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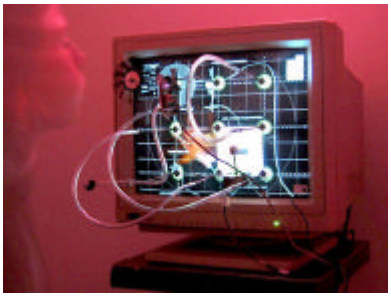
For full credits see end of the document
Monday, 30 December 2002

This document is avaliable online at:
http://www.arch.kth.se/mediatedspaces



Mediated Spaces

One year, Seven prototypes,
Various platforms, Related concepts,

Spatial interaction between the human,
the physical and the virtual.

me·di·at·ed, (mē' dē-ā't') adj. (-ĭt)
Acting through, involving, or dependent on an intervening agency

A00 Introduction

Mediated Spaces is a MSc of Architecture research project with the aim of exploring spaces of mediation in various scales:
Between the human, the physical and the virtual, between the local environment and the ubiquitous global digital media.

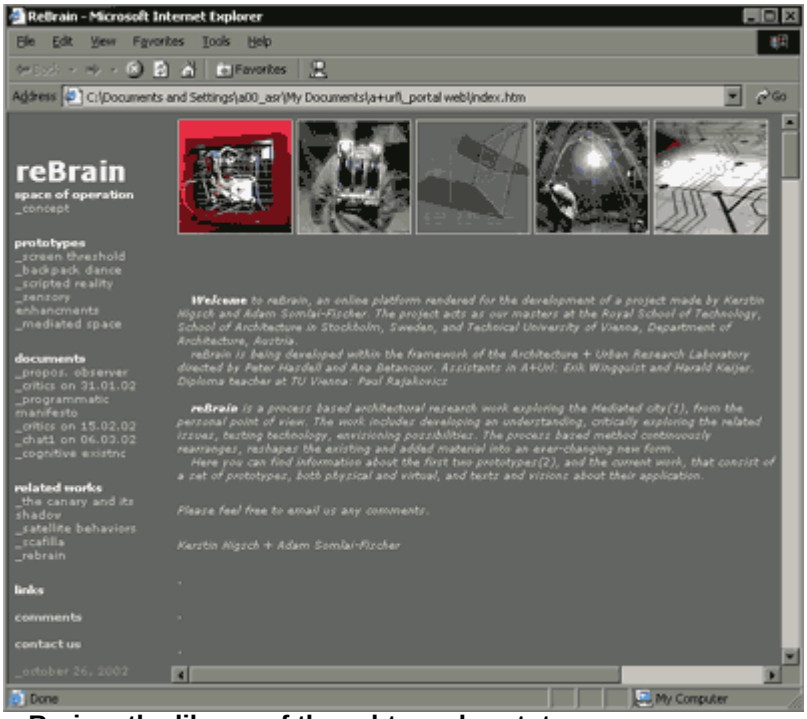
The project is carried out through the making of seven instrumental prototypes, that are testing concepts and experiences in a 1 to 1 scale, and are forming a rhizomatic system, informing each other back and forth. The method has been re-appropriating already existing concepts and technology in a playful way to breed new experiences.

Key concepts:

- Experience: Giving physical qualities to mediated (global) experiences and mediating physical (local) environments, blurring this threshold
- Method: Playful, use and abuse of mass-produced technology, software. Systems thinking, research through design
- Prototype: Testing concepts from our knowledge base reBrain, testing the experience
- Collaborative space: Group work, academic, art and commercial platforms

The expression - giving physical qualities to mediated experiences and mediating physical environments, blurring this threshold - means that electronic media like projections, sound, screens can gain materiality, than it can be embedded into local environments, both spatially and time wise.

While pursuing a personal agenda, many of the prototypes are done in collaboration with others on various platforms. The development is recorded on a website called reBrain. This online library is shared with Kerstin Nigsch, a diploma student from TU-Vienna, and it allows a continuous discussion while working in different cities.

