

fabric | ch

SELECTED WORKS,  
TEXTS, TALKS & EXHIBITIONS

Experiences and livable environments in "moiré spaces"

2015 – 1999







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## fabric | ch

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Studio for architecture, interaction & research

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Combining experimentation, exhibition and production, fabric | ch formulates new architectural proposals and produces singular livable spaces that bind localized and distributed landscapes, algorithmic behaviors, atmospheres and information technologies.

Since the foundation of the studio, the architects and scientists of fabric | ch have investigated the field of contemporary spaces, from network related environments which combine physical and digital properties to the interfacing of dimensions, such as their recent researches about "spatial interferences" and "moirés spaces".

fabric | ch's current works deal with the mediation of our relation to location and distance, with climatic, informational and energetic exchanges, with mobility and globalization in a perspective of creolization and spatial interbreeding.

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The works of fabric | ch have been exhibited or presented in different artistic institutions, universities, art and architecture festivals or biennials such as the Museum of Modern and Contemporary Art (MAMCO) and Contemporary Art Center in Geneva; Swiss Institutes of Technology in Lausanne (EPFL) and Zürich (ETHZ); the Universities of art and design of Lausanne (ECAL) and Zürich (HGKZ); the Institute of Contemporary Art and the Architectural Association in London; the Modern and Contemporary Art Center (CAMEC) in La Spezia; the Swiss Cultural Center and the University Paris VIII in Paris; Art Unlimited, Art | 35 | Basel and the Haus für elektronische Künste in Basel; Siggraph and Postopolis!LA in Los Angeles; O1SJ Biennial in San Francisco, Swissnex in San Francisco, Boston and Shanghai; the Festival Lyon Lumières in Lyon; File international festival in Sao Paulo; Article Biennial in Stavanger, LIFT in Geneva and LIFT Asia in South Korea; the Nuit Blanche in Paris and the one in Madrid, Lisbon Architecture Triennale, etc.

fabric | ch is at this day the beneficiary of numerous grants and cultural supports from the Swiss Office for Cultural Affairs and the Swiss Art Council (both Swiss Federal State support), the State of Vaud, the City of Lausanne and other national or international institutions.

In parallel, fabric | ch has been commissioned for architecture and/or interaction experimentations by private or public funds such as Nestlé, Canal+, Box Productions, the Canadian Center for Architecture (CCA), the Swiss House for Advanced Research and Education, the Swiss Institute of Technology Lausanne (EPFL), the University of Art and Design Lausanne (ECAL), the University of Fri-

bourg, the European Community, Ringier Press Group, the Swiss Confederation (OFC and DFAE), the Cities of Lyon and Marseille, the City of Paris.

fabric | ch is currently composed of Christian Babski, Stéphane Carion, Christophe Guignard and Patrick Keller (co-founders), Nicolas Besson, Sinan Mansuroglu, Yves Staub.

In addition, Christophe Guignard and Patrick Keller are also regular professors HES for Media & Interaction Design at the ECAL/University of Art and Design, Lausanne (CH).

<http://www.fabric.ch>

fabric | ch, January 2015

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## fabric | ch

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Studio for architecture, interaction & research

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En combinant expérimentation, exposition et production, fabric | ch élabore de nouvelles propositions architecturales et spatiales tout en produisant des espaces habitables singuliers qui lient paysages localisés et distribués, comportements algorithmiques, atmosphères et technologies d'information.

Depuis la fondation du studio, les architectes et scientifiques de fabric | ch explorent les champs de l'espace contemporain, des environnements en réseau combinant propriétés physiques et digitales à l'interfaçage des dimensions, comme dans leurs recherches récentes sur les « interférences spatiales » et les « espaces moirés ».

Les travaux de fabric | ch traitent ainsi des enjeux liés à la médiation de notre relation au lieu et à la distance, aux échanges climatiques, informationnels et énergétiques, à la mobilité et à la mondialisation, inscrits dans une perspective de créolisation et de métissage spatial.

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Les projets de fabric | ch ont été exposés ou présentés dans différentes institutions, universités, musées, festivals et biennales d'art ou d'architecture, dont le Musée d'Art Moderne et Contemporain (MAMCO) et le Centre d'Art Contemporain (CAC) à Genève ; les Écoles Polytechniques de Zürich (ETHZ) et de Lausanne (EPFL); les Écoles d'Art de Lausanne (ECAL), de Genève (HEAD) et de Zürich (HGKZ) ; l'Institut pour l'Art Contemporain (ICA) et l'Architectural Association (AA) à Londres ; le Centre d'Art Moderne et Contemporain (CAMEC) à La Spezia ; le Centre Culturel Suisse et l'Université Paris VIII à Paris ; Art Unlimited à Art | 35 | Basel et la Haus der elektronischen Künste (H3K) à Bâle; Siggraph et Postopolis!LA à Los Angeles ; O1SJ Biennial à San Francisco ; Swissnex à San Francisco, Boston et Shanghai ; le Festival International File à Sao Paulo ; la Biennale Article, à Stavanger en Norvège ; LIFT à Genève et LIFT Asia en Corée du Sud ; la Nuit Blanche de la Ville de Paris et celle de Madrid, la Triennale d'Architecture de Lisbonne, etc.

fabric | ch est bénéficiaire de nombreuses bourses et soutiens culturels de la part de l'Office Fédéral de la Culture et de Pro Helvetia (tous deux organismes de soutien étatique suisses), de l'Etat de Vaud, de la Ville de Lausanne et d'autres institutions nationales et internationales.

Parallèlement et de façon complémentaire à ses projets de recherche, fabric | ch répond à des mandats d'architecture et d'interaction pour des clients privés ou institutionnels tels que Nestlé, Canal+, Box Productions, Ringier Edition Suisse, le Centre Canadien d'Architecture (CCA), l'Ecole polytechnique fédérale de Lau-

sanne (EPFL), l'ECAL / Haute école d'art et de design, l'Université de Fribourg, le Canton de Vaud, la Confédération Suisse (OFC et DFAE), la Communauté Européenne, les Villes de Lyon, de Marseille et de Paris.

fabric | ch est actuellement composé de Christian Babski, Stéphane Carion, Christophe Guignard et Patrick Keller (associés), Nicolas Besson, Sinan Mansuroglu, Yves Staub.

Christophe Guignard et Patrick Keller sont également professeurs HES en Media & Interaction Design à l'ECAL (École Cantonal d'Art de Lausanne).

<http://www.fabric.ch>

fabric | ch, janvier 2015





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# White Oblique (of curiosities)

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## 2015

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Project by fabric | ch, in collaboration with Sabine Himmelsbach (cur. H3K)

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Clients: Haus der elektronischen Künste (CH), ECAL (CH)

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Locations: Basel (CH)

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Scenography for the exhibition *Poetics and Politics of Data* at the Haus der elektronischen Künste (H3K), in Basel (CH)

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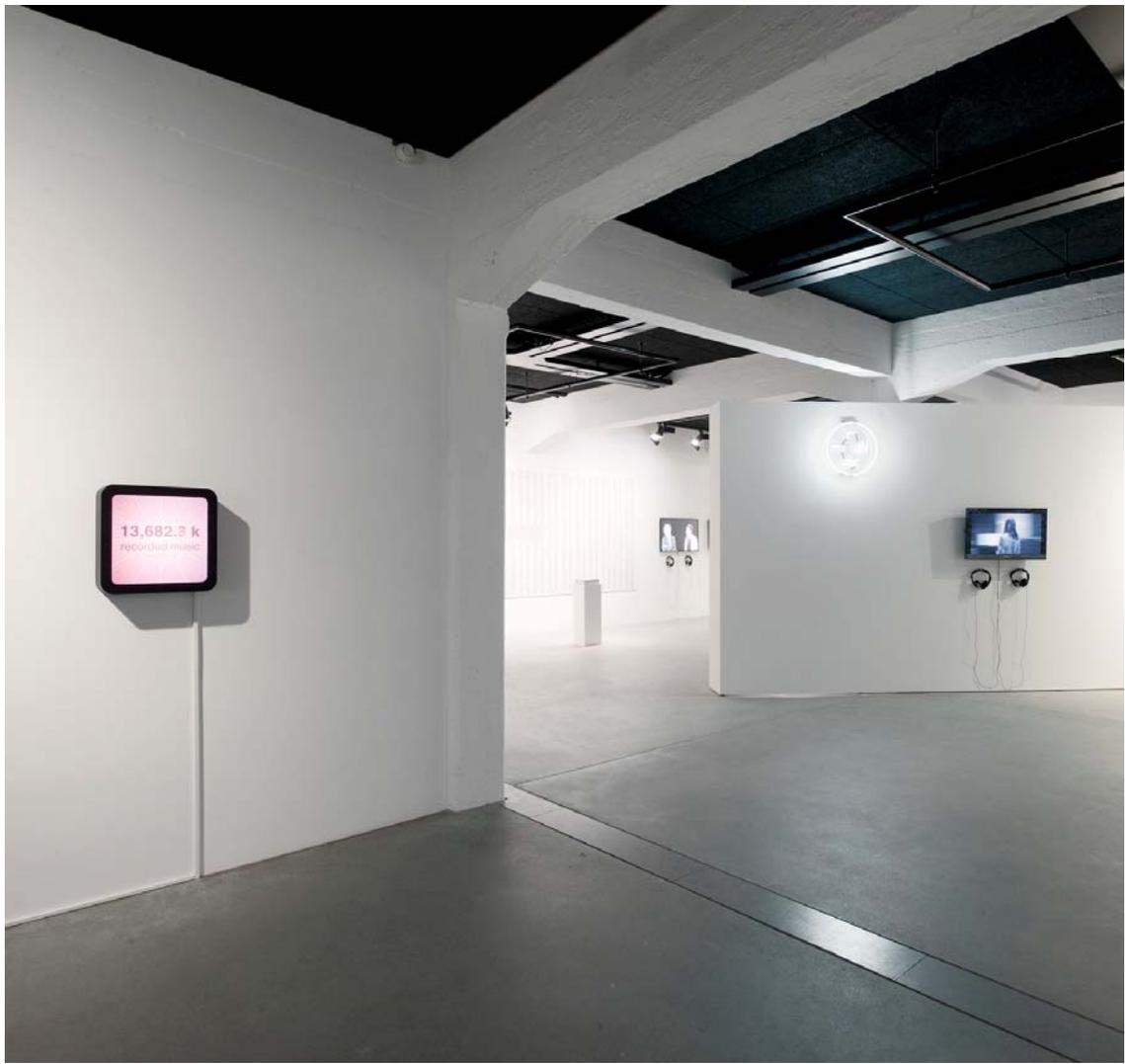
- 
- Widened exhibition wall, opening up a third space within the white cube
  - Inner exhibition wall as heterotopian cabinet of curiosities and archive
  - Oblique physical and thematic presence in the space that creates shortcuts and counterpoints of different sorts
  - *Datadroppers*, *Random RasPis for Datadroppers* and *Deterritorialized Living* projects as part of scenography
- 

- Exhibition

Curator: Sabine Himmelsbach

Works by: Christopher Baker (USA), Aram Bartholl (DE), Paolo Cirio (IT), R. Luke DuBois (USA), Ellie Harrison (GB), Marc Lee (CH), Rafael Lozano-Hemmer (MEX/CAN), Bernd Höpfengärtner (DE) & Ludwig Zeller (DE), Kristin Lucas (USA), Moniker (NL), Jennifer Lyn Morone (USA), RYBN (FR), Erica Scourti (GB)

Scenography: fabric | ch, with exhibited works from I&IC design research and fabric | ch



[img. 1]



[img. 2, 3]



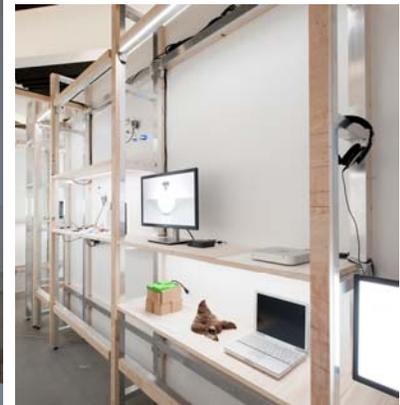
[img. 4]



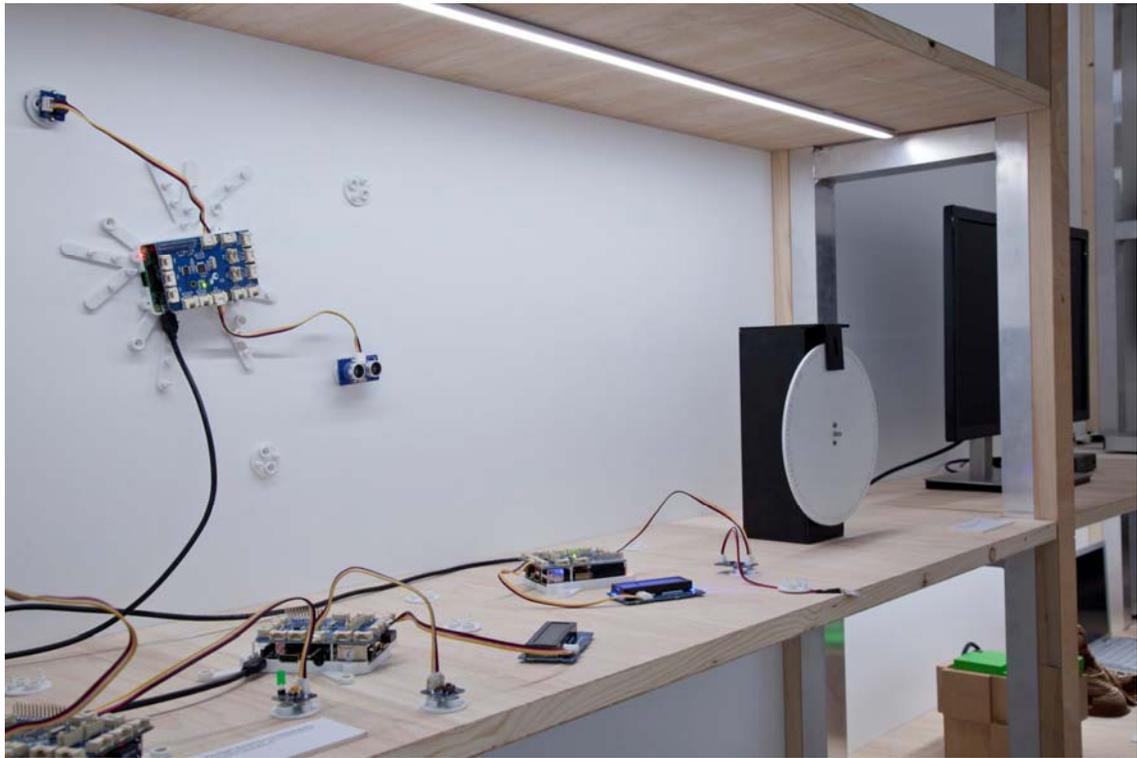
[img. 5]



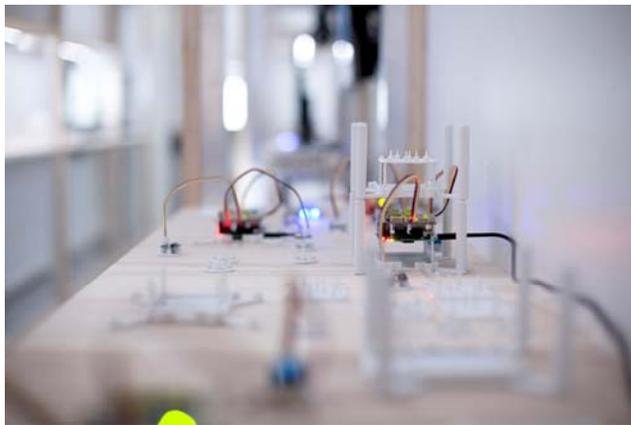
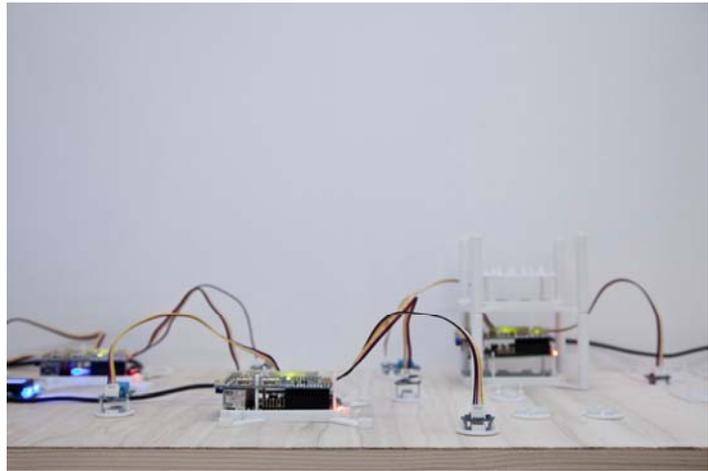
[img. 6]



[img. 7, 8]



[Img. 9]



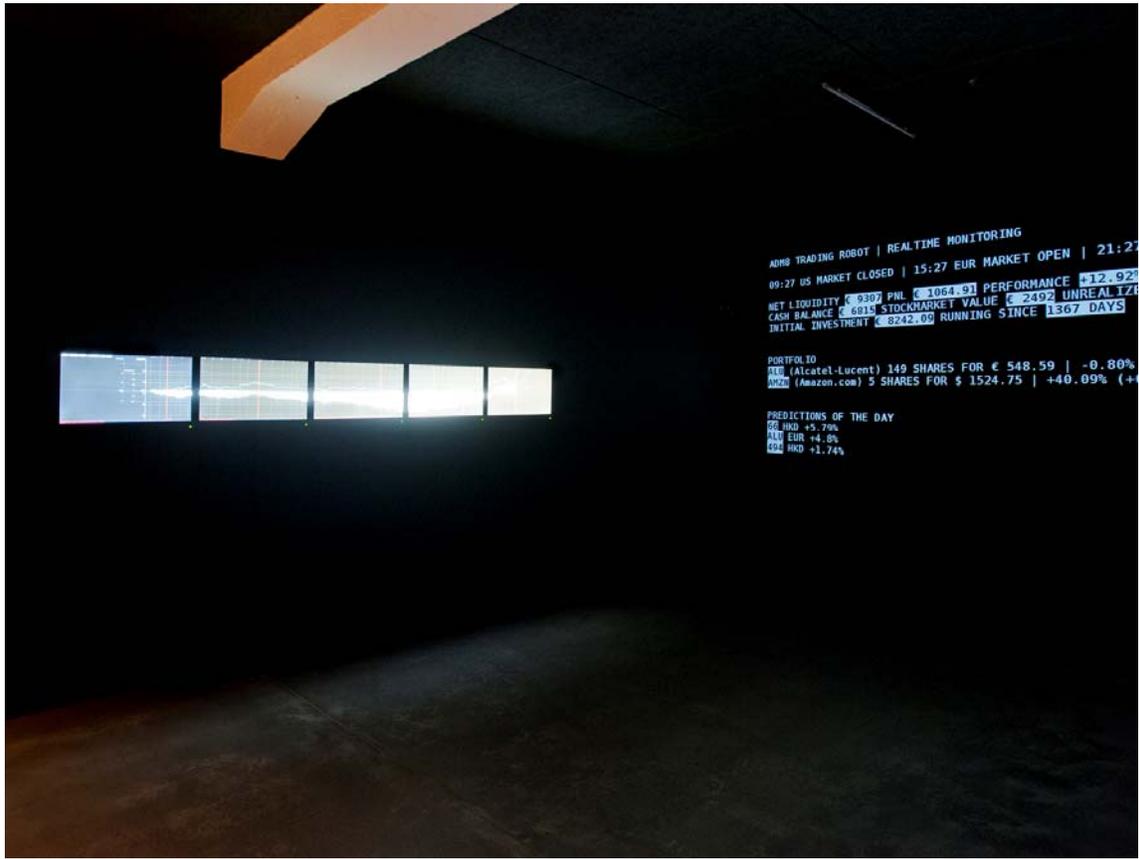
[Img. 10, 11, 12]



[Img. 13, 14]



[Img. 15]



[img. 16]



[img. 17]



[Img. 18]



[Img. 19]

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## Image captions:

- [Img. 1] Entrance view of *Poetics and Politics of Data* curated by Sabine Himmelsbach, with a work by Raphael Lozano-Hemmer. On the right discreetly appears the White Oblique wall that structures the whole exhibition space (initially an open space).
- [Img. 2-3] *Hello world! Or: How I Learned to Stop Listening and Love the Noise*, a large video projection by Christopher Baker with the passageway of White Oblique (of curiosities) appearing on the left [Img. 3].
- [Img. 4] White Oblique is an exhibition wall that appears as an object within the exhibition space and which inner part has been widened and made accessible. It thus creates a new space within the museum. Almost a heterotopia. The wall is literally oblique in the space, but due to the research "curiosities" being exhibited inside of its "shelving system", oblique in regards to the theme of the exhibition.
- [Img. 5, 6] Shelving systems within White Oblique and inside the exhibition wall allow to create the space of an archive or a cabinet of (digital) curiosities within the white cube.
- [Img. 7-15] Exhibited works within the cabinet includes the documentation of works created during workshops at ECAL and HEAD-Genève in the frame of *Inhabiting and Interfacing the Cloud(s)* design research. Documentation and works realized with Matthew Plummer-Fernandez (#algopop), James Auger, ALICE (Dieter Dietz's EPFL Laboratory) are exhibited, so as *Deterritorialized Living* [Img. 15], *Datadroppers* [Img. 7] and *Random Raspberry Pis for Datadroppers* [Img. 9-12], works by fabric | ch that serve the scenography.
- [Img. 16] A work by RYBN collective (FR) in the traditional white cube/black box part of the exhibition.
- [Img. 17-19] White Oblique as seen from different places within the exhibition space of *Poetics and Politics of Data*, at H3K.

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# Txt

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## White Oblique (of curiosities)

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*Inhabiting & Interfacing the Cloud(s) (I&IC)* is an ongoing design research about Cloud Computing and its iconic infrastructure, the datacenter. White Oblique is a scenography designed by fabric | ch to present the temporary results of the work at the Haus der elektronischen Künste in Basel (CH).

*I&IC* explores the creation of counter-proposals to the current expression of this technological arrangement, particularly in its forms intended for private individuals and end users (Personal Cloud). Through its fully documented cross-disciplinary approach that connects the works of interaction designers, architects and ethnographers, the research project aims at producing alternative yet concrete models resulting from a more decentralized and citizen-oriented approach.

Halfway through the exploration process, the current status of the work is presented during *Poetics and Politics of Data*, an exhibition about "big data" at the *Haus der elektronischen Künste* in Basel (CH). The presentation takes the form of a (computer) cabinet of curiosities within a "third space", an expanded exhibition wall that opens up a passage.

Entitled White Oblique, it also serves as scenography for the overall exhibition and articulates different views to the works of artists such as Raphael Lozano-Hemmer, Moniker, Aram Bartholl, Luwig Zeller, Jessica Lyn Morone and several others.

<http://www.iiclouds.org>

fabric | ch, June 2015

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# Deterritorialized Living

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2013

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Project by fabric | ch

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Result of a 4 months residency at the Tsinghua University (TASML. Beijing, CN)

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Location: Internet

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Exhibited during Lisbon Architecture Triennale 2014 (PT), Festival Pau Acces-s (FR) and at the Haus der elektronischen Künste (CH)

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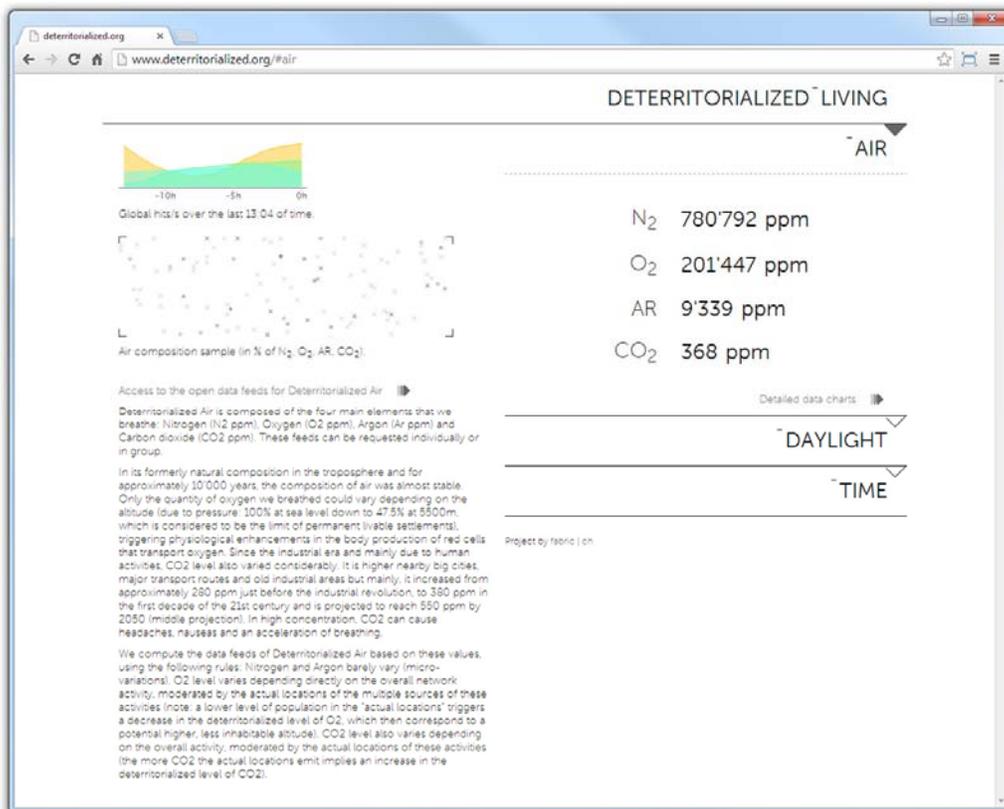
<http://www.deterritorialized.org>

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- Artificial troposphere, geo-engineered climate
- Delivered in the form of open data feeds
- Network related and “reverse engineered” atmosphere
- Artificial Air, Daylight and Time



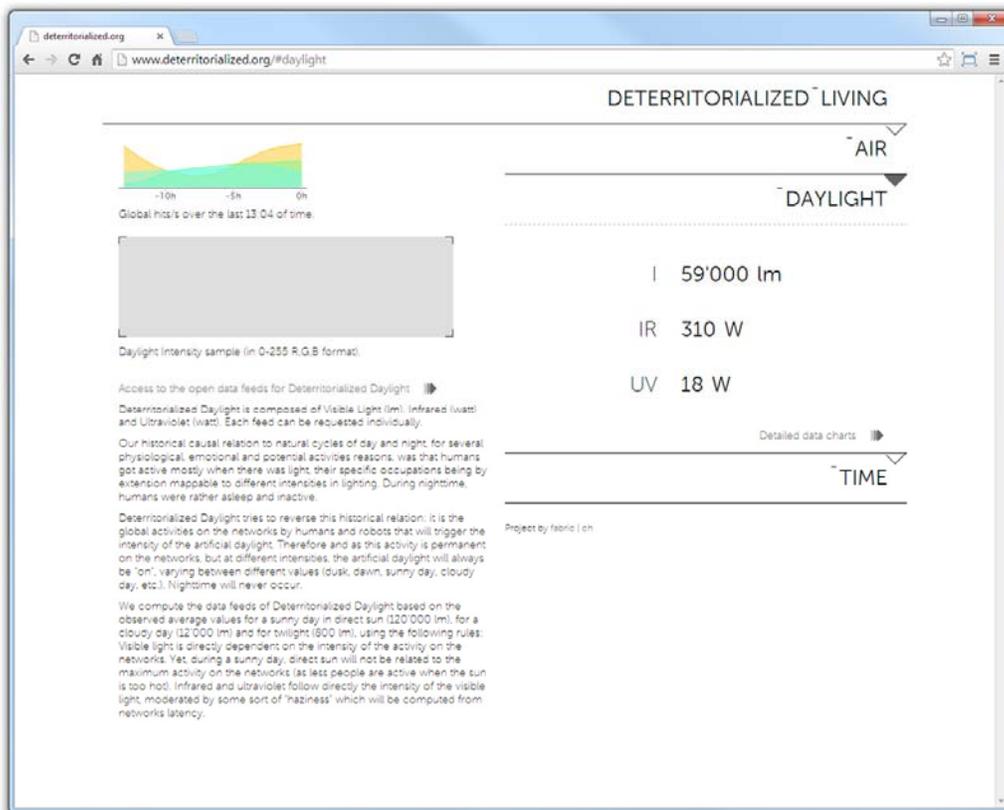
[img. 1]



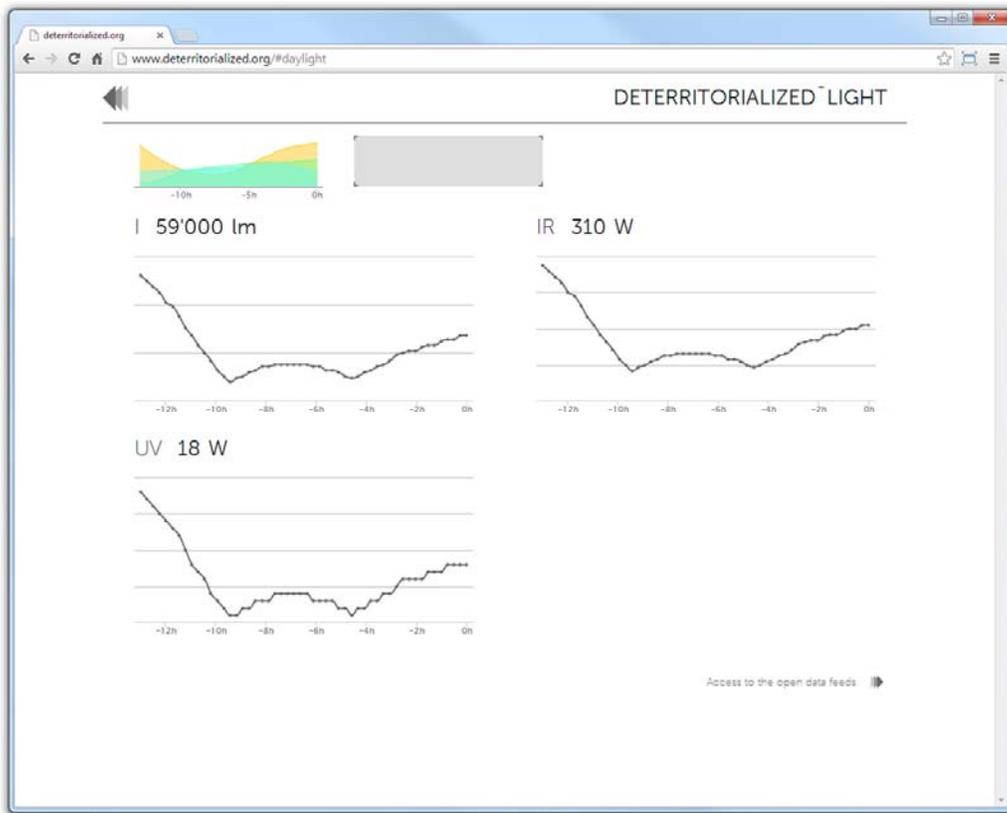
[img. 2]



[img. 3]



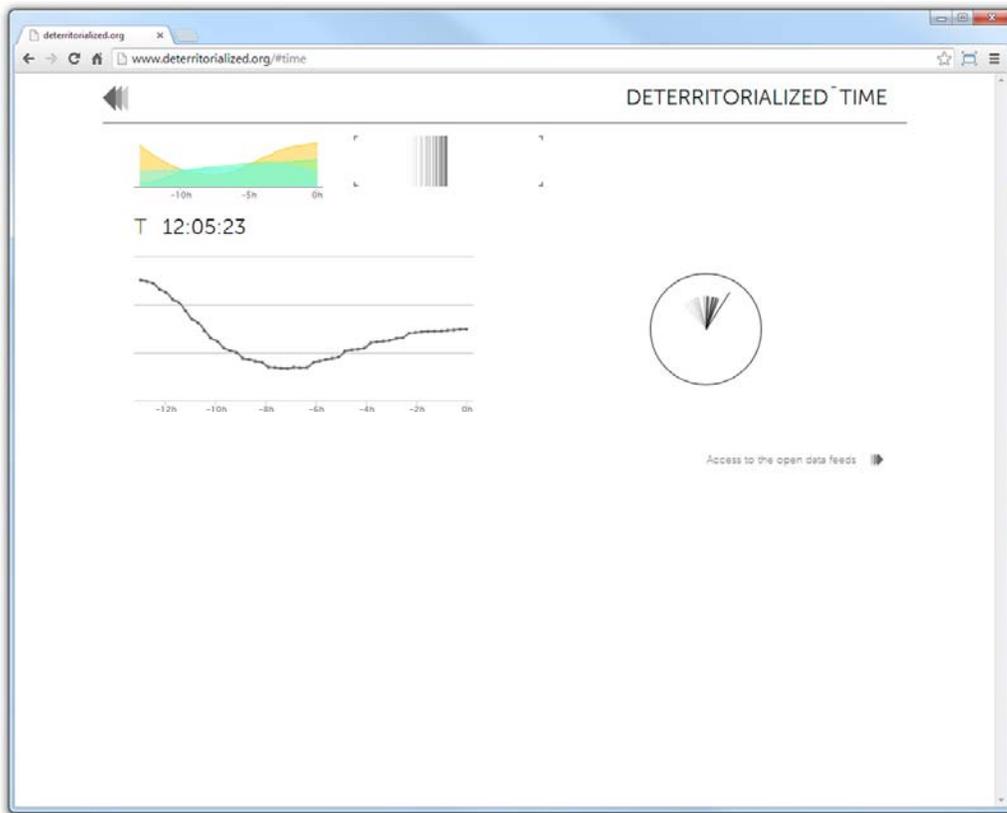
[img. 4]



[img. 5]



[img. 6]



[Img. 7]

DETTERRITIALIZED DATA FEEDS

Web service usage: [http://www.detterritized.org/datafeed/request.php?data=REQUIRED\\_DATA\\_ID&format=\[text,xml,json\]](http://www.detterritized.org/datafeed/request.php?data=REQUIRED_DATA_ID&format=[text,xml,json])

Valid values for REQUIRED\_DATA\_ID:

(for Deterritized Air)

- 
- air:** returns the current deterritized air composition in nitrogen, oxygen, co2, argon.
- 
- nitrogen:** returns the current deterritized nitrogen concentration in percentage (normal value is 780 840 ppm --78.084 %--).
- 
- oxygen:** returns the current deterritized oxygen concentration in percentage (normal value --at sea level-- is 209 476 ppm --20.9476 %--).
- 
- argon:** returns the current deterritized argon concentration in percentage (normal value is 9 340 ppm --0.934 %--).
- 
- co2:** returns the current deterritized CO2 concentration in percentage (average value in 2013 is 314 ppm --0.0314 %--).
- 

(for Deterritized Daylight)

- 
- lightintensity:** returns the current deterritized light intensity in lumens (lm).
- 
- lightvalue:** returns the current deterritized light intensity in R.G.B format [0,255].
- 
- ir:** returns the current infrared value in watt intensity (W).
- 
- uv:** returns the current Ultraviolet value in watt intensity (W).
- 

(for Deterritized Time)

- 
- time:** returns the current deterritized time in 24h format.
- 

Format returned:

- 
- text:** returns the current REQUIRED\_DATA\_ID value in text format.
- 
- xml:** returns the current REQUIRED\_DATA\_ID value in xml format.
- 
- json:** returns the current REQUIRED\_DATA\_ID value in json format.
- 

[Img. 8]



[img. 9]

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## Image captions:

- [Img. 1] Main access page of Deterritorialized Living service. The project which consists in an artificial troposphere is delivered in the form of open data feeds. Real time graphics show the current state of the information that serve to build the geo-engineered climate.
- [Img. 2-7] Components of the artificial climate can be separately accessed and visualized: Deterritorialized Air, Deterritorialized Daylight and Deterritorialized Time.
- [Img. 8] The different data flows and instructions to access them and use them.
- [Img. 9] Part of Deterritorialized Living, Deterritorialized Daylight in used during Festival Acces-s, at the *Maison de l'architecture* in Pau (FR).

