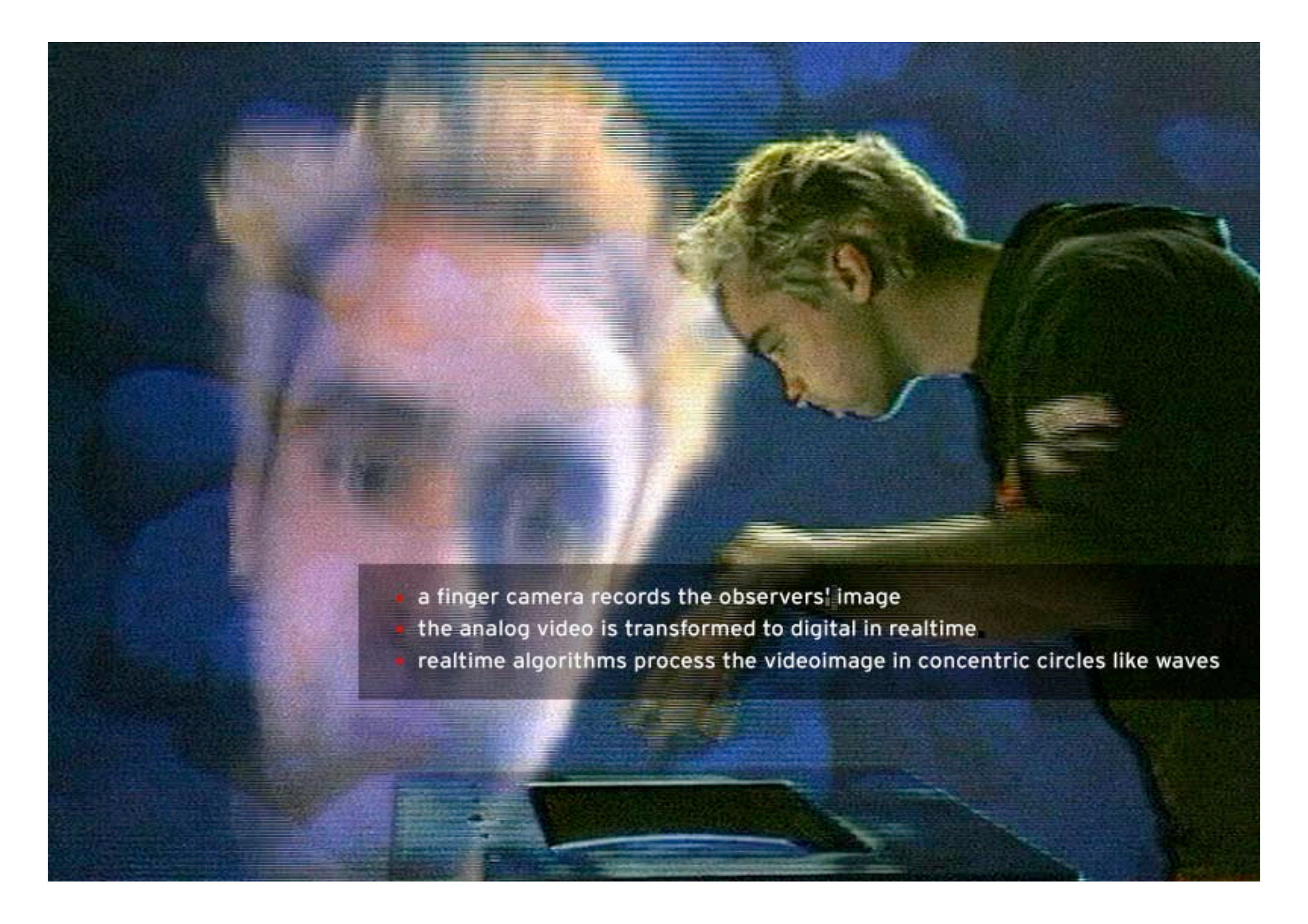
Water Algorithm / Real-Time Morphing

Touch Screen/VideoCamera/2 Screens/1 PC

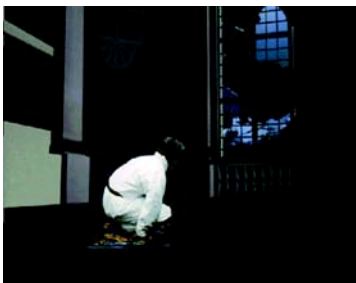
http://www.iamas.ac.jp/interaction/i97/artist_FSB.html

A woman with long dark hair is shown in profile, looking at a large, multi-layered digital interface. The interface consists of several overlapping, semi-transparent screens or panels, each displaying different data or graphics. The woman's hand is visible, touching one of the layers. The background is dark, and the overall lighting is focused on the woman and the interface. The interface has a blue and white color scheme with various geometric shapes and patterns.

The main goal is to externalize consciousness, to make visible the communication between the individual person and the virtual selves. Touch is the interface into the virtual world, into a different spatial experience.

- 
- A man with short, light-colored hair is shown in profile, looking down at a large, glowing, abstract digital display. The display is composed of concentric, overlapping circles of light in shades of blue, purple, and yellow, creating a wave-like pattern. The man is wearing a dark, long-sleeved shirt. The background is dark, and the overall atmosphere is futuristic and high-tech.
- a finger camera records the observers' image
 - the analog video is transformed to digital in realtime.
 - realtime algorithms process the videoimage in concentric circles like waves