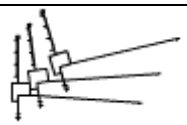


reBrain – the library of thoughts and prototypes
Available online at: www.arch.kth.se/eurb/rebrain

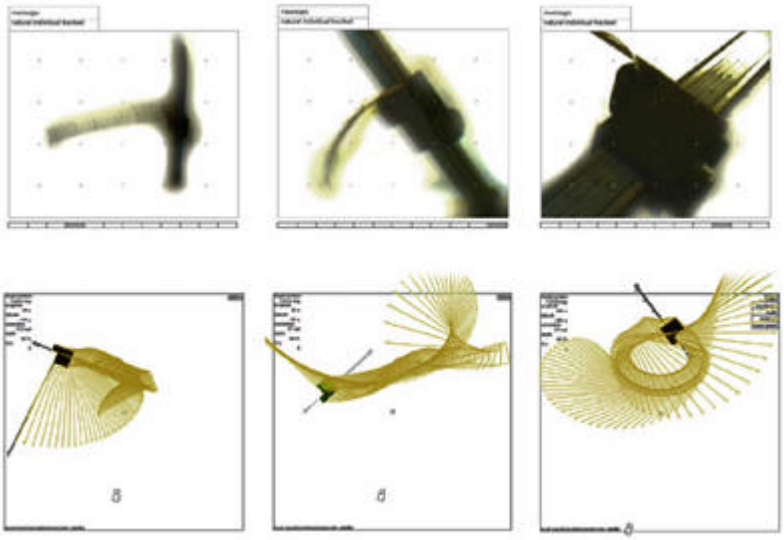
This library contains many discussions, formulated documents, responses from critiques, documentation of prototypes, an open discussion forum, and a continuously reshaped summary about where this work could lead to.

B00 prototypes

B01 Satellite algorhythms

1	
Prototype name	Satellite Algorhythms
Date	2001 q4
Testing	Spaces of algorithmic motion are linked to physical devices
Media	21Kb, Web, Electrograph, Sound
Credits/Platform	Adam Somlai-Fischer, A+Url
Link	arch.kth.se/eurb/rebrain/background/satellites

A fictional entity called Satellite was created playing out complexity science concepts. It can generate spaces from various algorithmic behaviors.
To enrich the belief of the existence of these satellites, a physical model of it was created, and a film to illustrate its behavior outside the computer. It is a fictional project based on scientific data.



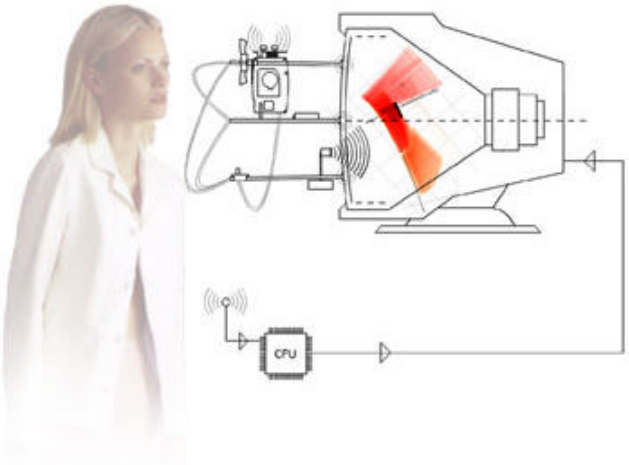
Images of the physical model - Screenshots of the virtual satellite