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# Txt

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## Deterritorialized Living

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Deterritorialized Living is an artificial troposphere that reverses our causal relationship to the natural rhythms of day and night, air, seasons, and time. It is a manmade environment where the atmosphere is the effect, continuously shaped from the global activities on the networks produced by humans, objects and robots. The aim of this artificial, almost fictional atmosphere is to give permanent presence (at this stage only in the form of data flows) to what has paradoxically become an ambient, "atmospheric" and contextual experience of deterritorialization / detemporalization induced by the massive use of networks, transportation devices, flows of data or communication technologies. Therefore, to literally become able to "breathe" the environment we are generating through our common actions. To some extent, Deterritorialized Living could then also be considered as an information design, delivered in the form of an atmosphere.

As the result of its initial and designed rules, this milieu develops strange behaviors: daylight is always "on" (as there are always activities worldwide on the networks) but at variable strengths, nighttime never occurs, air composition regularly reaches "physiological enhancement" levels of high altitude, it is composed of a unique single day that goes back and forth and that literally last forever, continuous. There are no months, no years.

Deterritorialized Living is delivered in the form of open data feeds which define this "geo-engineered" yet livable environment, computed by the [deterritorialized.org](http://deterritorialized.org) server. We expect to develop and use the troposphere in the future in the form of installations, responsive devices and architecture projects.

But the artificial troposphere is also freely available to architects, artists, designers, scientists and makers of all kinds in the form of different "services": Deterritorialized Air (N<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>, Ar), Deterritorialized Daylight (visible light Intensity, IR, UV) and Deterritorialized Time (HH:MM:SS). Additional feeds and refined rules will be added along the time to mature this generated atmosphere.

fabric | ch, September 2013

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# Gradientizer

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2012

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Project by fabric | ch in collaboration with Amid.Cero9

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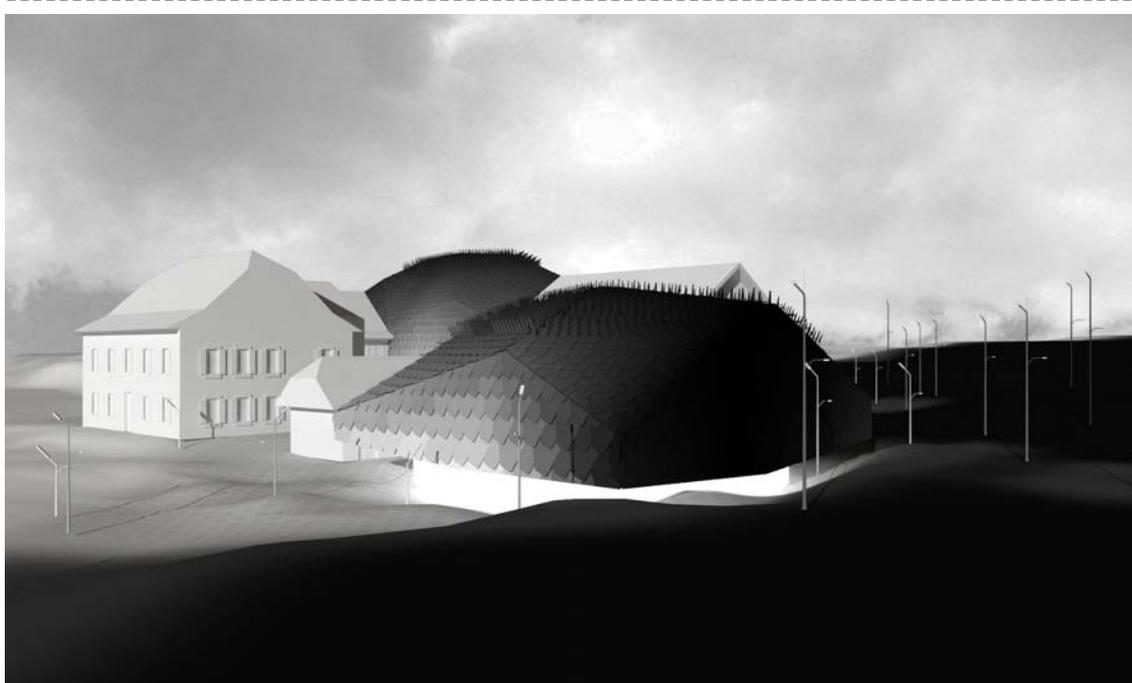
Architecture Competition: New Planetarium and Natural Sciences Center (CH)

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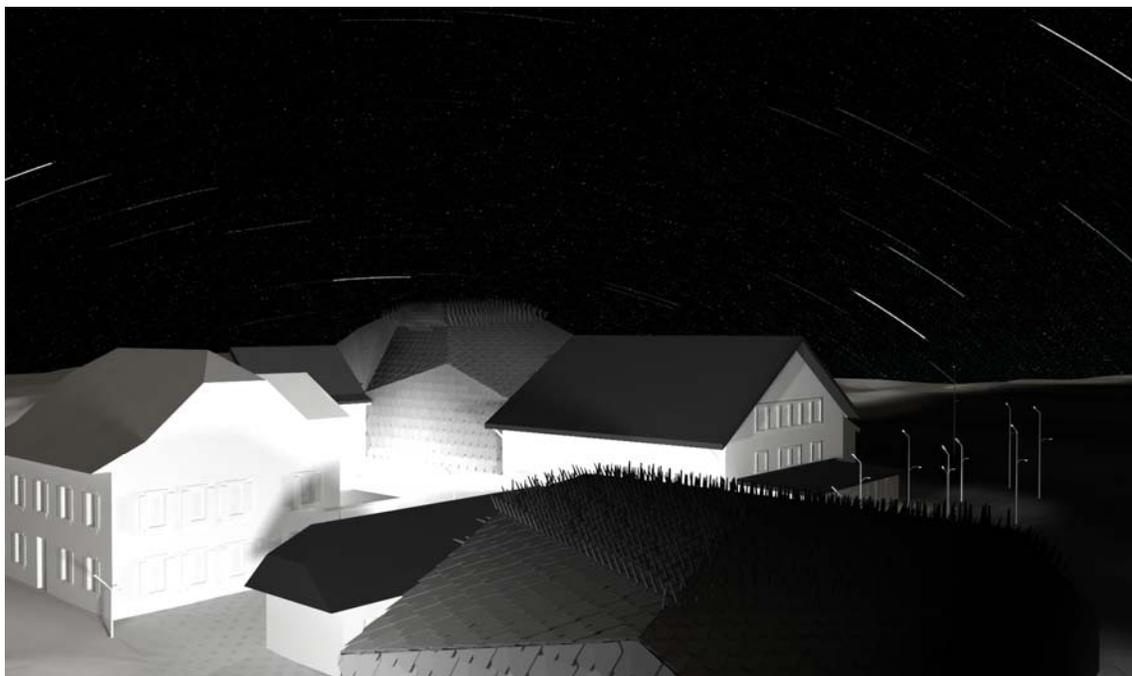
Location: Lausanne (CH)

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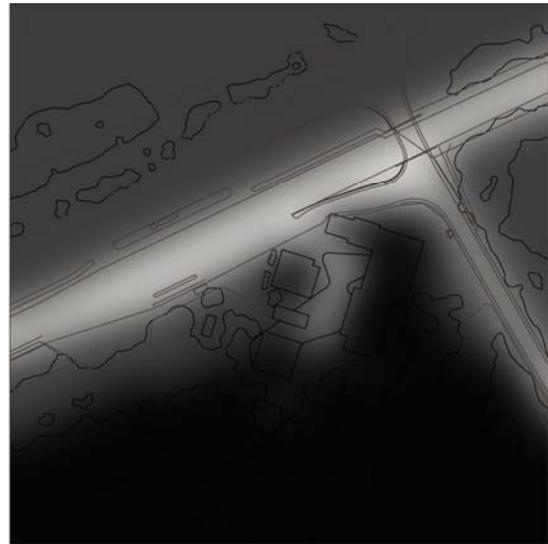
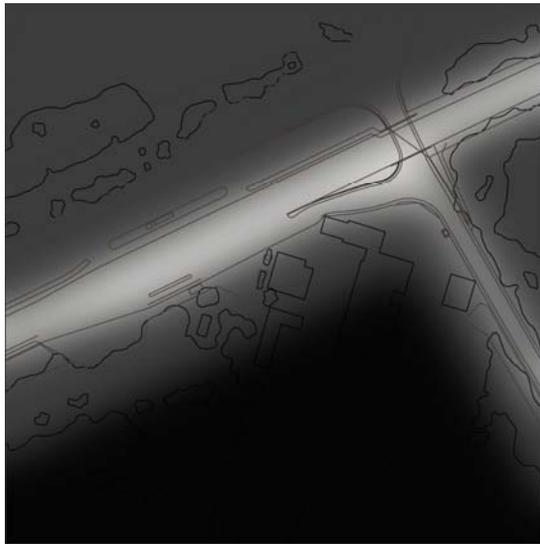
- Architecture organized around monitored gradients of light and albedo of surfaces
- Conditional distribution of functions on site and within buildings, according to their level of exposition to light
- Plan, section, façade and roof principles that filter lighting
- Monitored environment with feedback loops, interfaces, programs, open data storage
- “Nomadic” and variable use throughout time and seasons



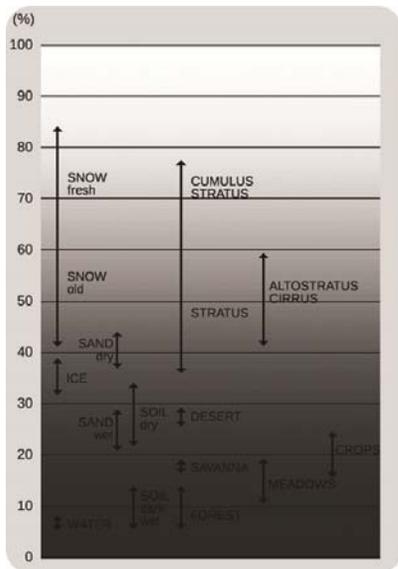
[Img. 1]



[Img. 2]



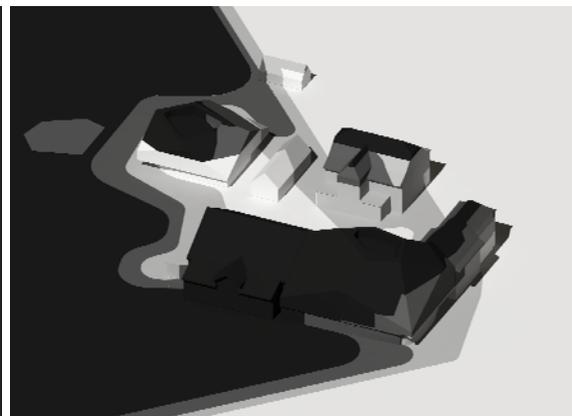
[Img. 3, 4]



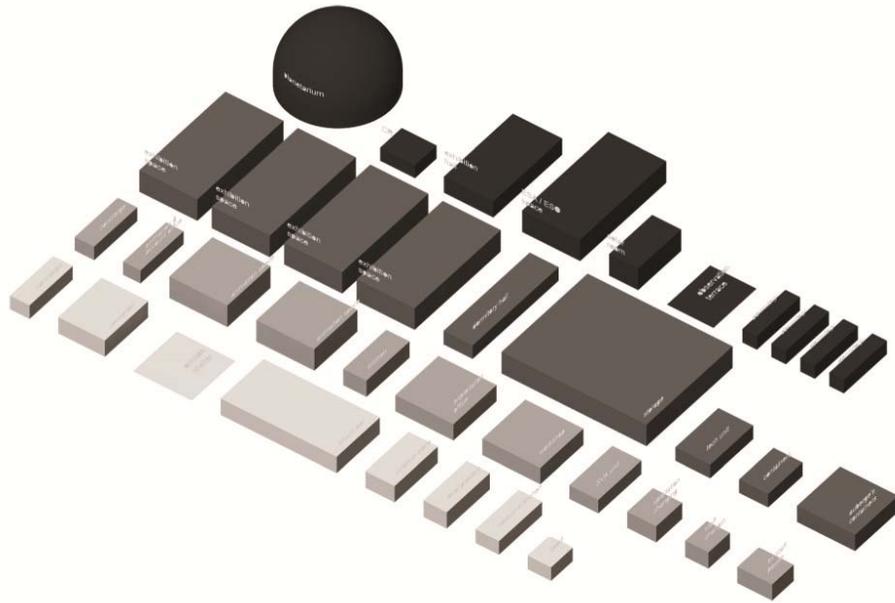
[Img. 5]

## GRADIENTIZER

Concours pour la construction d'un planétarium  
et d'un centre des sciences et de la nature



[Img. 6, 7]



[Img. 8]

Exposition à la lumière:  
 « totalement »  
 « la plupart du temps »  
 « en partie »  
 « pas du tout »

1.01 Accueil  
 1.02 Boutique des sciences  
 1.03 Epicerie du terroir  
 1.04 Espace cafétéria  
 1.05 Espace pique-nique  
 1.06 Cuisine  
 1.07 Sanitaire

2.01 Espaces d'exposition  
 2.01 Espaces d'exposition  
 2.02 Espaces d'animation  
 2.03 Exposition ESA/ESO  
 2.04 Planétarium  
 2.05 Régie technique  
 2.06 Hall d'expositions  
 2.07 Terrasse d'observation  
 2.08 Sanitaire  
 2.09 Vestiaire du personnel  
 2.10 Salle d'observation solaire

3.01 Bureaux exploitation  
 3.02 Local SVA  
 3.02 Vestiaires du personnel d'exploitation  
 3.03 Pause du personnel d'exploitation  
 3.04 Atelier  
 3.05 Dépôt

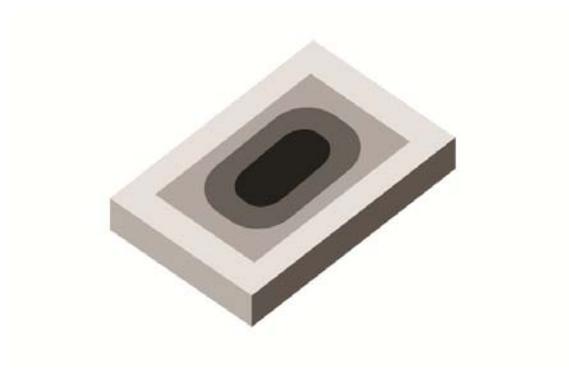
4.01 Dortoirs pour tourisme vert  
 4.02 Cuisine commune pour tourisme vert  
 4.03 Local matériel de sport  
 4.04 Locaux sanitaires, douches + wc

5.01 Appartement de fonction

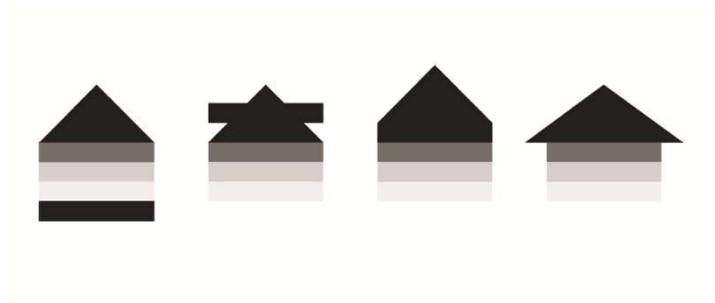
6.01 Local containers  
 6.02 Locaux techniques

7.01 Couvert extérieur  
 7.02 Aire de parking pour autocars  
 7.03 Aire de parking pour voitures  
 7.04 Aire de parking pour deux-roues

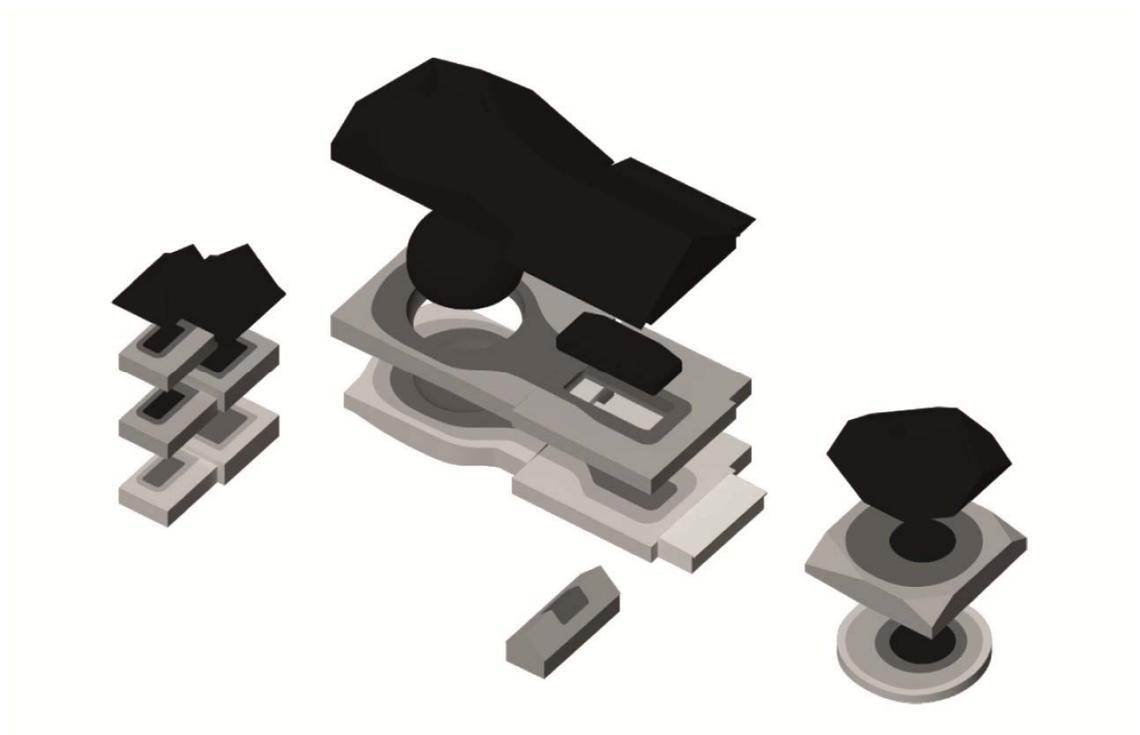
[Img. 9]



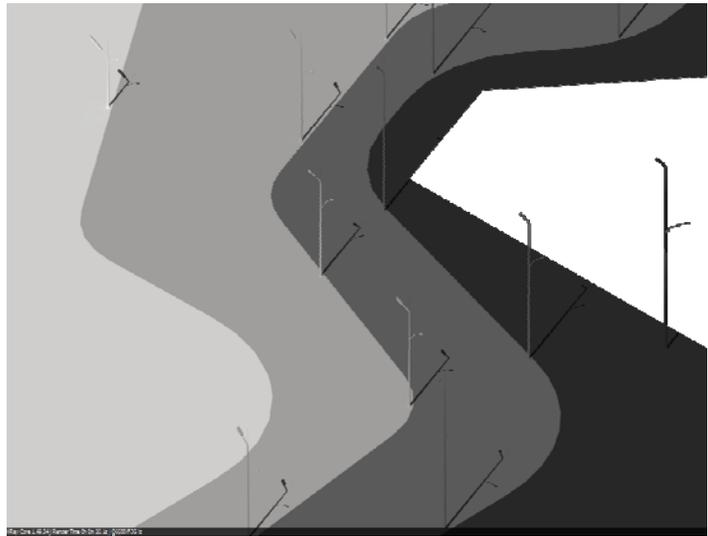
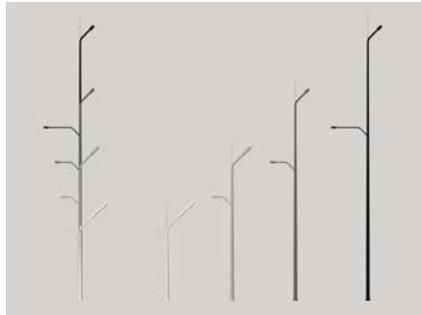
[Img. 10]



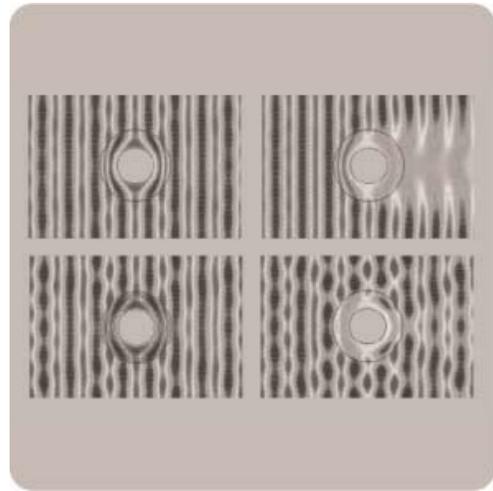
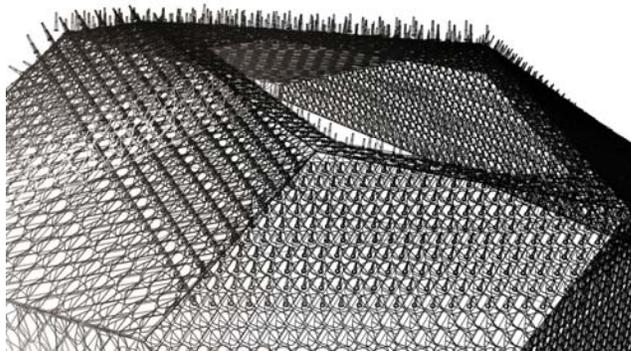
[Img. 11]



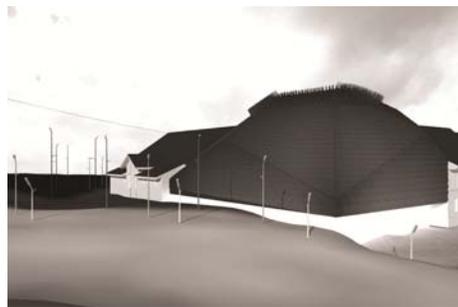
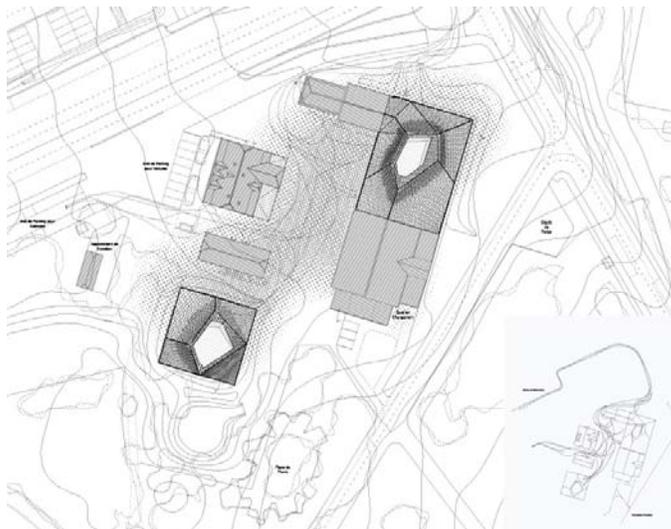
[Img. 12]



[Img. 143 14]



[Img. 15, 16]



[Img. 17, 18]





[Img. 22]



[Img. 23]

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## Image captions:

- [Img. 1] Two new buildings with large (and dark) farm-like roofs in an almost rural settlement define the New Planetarium and Natural Sciences Center. A planetarium, a museum, a solar room, observations platform and deck, scientific offices, an hotel, a café and an eco-shop constitute the main elements of the program.
- [Img. 3-4] Expression of the light gradient on site at night (the road axis are artificially lit, the rest of the site is dark --woods and grass land-- with the adjunction of a courtyard in the new project [Img. 4])
- [Img. 5] Graphic of relations between surfaces' treatment/material and their albedo.
- [Img. 6-7] Expression of the light gradient on site and on the buildings (average value between the exposition to natural or artificial luminosity and the albedo of the surfaces).  
White zone (fully exposed to light) along the roads axis, in the courtyard and around the ground levels that evolve toward the black zone (not exposed to light) on the east of the site and in the upper levels (roofs), through light grey (mostly exposed) and dark grey (partly exposed). The gradient on site serves us both as a way to locate functions and to choose materials or landscape treatments (according to their reflectance - albedo).
- [Img. 8-9] The program (surfaces, volumes and functions) of the New Planetarium and Natural Science Center dispatched according to its potential exposition to light, with the same 4 levels (fully, mostly, partly, not at all) as expressed on site.
- [Img. 10-11] Schematic rules in plan and section to increase and deform existing lighting conditions (both natural and artificial): "onion" rings that filter light from the outside toward the inside in plan, suppression of basements that are moved into bigger roofs to progressively create darkness from bottom to top levels.
- [Img. 12] The resulting axonometric view of the project and principles of spatial organization/uses according to the chosen set of rules.
- [Img. 13-14] The position, orientation and design of the probes, made out of 4 different heights and that are coated in white, light grey, dark grey and black, reveal a first vision of the site's light gradient and surfaces albedo to the naked eye. They also serve to locate different activities (observation in the potential dark areas, public program in the white ones).
- [Img. 15] The upper levels of the new roofs (around the observation decks) are treated like "darker than black" meta-materials (see below), instead they are scaled up about 10 billion times: a spiked surface within which incident lighting is getting reflected many times, loses its strength before eventually getting out. It can be considered as a similar process as what is happening in an anechoic chamber, but in this case for light instead of sound.
- [Img. 16] "Darker than black" metamaterials are nanoscale materials (that can also be used as coating) that trap the reflection of light through very mat dark, spiked surfaces. Therefore, the incident light is reflected many times (at a tiny scale) before eventually getting out again. Very few light is reflected.
- [Img. 17] Gradientizer master plan, with a tiling on the floor level (courtyard) that "connect" the two main buildings. Observation decks in the roofs of both new buildings are oriented toward the south-east of the site. Overall distribution of functions follows the main gradient of light and albedo on the site.
- [Img. 18] East view of the planetarium with probes as landscape treatment (installed along the lines of gradients). No openings in the new buildings and blinded openings in the old ones.
- [Img. 19-20] Planetarium, solar room, museum, hotel and eco-shop: ground floor plan and planetarium section, where the principles of organization in plan and section are applied.
- [Img. 22] A dark roof, viewed from the dark zone, in front of a white zone at night.

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# Txt

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## Gradientizer

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*Gradientizer is an architectural proposal for the New Planetarium and Natural Science Center buildings and program in Lausanne, Switzerland. It consists in the transformation of an old, almost rural and isolated settlement and the adjunction of two new buildings.*

*The proposal was completed early this year and was developed in close collaboration with Madrid based architects AMID.cero9 (Cristina Diaz Moreno and Efrén García Grinda, both also teachers at the Architectural Association in London).*

*We didn't win the "trophy" unfortunately, but as we believe nonetheless that the project is of interest, we take the opportunity to document and shortly present it on | rblg.*

### **Gradientizer (excerpts from the competition text)**

An architecture that articulates light, that pervades into the existing luminous gradients and albedos of the site, that transforms them on site, in plan and in section and which creates "dark poles", real "attractors" of the program: Planetarium, Solar room, Sky observation deck. A forgotten atmosphere, "almost unknown", but monitored nevertheless, built around the exposure of the program to light, in which visitors and scientists freely wander, layer by layer.

### **Monitored architecture of light gradients and albedos**

The observation of the sky, by daytime and nighttime, is always marked by an intimate relationship with weather and light conditions. To make accessible the cosmos from Earth with the naked eye as through a powerful telescope, special conditions are needed: minimum cloud cover, low atmospheric density, maximum distance to the sources of artificial light at night.

Would we realize today a world map of the suitable observation locations, in continuous time, it would likely reveal a landscape in a vanishing phase, a kind of forgotten preindustrial relic. A sensual landscape that evolve along days and seasons: clear sky, stary dark night, low pollution, near low reflectance (albedo) lands.

It is this landscape, which has become almost unknown nowadays, that makes possible the observation of another one, fascinating and borderless: the cosmos. It is also precisely around this landscape that our project is built: a "gradient" architecture

that seeks to analyze and transform the light patterns of the place, to inhabit them, which looks to generate and shape this "unknown landscape" and to comment it.  
(...)

However, the site of the New Planetarium has a light gradient of its own, with varying intensities: artificial illumination of roads at night, large farm like roofs that generate darkness during the day.

The project seeks to leverage this existing state, to develop it, whether it be in the positioning and association of functions in an almost generative way (rule based) or in the amplification of the roofs of the buildings: to "gradientize" the overall site through its architecture.

(...)

### **To "gradientize" the site**

Articulated around 4 main categories of exposure to light ("fully", "mostly", "partly" and "not at all" exposed), the program is distributed around the matching gradients of light on the site to achieve the initial distribution of functions. In section, this gradient is reinforced in order to create permanent "black areas" and to further distribute the program vertically.

Three main rules allow us to organize in this way the whole program of the New Planetarium and to outline its architecture. At night and in mass plan, the luminosity and reflectance gradient of the site evolves from lit perimeters, near traffic areas and roads, to dark areas towards forests and grassland (on the east part of the site, guaranteed to be kept in the future due to the reallocation of the whole area into a protected green park). The repartition of activities and functions on the site results mainly from this first rule (the program analysis based on its exposition to light). Thus, no artificial light is directed towards the east and south of the site at night. In plan, again but inside the buildings this time and mainly during day time, a concentric organization of volumes allow to filter and lower the light from the outside toward the inside. In section finally, during day time especially, large and deep roofs of agricultural characteristics also ensure the creation of shadows and darkness. No artificial lighting is installed in the dark grey or black areas.

This approach makes it possible to define principles of spatial organization, by day and night. This is the intention of the project: an architecture that fits into a monitored gradient of light proper to the site, which exploits but transforms its vocabulary of forms and materials, which deforms, amplifies and strengthens them, both in plan and section. These principles engender our architecture of spatial shifts, its main code. The result is the GRADIENTIZER.

(...)