virtual balance 1995 - fleischmann/strauss



Looking with the feet - Navigate with body balance

<http://www.nada.kth.se/rena/balance.html>

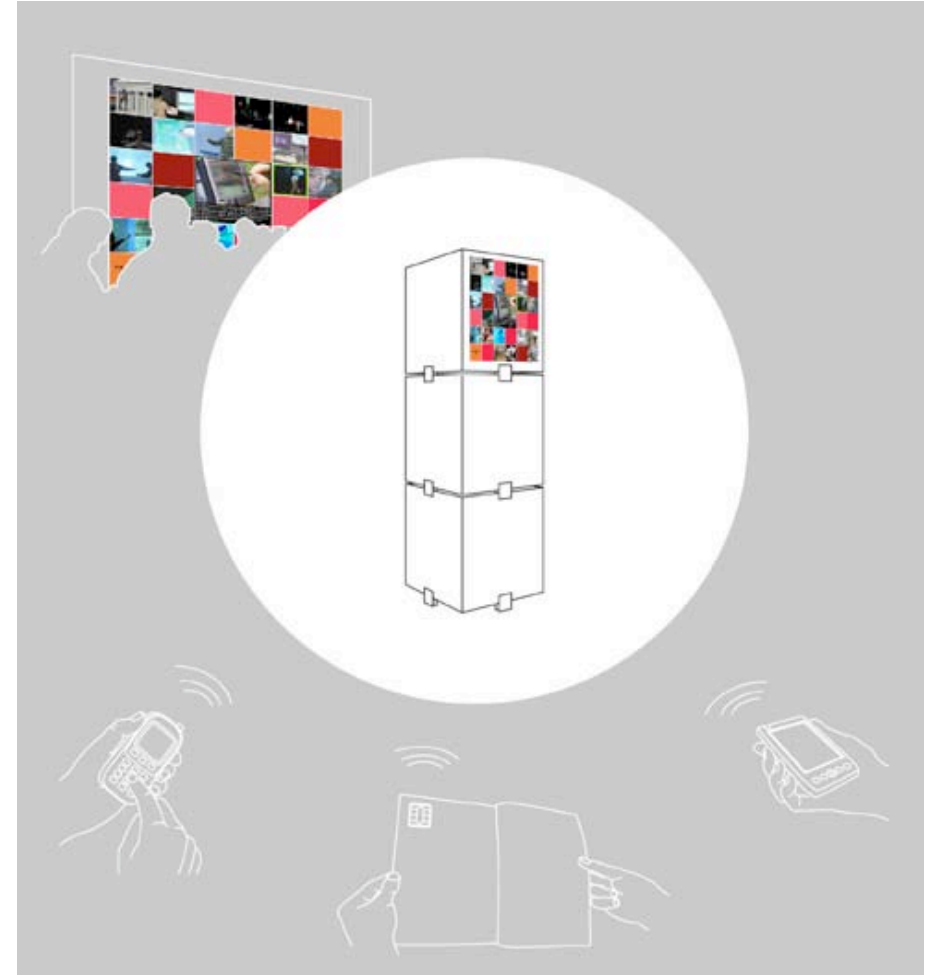
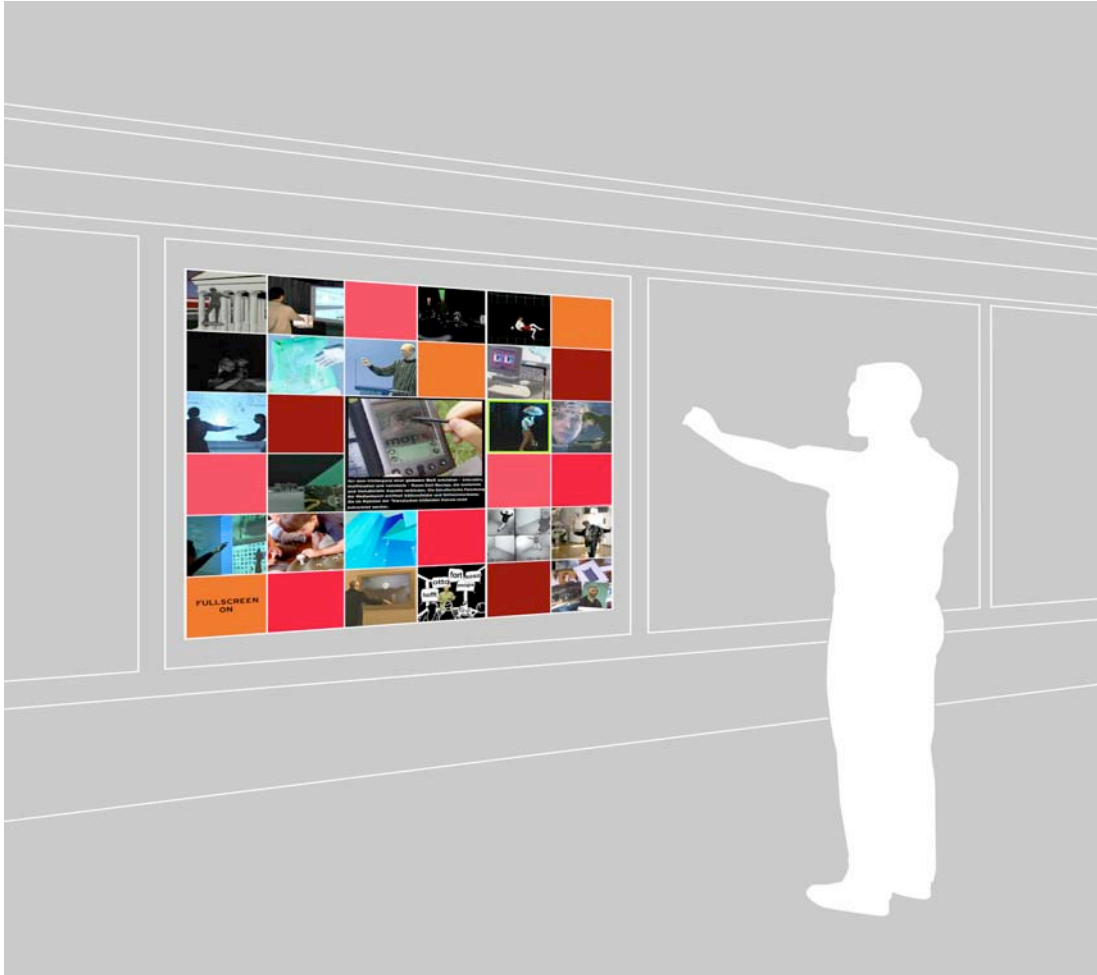
info-jukebox 2002 - fleischmann/strauss