B02 Screen Threshold

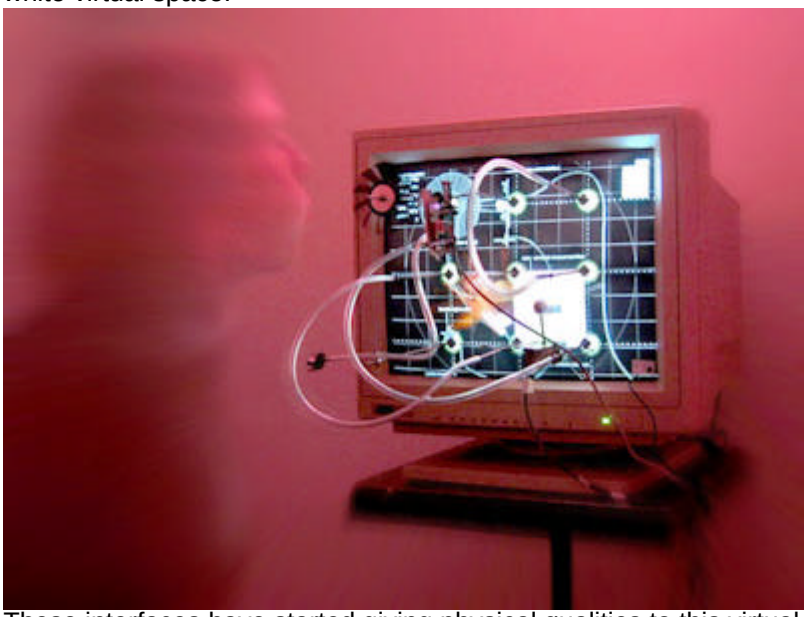
2	

Prototype name	Screen Threshold
Date	2002 q1
Testing	Giving physical qualities to a mediated entity, blurring the threshold
Media	50*50 cm, 41Kb, Web, Screen, Deconstructed Mouse, Magnetism, Wind
Credits/Platform	Adam Somlai-Fischer, A+Url
Link	Exhibition: www.arch.kth.se/a-url

The idea of connecting something physical to something virtual is tested on a more refined level on the second prototype, where the satellite ended up behind the glass of a screen, where the visitor can physically tease it.

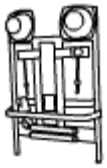


You can blow on the satellite and the wind gets through the glass and hits it. There is also a magnet, which interferes with the technology of the screen and gives color to the otherwise white virtual space.



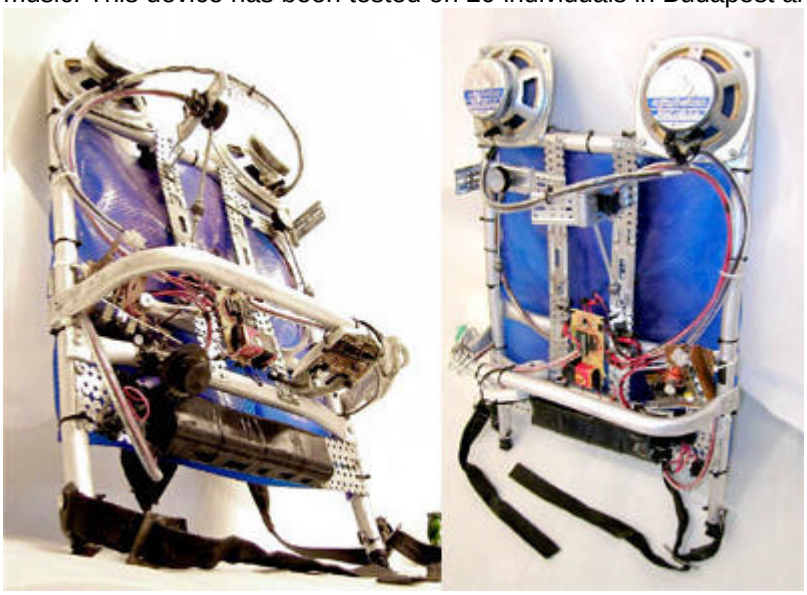
These interfaces have started giving physical qualities to this virtual entity.
To extend the experience of this prototype, the next aim became to open up this threshold, to get into this space that lies between the physical device and the dance of the satellite.