### **Probes, sensors, monitoring, feedback loops and algorithms**

A set of light and atmospheric probes equip the site and the interiors of the buildings. They are positioned so to reveal in first sight the average gradient on the site and to locate specific areas for the public (white, light grey, dark grey and black masts at different heights equipped with sensors that are positioned along the main lines of each gradient). Some also serve as furniture or lighting (white areas). These sensors continuously analyze the state of illumination of the Gradientizer and reveal

it through freely accessible interfaces (both on site information displays, distributed over the Internet or through mobile apps) and feedbacks.

This constant analysis transcribes in "real time", along time and seasons, the variable state of a large architectural device based on simple rules (the exposition of the program to --monitored-- light). Custom and architectural algorithms indicate appropriate times to achieve a particular observation, shift of functions or activities in a conducive area.

(...)

### **Architecture as shifting landscape**

The whole Planetarium and Natural Science Center can be seen and experienced as a light based architecture - landscape in constant evolution. It offers therefore oscillations, unpredictable spatial and uses variations. It suggests some sort of nomadic and evolving uses over time to adapt to the varying conditions.

A landscape that should be understood here in the sense of an environment with blurred limits, within which one can evolve with a certain freedom according to ones desires or needs. A landscape that "feels" its own variations and makes them visible, livable.

fabric | ch, February 2012

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# (Paranoid) Shelter

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2012

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Project by fabric | ch

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Locations: Caen (FR), Montbéliard (FR), Renens (CH)

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With the support of Pro Helvetia, Sitemapping/Mediaprojects (Swiss Federal Office for Cultural Affairs), Ville de Lausanne and Canton de Vaud

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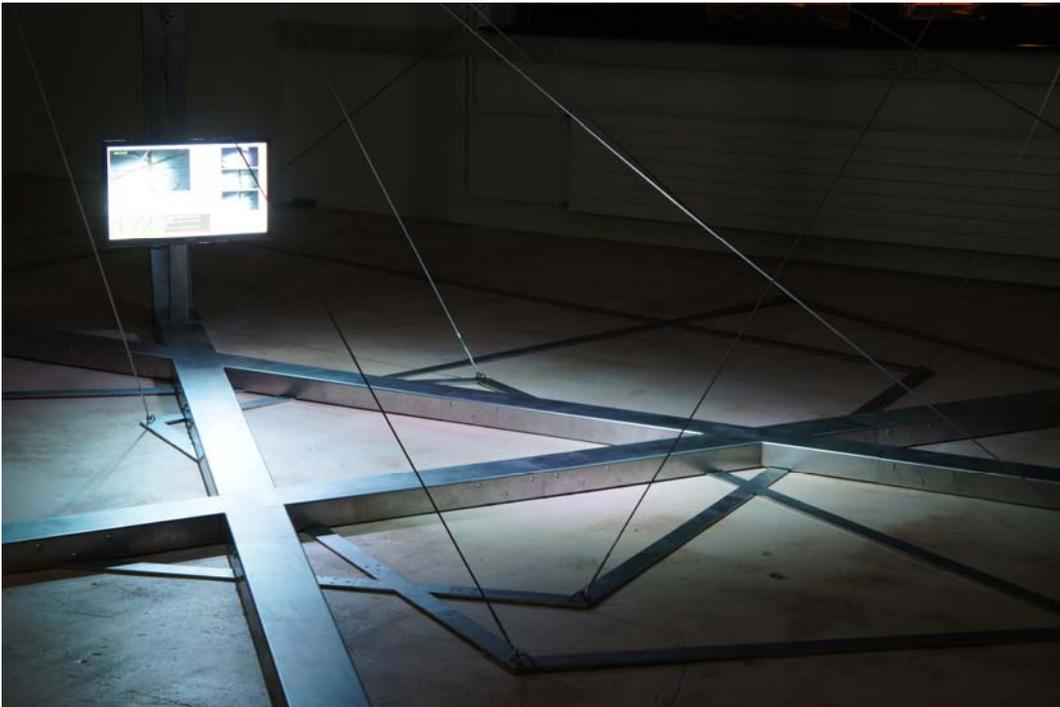
Exhibited during the creation residency at the EPFL-ECAL Lab (Renens, CH) and Globale Surveillance's theatrical (Caen, Montbéliard FR)

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- 
- Transparent shelter shaped and determined by surveillance and monitoring technologies
  - Architectural device made out of code & algorithmic behaviours
  - Autonomous/learning architecture
  - Variable environment
- 
- Interfaces & software Paranoid Shelter
-



[Img. 1]



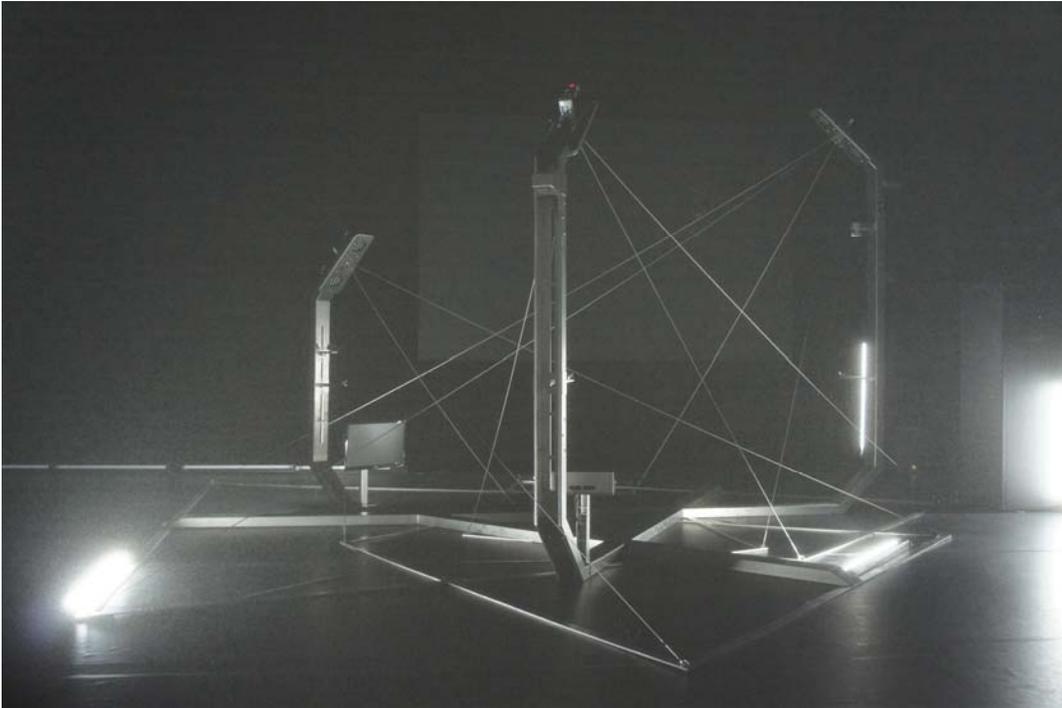
[Img. 2]



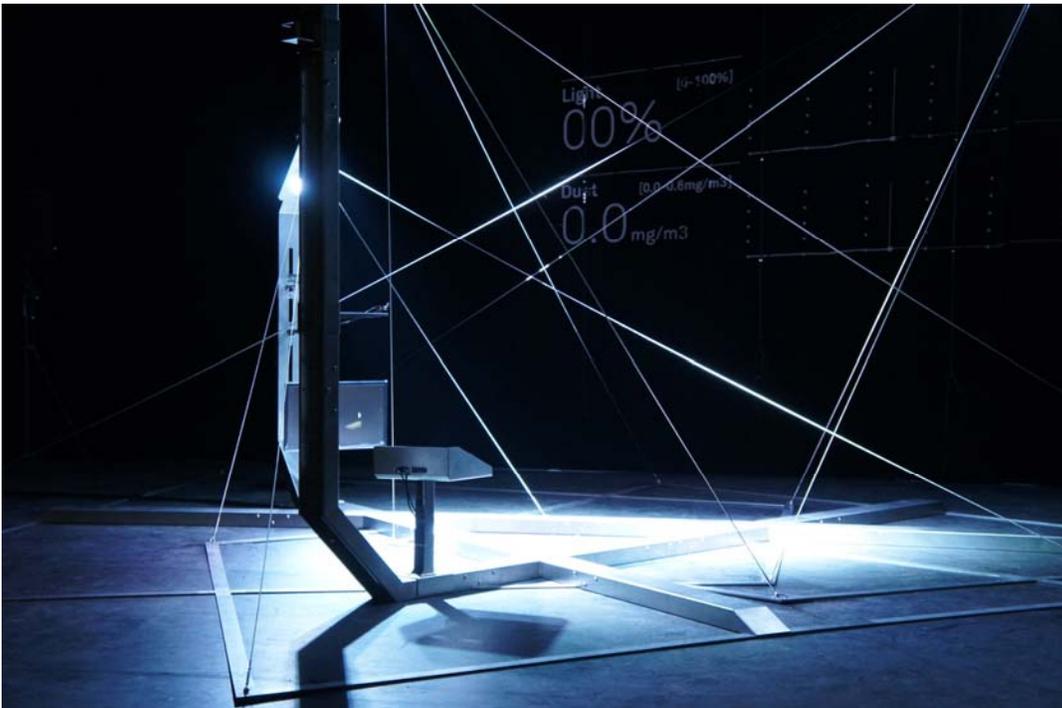
[Img. 3]



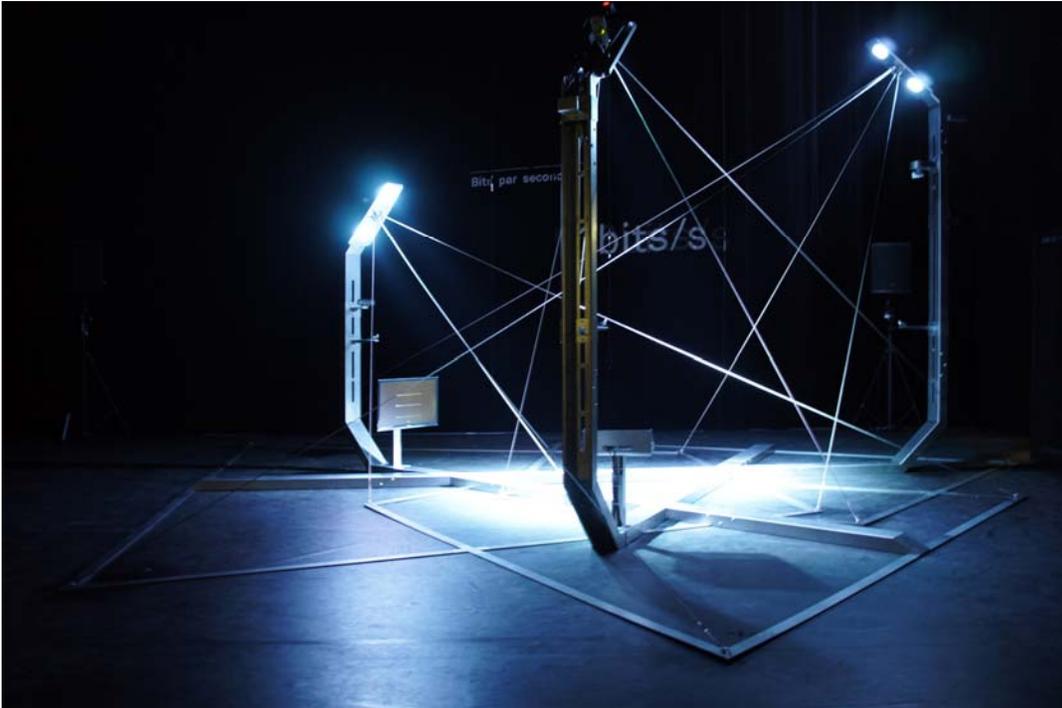
[Img. 4]



[Img. 5]



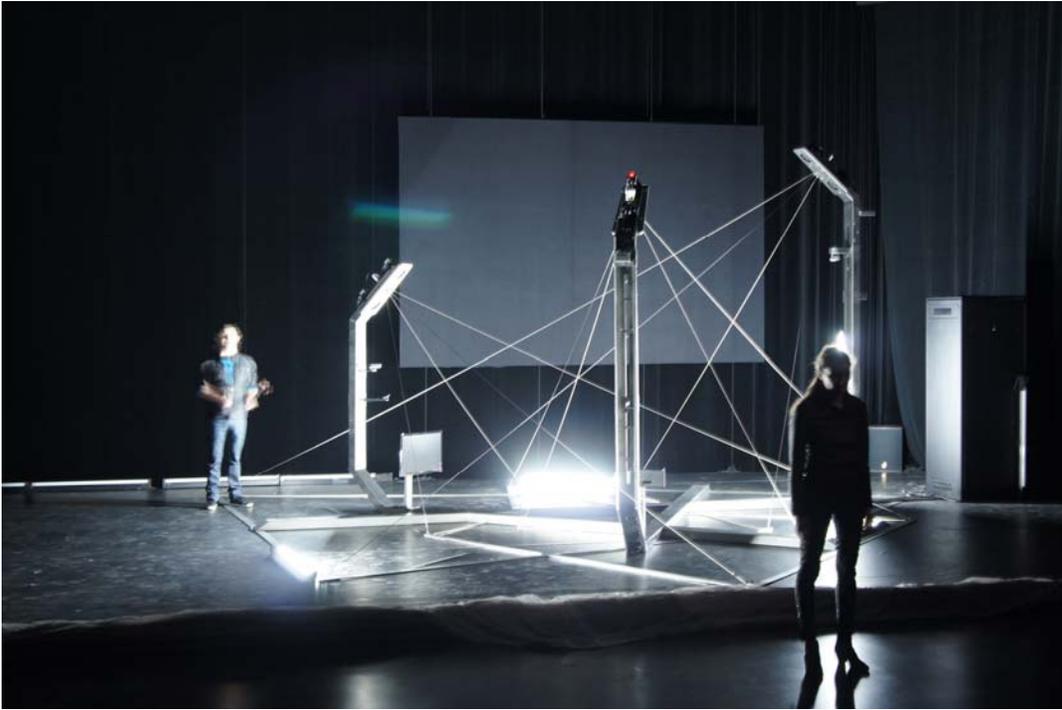
[Img. 6]



[Img. 7]



[Img. 8]



[img. 9]

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## Image captions:

- [Img. 1] Paranoid Shelter, residency installation at the EPFL-ECAL Lab (Renens, CH), February 2012. The overall design of the pavilion is mainly determined by the made visible shapes of the three cones of vision from the surveillance camera and their projection on the floor, as well as by some other surveillance/monitoring devices. The pavilion remains mostly transparent, open and lightly materialized.
- [Img. 2] "Central" part of the shelter, where the highest density of monitoring systems are active. A screen displays the current state of the Paranoid Shelter (level of awareness, views from camera, activities from the different sensors and algorithms at work, analytics and mining) as well as where the user(s) can scrutinize him(them)selves. The entire space can also be seen as only three flat images.
- [Img. 3] While mainly and only « framing the air » with sensors and different technologies (high level of monitoring redundancy), it is nonetheless a totally different space/experience inside the frames than outside. Even so the exact limits or "area of influence" of Paranoid Shelter remain blurred due to the use of other technologies such as microphones (so called "gunshot tracking"), wireless atmospheric sensors, a dedicated access point, etc.
- [Img. 4] Sitting still in the data shelter.
- [Img. 5] Paranoid Shelter on stage, in use as a theatrical device with additional lighting systems. All lighting systems are driven by data and monitoring inputs.
- [Img. 6] On stage in Caen (FR), Paranoid Shelter is equipped with additional devices so as a background projection of inner data mining.
- [Img. 7] On stage in Caen (FR).
- [Img. 8] Two actors inhabit the shelter during an act.
- [Img. 9] Two actors inhabit the shelter and its vicinity during an act.

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# Txt

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## (Paranoid) Shelter

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(Paranoid) Shelter is a recent installation / architectural device that fabric | ch finalized later in 2011 after a 6 months residency at the EPFL-ECAL Lab in Renens (Switzerland). It was realized with the support of Pro Helvetia, the OFC, the City of Lausanne and the State of Vaud. It was initiated and first presented as sketches back in 2008 (!), in the context of a colloquium about surveillance at the Palais de Tokyo in Paris.

Being created in the context of a theatrical collaboration with french writer and essayist Eric Sadin around his books about contemporary surveillance (Surveillance globale and Globale paranoia --both published back in 2009--), (Paranoid) Shelter revisits the old figure/myth of the architectural shelter, articulated by the use of surveillance technologies as building blocks

Doing so, it states that contemporary surveillance is in a "de facto" relation with the old myth of the shelter and that it can be considered as a contemporary way to build it, yet in a total different way, somehow problematic because it usually mixes public and private interests, freedom and penalty or censorship and remains unclear.

Therefore, filled with monitoring technologies and exploring their formal potential (the main formal aspects are "autological": the materialisation of the cones of vision from the surveillance cameras fixed on a frame that evokes public infrastructure) as well as their functional incidence (a tele-"neo-nomad" condition?), the project also comments about "smartness" as (Paranoid) Shelter is composed of the same ingredients : active, mediated, monitored or scrutinized, possibly robotized and sometimes "intelligent". Consequently, it points out the links between "smartness" and surveillance that can't be undervalued (what is the status of the data that are collected? what are the inner natures of codes and softwares that drive the behaviours of the architecture?)

"Smartness" is undoubtedly a coming way to architecture space largely debated in specialized circles. Will this be the work of the architect or the engineer is still to be decided (following the heritage of architectural critic from the 60ies Reyner Banham, we state it should mainly be designed by the architect and implemeted in close relation with the engineer). It is, along with parallel questions about sustainability, digital design & fabrication, code, weather, robotics and possibly "geo-engineering", one of the hot topics within the recent architectural debate that will drive the evolution of the discipline.

As with surveillance, "smartness" will generate data, it will leave "traces" and "tracks". This latter inevitably led to raise the same issues as those related to the privacy (or

not) of personal data. The statuses of data, codes and technologies are, in fact, a real issue for society in general and for architecture in particular. To envision the question, just think about a public space monitored by a private company that owns and uses the data for marketing purposes (we all know this already) or a private home where all the data and images are openly released on the networks (next frontier for some hackers). Worse: a state that sells its monitored but non-nominal public information to companies for them to build commercial products. We are confronted to a confusion of gender, at best a hybridization.

Paranoid Shelter articulates and objectifies the idea of surveillance/smartness as one of the main vectors of transformation in our contemporary space: while responding to none of the traditional ways to describe a shelter ((Paranoid) Shelter doesn't protect you from rain or cold, it doesn't really protect you neither from any physical danger but can maybe anticipate it), while being nearly totally transparent and mostly immaterial, it is nonetheless totally different to stand inside its layered frames and limits than to stand outside them. If an outside does, indeed, still exist. The space is changed and architected by the means of invisible codes, behaviours and is mediated through the channels of technologies and networks.

With (Paranoid) Shelter, the code is obviously an integral part of the architecture and its status tries to be clear: custom created by the design team (architects and scientists) for the project along with its physical parts, the code is in this case part of the structure and the author's work. The raw data, generated by the public and that drives the reactivity of the spatial device, are public and fully open to any other public use. It is a shared common space where the infrastructure is made available to the public but doesn't belong to him, the space and data do.

(Paranoid) Shelter demonstrates the fact that a piece of code and technology should indeed be considered as architecture, that it transforms the nature of space and our experience of it, like previous technologies did (electricity, artificial lighting, heating, air conditioning, elevators, etc.), but also like walls and windows can do. It suggests new ways of living too, nearly tribal within an equally new, partly immaterial, open and mediated shelter.

(Paranoid) Shelter can be displayed either as an architectural installation of its own (museum), where its programs let it behave in an autonomous and "intelligent" way, or as a scenographic architecture, on stage (theatre) in the context of collaborations and where it is driven by different programs that are (mostly) remotely controlled.

(Paranoid) Shelter building blocks are (hardware):

- 3 network (surveillance) cameras, w. night shot functionalities
- 1 network (surveillance) PTZ (Pan Tilt Zoom) camera
- 3 embedded microphones
- 2 libellium wireless network sensors boards
- 3 temperature sensors
- 2 light sensors
- 1 humidity sensor
- 1 pressure sensor
- 1 CO2 level sensor
- 1 O2 level sensor

- 1 pollution sensor
- 1 dust sensor
- 1 dedicated wifi access point ("paranoid hotspot")
- 6 dmx controllable led lights
- 1 lcd led acreeen (1920x1080), 2nd optional
- (optional) 1 beamer 1280x800, 4000lm
- 1 air conditioned servers' cabinet
- Servers, lanboxes
- A set of inox cables
- An overall inox frame
- Some books
- Some blankets

(Paranoid) Shelter other building blocks are (custom softwares, codes & data):

- Quantity of mouvement & camera tracking
- Areas' occupation, heat zones
- moving objects' location
- Presence/absence counting / per overall object and surrounding / per sub zones
- Normal/abnormal behaviours
- Sound patterns recognition, "gunshot tracking"
- Noise level
- Sound location
- Atmosphere monitoring
- Normal/abnormal atmosphere
- Wi-Fi monitoring ("snooping")
- "Intelligent" behaviours, set of rules, scripts and codes
- Spatial uses' data

fabric | ch, March 2012

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# I-Weather as Deep Space Public Lighting

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2010

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Project by fabric | ch

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Funding: O1SJ Biennial (USA)

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Location: San Jose City (CA, USA)

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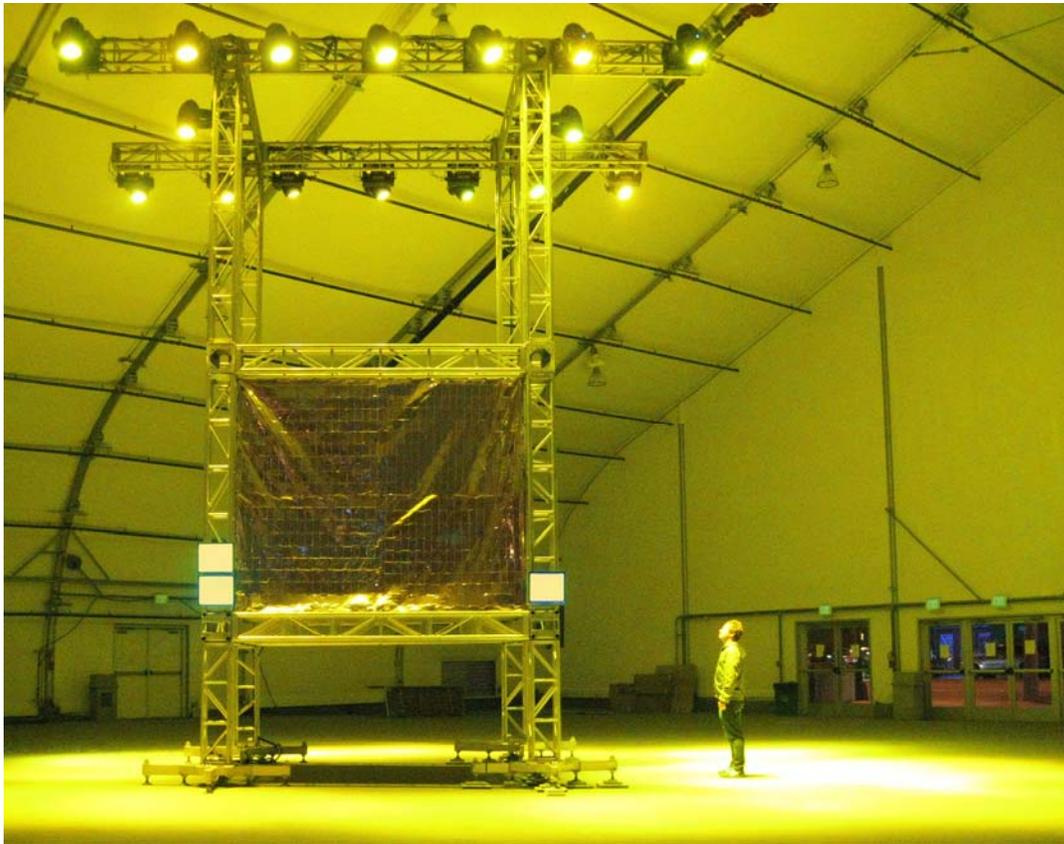
With the support of Swissnex San Francisco and Pro Helvetia.

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Exhibited during the O1SJ Biennial (San Francisco Bay Area, CA, USA)

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- I-Weather artificial and networked climate used for the illumination of public (outer) spaces
  - \_ Metabolic lighting for deterritorialized landscapes and environments
  - Reshaping public lighting as a physiological device
  - Open source technology for public spaces
- 
- I-WaDSPL program, clock and interfaces



[Img. 1]

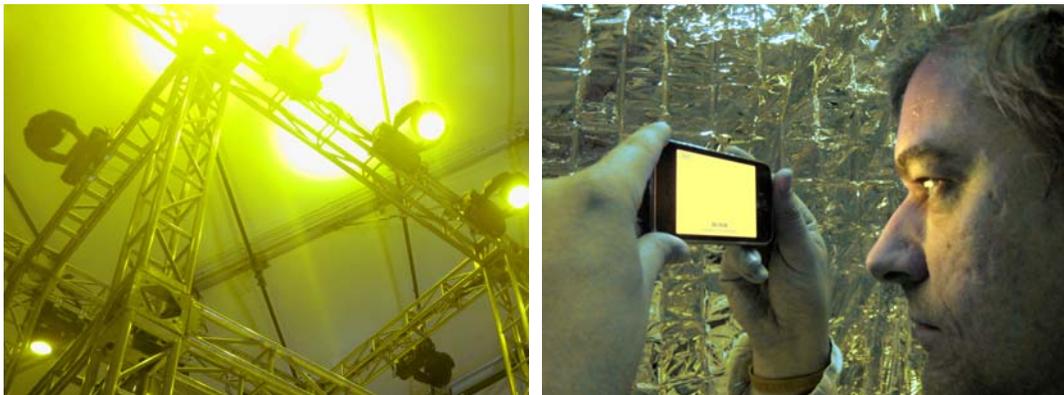


[Img. 2]





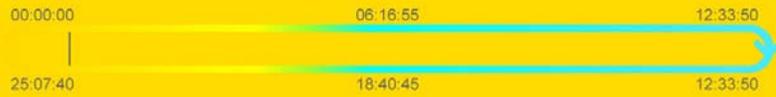
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[Img. 6]

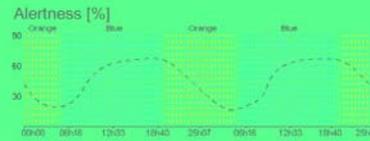
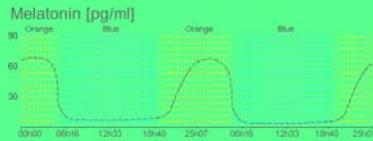
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003212 days | I-Weather Time



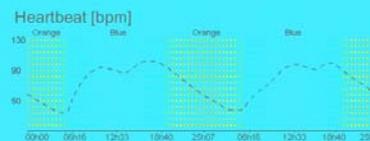
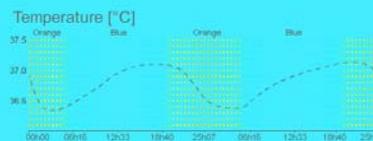
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003212 days | I-Weather Time



# 11 : 48 : 43

003212 days | I-Weather Time





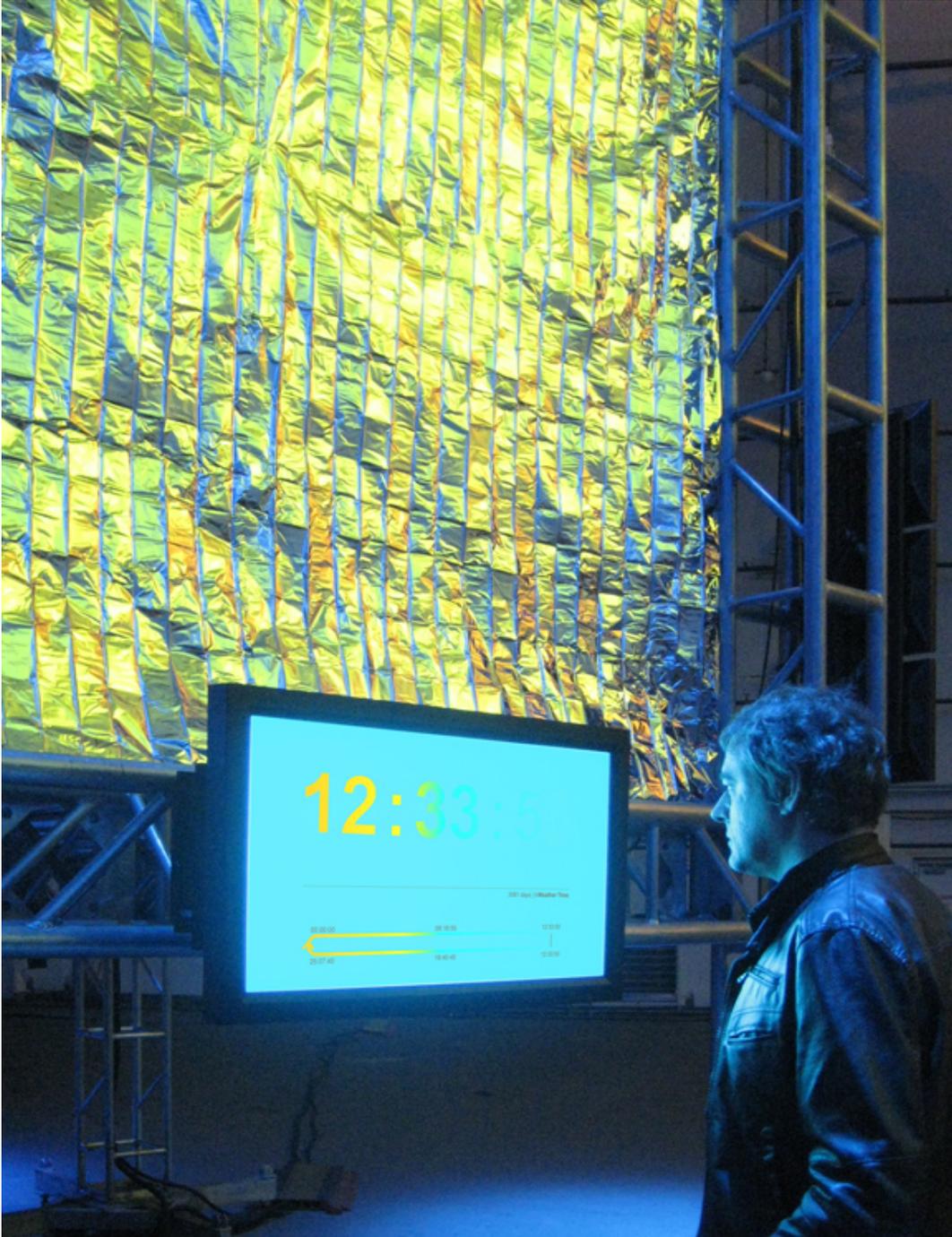
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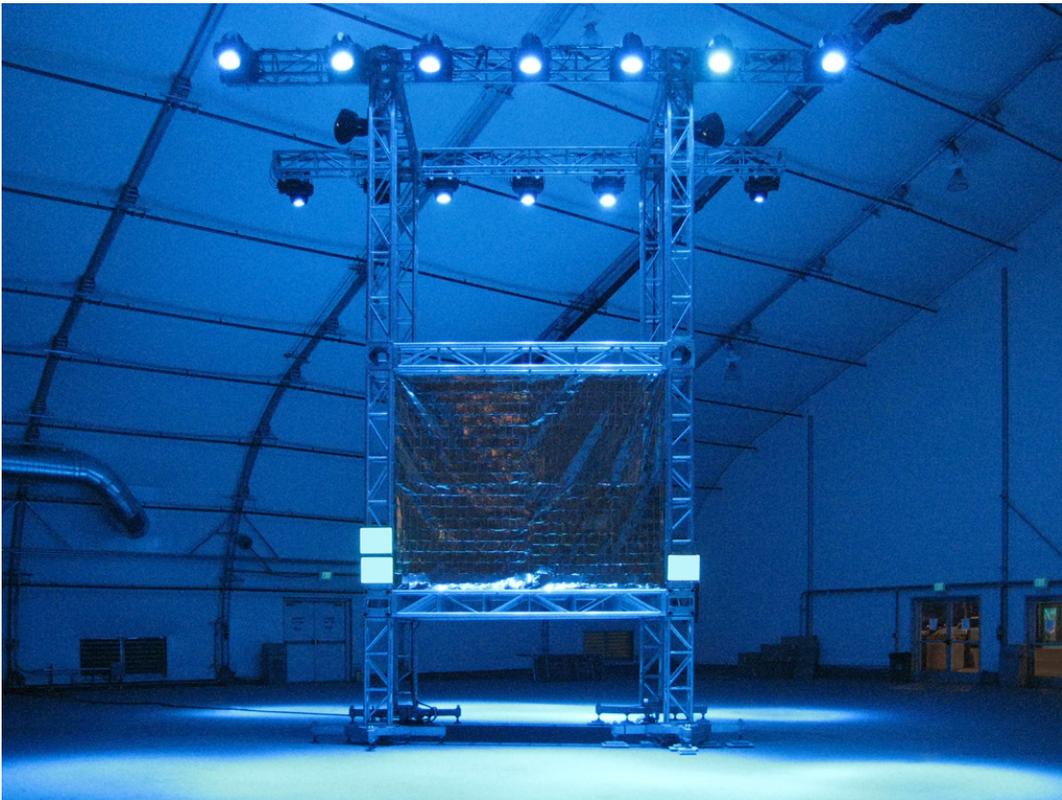
[img. 9]



[img. 10]



[img. 11]



[Img. 12]



[Img. 13]



[img. 14]

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## Image captions:

- [Img. 1] I-Weather as Deep Space Public Lighting during a yellow-orange time (equivalent to night time). The "lander" like installation is set up into South Hall, in downtown San Jose (San Francisco Bay Area, CA), with a number of controllable lights on its top (color, intensity and orientation are digitally controllable by a custom program). The "control room" is inside the closed and infrared reflecting volume of the module. South Hall is a large and very long inflated type of multi-purpose hall, with no natural light coming in. It is a quite adequate space to install the I-Weather lighting module and the artificial climate.
- [Img. 2] Details on the I-Weather as Deep Space Public Lighting module and its different outside interfaces.
- [Img. 3] Interface n°1: some snapshots during a "blue time" period (equivalent to day time). This interface explains mainly the basic objectives of the project while presenting at the same time the current state of I-Weather.
- [Img. 4] Interface n°2: presents different graphs about the diverse relations between light and inner body clock.
- [Img. 5] Interface n°3: I-Weather clock. This is the main interface on the module. It displays the I-Weather real time (hours and days), color and main graphics.
- [Img. 6] Details. A scientist inside the control room synchronizes himself on the yellow time.
- [Img. 7] The I-Weather Clock interface in three different states: yellow-orange, green and blue times with time cursor and different graphs (top – bottom).
- [Img. 8] At certain periods, the installation in South Hall displays the entire I-Weather rainbow. It is similar to having all the times (night, day, sunset and sunrise) displayed at the same time: a sort of time and light rainbow.
- [Img. 9] Same "time rainbow", but this time from the opposite side of the 200 meters long South Hall. In front of this picture is a fragment of the amazing Empire Drive-In, built out of wrecked cars and second hand wooden parts (project by Tod Chandler and Jeff Stark).
- [Img. 10] Rainbow time, detail on the inflated tarpaulin.
- [Img. 11] The I-Weather Clock is displaying a daytime (blue, 12h 33min), while a rainbow reflects itself on the infrared reflective sides (made out of gold Mylar) of the control room.
- [Img. 12] Blue time, view from the 2010 O1SJ Biennial exhibition's main access.
- [Img. 13] Details on the blue light scattering in the space.
- [Img. 14] Front view of the "lander" with the I-Weather clock in the center.