Browsing Multi-Media Information with Body Gestures

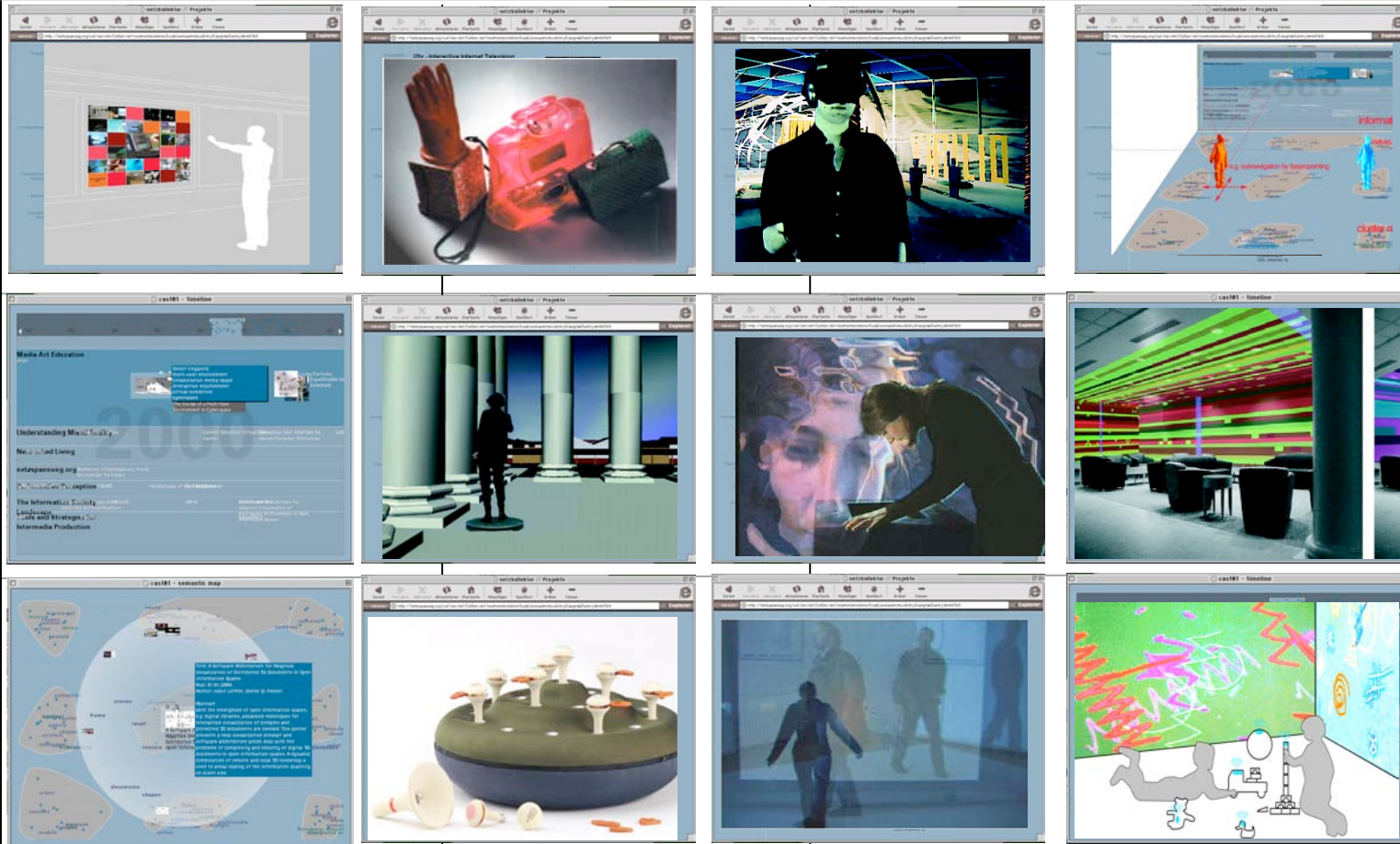
<http://www.imk.fraunhofer.de/de/jukebox>