B03 Backpack Dance

3	

Prototype name	Backpack Dance
Date	2002 q2
Testing	Biofeedback instrument mediating music to dance. 20 testers personal behaviour documented. Gives physical qualities to music
Media	30*50 cm, 6Kb, Music, Microcontroller, Radio, People
Credits/Platform	Kerstin Nigsch and Adam Somlai-Fischer, A+Url
Link	www.arch.kth.se/eurb/rebrain

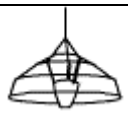
The third prototype is called dance backpack. It is a biofeedback instrument, a backpack that turns the dance of the person wearing it into music, so you end up dancing to your own music. This device has been tested on 20 individuals in Budapest and Vienna.



The design of it is quite simple, with breaking off the amplifier from and old radio, and using a cheap microcontroller(Basic Stamp).

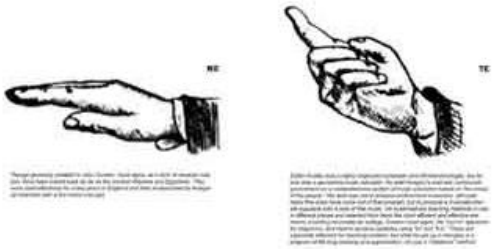
Although 20 different users have tested it, there was no two similar reaction.

B04 Installation for Learning Lab:

4	
Prototype name	Installation for Learning Lab
Date	2002 q2
Testing	Taking the backpack experience to a communal level
Media	80 m2, 200Mb, Sound showers, lights, Kodály hand signs, solmization
Credits	Olivier Frances, German Bender Pulido, Martin Larsson, Adam Somlai-Fischer

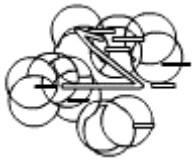
The next prototype raises the backpack experience to a communal level. Five sound showers where used that played specific tones and fragments of discussions, in front if corresponding prints of Kodály hand signs for solmization.

The tones you could hear when you observed someone walking by the prints, but the discussion you could only hear when you have walked yourself. This was achieved through hidden sensors in the floor that you stepped on.



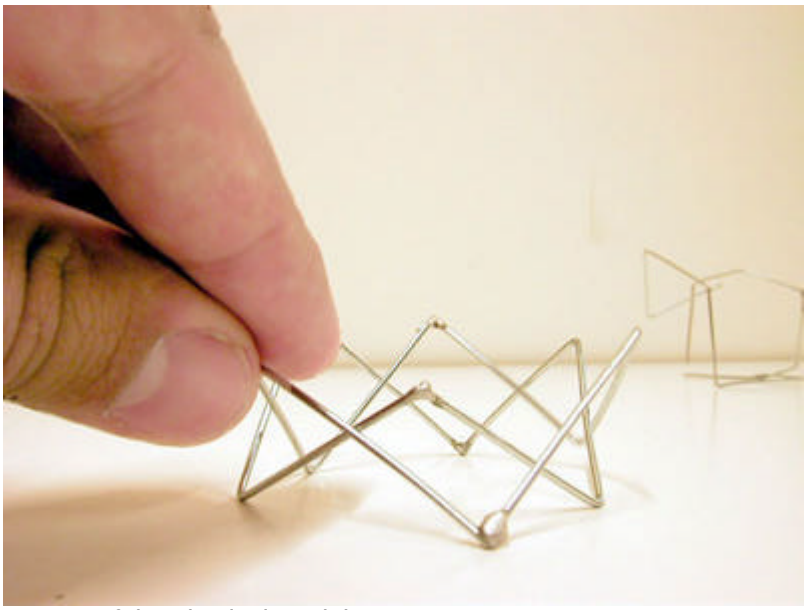
The communal experience became interesting, some if the visitors where starting to collaborate, and step in and out together to understand the installation. A social space was created.