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# Txt

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## I-Weather as Deep Space Public Lighting

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Curator Steve Dietz, about the 2010 O1SJ Biennial:

*"Build Your Own World: The future is not just about what's next. It's also about what we can build to ensure that what's next matters. How can we, as resourceful, innovative, and knowledgeable local and global citizens build and participate in a desirable future in the face of global climate change, economic meltdown, political instability, and cultural divisiveness?"*

I-Weather as Deep Space Public Lighting:

In 2001, fabric | ch and architect Philippe Rahm jointly set up I-Weather, an open source artificial climate based on human metabolism, circadian rhythms and on the medical knowledge of the time about light therapy and chronotherapy. I-Weather intended to allow the growing number of de-territorialized locations and people to synchronize their atmosphere and metabolism with this Internet distributed climate: a parallel day of 25 hours, which diffused its colored and luminous "daylight" in any physical or digital space connected to the I-Weather's server.

In 2008, NASA made an announcement about a first successful communication with a 20 million miles distant spacecraft on the *Deep Space Internet* (Disruption-Tolerant Networking protocol), the model for a forthcoming interplanetary Internet.

Late in 2009, the team upgraded I-Weather to a new version, as scientific knowledge of biological rhythms has evolved, demonstrating that melatonin regulation is enhanced by using a minimum wavelength of 460nm (blue) and a maximum wavelength of 597nm (orange) rather than between 385nm (deep purple) and 509 nm (green), like it was the case with the initial version of I-Weather. Actually, blue light suppresses the diffusion of melatonin in the body, while orange light allows to go to sleep or to perform quiet actions without altering the body clock.

In summer 2010, fabric | ch set up a project called I-Weather as Deep Space Public Lighting, during the O1SJ Biennial in South Hall, downtown San Jose (San Francisco Bay Area, CA). It has proposed a critical use of I-Weather as a model for a metabolic public lighting source, distributed and synchronized through an imaginary *Deep Space Internet* into the confined and conditioned environments of space exploration vehicles or into speculative public spaces of "distant colonies".

The exhibition was therefore the occasion to question public (outer) space, public data, public technology and artificial climate through the installation of I-Weather as Deep Space Public Lighting inside the artificial and conditioned space of South Hall.

fabric | ch, September 2010



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# Arctic Opening

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2010

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Project by fabric | ch

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Funding: AML, City of Marseilles (FR)

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Location: Frioul Archipelago, Marseilles (FR)

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Exhibited during the MIMI Festival 2010 (Marseille, FR)

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- Métis landscape, Arctic Mediterranean
  - Combination of Mediterranean landscape and arctic daylight
  - Remote day at night. Second day, tele-present through an artificial LED based "opening"
  - Channeled atmosphere, experience in mixed light
  - Architectural expedition in a fictional future
- 
- Satellite Daylight interface and software



[Img. 1]



[Img. 2]



[Img. 3]



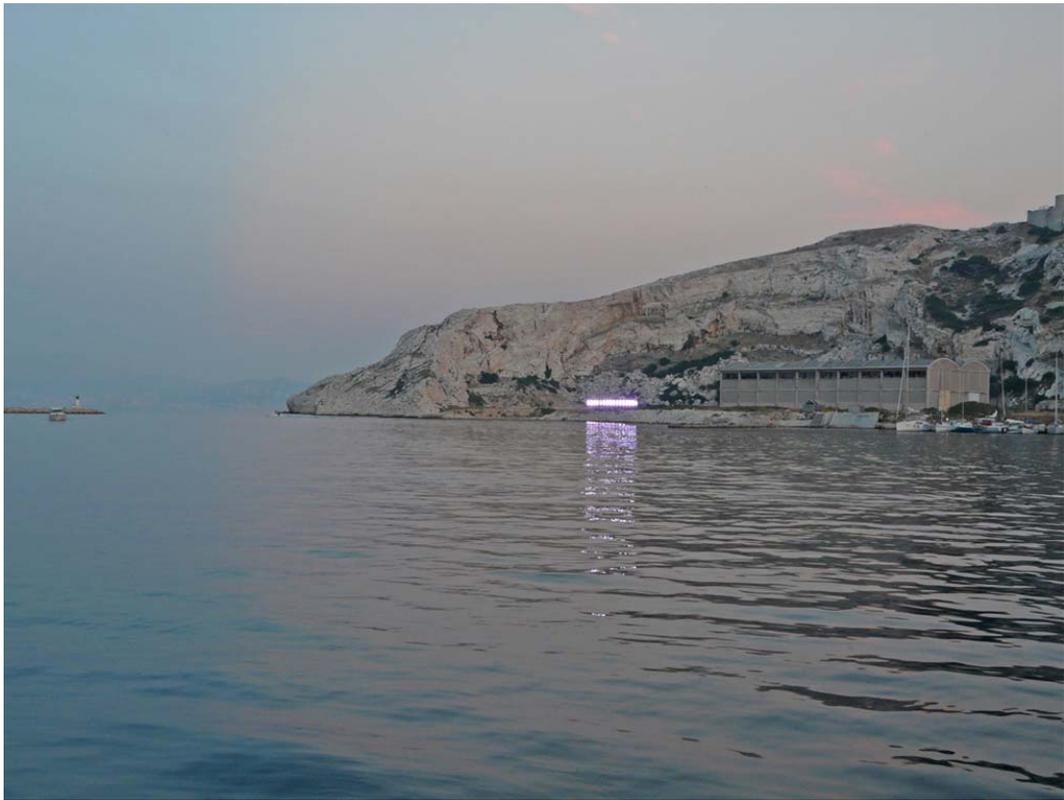
[Img. 4]



[img. 5]



[img. 6]



[Img. 7]



[Img. 8]

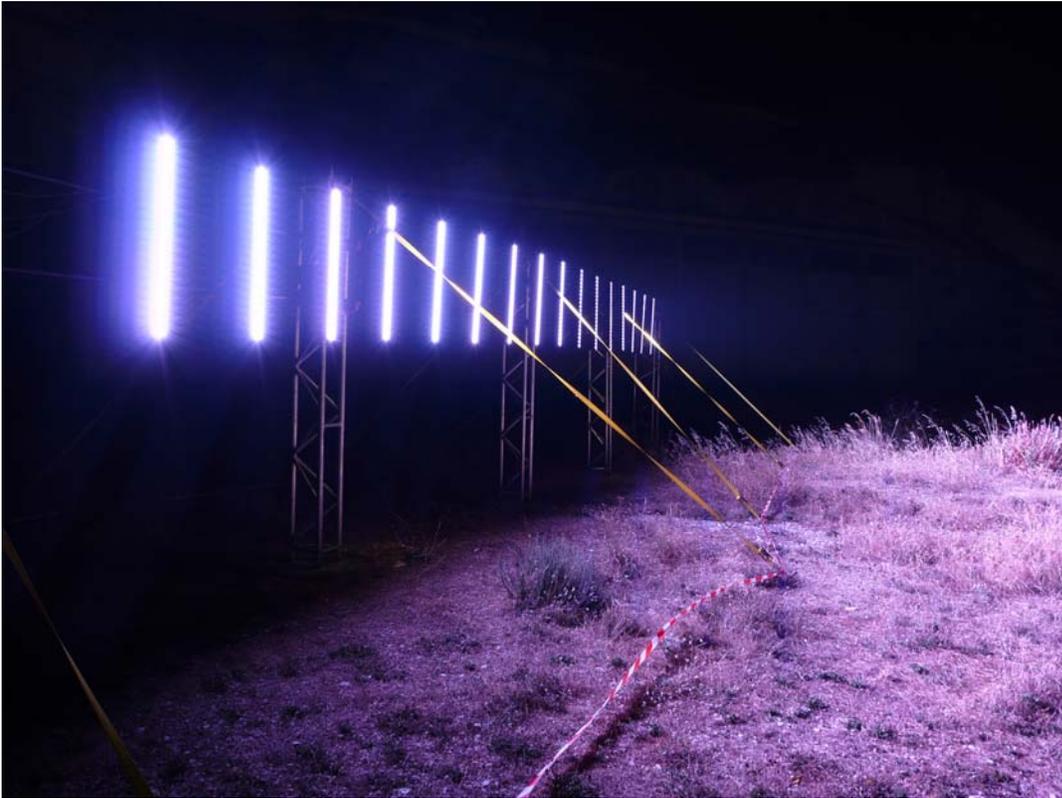




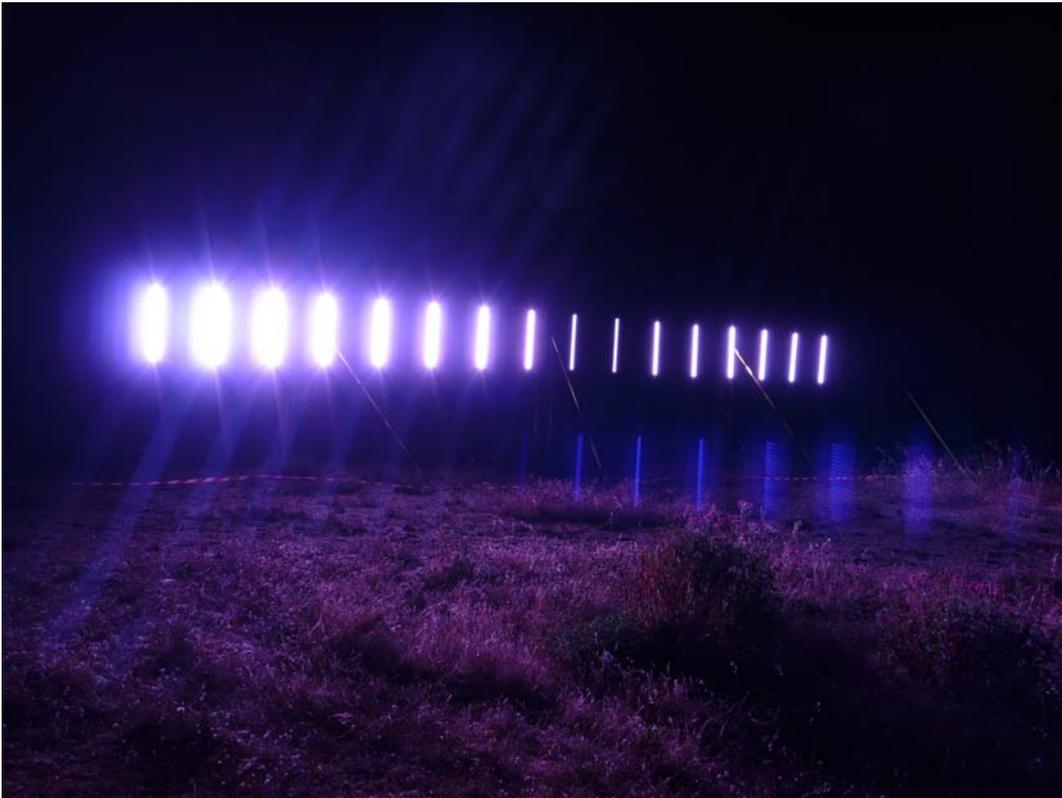
[Img. 9]



[Img. 10]



[Img. 11]



[Img. 12]



[Img. 13]



[Img. 14]



[Img. 15]



[Img. 16]

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## Image captions:

- [Img. 1] Snapshots of Arctic Opening standing beside the Mediterranean Sea, from inside the expedition tent and from the access trail.
- [Img. 2] Snapshot of a visitor at night under the arctic lighting, shot from inside the temporary tent.
- [Img. 3] Different views of the "base camp" and Arctic Opening's expedition tent. Leftovers of the week of work on site are still present for visitors and constitute the exhibition's installation. It includes two interfaces, two led lights (continuous local control of the arctic daylight) lit 24/7, two boxes of material and the expedition's logo on a flag and on the tent (as well of course as the tent itself and the "opening" made out of LED bars).
- [Img. 4] The Arctic Opening logo on the expedition flag.
- [Img. 5] Arctic Opening's interfaces and software in the tent, on the left (top, with expedition logo) and right screens (bottom). Phases #1 and #2 of the software analyses: on the left screen are displayed the existing weather conditions in Marseille (Frioul islands), wind orientation as well as the time remaining until the next sunset (when the arctic distant daylight and second day will become lit on the big LED display and visible again). On the right screen is displayed a North Pole top view (with cloud cover) and Arctic Circle, with the "opening" circling on the 69° 25' N latitude. Bottom of the interface shows the current overflow region that is analyzed and displayed on the big LED display in the nearby Mediterranean landscape.
- [Img. 6] Detail on the right screen interface (phase #2): cloud cover, luminosity and arctic daylight as reconstructed by the software and based on the public data transmitted from the Arctic.
- [Img. 7] A distant view of Arctic Opening, taken after sunset from the opposite side of the small harbor on the Frioul island (shuttle departure). On the right of the installation stands an industrial relic with its broken horizontal openings and rusty concrete.
- [Img. 8] Distant views of the installation, different times and luminous strengths with light reflections on the sea.
- [Img. 9] Night views of Arctic Opening with Marseille's urban lightings and "Notre Dame de la Garde" in the background (on the top), as well as a dramatic stone scenery, remains of a former quarry (on the bottom).
- [Img. 10] A close view of the arctic lighting at night, with illuminated local flora in the foreground.
- [Img. 11] Detail. The front of the installation is horizontally illuminated by the strong LED bars, like in arctic daytime where the natural lighting is very horizontal and blinding.
- [Img. 12] A view against the light from within the mixed landscape.
- [Img. 13] The now "métis" flora illuminated by a distant day.
- [Img. 14] Flora, quiet flag and strange luminosity (half night) in the back coming from the reflexion in the moist air of Marseille illuminated at night.
- [Img. 15] Arctic Mediterranean: the landscape and expedition tent illuminated by a distant and continuously variable arctic light.
- [Img. 16] The expedition tent at night: remnant of a fictitious expedition in a hypothetical future.

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# Txt

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## Arctic Opening

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Each day, when night falls on our urbanized landscapes, in our cities, our streets or our ports, another day dawns, electric. It is literally a "second day" which begins: the industrial or postmodern one of neon signs, street lights, sodium, mercury or fluorescent lighting, the one of illuminated apartments and shops' windows, the one of night activities that we did not know two centuries ago.

Although today we no longer think much about it, as this "second day" is now part of everyday life of city dwellers, this artificial light had been a conquest: by fire first, then by the gas, and more recently by electricity. This "fabricated" light permitted first to extend artificially the day at night to illuminate the darkness, but also to transform our relationship to time, to landscape and to space. It especially allowed to exceed the given natural immemorial cycle of day and night induced by the rotation of the Earth itself, and thus to redefine architectural and urban spaces.

However, that day, which has become "perpetual", has interfered since the nineteenth century with our natural rhythms, producing dramatic changes: emancipated of the natural alternation of day and night, social habits and customs of inhabitants benefiting this "discovery" found themselves immediately and irrevocably transformed. One began to live and work at night, having fun more and more under artificial light, and sometimes, as compensation, to sleep the day away. One also began to design new architectures that did not require natural lighting anymore. In a few decades, artificial lighting profoundly altered the lifestyle of city dwellers, but not only: birds began to sing at night near the lampposts, insects to swarm under the spotlights and stars to disappear of the urban night sky, opening the door to a strange creolized world, that not only combines now the local and the global, but that deeply intertwines natural and artificial cycles. Losses and gains then.

This new environment was also marked by the willingness of men to control the "randomness" or the "wildness" to take control of a growing number of factors and constitutive dimensions of their habitat. Today, this "second day", historically "industrial", is still often a day with a monotone lighting, having essentially a functional goal (to see, to secure, to work, but also to read, to cook, etc..). Mostly, it evokes nothing, and if it varies, it is to stay in a comfort zone preset unlike natural climates which are constantly playing with landscape to offer different uses and perceptions of a same environment. In addition we are just beginning to take the measure of the energy cost of that enterprise and its participation in global ecological negative balance of humanity. Yet this environment, sometimes magical, sometimes disturbing, develops undoubtedly for us poetry of shifts. Now, the challenge is to deploy these shifts, which combine presents, pasts and possible

futures, into a comprehensive reflection on our contemporary space and our consumption of energy.

Designed for the Innovative Music Festival (MIMI 2010) in Marseille, on the Frioul islands, Arctic Opening does not aim to deny this "second day", but to amplify its positive, variable and sensitive issues. Thus, Arctic Opening seeks to develop the potential of imagination(s) of artificial illumination, while integrating new technologies and intelligent lighting cycles of low energy consumption.

In a global environment, endlessly interconnected, which develops new forms of mobility, temporalities, and social behaviors at the crossings of time zones, this artificial day provides an opportunity for another kind of "days", simultaneous and distant: an imaginary or mediated "connection" with countries where precisely and literally, at the same time, the sun is shining. Through satellite imagery and sensor data, it is now possible to imagine opening a "window" onto a sensitive and remote light whose intensity varies continuously, where the sky is sunny, then cloudy, then possibly sunny again. A window that "tele-ports" abstractly a remote atmosphere without physical mobility, without means of transport other than transportation data from there to here. A "mobile immobility".

With Arctic Opening, fabric | ch proposes to create such an "opening" at a large scale, to another day: an artificial and sensitive light, revealing some geographical patterns, luminous and meteorological, across the globe (to the summer of one hemisphere corresponds the winter of the other, to the daylight the darkness, to the perpetual light of a pole the night of the other, etc.). When night falls over Marseille this "second day" gets up with its source somewhere north of the Arctic Circle, on the edge of the habitable zones (Hammerfest, Murmansk, Prudhoe Bay, Tuktoyaktuk, Igloolik, Clyde River, Scoresby, etc.), where once the ice melted new navigation routes open and will open more and more in the future. Fed by light coming from regions, where in this season, the horizontal light of the sun never sets, where sunrise and sunset mix, Arctic Opening reproduces the continuous modulation of the northern summer.

Composed of hundreds of light emitting diodes (LEDs), this bright band long of eighteen meters illuminates a rocky landscape, swept by winds. At sunrise, it goes slowly to reveal a temporary installation of pipes, placed there to conduct this experiment in distant light. Erected near the vicinity of a military and industrial relic of the twentieth century, a tent hosting the instruments of control suggests a possible scientific expedition in an "hostile" zone.

The combination of light produced by this window and the Frioul islands' landscape produces a composite territory: Arctic Mediterranean, remote nocturnal day.

This combined area in mixed light is purposely created as a prospective environment, which evokes the contemporary patterns of mobility and crossing time zones, the fluxes and the networks, the artificiality and the mediatization, or to indicate the strange topographic similarities between the arid Frioul islands and the Arctic regions where no tree grows. As if this temporary place in front of Marseille, illuminated by a light transported from the Arctic could become the distant, catastrophic and fictitious future of these northern territories: warmed by climatic changes, visited by boats navigating on new routes opened by melting ice, the

shores of the Far North could begin to resemble those of the Mediterranean Sea. This environment would then combine itself as well, as people become increasingly mobile over time: mix of here and elsewhere, future and present, material and immaterial.

Arctic Opening: mixed territories.

fabric | ch, July 2010.



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# I-Weather v.2009, open source software and libraries

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## 2009

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Project by fabric | ch and Philippe Rahm architectes

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Location: Internet

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Exhibited during the O1SJ Biennial (San Francisco Bay Area, CA, USA)

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<http://www.i-weather.org>

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- Artificial climate based on human metabolism, circadian rhythms and light therapy
  - Synthetic weather to meet human needs in deterritorialized environments and spaces
  - Networked light atmosphere to be distributed on any luminous and connected peripheral, anywhere
- 
- Open source libraries, code, programs and applications



[Img. 1]

File Edit View History Delicious Bookmarks Tools Help

i-weather.org - artificial climate base...

## i-weather

- about
- electromagnetic waves
- circadian rhythms
  - melatonin
  - potassium
  - cortisol
  - growth hormone
  - temperature
  - alertness
- i-weather rhythms
- simulation movie
- download
- credits

### circadian rhythms

Circadian rhythms regulate physical, mental and behavioural variations occurring over a roughly 24-hour cycle, responding primarily to light and darkness in an organism's environment. They are found in most living organisms, including animals, plants and many tiny microbes.

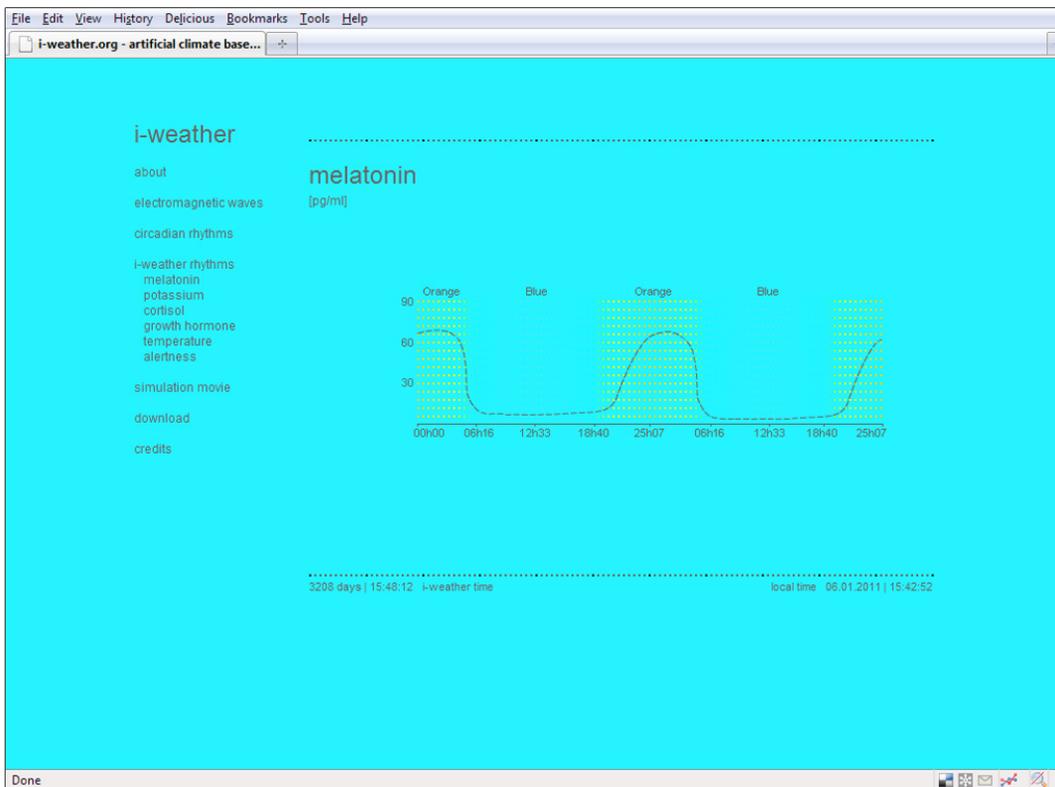
In human beings and other mammals, the suprachiasmatic nucleus (SCN) located in the hypothalamus functions as the master pacemaker of an endogenous circadian timekeeping system. The SCN receives photic input from the retina via direct and indirect pathways, thus forming the prime relay between external and internal times.

A network of circadian clocks is synchronised with external time via humoral and neuronal pathways. From the SCN peripheral clocks throughout the brain and the body are synchronised via the autonomic nervous system. Rhythmically released hormones like ACTH from the pituitary, melatonin from the pineal and corticoids from the adrenal also contribute to the synchronisation of physiological functions and provide feedback to the SCN.

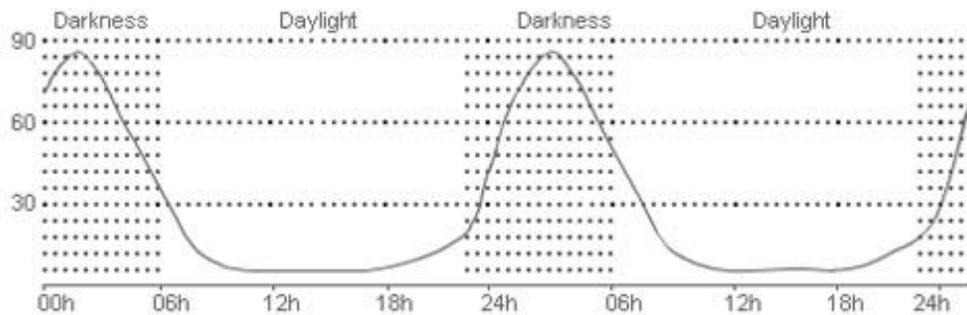
3208 days | 15:47:44 i-weather time local time 05.01.2011 | 15:42:24

Done

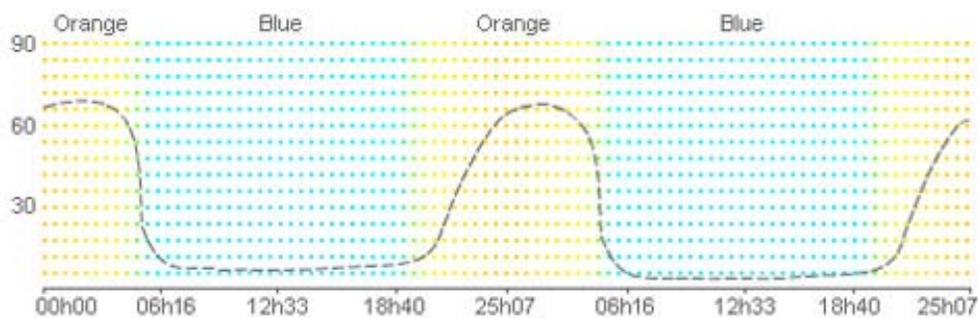
[Img. 2]



[Img. 3]

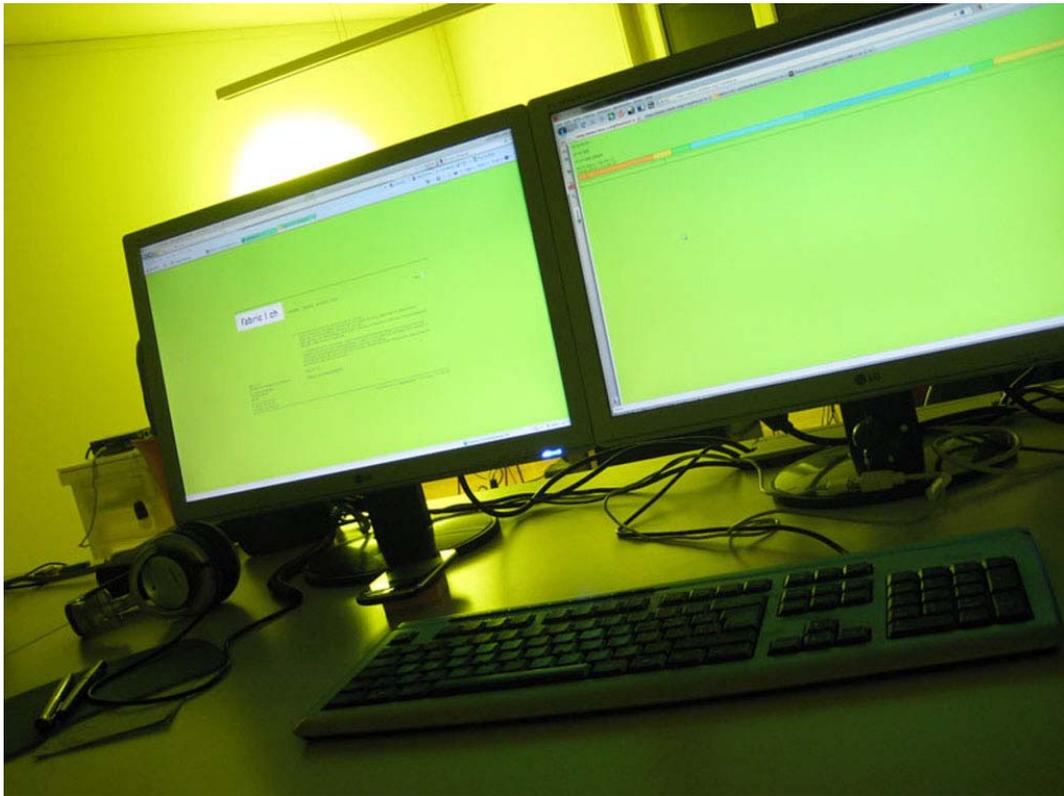


Melatonin diagram over a natural 24h hours, night and day cycle.



Projected melatonin diagram over an an artificial 25h 07min 40sec, I-Weather cycle.