patent: pointscreen technology 2002 - strauss/li



Touchless interaction for information access

wissenskünste/performative interfaces/ambient space



Screen based Knowledge Art

Performative Interfaces, Objects & Space

Ambient Space

cat project - communication of art and technology

1 netzspannung.org

» Internet Platform for Electronic Arts and Digital Culture

2 Knowledge Discovery Tools

» Timeline and Semantic Map

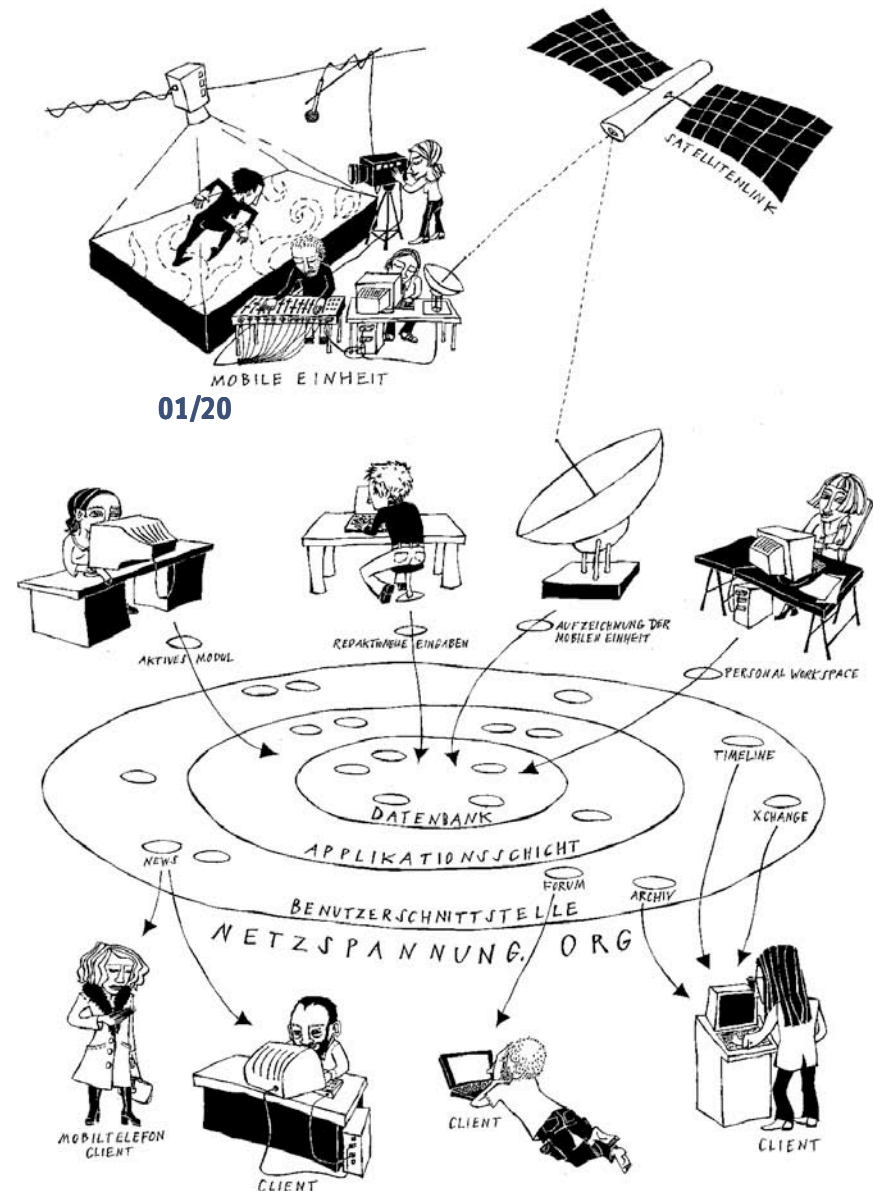
3 Ambient Space

» Enterable Knowledge Space

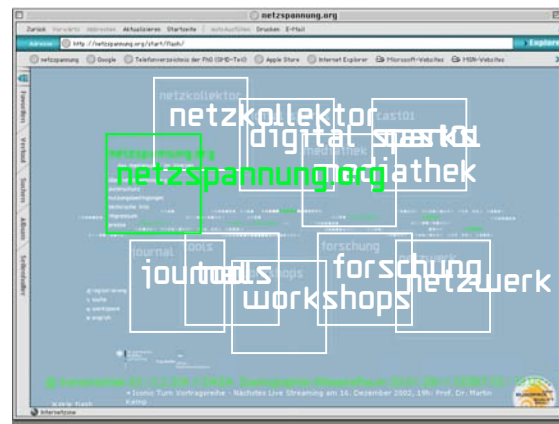
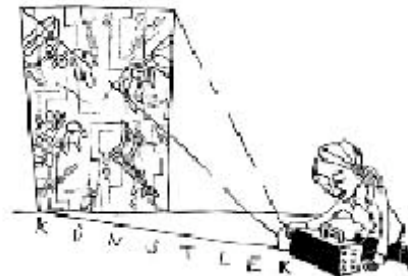
media artists, curators, scientists need support

Such as:

- » Archives
- » Collaboration
- » Connectivity
- » Communication
- » Distribution
- » Education
- » Production
- » Publication
- » Public Displays
- » Theory Building



netzspannung.org serves for artists and scientist



COMMUNITY SERVICE

- > Conference
- > Workshop
- > Student competition
- > telelectures

PRODUCTION

- > Online exhibition
- > digital heritage
- > mixed reality
- > ambient interfaces

MEDIATHEK

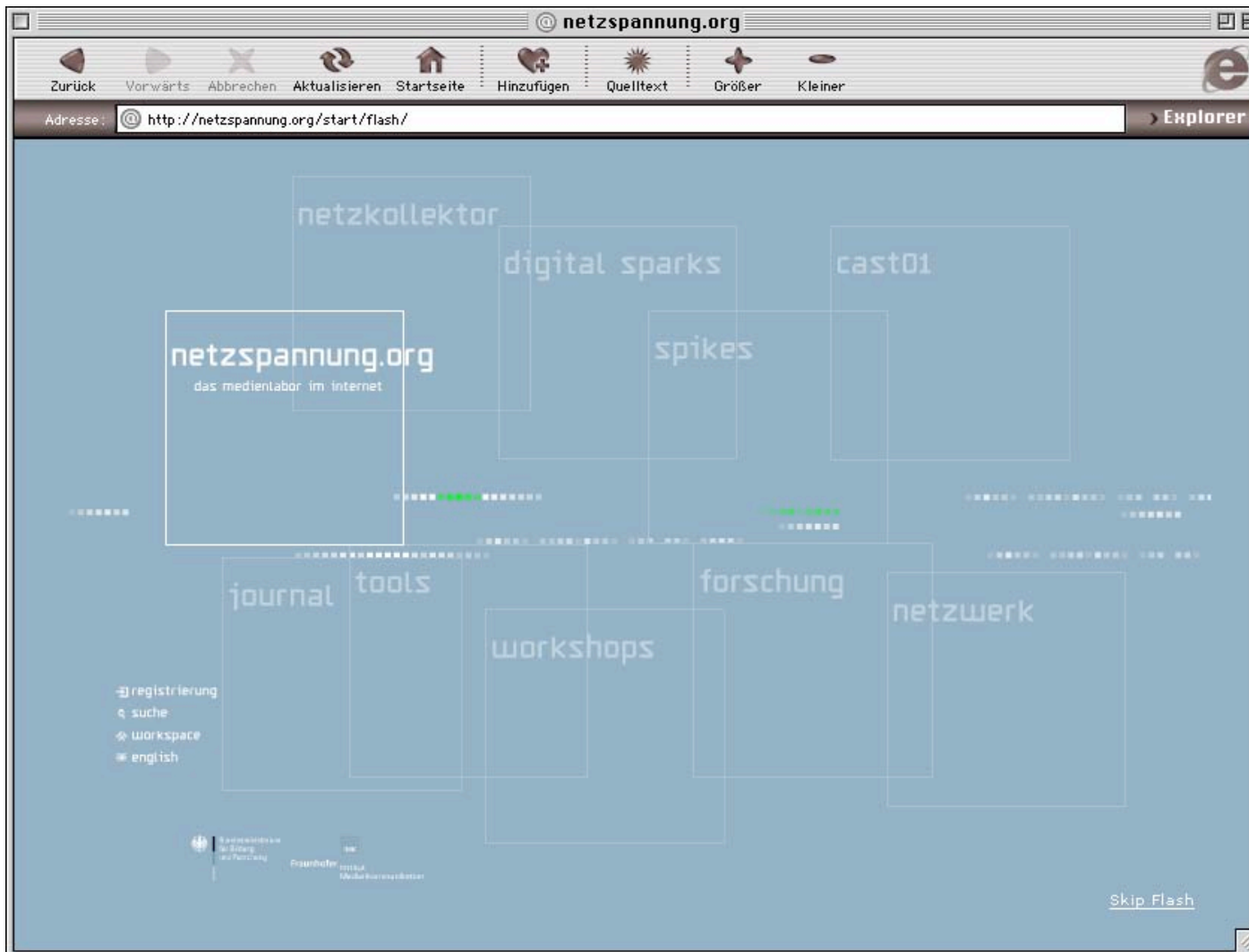
- > Authors
- > Projects
- > Mediafiles
- > Datapools