B05 Allende Arquitectos Website

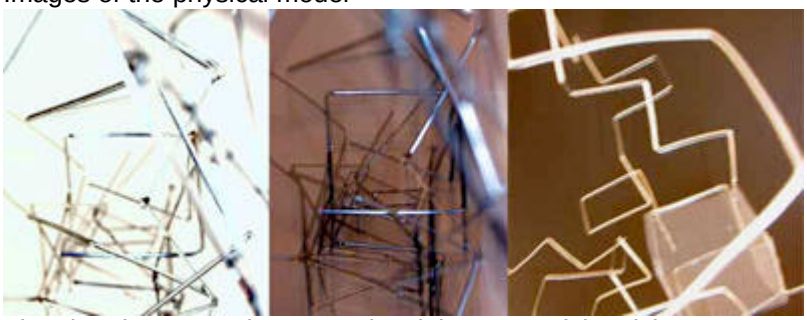
5	

Prototype name	Allende Arquitectos Website
Date	2002 q3
Testing	Informing a virtual space with qualities of a physical model
Media	40Kb, Steel, Web
Credits	Nagy Peter Sándor, Pozna Anita, Adam Somlai-Fischer
Link	www.allendearquitectos.com/beta

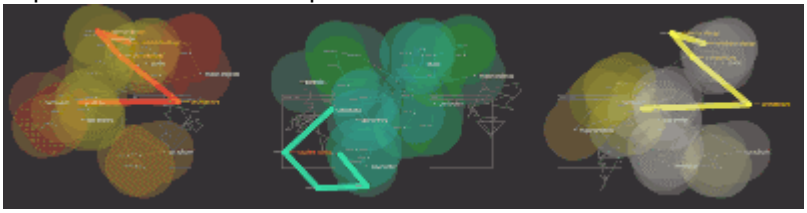
The 5th prototype is a virtual space designed through physical modeling, by informing the virtual with qualities of the physical model. This concept could plug in as a navigation system for a website for an architecture practice in Madrid, so we could develop it there.



Images of the physical model



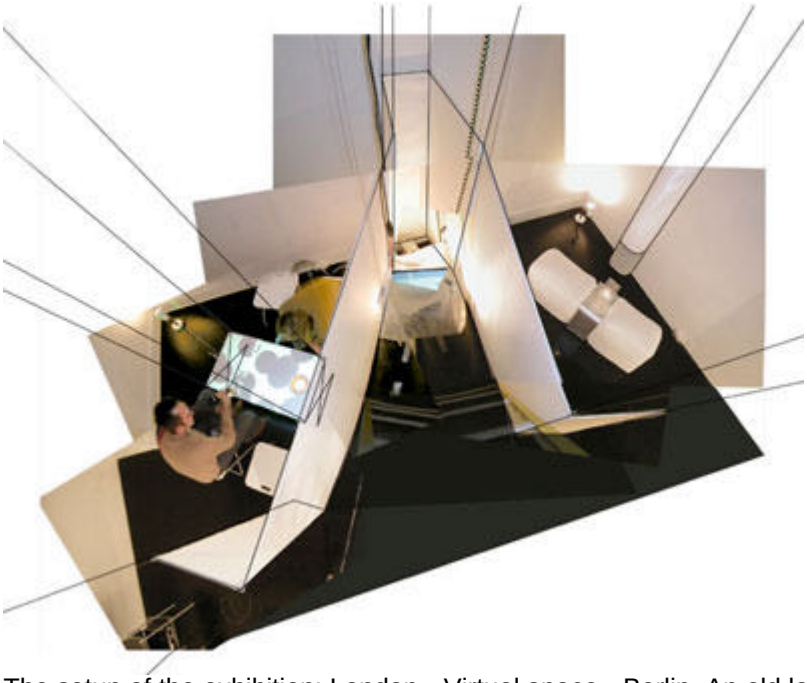
The virtual structure is responsive, it is aware of the visitors presence and rearranges its legs dependent on the visitors position.