[Img. 4]



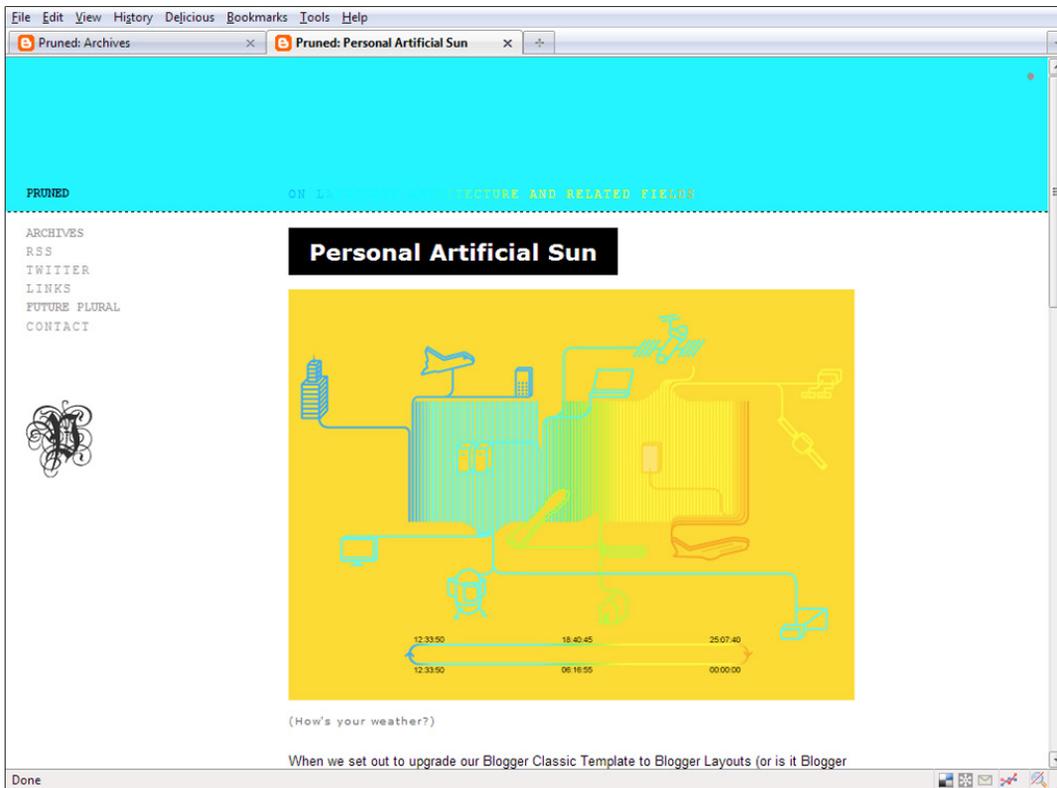
[Img. 5]



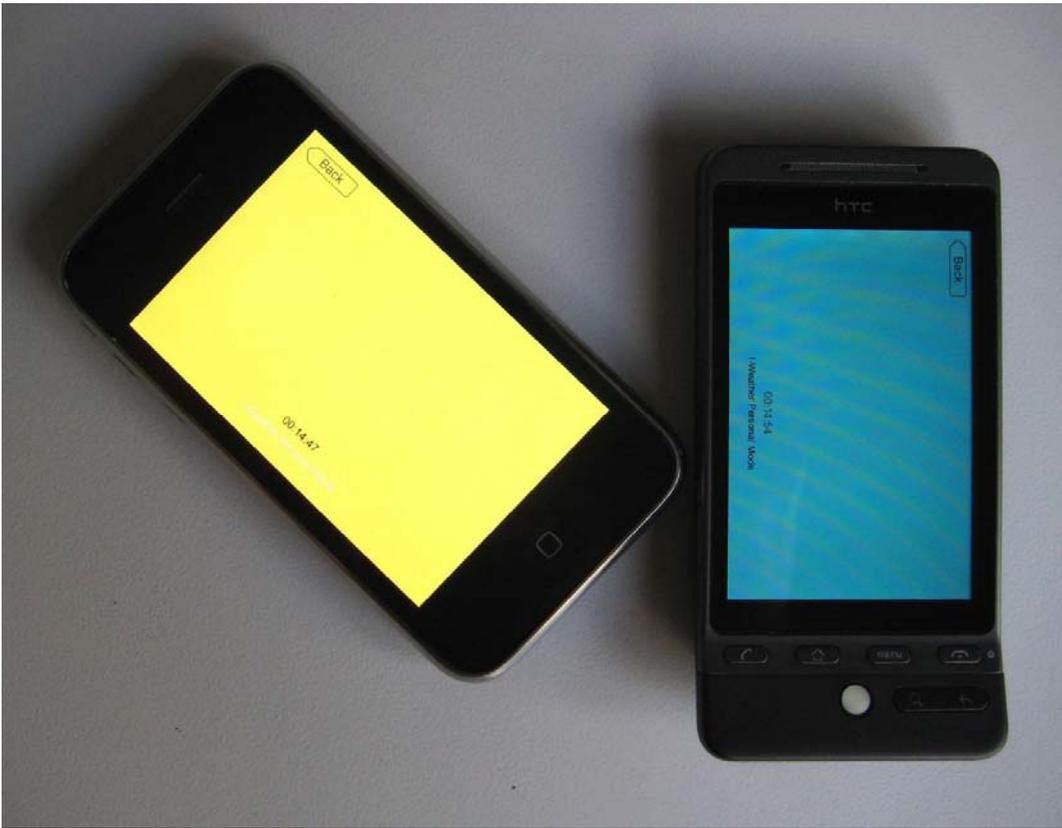
[Img. 6]



[Img. 7]



[Img. 8]



[img. 9]



[img. 10]

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## Image captions:

- [Img. 1] The new logo of I-Weather's artificial climate (v.2009), on which the entire light and color spectrum (from yellow-orange to blue through lime green) can be seen. One day in this parallel time lasts 25 hours 07 min. and 40 sec. "Connected" to it are potential deterritorialized or mobile "peripherals" (planes, space stations, space shuttles, rapid trains, big factory buildings or computer farms, undergrounds, airports, screens of all types, games and virtual environments, etc.)
- [Img. 2] I-Weather website: [www.i-weather.org](http://www.i-weather.org). The artificial regulation of circadian rhythms, outside of natural light references (natural cycle of day and night) is the main purpose of I-Weather. Recent scientific knowledge of biological rhythms has evolved, demonstrating that melatonin regulation is enhanced by using a minimum wavelength of 460nm (blue) and a maximum wavelength of 597nm (orange). These are the two new main colors used in the artificial light climate. Open source libraries and applications can be downloaded from the website.
- [Img. 3] The projected fluctuations in the melatonin rate according to the I-Weather climate. The pace is influenced by the amount and type of light received by the retina: blue light triggers a drastic diminution in melatonin secretion (similar to daytime period) while orange light doesn't affect the inner body clock (corresponding to a luminous nighttime, when quiet activities can still be undertaken).
- [Img. 4] Comparison between two melatonin diagrams: a natural cycle and a projected I-Weather one.
- [Img. 5] The artificial climate can be connected to any controllable, connected (luminous) device and synchronized. In this case, the light in the room is the same as the background color on the Internet page, at the same time (green transition color between blue and yellow).
- [Img. 6] Blue light in the computer room.
- [Img. 7] The background color of fabric | ch's website is synchronized to I-Weather.
- [Img. 8] The excellent architecture blog, Pruned, uses I-Weather as well as a sort of climatic banner.
- [Img. 9] Late in 2010, fabric | ch developed new I-Weather applications for iPhone, iPod Touch and iPad as well as for Android mobile platforms. They can be downloaded for free as well.
- [Img. 10] A mobile user that synchronizes himself to "blue time" with his iPhone.

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# Txt

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## I-Weather v.2009

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I-Weather is an international consortium created in 2001 that has set itself the goal of creating the world's first artificial climate to satisfy the metabolic and physiological requirements of a human being in an environment partially or completely removed from earthly influences: mediated reality, networks and "netlag", the disruption of the body clock that comes with air travel, as well as with extra-terrestrial trips and holidays.

Accessible everywhere and to everybody thanks to the Internet, this artificial climate called I-Weather makes it possible to live in a situation completely removed from natural locations by producing an artificial circadian rhythm synchronized to match the inner cycle of the human hormonal and endocrine system. In the absence of the natural terrestrial cycle of day and night, it becomes apparent that this inner cycle in fact lasts around 25 hours, and that body temperature, the alternation between sleep and wakefulness, and the accumulation and secretion of substances such as cortisone and oligopeptides, all depend on it. i-weather.org has therefore put together the first specifically human climate.

This version of I-Weather operates solely on the basis of fluctuations in the rate of melatonin, which in turn is influenced by variations in the intensity of light received by the retina. I-Weather acts as a kind of personal artificial sun, oscillating over a 25-hour 7 minutes and 40 seconds period between a maximum light frequency of 652 THz and a minimum of 503 THz.

The original version of I-Weather was launched on 26 October 2001 (version 1.0). It has been improved on June 5, 2009 (version 2.0) as scientific knowledge of biological rhythms has evolved, demonstrating that melatonin regulation is enhanced by using a minimum wavelength of 460nm (blue) and a maximum wavelength of 597nm (orange) rather than between 385nm (deep purple) and 509 nm (green). Actually, blue light suppresses the diffusion of melatonin in the body, while orange light allows performing actions without altering the body clock.

I-Weather is an open source, speculative architecture and art project. Its code has been ported to several platforms and can be downloaded for free to be used in personal projects (light installations, web sites, mobile phone applications, etc).

<http://www.i-weather.org>

fabric | ch and Philippe Rahm architects, June 2009

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# Satellite Daylight, 46°28'N

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2007

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Projet par fabric | ch

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Collection: Nestlé International (Collection d'Art Nestlé)

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Lieu: Vevey (CH)

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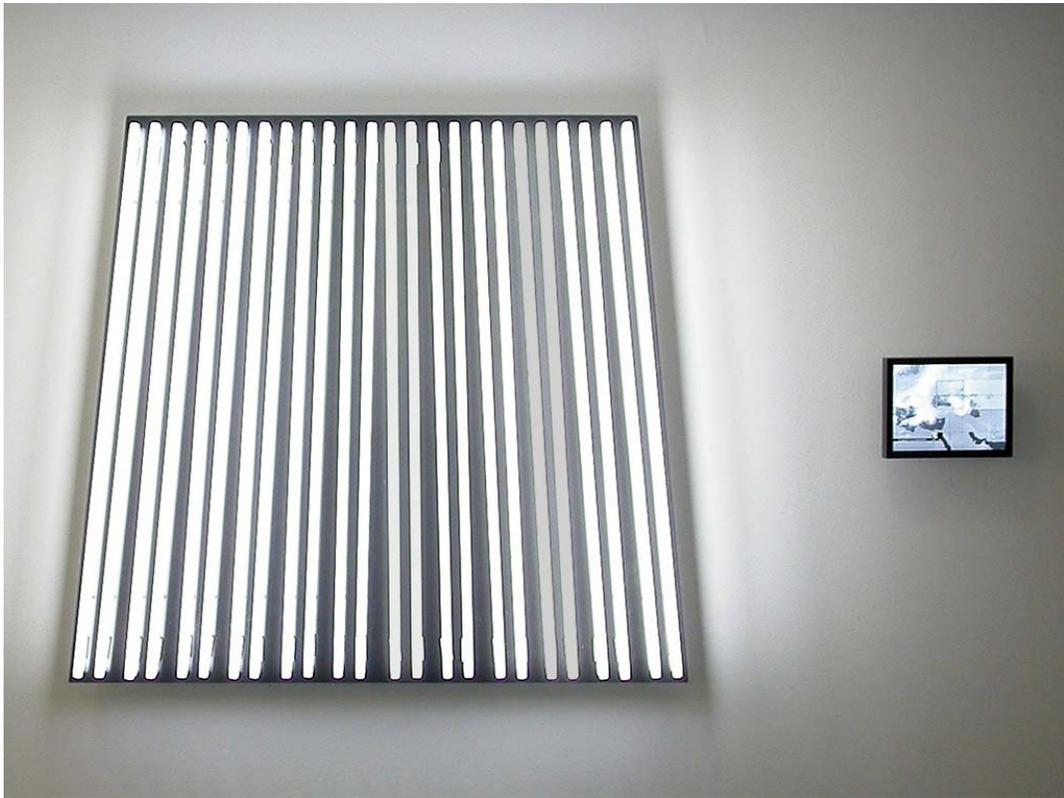
Exposition permanente au Centre International de Nestlé (Vevey, CH) et Haus der elektronischen Künste (Bâle, CH ; 08-11.12)

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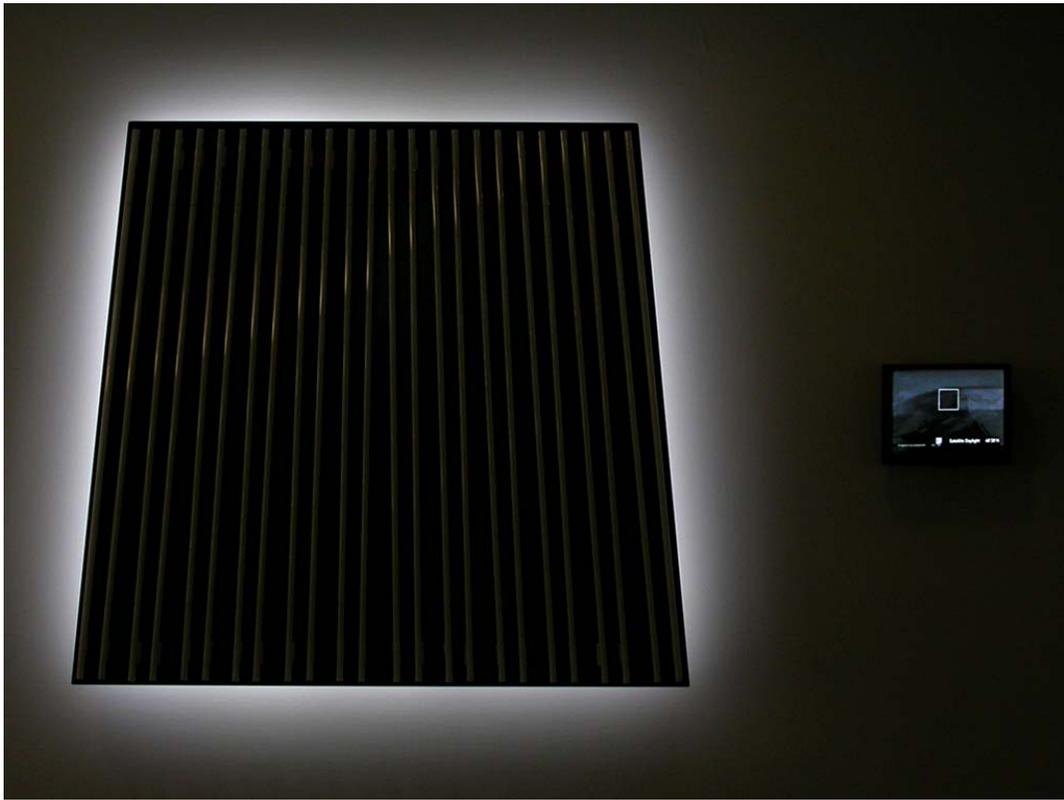
- 
- Echantillon d'illumination satellitaire
  - Rythme jour/nuit défini par un référentiel relatif (satellite imaginaire)
  - Artefact jour/nuit, ~15 levers et couchers de jour par 24 heures
  - Interférences des rythmes lumineux journaliers réels et artificiels dans l'espace d'installation du dispositif
- 
- Interface et logiciel Satellite Daylight. Captation des données en temps réel
-



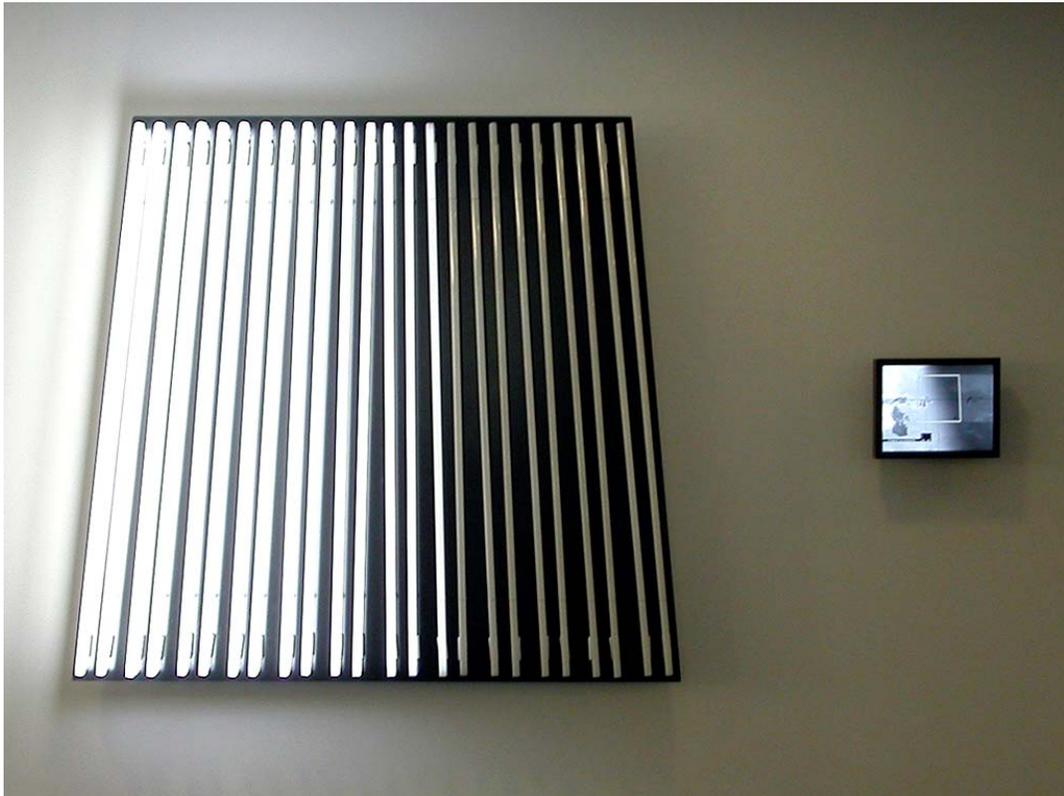
[img. 1]



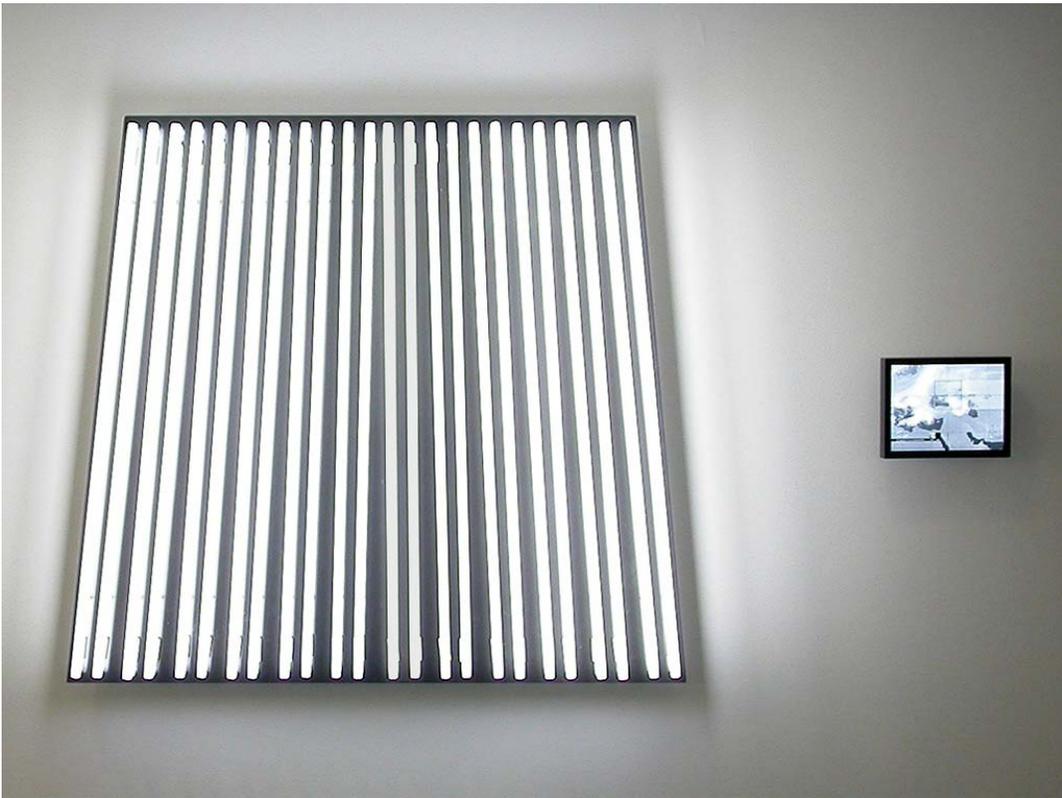
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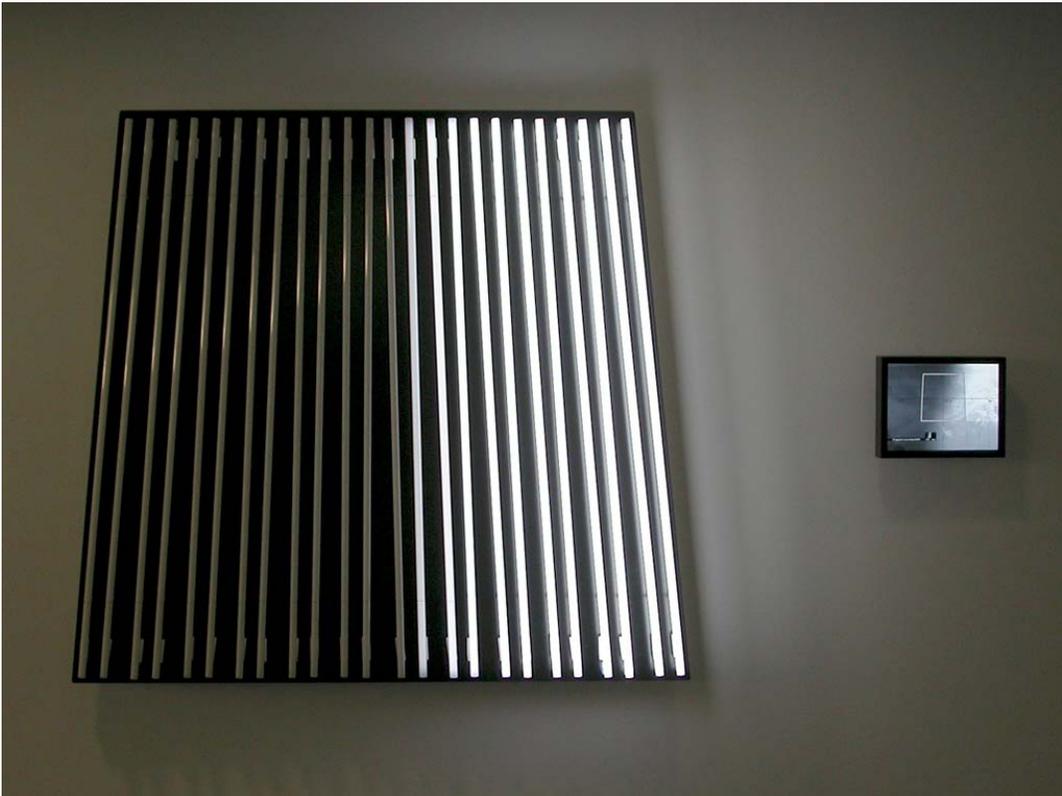
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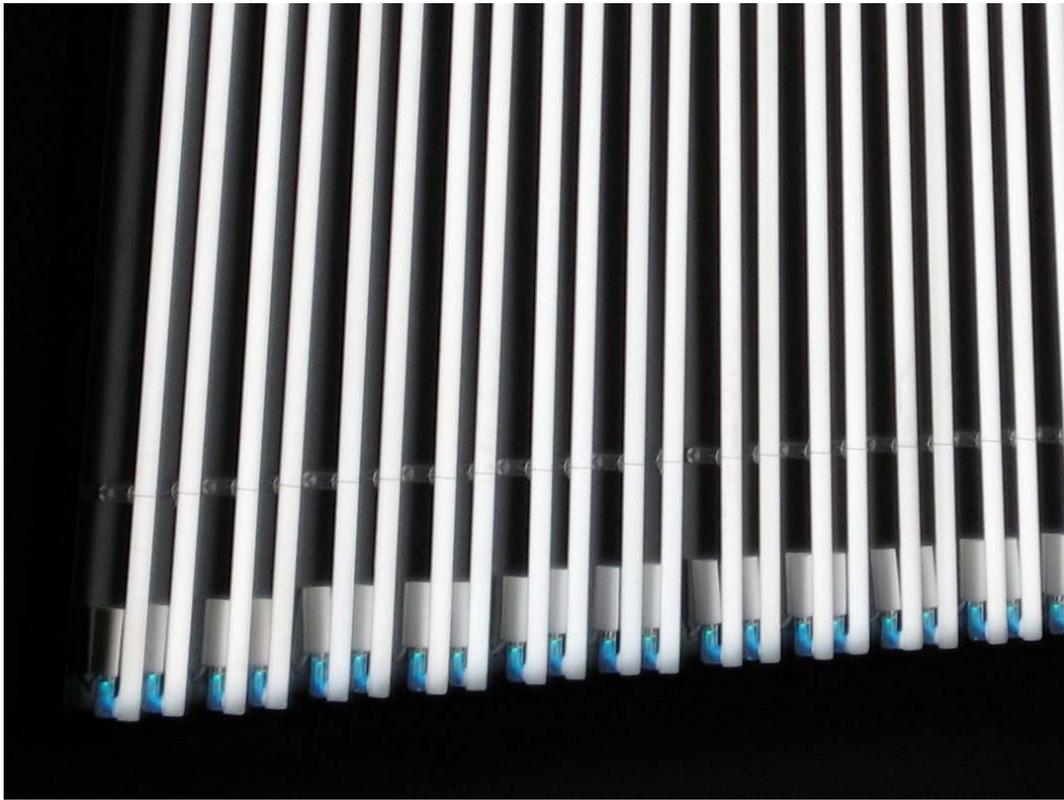
[img. 4]



[img. 5]



[img. 6]



[img. 7]



[img. 8]



[img. 9]



[img. 10]

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## Légendes:

- [Img. 1] Satellite Daylight, 46°28' N est une pièce lumineuse qui a été commandée à fabric | ch par Nestlé International en vue d'entrer dans leur collection d'art. Elle est installée de façon permanente depuis Octobre 2007 dans le centre mondial du groupe à Vevey (CH), à proximité de l'escalier hélicoïdal principal du bâtiment En Bergère, réalisé en 1960 par l'architecte suisse Jean Tschumi. La pièce illumine une partie de cet espace central de circulation.
- [Img. 2] Satellite Daylight, 46°28' N consiste en un échantillon de lumière de jour: une tranche d'une heure d'illumination terrestre, transmise en direct et séquentiellement depuis la latitude 46 degré 28 minutes Nord (46°28'N) et se déplaçant virtuellement à la vitesse d'un satellite (7541m/s).
- [Img. 3] La lumière émise par les néons haute-tension installés sur les deux faces opposées de l'œuvre joue toutes les variations sensibles de la lumière terrestre, passant alternativement dans les zones de jour et de nuit. Ici, la face avant se trouve au-dessus du pacifique alors qu'il y fait nuit, la face arrière, diamétralement opposée sur le globe terrestre, se trouve dans une zone de jour.
- [Img. 4] Satellite Daylight, 46°28' N en phase de « lever de jour ». L'interface du logiciel sur la droite de la pièce montre l'état et l'emplacement « virtuel » actuel du satellite lumineux ainsi que l'état de la couche nuageuse. Le logiciel qui pilote l'ensemble du comportement lumineux de la pièce (Satellite Daylight Software) actualise ces informations en direct, par le biais d'images satellites et de stations météo.
- [Img. 5] Phase de plein jour dans une zone ensoleillée. Grâce à l'actualisation des données par le biais du logiciel et des scripts pilotant Satellite Daylight, 46°28' N, la pièce ne se trouve que rarement deux fois dans le même état. A l'exception (comme ici) des phases de plein ensoleillement ou bien sûr des passages nocturnes.
- [Img. 6] Coucher de jour sur Satellite Daylight, 46°28' N. Les variations jour/nuit ainsi que celles de la couche nuageuse entraînent sur la pièce la création de motifs lumineux abstraits aux effets légèrement optiques. L'installation propose environ seize levers et couchers de jours par jour, accélérant ainsi l'échelle du temps et interférant de cette façon avec le rythme lumineux naturel (ainsi qu'artificiel) de l'espace dans lequel elle se trouve exposée.
- [Img. 7] Un détail sur le bas des tubes hautes-tensions réalisés sur mesure pour la pièce, avec leur halo de gaz bleuté caractéristique.
- [Img. 8] Satellite Daylight Software est le logiciel et l'ensemble des scripts qui pilotent l'installation. Il se présente sous la forme d'une interface animée où sont visibles la localisation actuelle « virtuelle » du satellite, le pourquoi de sa forme trapézoïdale (une largeur « d'une heure - 15° - » comprise entre deux longitudes vues en projection frontale et une hauteur de « 15° » comprise entre deux latitudes), l'état de la couche nuageuse ainsi que des informations climatiques sur les villes survolées par le satellite artificiel.
- [Img. 9] Vue de l'installation de Satellite Daylight, 46°28' N lors de l'exposition Sensing Place à la Haus für elektronische Künste de Bâle, septembre 2012. A gauche un travail de Timo Arnall et à droite *Serendipitor* de Mark Shepard.
- [Img. 10] Vue de l'installation de Satellite Daylight, 46°28' N lors de l'exposition Sensing Place à la Haus für elektronische Künste de Bâle, septembre 2012.

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# Txt

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## Satellite Daylight, 46°28'N

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Satellite Daylight, 46°28'N consiste en un échantillon de lumière de jour: une tranche d'une heure d'illumination terrestre, transmise en direct et séquentiellement depuis la latitude 46 degré 28 minutes Nord (46°28'N). Se déplaçant virtuellement à la vitesse d'un satellite (7541m/s), la lumière émise par les néons installés sur les deux faces opposées de l'œuvre joue toutes les variations sensibles de la lumière terrestre.

Captée à la même latitude que la ville de Vevey (CH), puis successivement dans tous les fuseaux horaires de ce même cercle géographique, la luminosité varie selon les heures, les lieux traversés, les jours ou les saisons grâce aux données et cartes météo satellitaires collectées de façon dynamique: jour ensoleillé, faiblement couvert, nuageux, passage nocturne où le jour et la lumière se trouvent alors sur le côté opposé du globe.

La forme « mondiale » endossée par la référence que fait l'œuvre à la figure du satellite permet en réalité de révéler de façon abstraite, mais sensuelle, toutes les nuances et les variations de la lumière, à chaque moment. C'est ainsi tout un rythme lumineux journalier qui se trouve transformé dans l'espace abritant Satellite Daylight, 46°28'N (Centre International Nestlé, Bâtiment En Berrière).

Satellite Daylight, 46°28'N cherche à relater, au travers d'un travail sur la lumière, les interférences temporelles et spatiales dans lesquelles l'homme occidental est aujourd'hui amené à vivre.

Mobilité, réseaux de communication mondiaux, voyages intercontinentaux, perception de la Terre comme entité, continuité du jour et de l'activité humaine à travers les fuseaux horaires, territoires virtuels, etc.: nous vivons ainsi dans une sorte de jour permanent où les dimensions et les références spatiales et temporelles se croisent, se superposent, s'accélèrent ou se mêlent.

Grâce à une approche basée sur la lumière et réalisée à l'aide de tubes lumineux haute-tension réalisés pour la pièce, Satellite Daylight, 46°28'N rend compte de ces mixages, de façon simple et sensible.