MEDIATOOLS

- > netzkollektor
- > workspaces
- > mobile unit
- > knowledge discovery

<http://netzspannung.org>

Learning & Teaching Platform for Media Arts & Intermedia Research

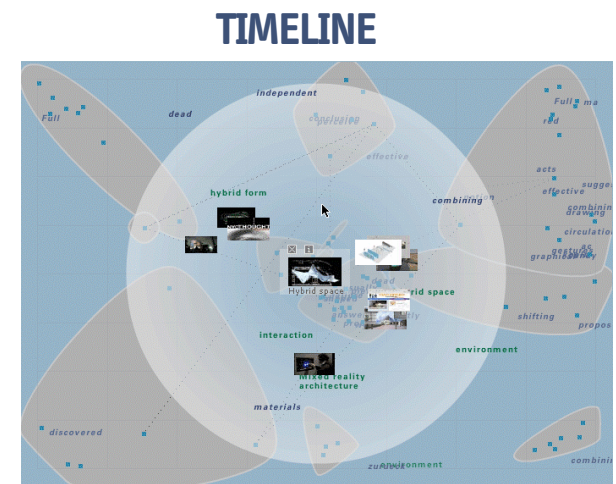
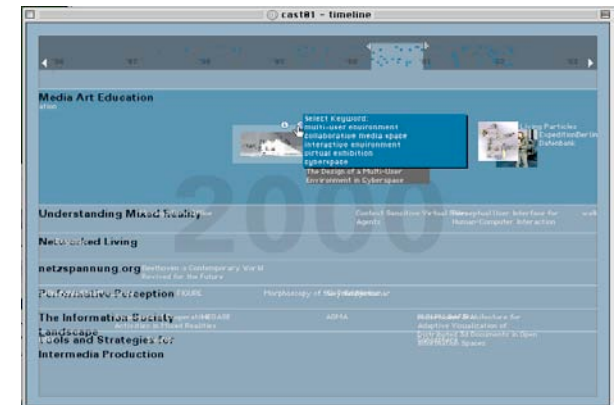
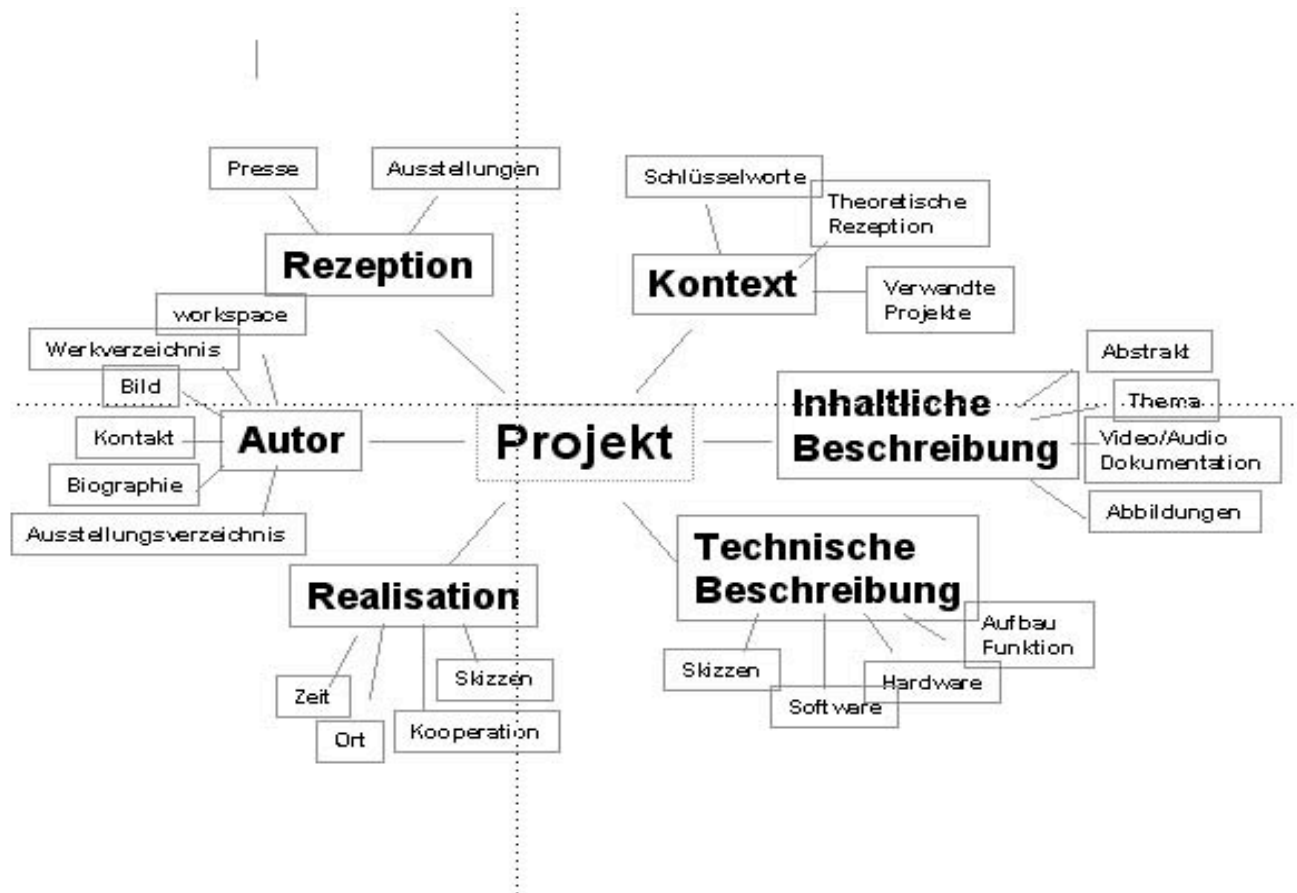