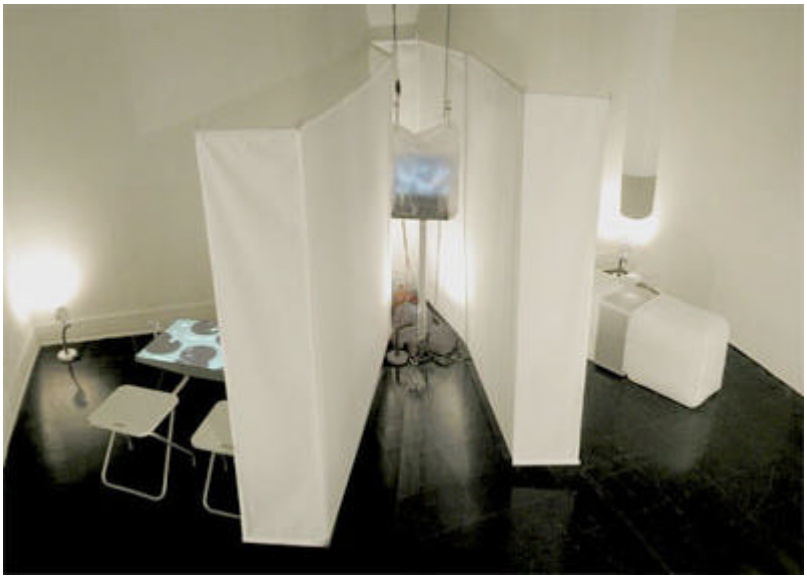
B06 Remote Home

6	
Prototype name	Remote Home
Date	2002 q4
Testing	Mediation of two small architectural spaces. Compound of previous ideas on a communal level.
Media	20m2, 4000Kb, Flash, Mouse, Keyboard, Projection, Sound, Milk, Fabric, Steel, Aluminum,
Credits/Platform	Tobi Schneidler (project leader), Magnus Jonsson, Adam Somlai-Fischer, Smart Studio, Interactive Institute
Link	www.remotehome.org

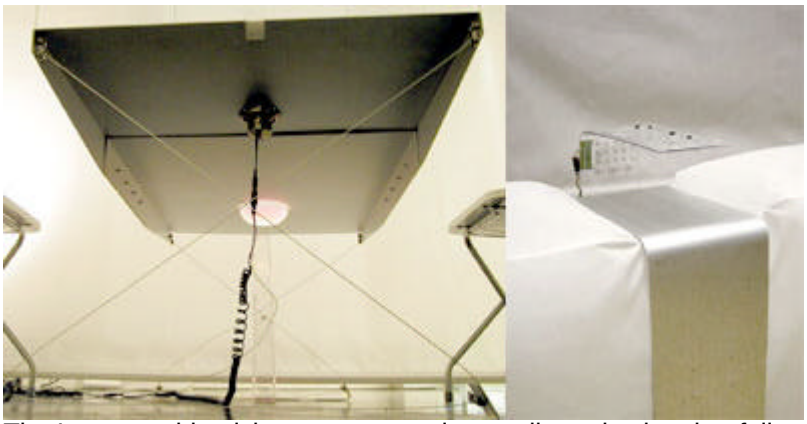
The next prototype could be considered as a compound of the previous work in many ways, where parts and results from previous prototypes are brought together. It is called remote home, and tests the mediation of two small architectural spaces into each other. It was set up in the Fisher gallery in Seattle.



The setup of the exhibition: London - Virtual space - Berlin. An old laptop hanging in the middle is running the whole installation using Flash.