L'œuvre propose en effet de mêler une atmosphère lumineuse locale (Vevey, le rythme du jour habituel dans l'espace du bâtiment) à celle d'un rythme jour-nuit différent, se modifiant à la vitesse de 7541 m/s et fixé sur un autre référentiel, à l'échelle planétaire: un satellite imaginaire. L'artefact lumineux ainsi créé permet donc de vivre environ quinze levers et couchers de soleil par jour (un toutes les nonante minutes environ), dans l'espace où l'œuvre est exposée. Ajoutés aux deux autres levers et couchers de jour naturels qui ont lieu Vevey, ceux-ci contribuent à créer un environnement paradoxal où deux temporalités et deux référentiels lumineux s'entrecroisent.

fabric | ch, Octobre 2007



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# Interférences dimensionnelles

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2007

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Projet de fabric | ch

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Exposition dans le cadre de « 70 architect(e)s » (Montréal, CA)

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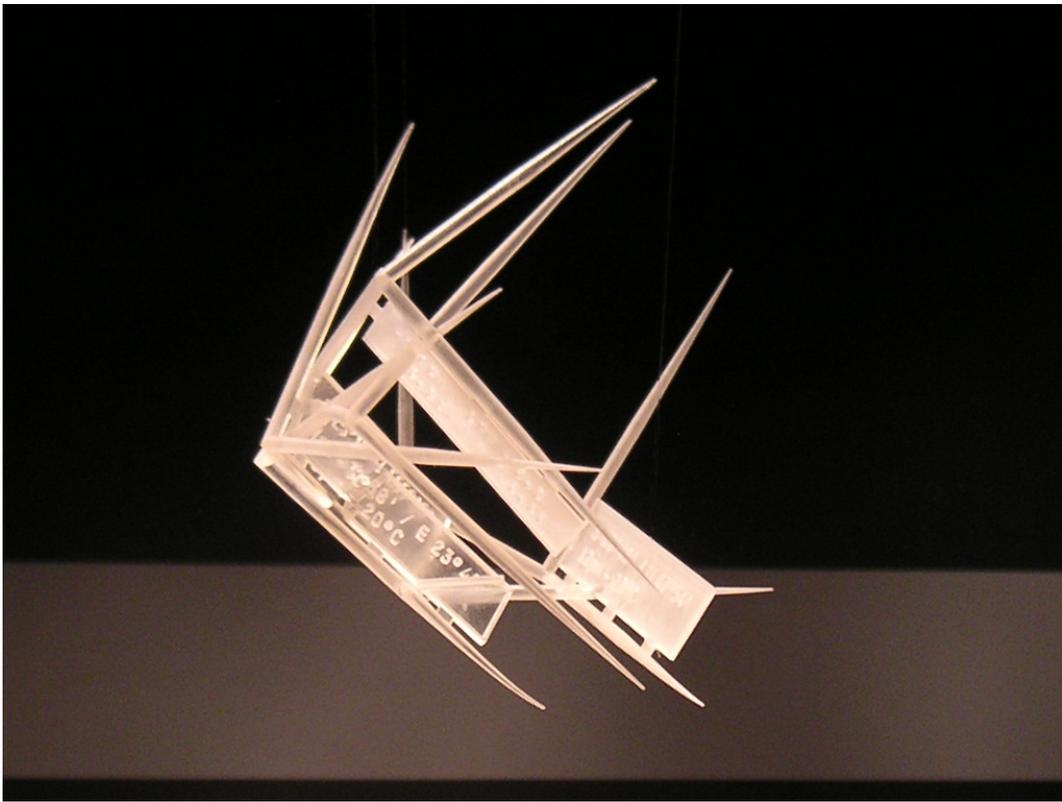
Avec le soutien de ProForm

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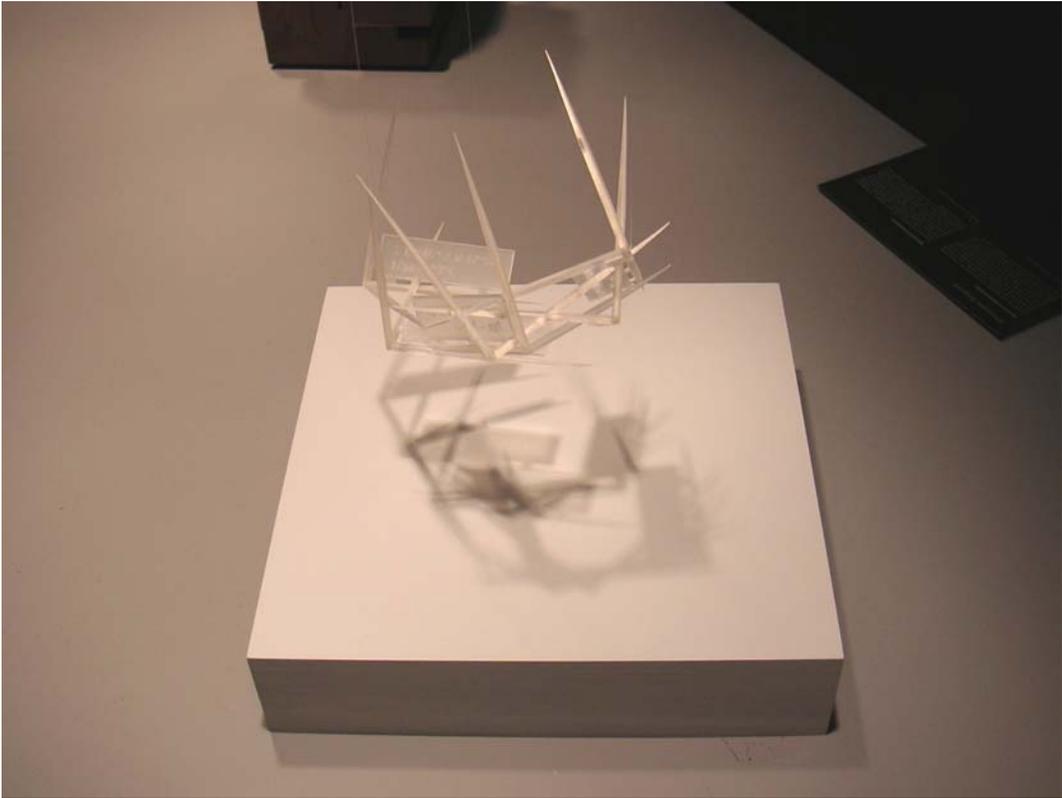
- Modèle descriptif d'interférences spatiales, temporelles et dimensionnelles
- Matrice de spatialités mondiales
- Architecture « ex-dimensionnelle »
- Situations coexistantes et/ou coprésentes (proches et lointaines, privées et publiques, physiques et digitales, etc.)



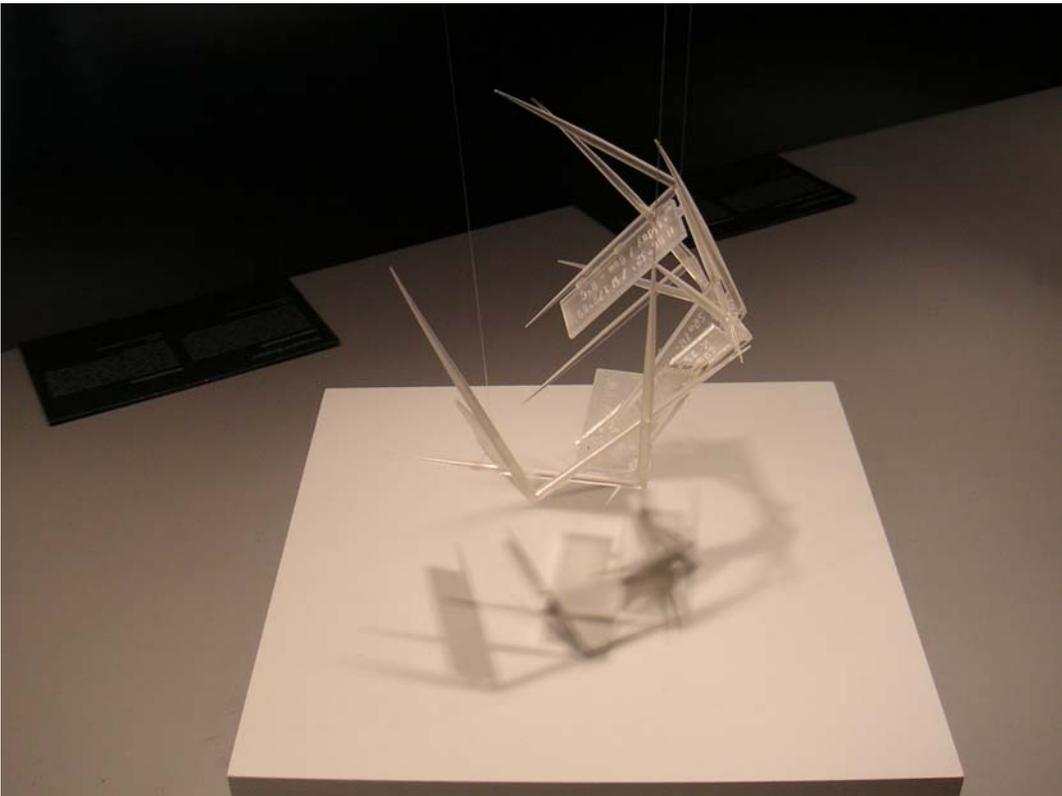
[Img. 1]



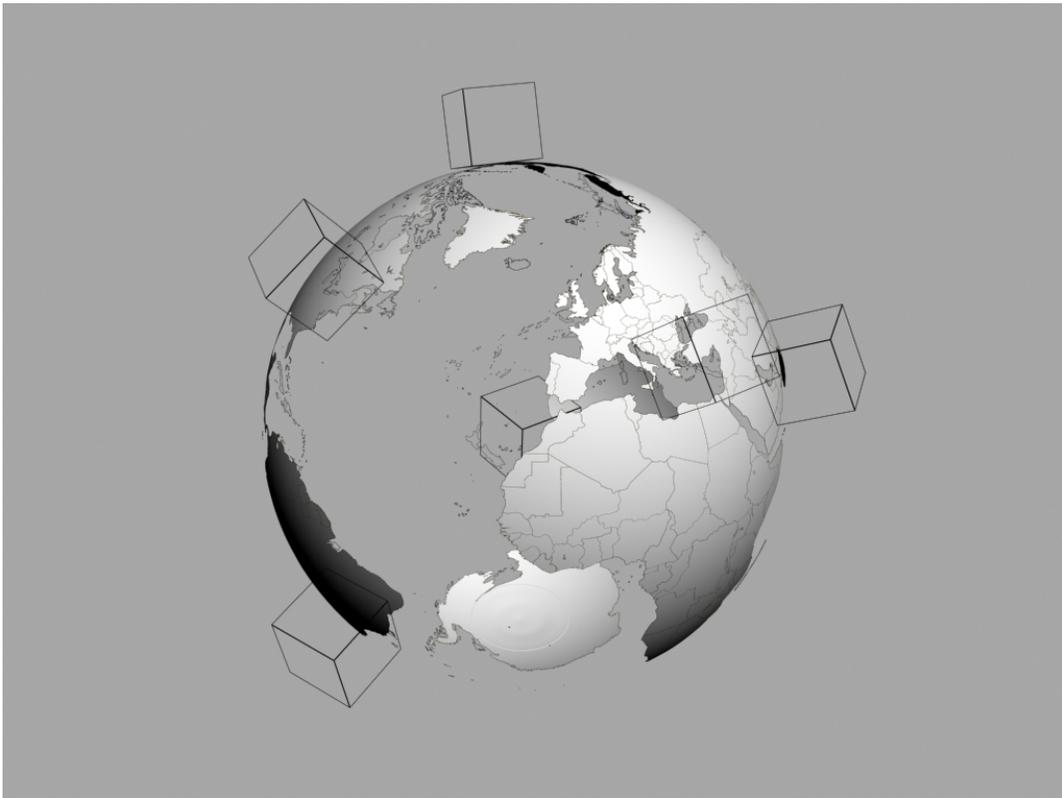
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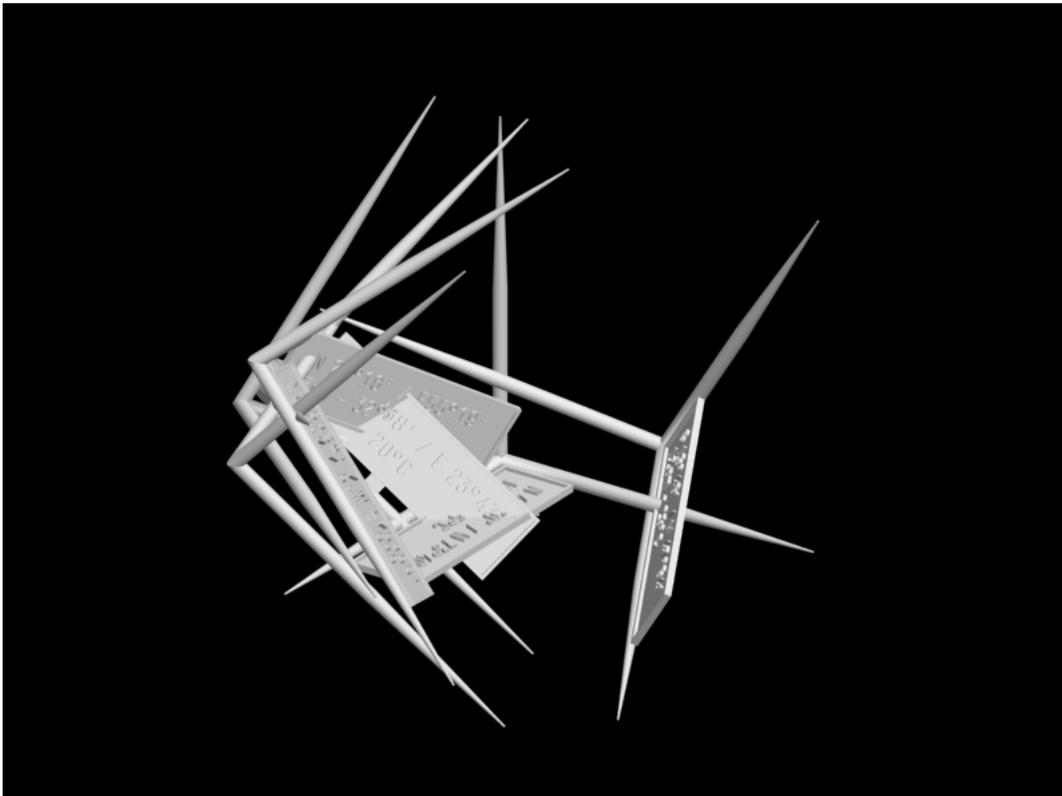
[img. 3]



[img. 4]



[Img. 5]



[Img. 6]



[img. 7]

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## Légendes:

- [Img. 1] Interférences dimensionnelles à Montréal, dans le cadre de l'exposition « 70 architect(e)s ».
- [Img. 2] Vue latérale d'*Interférences dimensionnelles*. Le référentiel « horizontal » de la matrice architecturale est ici celui de Montréal, lieu de l'exposition « 70 architect(e)s ».
- [Img. 3] La disposition d'*Interférences dimensionnelles* est propre à l'espace local : le référentiel de Montréal est orienté selon les points cardinaux.
- [Img. 4] Matrice pour interférences entre spatialité locale (ici, Montréal) et variabilité distante. Dans l'élaboration d'un projet à partir de cette matrice d'architecture, les interférences ne seraient pas nécessairement de l'ordre du géométrique, mais potentiellement temporelles, climatiques, lumineuses, énergétiques ou encore informationnelles.
- [Img. 5] Emplacement des cinq lieux sélectionnés pour créer la matrice : Athènes, Brasilia, Dubaï, l'intersection du cercle arctique et de l'antiméridien, Montréal. Au centre, un sixième référentiel, purement abstrait, évoque les espaces digitaux en réseaux (Internet, Facebook, Google Earth, Second Life, HOME, MIX-m, etc.)
- [Img. 6] Intersections et combinaison des six référentiels servant de nouveau référentiel (et matrice), ex-dimensionnel. Chacun garde son orientation relative, par rapport à la courbure terrestre et indique date et heure (il s'agit du même « moment » sur Terre pour tous ces lieux), une coordonnée GPS et la température du lieu à cette date.
- [Img. 7] Détail de la matrice architecturale présentant les valeurs entremêlées et temporellement figées de certains référentiels, fixés au moment de la matérialisation stéréo-lithographique de l'objet (positionnements GPS, heures et décalages GMT, températures).

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# Txt

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## Interférences dimensionnelles

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*Interférences dimensionnelles, matrice d'architecture*

*Interférences dimensionnelles* n'est pas à proprement parler une architecture en tant que telle. Créée pour l'exposition « 70 architect(e)s » qui a eu lieu à Montréal du 19 septembre au 21 octobre 2007, *Interférences dimensionnelles* se présente plutôt comme une « matrice » à l'échelle 1 : x qui combine de manière simultanée les dimensions spatiales, temporelles ou encore climatiques d'une série de localisations terrestres actuelles ou virtuelles.

Athènes, Brasilia, Dubaï, intersection du cercle arctique et de l'antiméridien, Montréal. 37°58' N / 23°43' E, 15°46' S / 47°54' W, 25°16' N / 55°19' E, 66°33' N / 180°00'E-W, 45°30' N / 73°40' W. Cinq lieux signifiants, représentatifs des approches architecturales, urbaines et énergétiques de la société occidentale et/ou de l'histoire de l'architecture, cinq coordonnées abstraites sur une mappemonde, cinq référentiels interconnectés, coprésents, pour de nouvelles situations spatiales.

De cet « instantané » peuvent être écrites des fictions spatiales qui ne cherchent ni vérité ni transcendance, mais se construisent sur des interférences entre spatialité locale (ici, Montréal) et variabilité distante, vécu à échelle humaine et perception planétaire. Un objet mobilier, une maison, une place publique, un espace virtuel, un autre lieu encore. Le potentiel de cette « matrice » d'architecture « ex-dimensionnelle » ne se limite pas à un programme pour un site donné, mais offre la possibilité de concevoir des projets qui s'inscrivent dans un espace contemporain variable aux référentiels multiples.

Cette matrice signale également ici, en tant qu'objet d'exposition, la nature désormais « interférentielle » de l'espace contemporain dans lequel vit aujourd'hui l'homme occidental. Espace « interférentiel », dans le sens du surgissement de courte, moyenne ou longue durée de spatialités distantes ou hétérogènes au sein de spatialités locales et de situations définies (hyper-localité ?). Ces « surgissements » et interférences étant dorénavant rendus possibles par la « médiatisation » (au sens du rapport médiatisé) grandissante de la relation à l'espace.

fabric | ch, septembre 2007

*Interférences dimensionnelles* a été réalisé grâce à un procédé de stéréolithographie par la société ProForm SA à Marly, Suisse.



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# Perpetual (Tropical) SUNSHINE

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2005

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Project by fabric | ch

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Client: City of Lyon (FR)

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Locations: Paris, Lyon & Montpellier (FR), Basel (CH), Stavanger (NO), Madrid (ES),  
Lausanne (CH)

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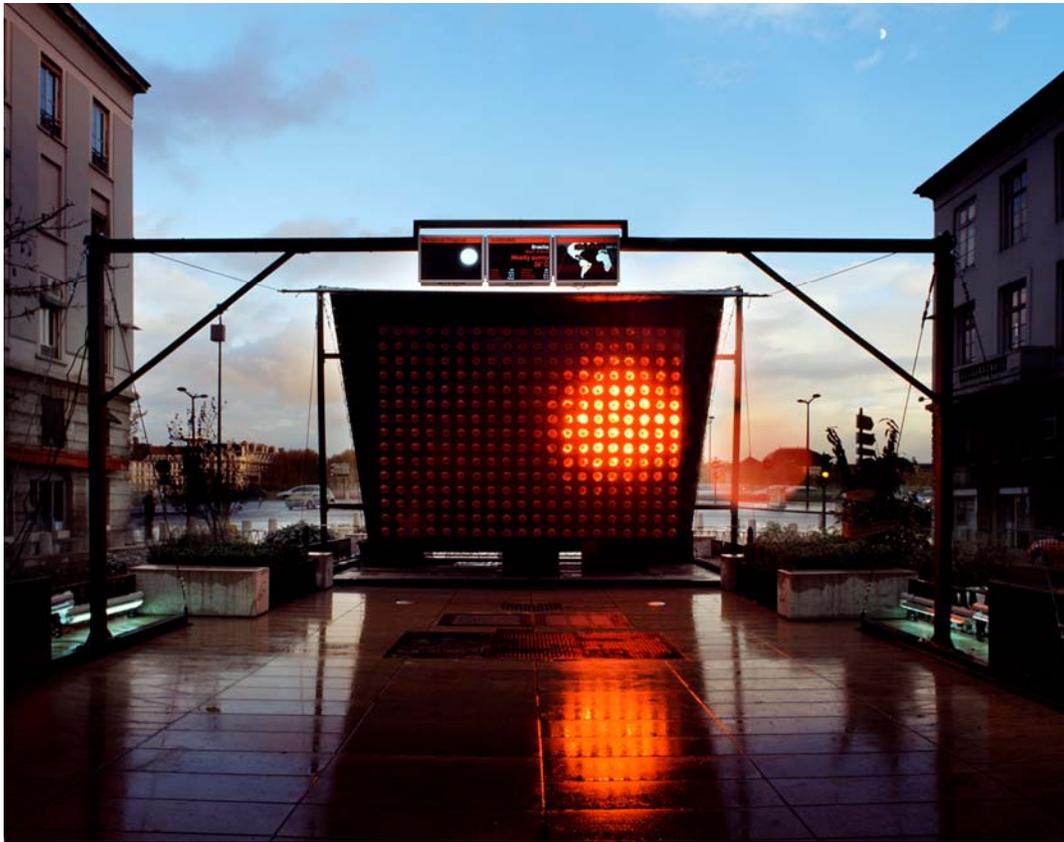
With the support of Sitemapping/Mediaprojects (Swiss Federal Office for Cultural  
Affairs), Pro Helvetia and Osram

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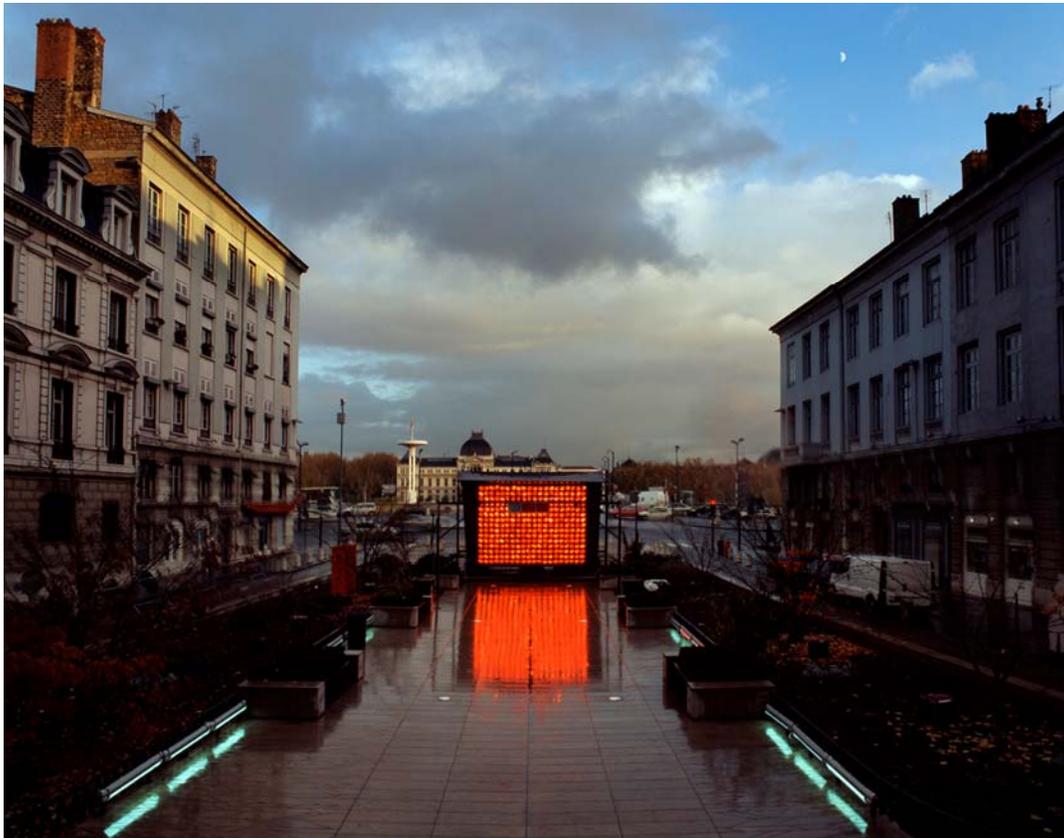
Exhibited during festival Lyon Lumières (Lyon, FR), Swiss Art Awards (Basel, CH),  
Festival Emergences (Montpellier & Marseille, FR), Festival Article 06 (Stavanger,  
NO), Madrid's (S) and Paris' Nuit Blanche (FR), Transat Festival (Lausanne, CH), EXIT  
MAC Créteil (Paris, FR)

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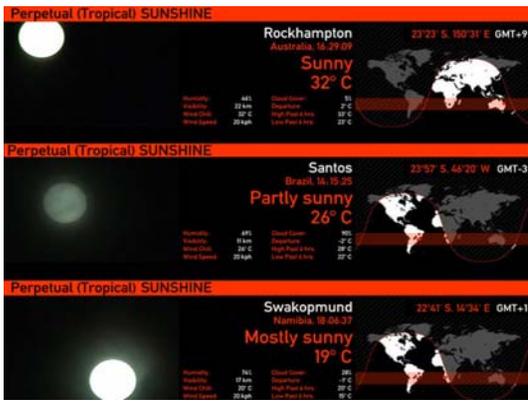
- Summer displacement
  - Space of perpetual day & summer
  - Tropical networking
  - Interferential architecture
  - Heating image & screen
  - IR heated space
- 
- Interface & software Perpetual (Tropical)  
SUNSHINE



[img. 1]



[img. 2]



**Perpetual (Tropical)**

City:	Visibility:	Temperature:	GMT:
Antofagasta	mostly sunny	20	-4
Iquique	sunny	22	-4
Arica	sunny	22	-4
Pozo Colorado	partly sunny	27	-4
Juiz de Fora	sunny	23	-3
Windhoek	mostly sunny	27	+1
Swakopmund	sunny	17	+1
Walvis Bay	sunny	17	+1
Kang	sunny	26	+2
Mahalapye	mostly sunny	23	+2
Gaborone	sunny	22	+2

[Img. 3, 4]



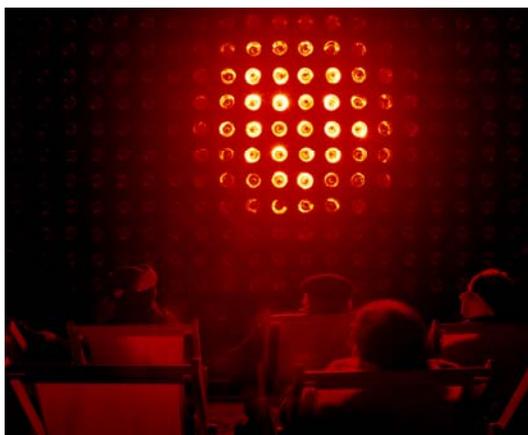
[Img. 5, 6]

**Perpetual (Tropical)**

79	73	59	41	30	19	14	10	9	6	5	5	4	4	4	4	4	3	3	4	
130	115	91	62	39	27	15	12	9	6	6	5	5	4	4	4	4	3	4	4	
254	255	136	80	53	33	18	14	10	8	6	5	5	5	4	4	4	4	5	5	
254	254	254	103	64	37	19	13	10	6	6	5	5	4	4	4	3	4	4	2	
254	254	254	112	69	38	21	14	11	8	6	6	5	5	4	4	4	4	4	4	
254	254	254	108	64	35	22	14	11	8	6	5	5	5	4	4	4	4	5	4	
254	254	145	90	54	33	19	13	10	8	8	5	6	4	5	4	4	4	4	5	
142	131	90	66	45	25	15	12	9	8	6	5	5	4	4	4	4	6	6	4	
85	71	54	43	28	20	13	10	8	6	5	5	5	4	2	4	4	4	4	4	
44	41	32	30	20	14	11	9	8	6	5	5	4	4	4	3	4	4	4	5	
25	23	20	18	14	10	10	8	6	5	5	4	4	4	4	4	4	4	4	5	4
19	15	14	12	11	10	8	6	6	5	4	4	4	4	4	5	5	4	4	4	3
12	11	10	10	9	8	6	7	5	4	5	4	5	4	6	4	3	4	3	3	3



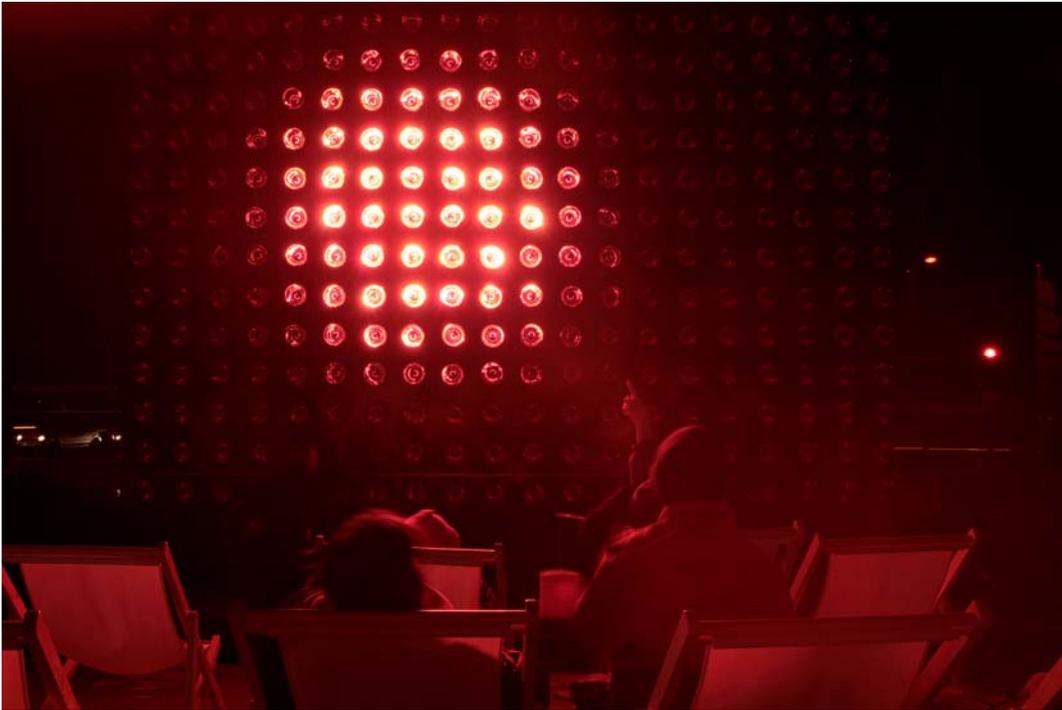
[Img. 7, 8]



[Img. 9]



[img. 10]



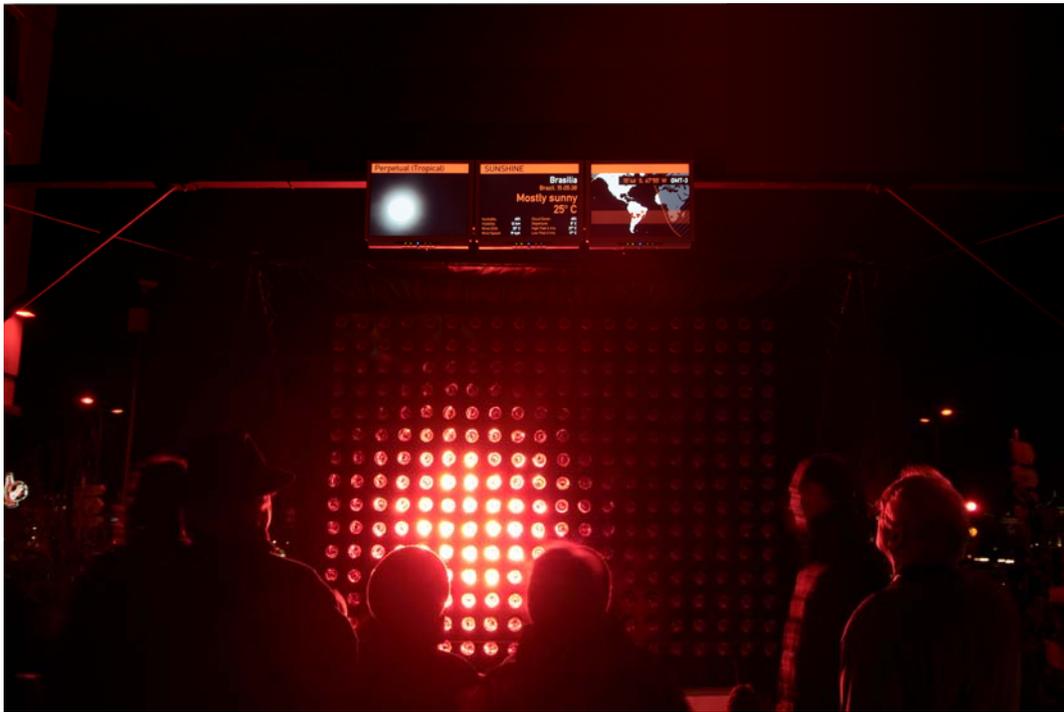
[img. 11]



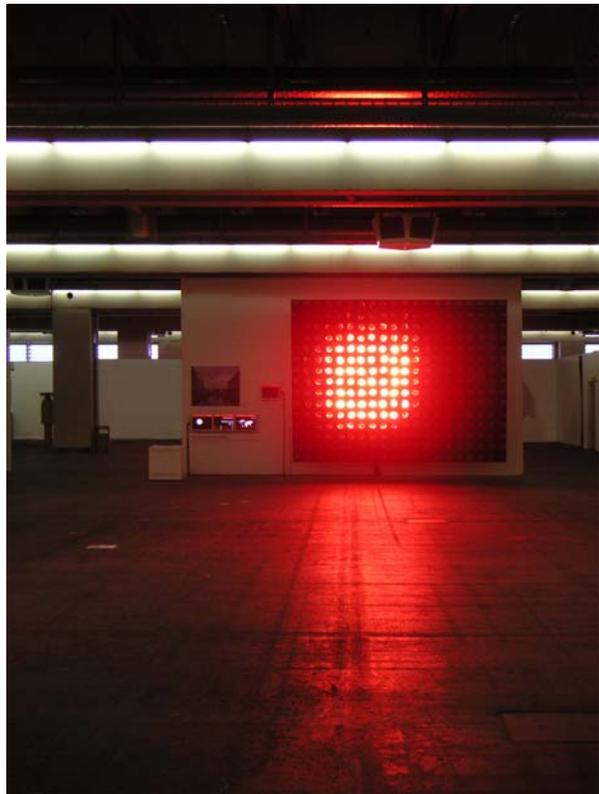
[Img. 12]



[Img. 13]