- » 300 media arts projects
- » 130 hours of tele-lectures
- » 2.400 registered users
- » 5.000 visitors in Oct 2002
- » 12.000 visitors in July 2003
- » 3.000 - 5.000 downloads of documents per month
- » Growing datapool through open channel & curated modules such as netzkollektor, digital sparks, tele-lectures ...

The Art of Searching and Finding: Data - Information - Knowledge

Meta-Data to communicate projects/content

Methods to structure/visualize similar content



SEMANTIC MAP

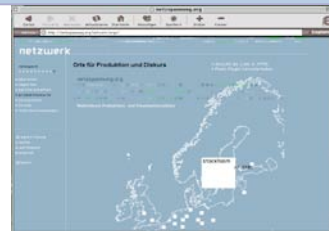
knowledge discovery tools: time structured access



LISTS



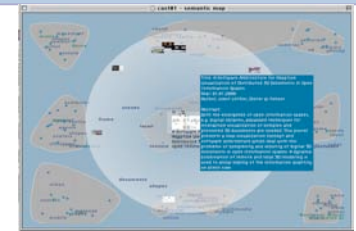
PROJECTS



CARTOGRAFIES



TIMELINE



SEMANTIC MAP

Media Art Education
ation

Select Keyword:
multi-user environment
collaborative media space
interactive environment
virtual exhibition
cyberspace

The Design of a Multi-User Environment in Cyberspace

Understanding Mixed Reality
tion of User Interface

Context Sensitive Virtual Reality
Agents

Conceptual User Interface for
Human-Computer Interaction

walk

Networked Living

netzspannung.org Beethoven -s Contemporary World
Revived for the Future

Performative Perception FIGURE Morphoscopy of the Yodanisamar

The Information Society as a Cooperative MEGASE AGMA

WORLDWIDE Architecture for
Adaptive Visualization of
Distributed 3d Documents in Open
Sonsphere
Information Spaces

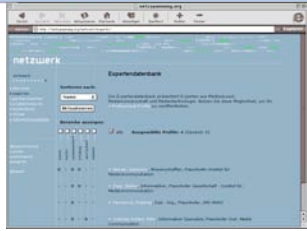
Landscape Tools and Strategies for Intermedia Production

TIMELINE

- » chronological organization of categorized content
- » overview on parallel activities
- » supports contextualization
- » structured access to data

<http://netzspannung.org/cast01/timeline>

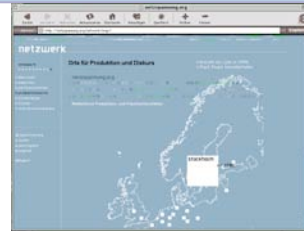
knowledge discovery tools: explorative access



LISTS



PROJECTS



CARTOGRAFIES



TIMELINE



Semantic Map

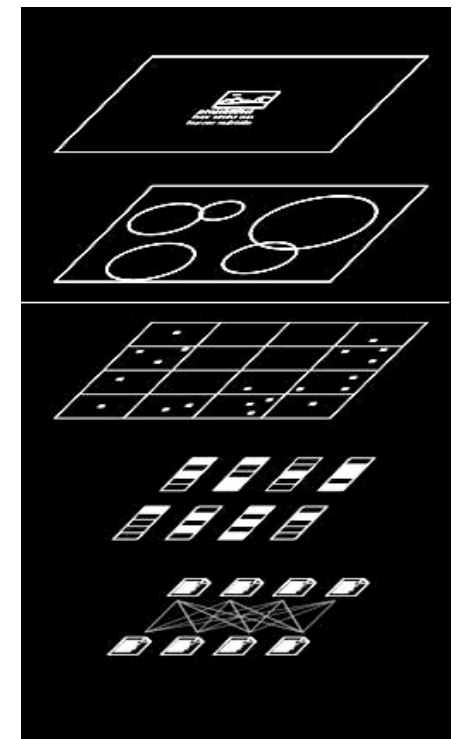


SEMANTIC MAP

- » visualization of semantic relations
- » explorative access to data

STRUCTURE

- » Project Sheet
- » Cluster Map
- » Kohonen Map
- » Text Vectors
- » Text Analysis



semantic map - extended tool 2003 - novak

Global ClusterMap (based on : B. Schmidt : Map 01)
Netzspannung.org : Digital Sparks