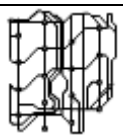


The Interactive Lounge Table in London and the Sound Shaft in Berlin - disassembled mouse and keyboard

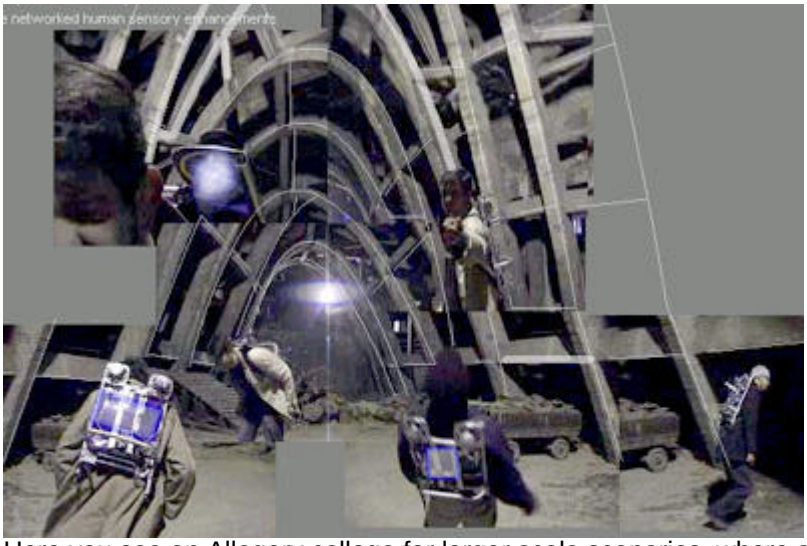


The Lounge table picks up a responsive media projection that follows its movement and shifts music to the other side when touched.

B07 Installation for Magasin, Vienna

7	
Prototype name	Installation for Magasin
Date	2003 q1
Testing	Mediation of cultural space
Media	150 m2, Computers, Keyboards
Credits	Kerstin Nigsch and Adam Somlai-Fischer
Link	Magasin: www.entzueckend.com/magasin

Magasin is a cultural space downtown Vienna, a local nonprofit initiative to host interdisciplinary discussions, poetry readings, music experiments, etc. Our aim is to mediate this cultural space, to embed media in the environment for permanent use. Work is under progress, technologies are being tested: EOG, screen transparency



Here you see an Allegory collage for larger scale scenarios, where similar local initiatives could link up to form a network and share their events through people and technology mediating the spaces.

C00 Conclusion

The aim of the investigation was to inform physical spaces with new digital media and interaction technology, blurring this threshold between the physical and the virtual, between the local and the global.

C01 Systems thinking – Interactivity

There is a fascination in looking at buildings as complex systems, with dynamic nature. How the space becomes aware of us being there through inputs, outputs, sensors. Perhaps this resembles nature itself.

Interactivity on its own generates non-uniform output, breeds diversity, variety because of different people have different uses – example of the backpack, no two persons have danced the same way. This also relates to the creativity of use, user of architecture is invited to share the authorship.

The different prototypes function as parts of a rhizomatic system, they inform eachother, the qualities get refined over time, but looking back from each point gives new inputs from the older parts. The whole project could be seen as an interaction device on its own, or more like a genetic process where I the designer am the mediator, trying to relate to it as being the hive mind.

C02 Various platforms

As you have seen, part of the work has been produced on external platforms. Besides the main line being developed at A+URL, there are research organisations like the Interactive Institute, art venues like the Fisher Gallery's Responsive Environments exhibition, commercial tests at Allende Arquitectos in Madrid, and so on. It was very interesting to see how the different contexts can take on different qualities of this research, how things are tested between different professionals.
Also, since some time I am teaching as a student teacher, I took that opportunity to introduce some of the concepts I've been interested in some courses, and learned from how others related to them.
As for the idea of a mastermind for the design, and the question of authorship, with re-appropriating existing products, using computers and software designed by others, this becomes scattered anyhow. Open source.

C03 Playfully abusing technology

Re-appropriating mass produced tools from their original use. Also interesting that this is not creating new things, it's rather altering existing ones.
Is overconsumption related to overproduction?
Should I create new things or should I alter existing ones?