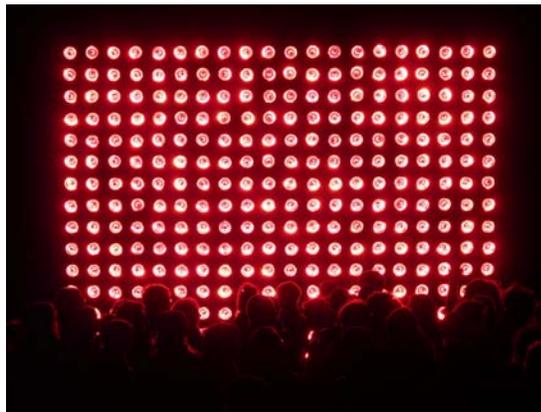
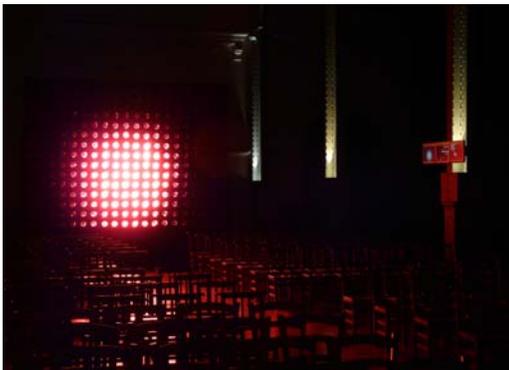
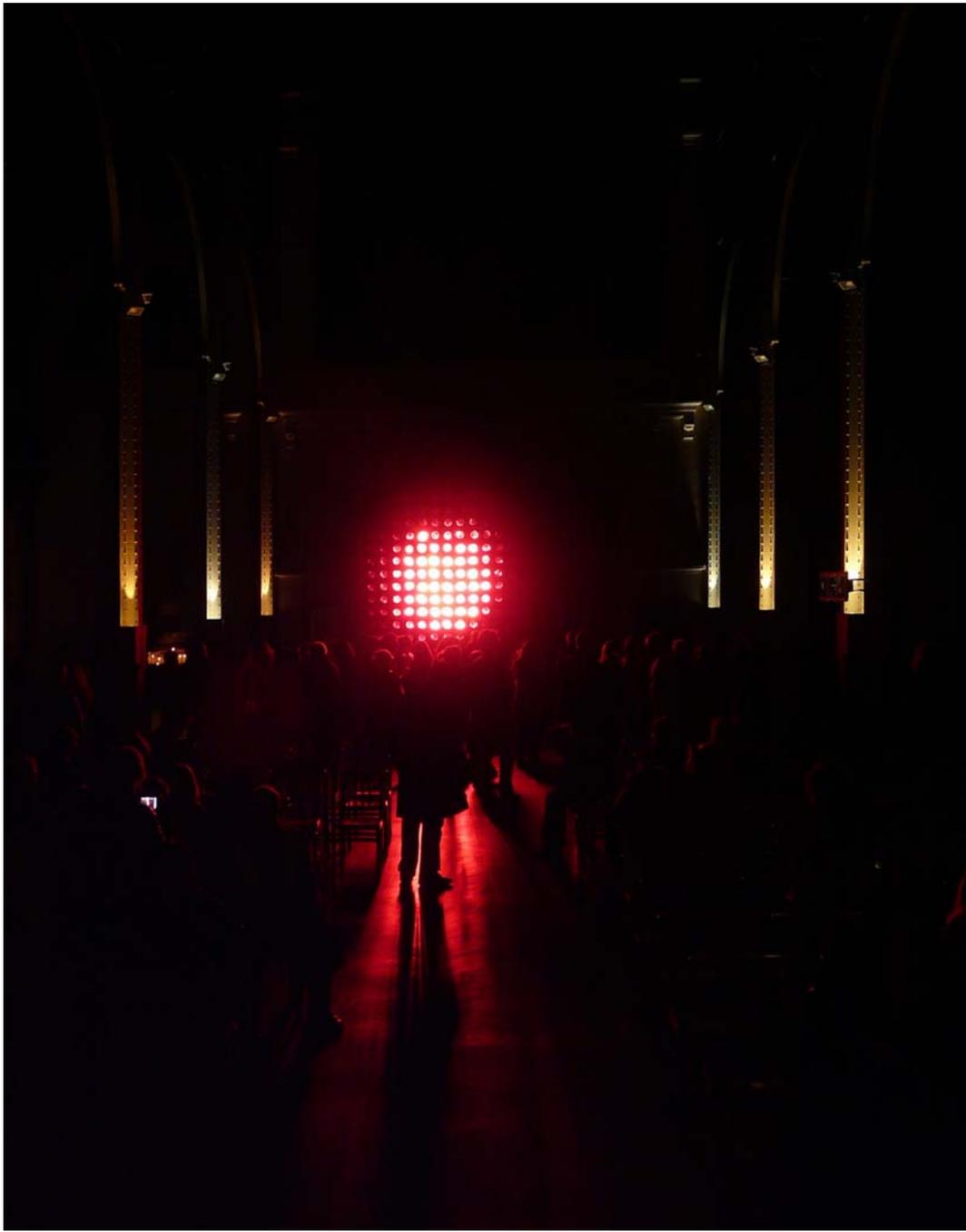
[Img. 14]



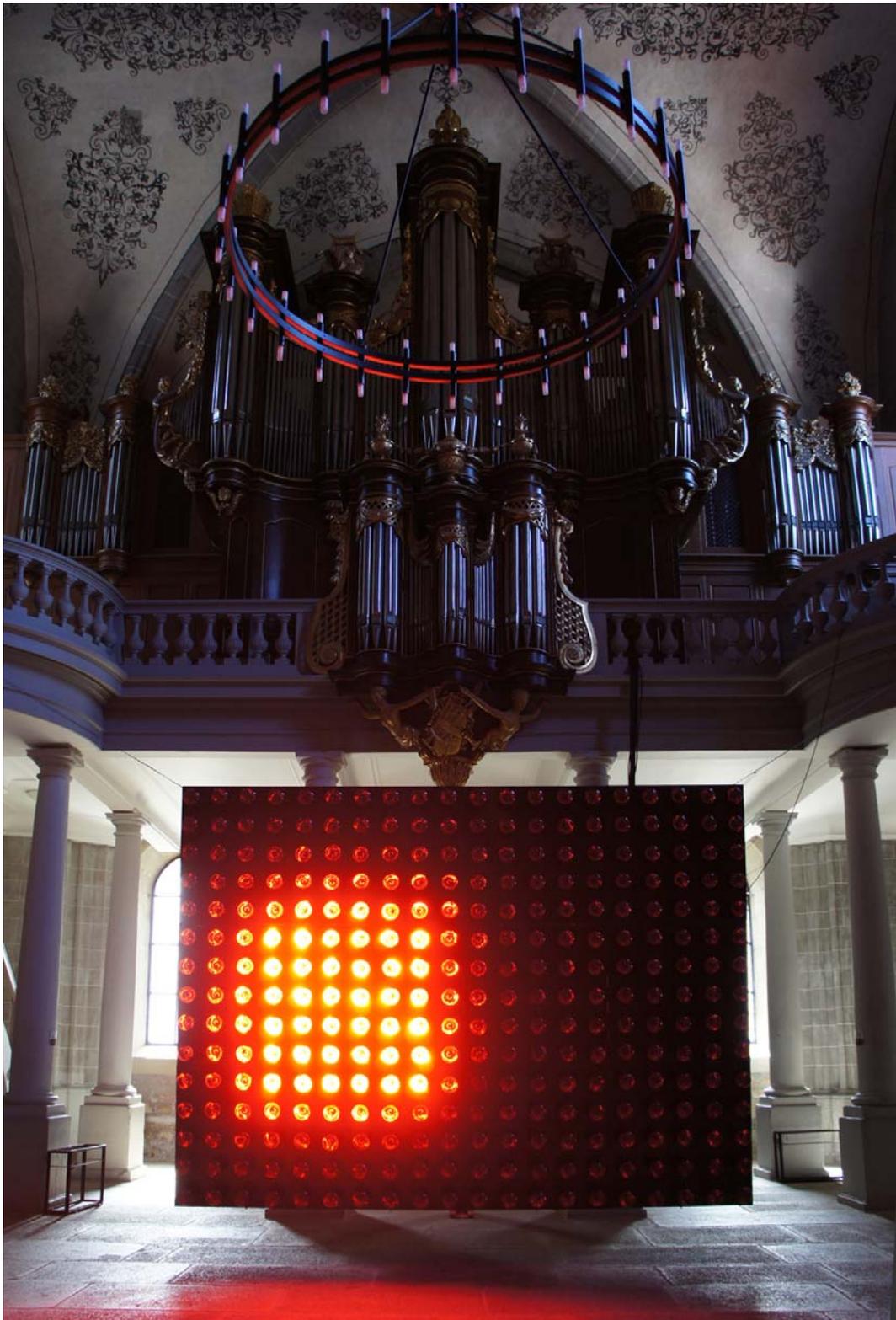
[Img. 15, 16]



[img. 17]



[Img. 18, 19, 20]



[img. 21]

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## Image captions:

- [Img. 1] Perpetual (Tropical) SUNSHINE, outdoor installation in Lyon for Lyon Lumières 2005. Sun, Moon & beginning of night, rain. One large infra-red & heating screen made out of 300 infrared light bulbs (150W each) displays a distant and live image of the sun. 3 small lcd screens in front of it show which data is currently processed by Perpetual Tropical software.
- [Img. 2] Installation in Lyon, full screen, end of day time.
- [Img. 3] Snapshots on the 3 screens. 3 states of Tropical software where it has gathered information and the live image of a located & active sun. 3 different examples of 3 distant cities captured under the tropic of Capricorn. On the left, the image of the sun which is transmitted to the IR screen.
- [Img. 4] Tropical software phase 1 & 2: tracking for sunny locations and cities under the tropic of Capricorn then selecting a city and its weather data.
- [Img. 5-6] Tropical software phase 3: displaying "live" climatic information about the selected city and phase 4: locating the city on the earth map.
- [Img. 7-8] Tropical software phase 5: opening the live image of the city's sun. Verifying if it's active and not behind a cloud. The image processing software is always active and is checking for the intensity of the sun's illumination. Phase 6: displaying the selected and checked image of the active sun on one of the lcd screens.
- [Img. 9] The selected and processed image of the live sun displayed on the infrared screen: a heating image in Lyon, a captured summer and day condition displayed within northern hemisphere's winter and night.
- [Img. 10] People lying under the abstract IR sun.
- [Img. 11] An artificial tropical sunrise in Lyon, December 2005.
- [Img. 12] Lyon, December 2005, 4.45 pm.
- [Img. 13] Lyon, night condition, 10.35 pm.
- [Img. 14] People warming up in front of Perpetual (Tropical) SUNSHINE and witnessing the 3 screens dedicated to Tropical software activity.
- [Img. 15] Installation at the Swiss Art Awards 2006, lateral view (cabling is location dependent and can be fully integrated in the sun's screen that is suspended).
- [Img. 16] Installation of Perpetual (Tropical) SUNSHINE during the Swiss Art Awards 2006, as part of Art | Basel. Sun of the 27th of May, 2006, Rio de Janeiro / Basel.
- [Img. 17] Perpetual (Tropical) SUNSHINE's atmosphere in Montpellier.
- [Img. 18-20] Installation during Paris' Nuit Blanche in the Church Notre-Dame-du-Travail, October 2008.
- [Img. 21] Installation during Transat Festival, Lausanne in the Church of Saint-François, June 2012.

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# Txt

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## Perpetual (Tropical) SUNSHINE

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Perpetual (Tropical) Sunshine is an architectural, climatic and temporal installation made of heat and light. Thanks to a "screen" composed of several hundred infrared light bulbs, Perpetual (Tropical) Sunshine retransmits non-stop the journey and intensity of the sun on the 23rd parallel south, according to information transmitted live by weather centers all around the Tropic of Capricorn.

Perpetual (Tropical) Sunshine thereby creates a displaced architectural space, in terms of both climate and time. This stimulated space confronts the visitor with an abstract form of day and endless summer. It represents the increasingly artificial nature of our environment and suggests a form of "static mobility" or "displaced tropicality". Facing Perpetual (Tropical) Sunshine, the visitor can experience an abstract journey through tropical sunshine without any apparent movement, across longitudes and time zones.

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Context:

During the last twenty years, the citizens of European and North-American cities have seen an increase in the number of external heating systems using infra-red lamps installed on terraces during winter. This use of urban space, characteristic of the summertime, whereby people sit down to linger over a coffee and check out the passersby, can thus prolong the few weeks or months of suitable climate the summer usually grants us. Thanks to these infra-red lamps, a typically southernmost behavior slowly permeates the more northerly parts of the northern hemisphere, making it possible for people to spend more time outdoors, together in public spaces.

It is always surprising to witness such transformations in people's urban behavior. In this case, this use of public space during winter is mainly due to the use of these artificial lighting systems that generate heat (the interesting point being that the i.r. light doesn't heat the air, but directly any surface exposed to it and mainly in this case, skin). Today, people can gather in the cold winter of Paris, Berlin, London and even in Oslo or Stockholm, taking advantage of these localized spaces of artificial summer. Such behavior signals the rise of new types of contemporary spaces, whereby man takes control of the natural conditions of his environment in order to increasingly adapt them to his cultural needs and requirements. Whilst the artificiality increases, new spatial paradigms and artifices become possible.

Perpetual (Tropical) SUNSHINE proposes to explore these new types of spaces based or built on dimensional handling. It tries to render visible and comprehensible the major variations which take place today in the Western way of inhabiting contemporary spaces.

<http://www.fabric.ch/pts>

fabric | ch, January 2006

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# RealRoom(s)

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2005

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Project by fabric | ch

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Client: Nestlé

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Location: Vevey (CH)

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Exhibited at Centre Culturel Suisse (Paris, FR), FILE Festival (Rio de Janeiro & Sao Paulo, BR), Mediaruimte (Brussels, BE)

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- Nestlé world headquarters
  - Architectural retrofitting
  - Global space & conditioning
  - Spatial displacements & streaming of Earth's atmospheres
  - Spatial devices connected to the 24 hours' time zones,  $-180^{\circ}$  to  $+180^{\circ}$  longitudes,  $-90^{\circ}$  to  $+90^{\circ}$  latitudes
- 

- **Video**

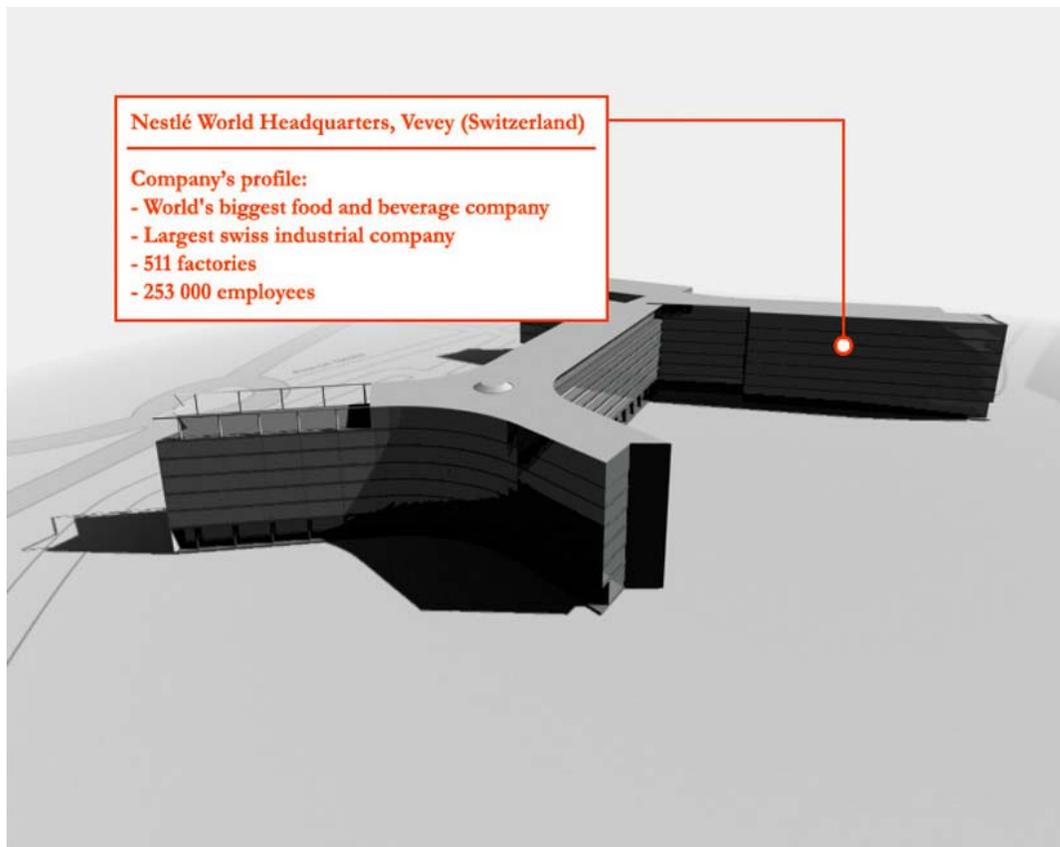
for "Architecture invisible", Centre Culturel Suisse (Paris, FR). Curator Philippe Rahm

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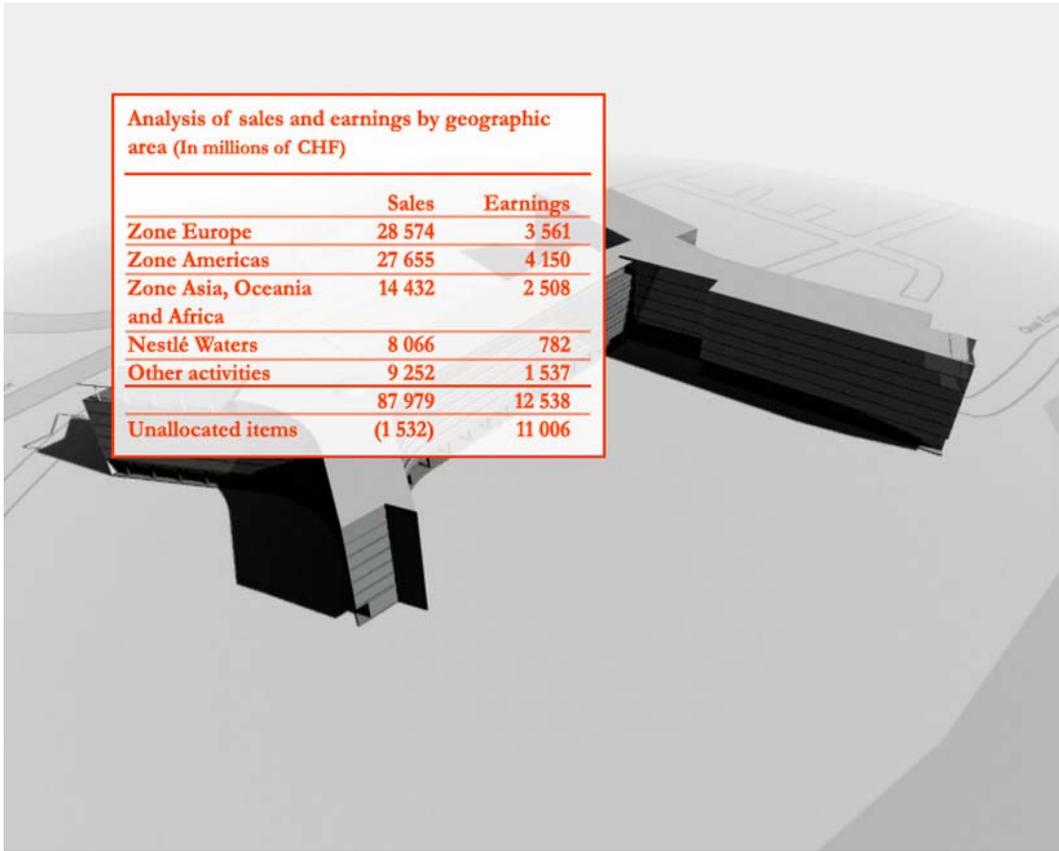
# RealRoom(s)

Peripheral Architecture for the Nestlé World Headquarters,  
Vevey (Switzerland), 2005

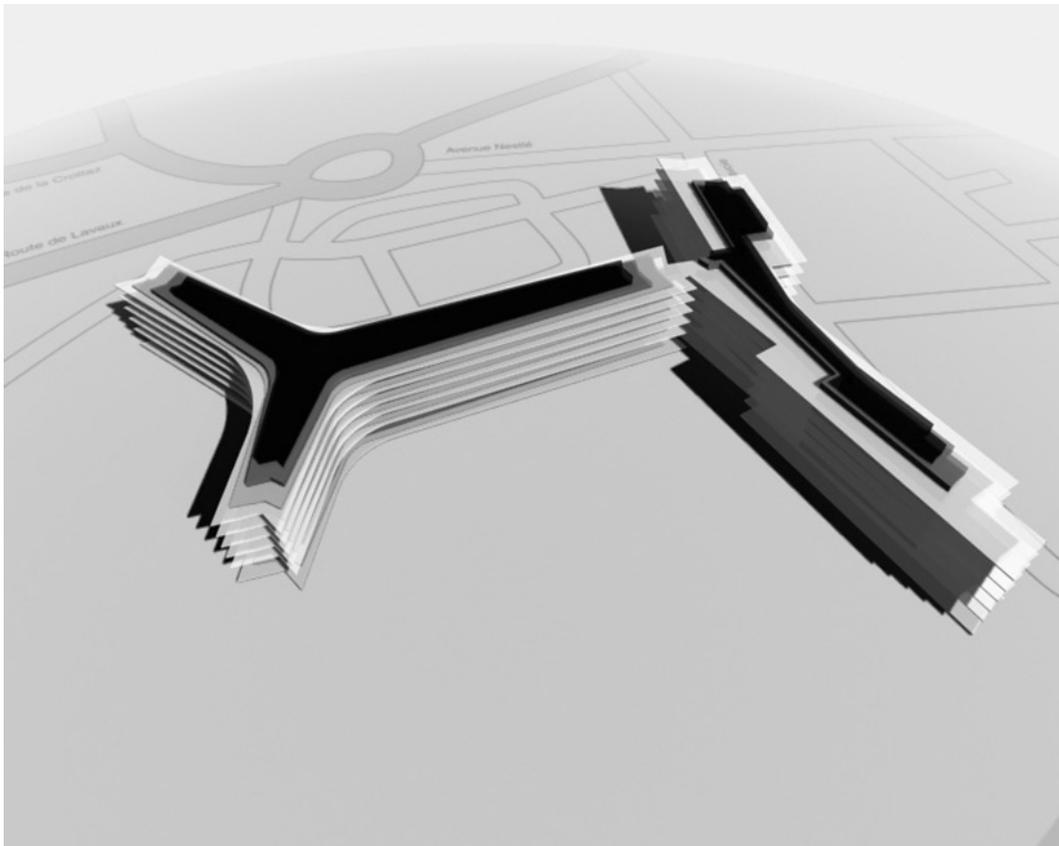
[Img. 1]



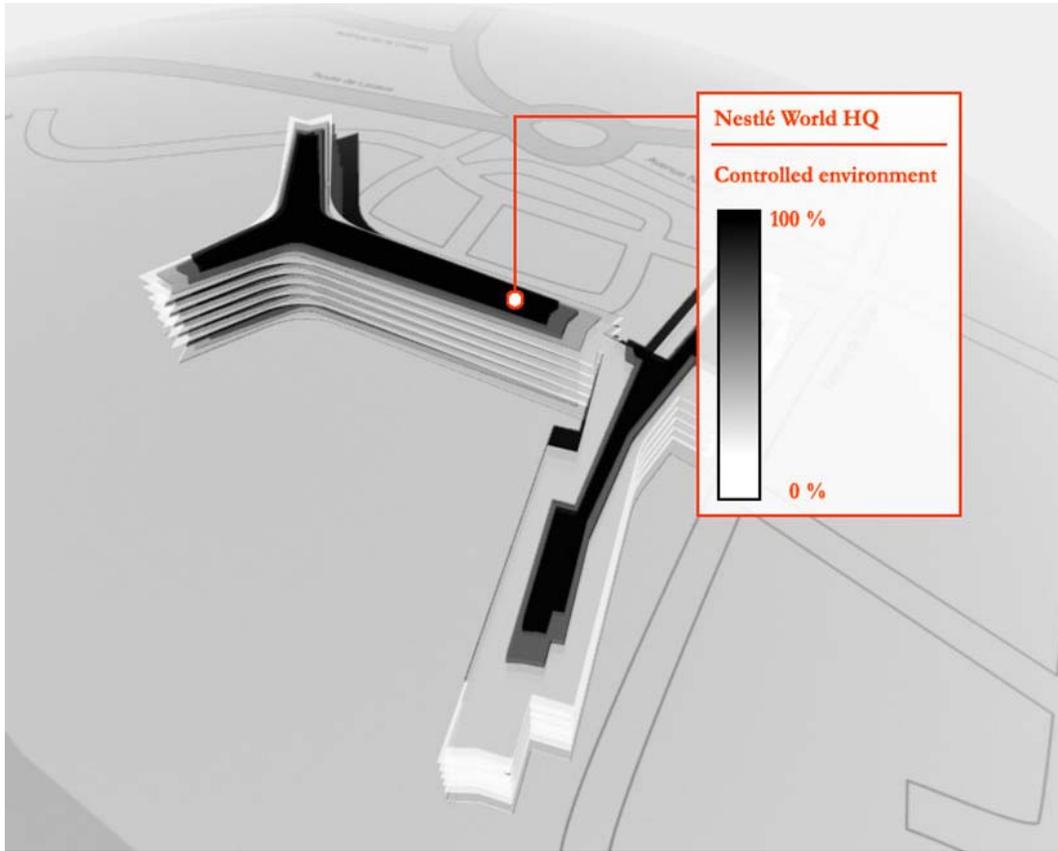
[Img. 2]



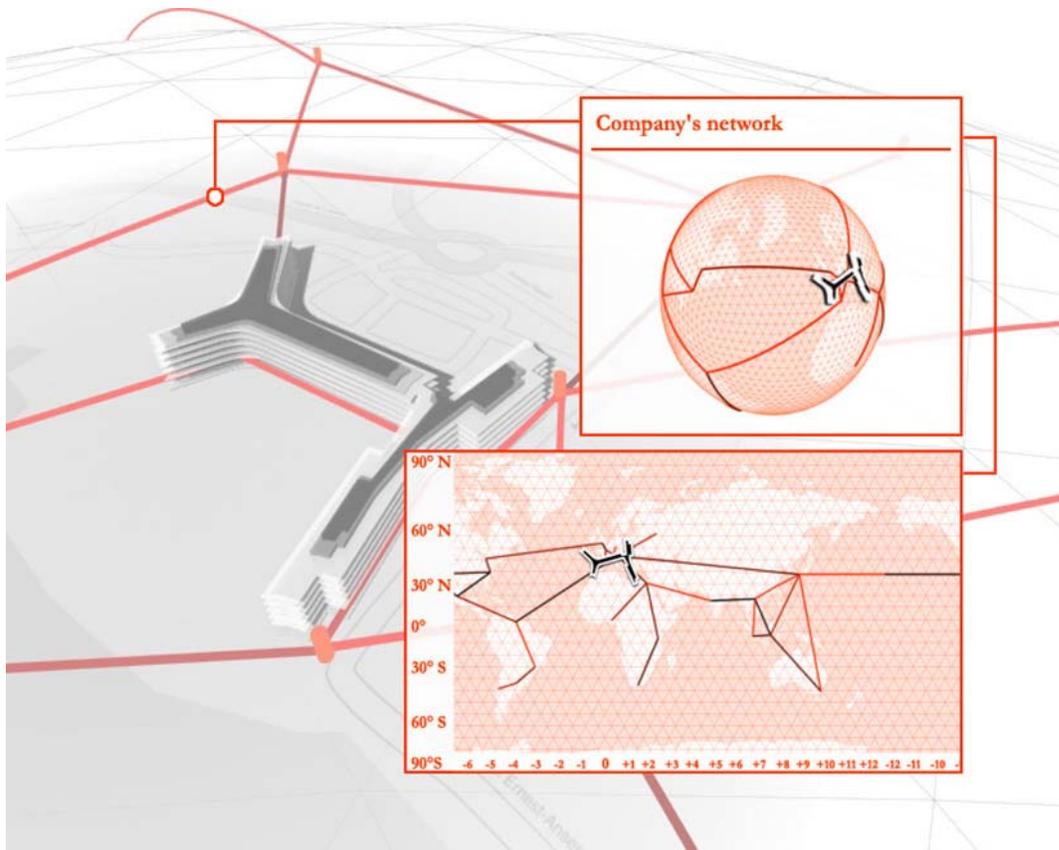
[Img. 3]



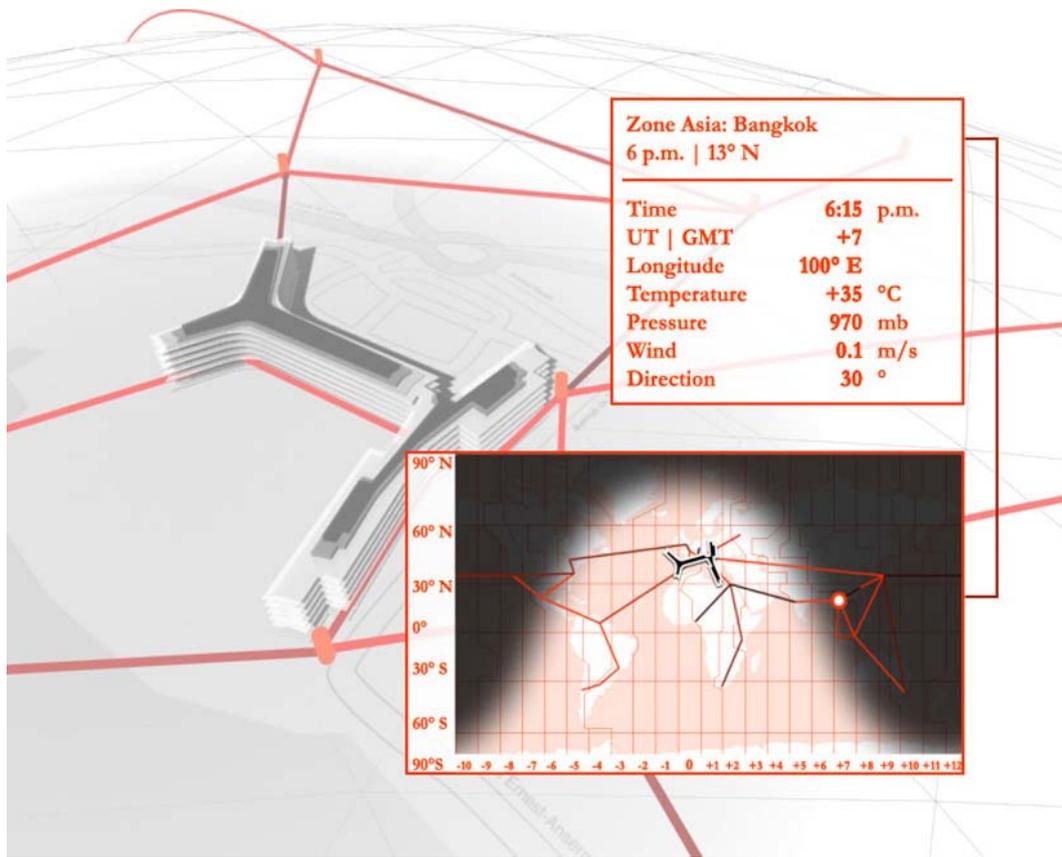
[Img. 4]



[Img. 5]



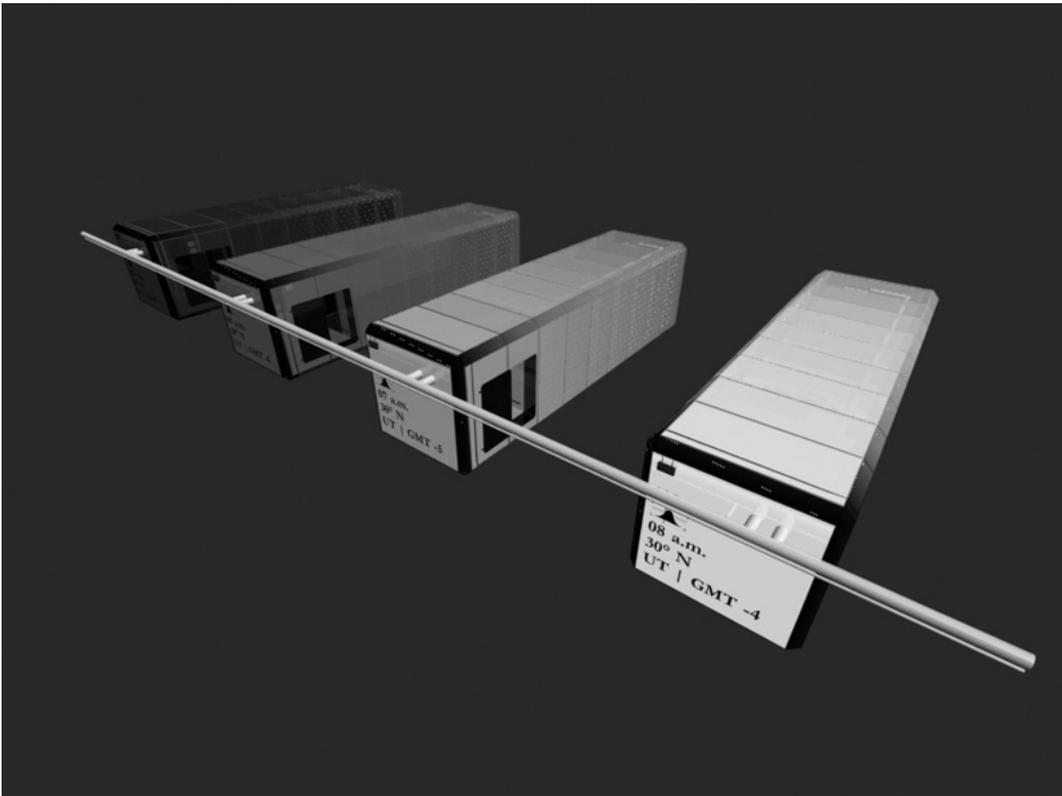
[Img. 6]