Text Analysis Keywords Title Typical Members 85/150 | 100%

Global WordMap
Netzsp... : Cast01

Step: 0 1 100%

Max Muster : My Map 05
My Selection from Cast01

Text Analysis Keywords Title Typical Members
Step: 0 1

Select and move objects

▼ Search intelligent agent Go

6 relevant maps containing results for "intelligent agent"

- My Personal Map Cast01
- MyMap DigitalSparks
- Global Map Data Pool 4
- Global Map Data Pool 23
- My Personal Map 24 Data Pool 9
- My Map 02 Data Pool 17

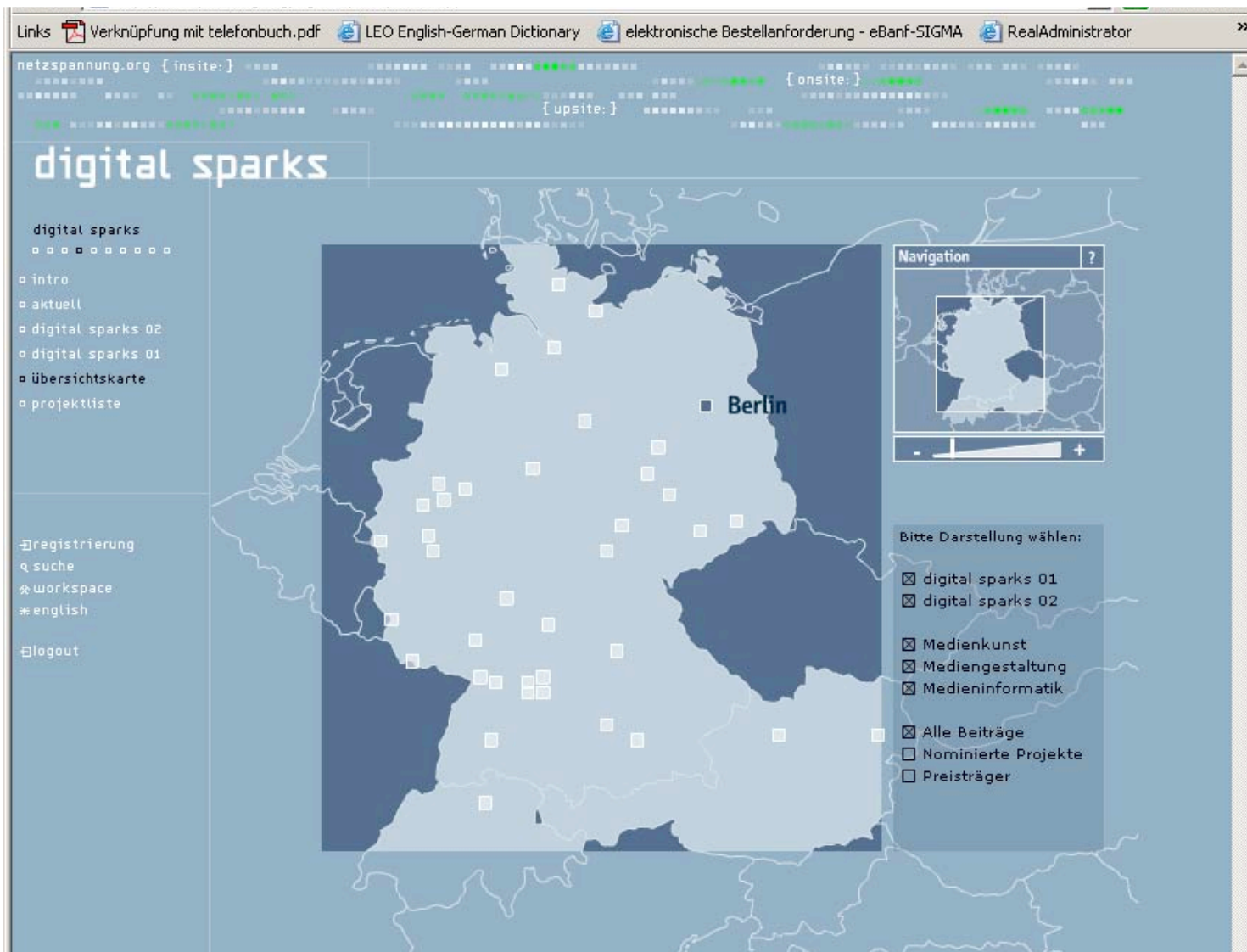
▼ History

- IKI-IKI-Photo Cast01
- Unnamed Cluster Cast01
- Global ClusterMap Digital Sparks
- Global ClusterMap Digital Sparks

<http://awake.imk.fraunhofer.de/>

mapping the media education landscape

DIGITAL SPARKS CONTEST



NAVIGATION MAP

» cartographic relation between universities and prize winning projects in media art / design / informatics.

» geographical access to data: what is going on in that university?

<http://netzspannung.org/digital-sparks>

http://netzspannung.org/learning

MEDIA ART MEETS MEDIA EDUCATION

Zurück Suchen Favoriten Medien

Adresse <http://netzspannung.org/digital-sparks/flashmap/>

Links Verknüpfung mit telefonbuch.pdf LEO English-German Dictionary elektronische Bestellanforderung - eBanf-SIGMA RealAdministrator

netzspannung.org [insite:] {onsite:} [upsite:]

digital sparks


- digital sparks
- o intro
- o aktuell
- o digital sparks 02
- o digital sparks 01
- o übersichtskarte
- o projektliste

→ Registrierung
q suche
⌘ workspace
⌘ english
⌘ logout

Berlin
UDK FHTW KH
» Universität der Künste Berlin
1/3

① ② ③ ④ ⑤ ⑥

"Froschkönig"
Weng Ching-Sui
» Projekt-URL

 Elektronisches Bilderbuch für Palm OS Computer

- Medienkunst
- digital sparks 01

» Details anzeigen
1/10

Navigation ?