C04 Architecture as media

Many new social conditions make these issues relevant to work with for architects. Since our environments are more and more defined by technology, or memories become mediated (viewing the world through representations) these media should be included within the tools an architect works with. How material qualities can be extended through media and how this can mediate local spaces to distant spaces. The social habits for this are already existing with the use of mobile phones, Internet, etc.

For being new, one can not really know its qualities without testing, again, this has been the reason for 1 to 1 scale prototyping.

The tests have showed that these qualities can create a strong personal or communal experience, later stages speculate on larger scenarios, even suggesting possibilities for building or city scale applications.

D01 Credits/Platforms:

Prototype 1,2
Satellites, Screen Threshold
Adam Somlai-Fischer within:
Architecture + Urban Research Laboratory
KTH-School of Architecture, Stockholm,
Course directors: Ana Betancour and Peter Hasdell
Course assistants: Erik Wingquist and Harald Keijer
http://www.arch.kth.se/eurb/rebrain/
http://www.arch.kth.se/a-url

Prototype 3
Backpack Dance
Kerstin Nigsch and Adam Somlai-Fischer within:
Architecture + Urban Research Laboratory
KTH-School of Architecture, Stockholm,
Course directors: Ana Betancour and Peter Hasdell
Course assistants: Erik Wingquist and Harald Keijer
http://www.arch.kth.se/eurb/rebrain/

Prototype 4
Installation for Learning Lab
Olivier Frances, German Bender Pulido,
Martin Larsson, Adam Somlai-Fischer
Assigned by Learning Lab, KTH Stockholm

Prototype 5
Website for Allende Arquitectos, Madrid
Nagy Peter Sándor, Pozna Anita,
Adam Somlai-Fischer
Assigned by Allende Arquitectos, Madrid
http://www.allendearquitectos.com/beta
http://lowcat.designstudio.hu

Prototype 6
Remote Home
Tobi Schneidler (project leader), Magnus Jonsson,
Adam Somlai-Fischer within:
SMART Studio-Interactive Institute, Stockholm
Assigned by Fisher Gallery, Cornish School, Seattle
http://www.remotehome.org
http://smart.interactiveinstitute.se

Prototype 7
Installation for Magasin, Vienna
Kerstin Nigsch and Adam Somlai-Fischer
http://www.entzueckend.com/magasin

D02 Glossary, Bibliography

- The mediated city is a new phenomenon involving the emergence of new technologies of connectivity, network, communication and information technology. Additionally while these factors are technological and in many ways not physical, they are modifying economic, social, political aspects as much as they are transforming the physical nature of cities and their relationships across scales whether on the level of the virtual city or on the level of the massive market of mobile phones in third world countries that are changing the role of infrastructure, or on the level of 'network server farms' that invisibly place demands on the city and its resources. These factors are presently debated within sociologists, cultural studies writers and more academic theorists, but are not actively dealt with by architects. We will ask how architects can work with both cities; the physical and the mediated.

Peter Hasdell + Ana Betancour, A+Url course handout, 2001 q4

- Imagination, Reality, Automata,
concepts used from Vilém Flusser Glossary
Edited by Andreas Müller-Pohle and Bernd Neubauer
From www.equivalence.com

- Systems thinking, non-linearity,
concepts used from Philosophy of Complexity, Chris Lucas at:
http://www.calresco.org/lucas/philos.htm

- Use and abuse of the tools, term borrowed from
Fredrik Jönsson artist/webdesigner

- Is overconsumption related to overproduction(of the artist/designer)?
from a lecture by David Cross, Artist, UK

- Creativity of use
from a lecture by Jonathan Hill discussing
The Death of the Author by Roland Barthes

- Emergence, Memory concepts, Hive mind
Kevin Kelly: Out of control

- Besides the collaboration with Kerstin Nigsch and the tutorials with my supervisors and their assistants, many ideas where formulated through discussions with:
Torsten Livion, Pablo Miranda Carranza, Nagy Peter Sandor, Daniel Norell, Tobi Schneidler, Jonas Runberger