Bitte Darstellung wählen:

- digital sparks 01
- digital sparks 02
- Medienkunst
- Mediengestaltung
- Medieninformatik
- Alle Beiträge
- Nominierte Projekte
- Preisträger

Berlin
UDK FHTW KH
» Kunsthochschule Berlin-Weißensee
3/3

① ② ③ ④ ⑤

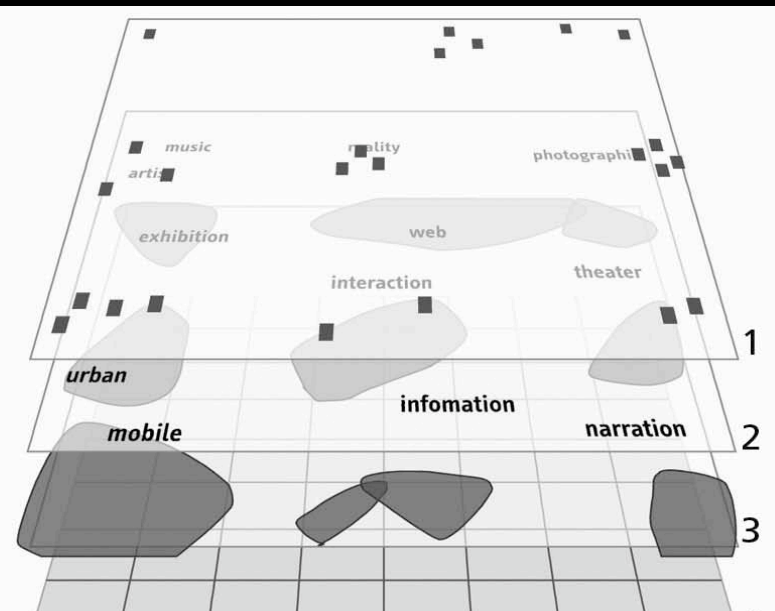
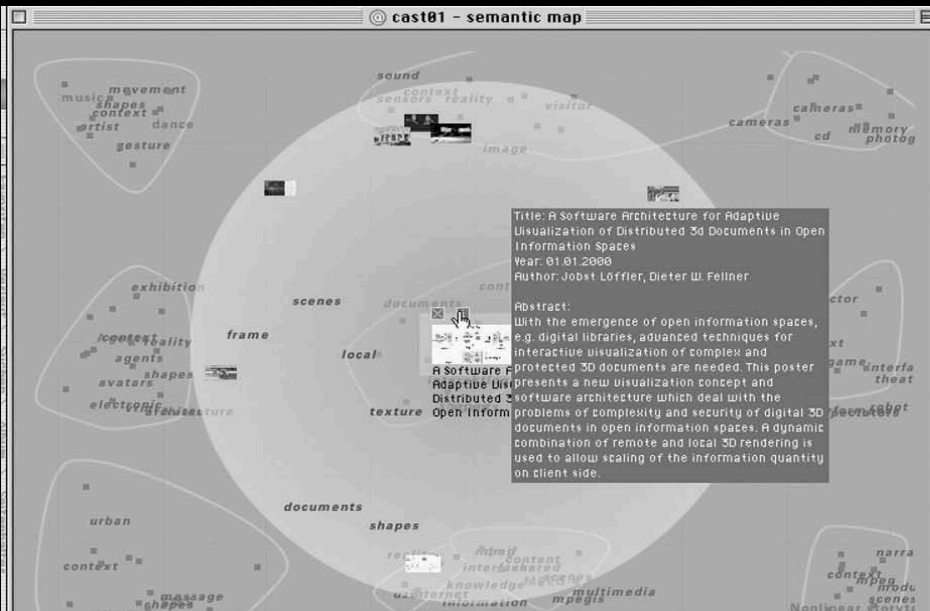
multistrips
Boehm Sylvia
» Projekt-URL

 Das typische Pflaster

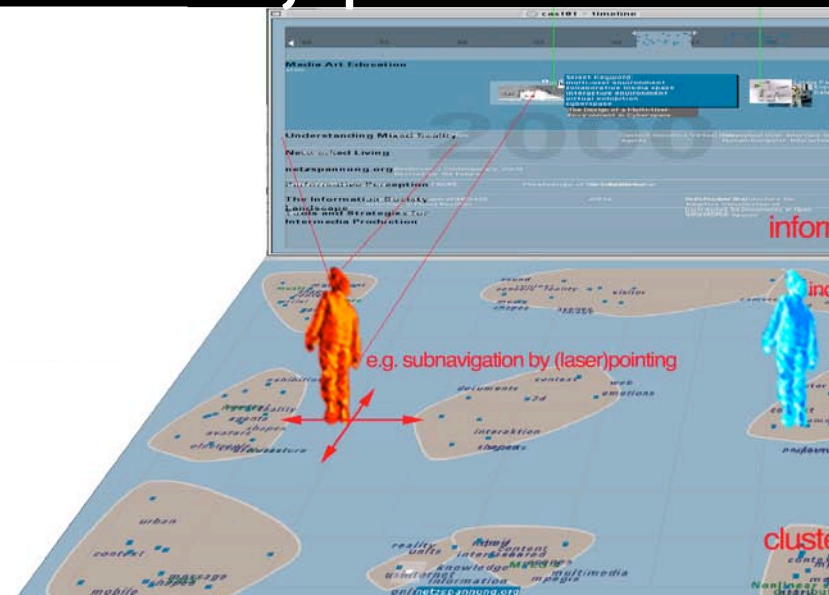
- Medienkunst
- digital sparks 01

» Details anzeigen
1/5

enterable knowledge space



knowledge map creates memory space





<http://netzspannung.org/about>

<http://www.imk.fraunhofer.de/mars>