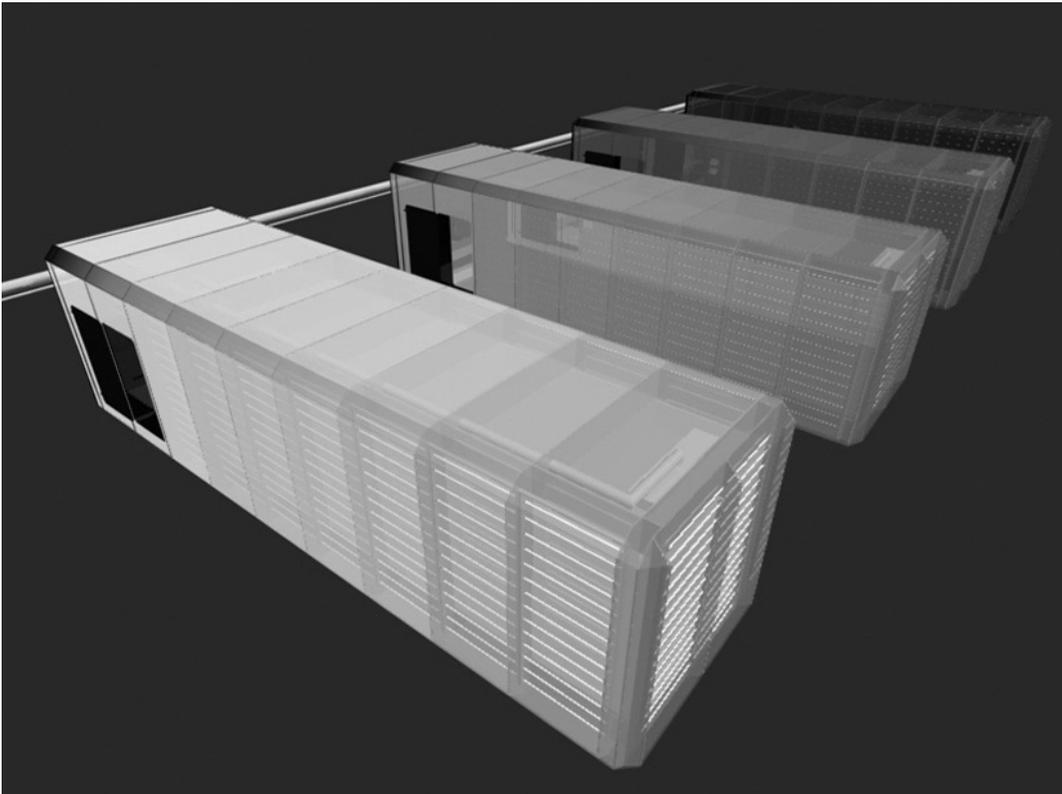
[Img. 7]



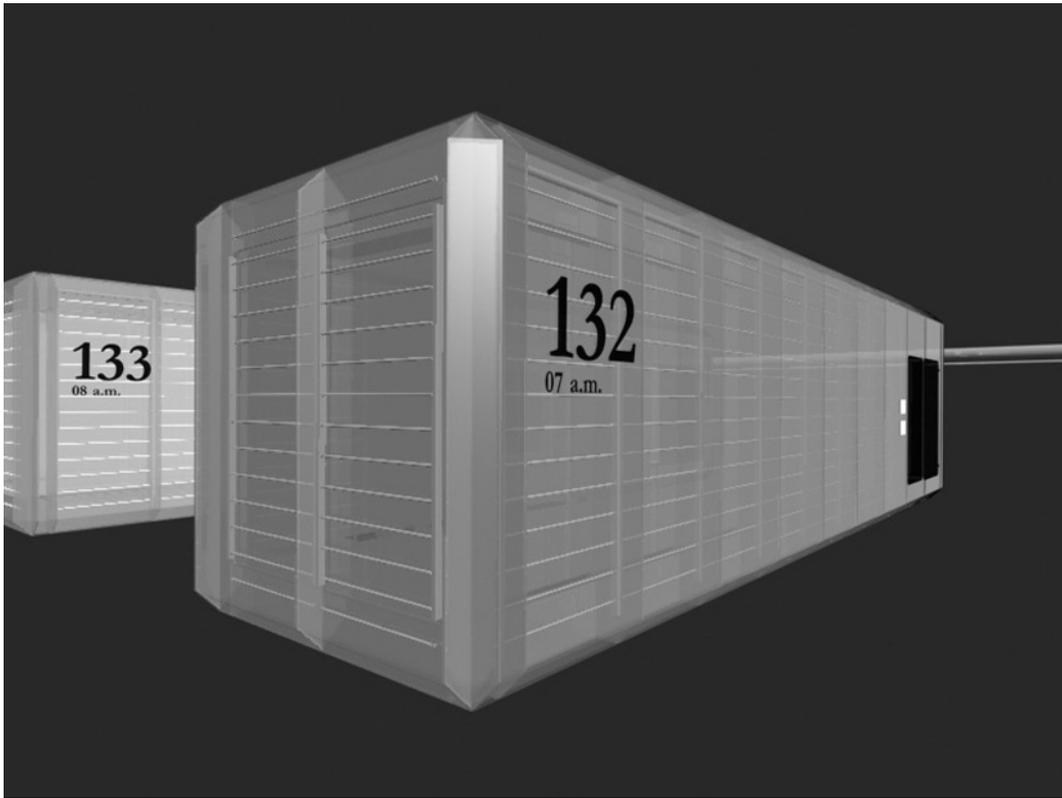
[Img. 8]



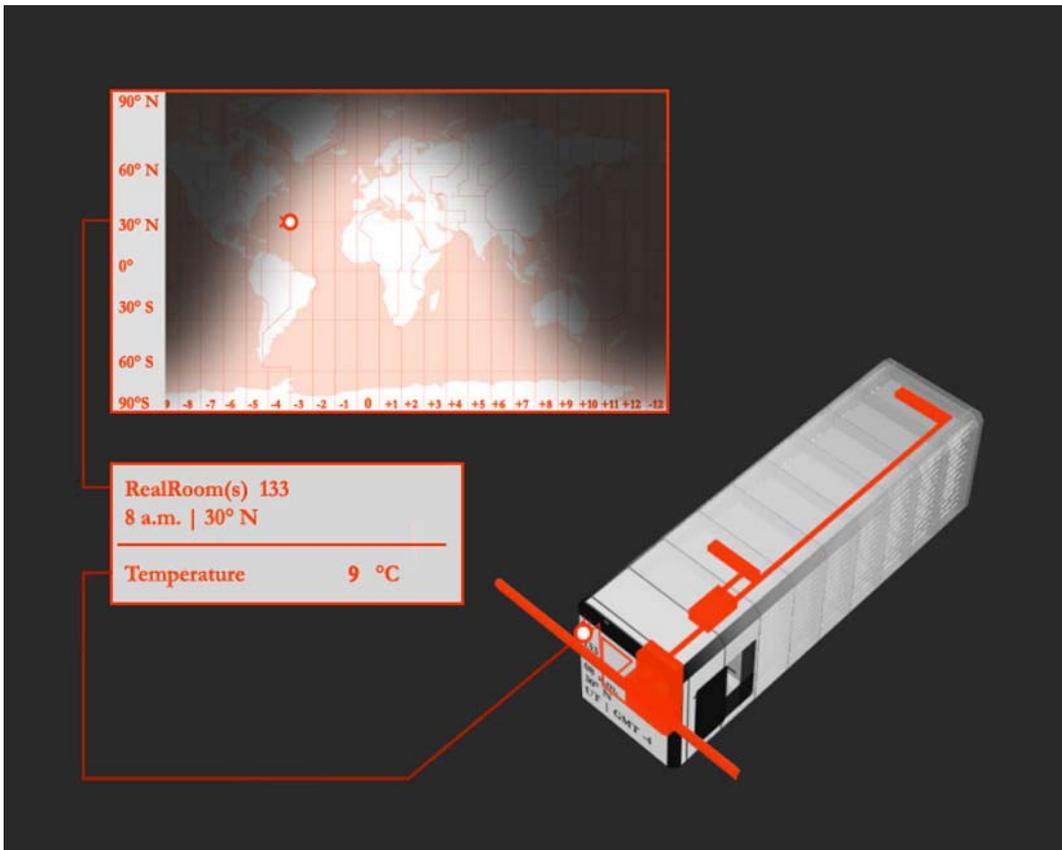
[img. 9]



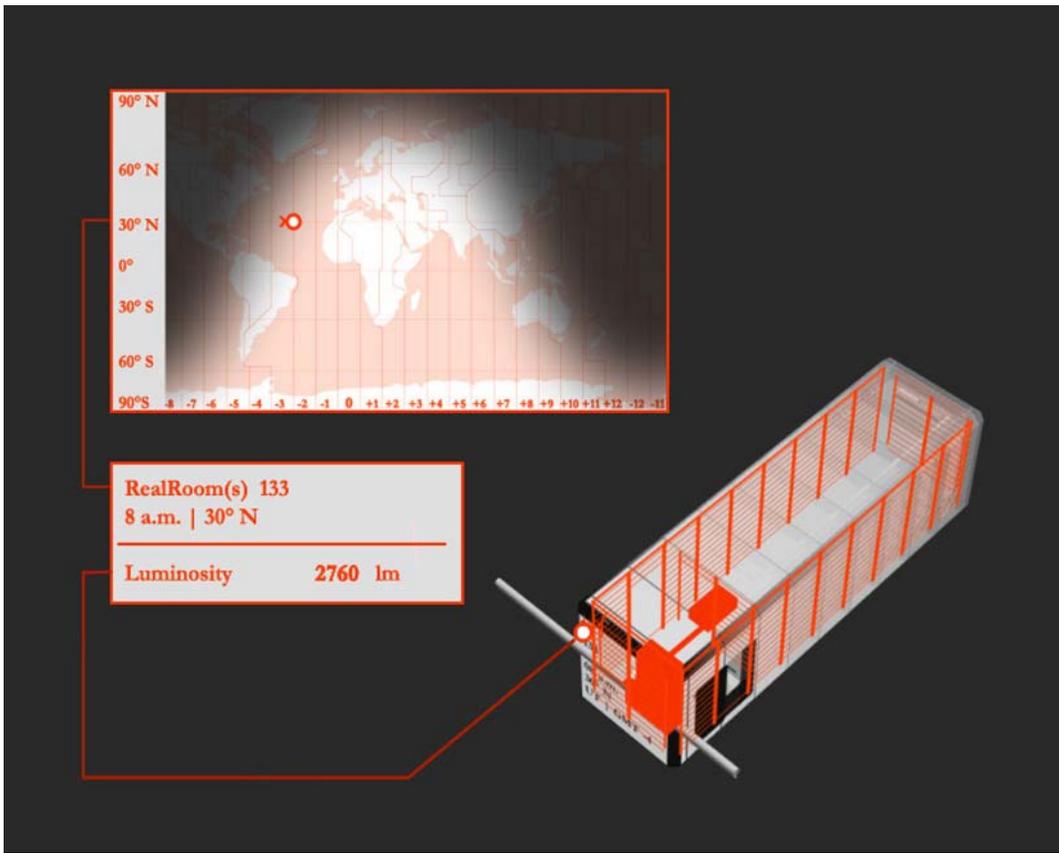
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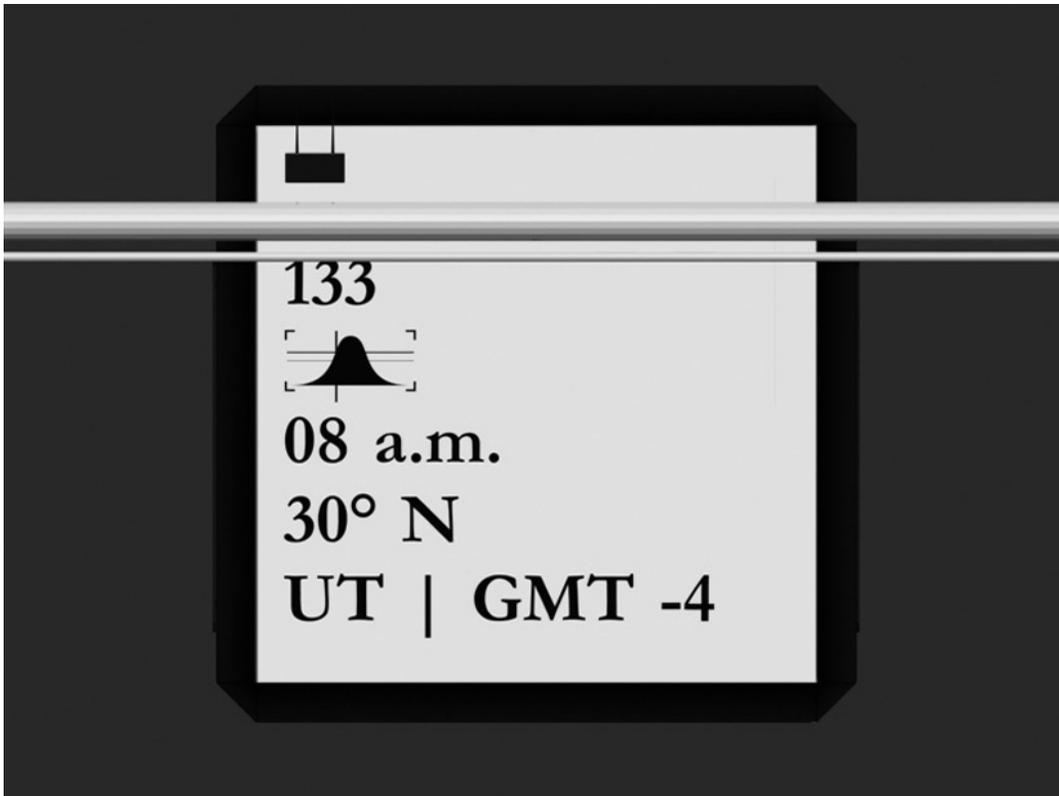
[Img. 11]



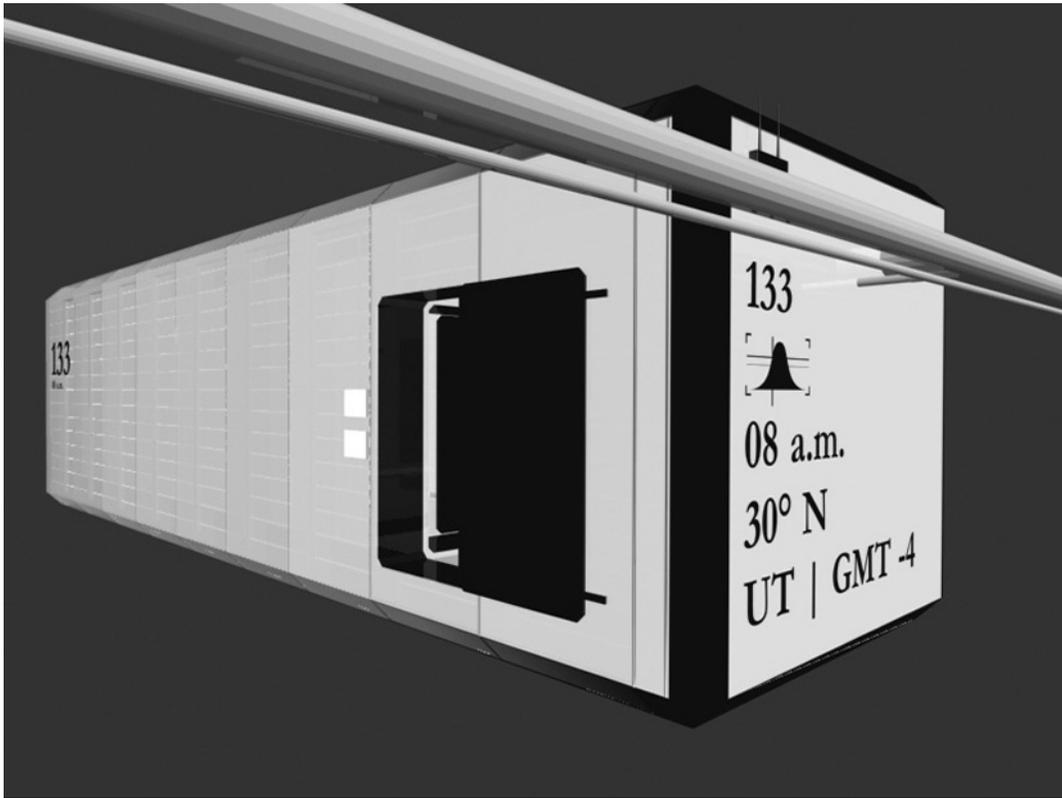
[Img. 12]



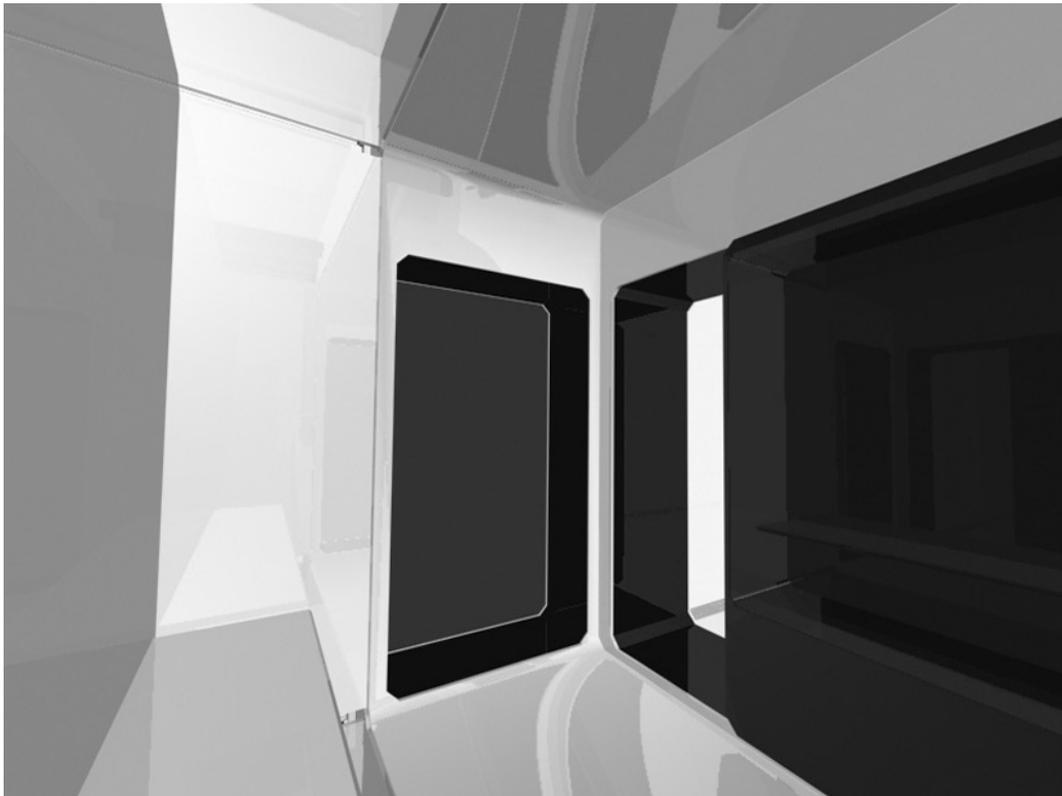
[Img. 13]



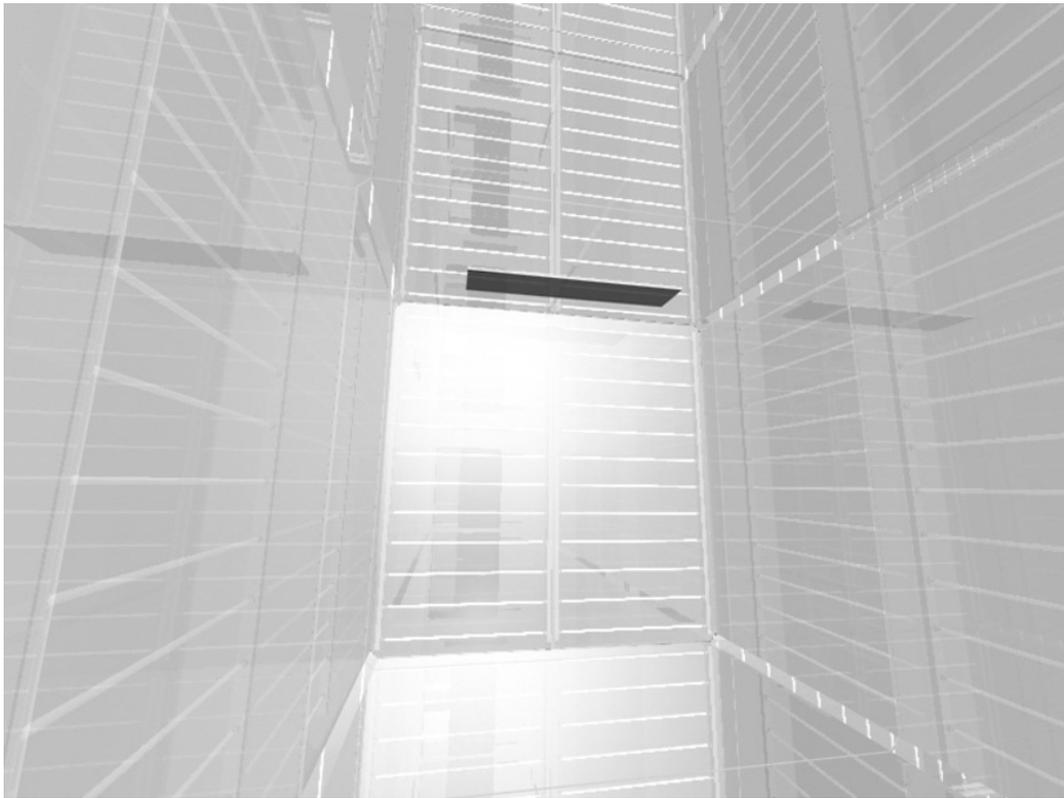
[Img. 14]



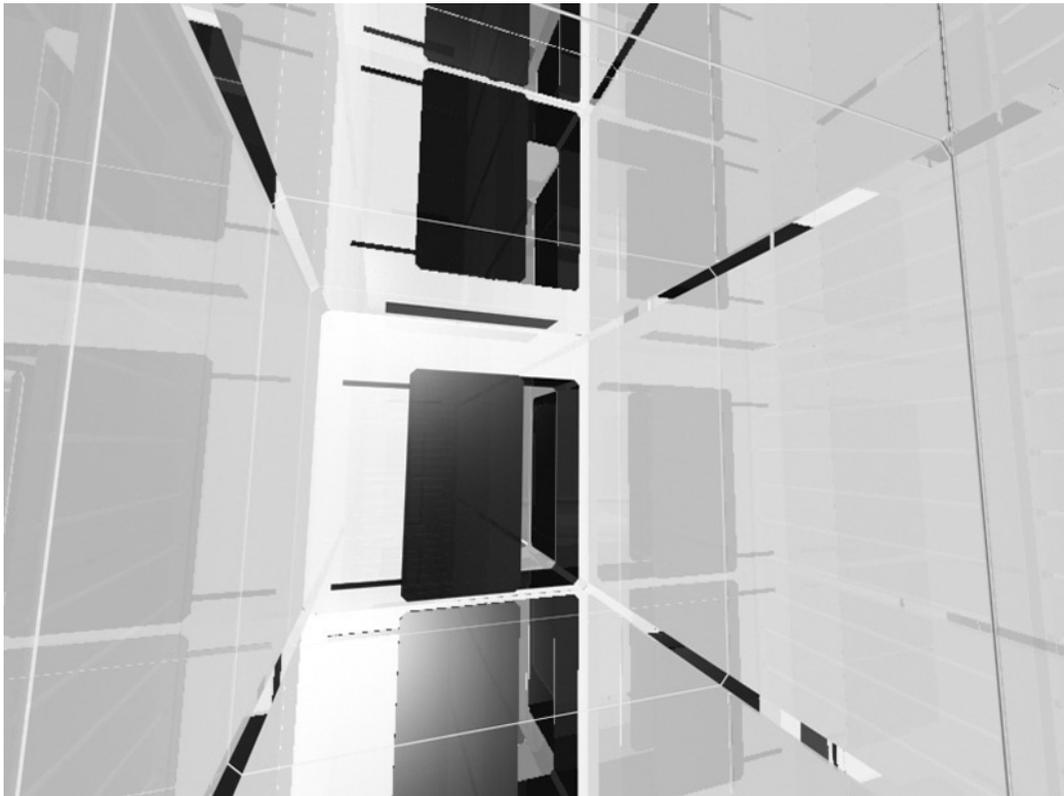
[Img. 15]



[Img. 16]



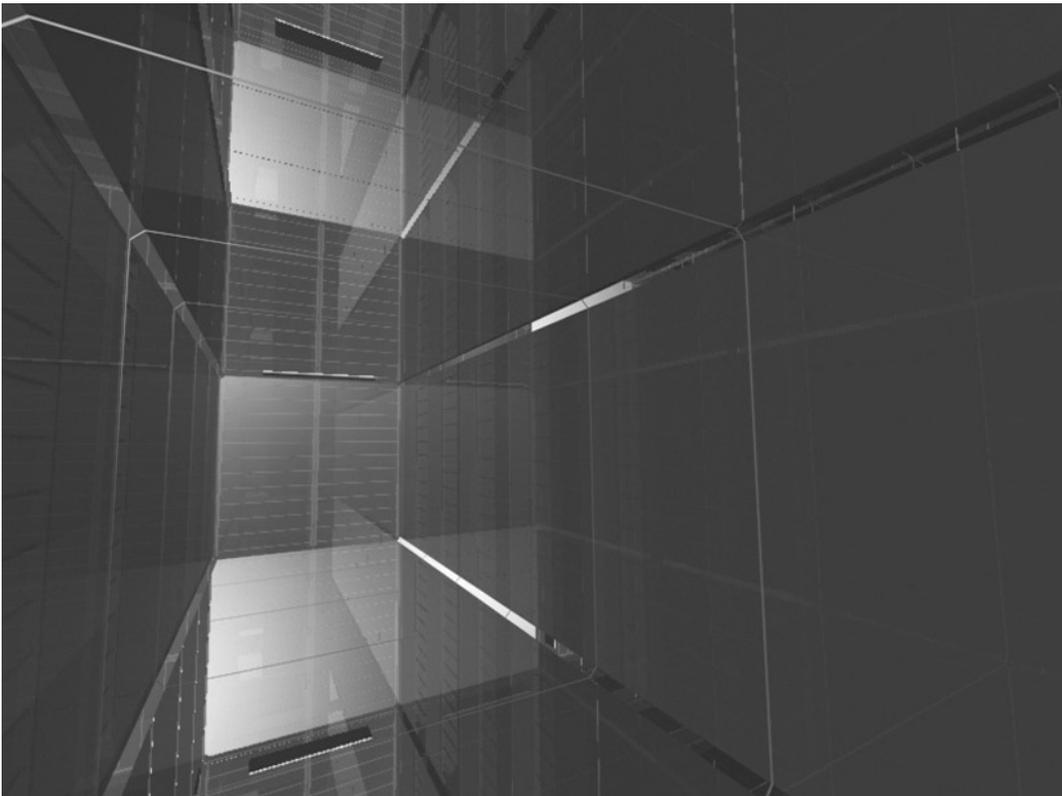
[img. 17]



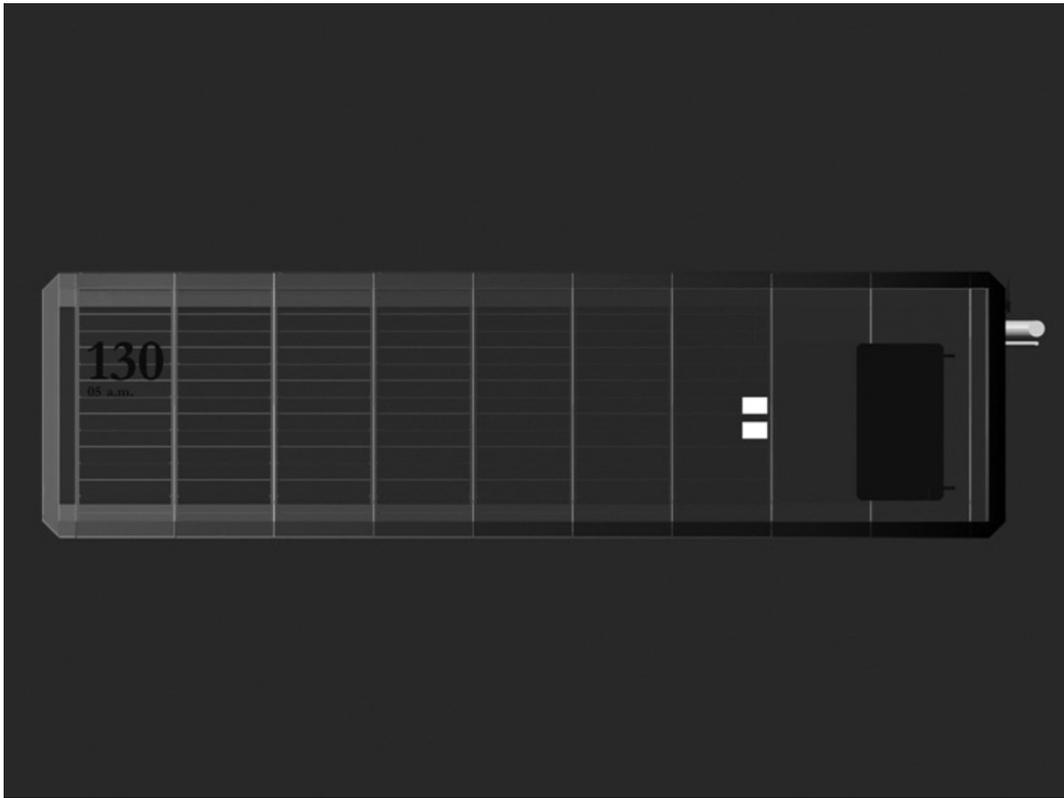
[img. 18]



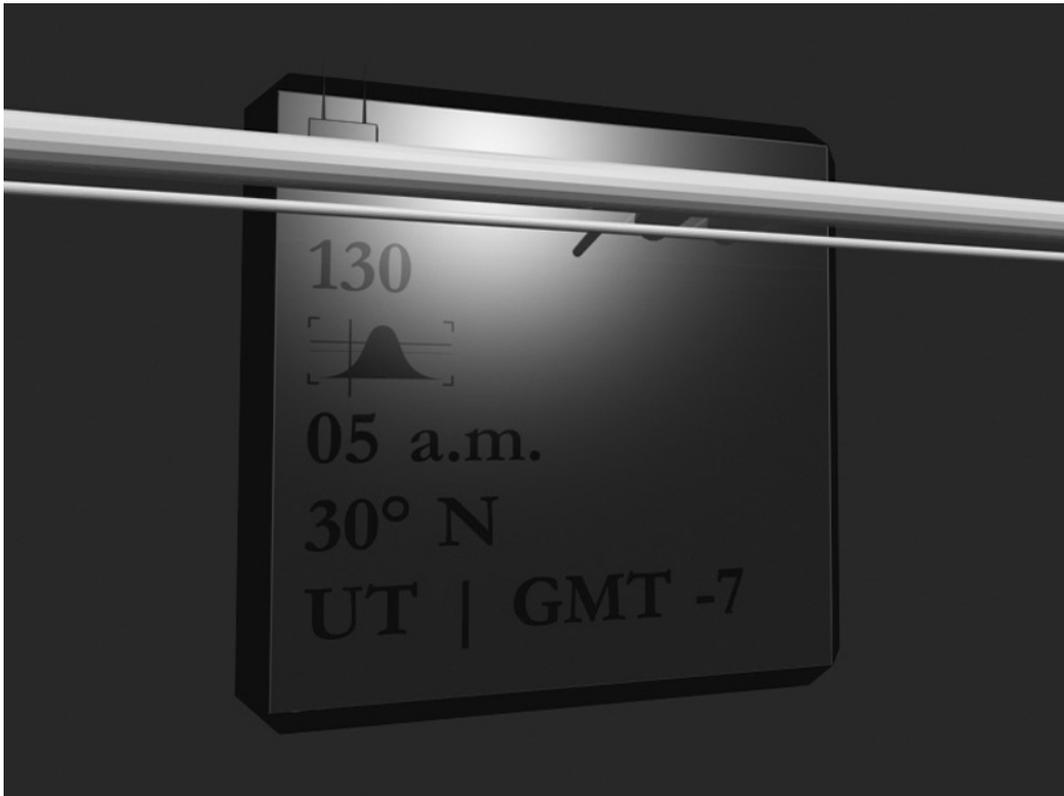
[img. 19]



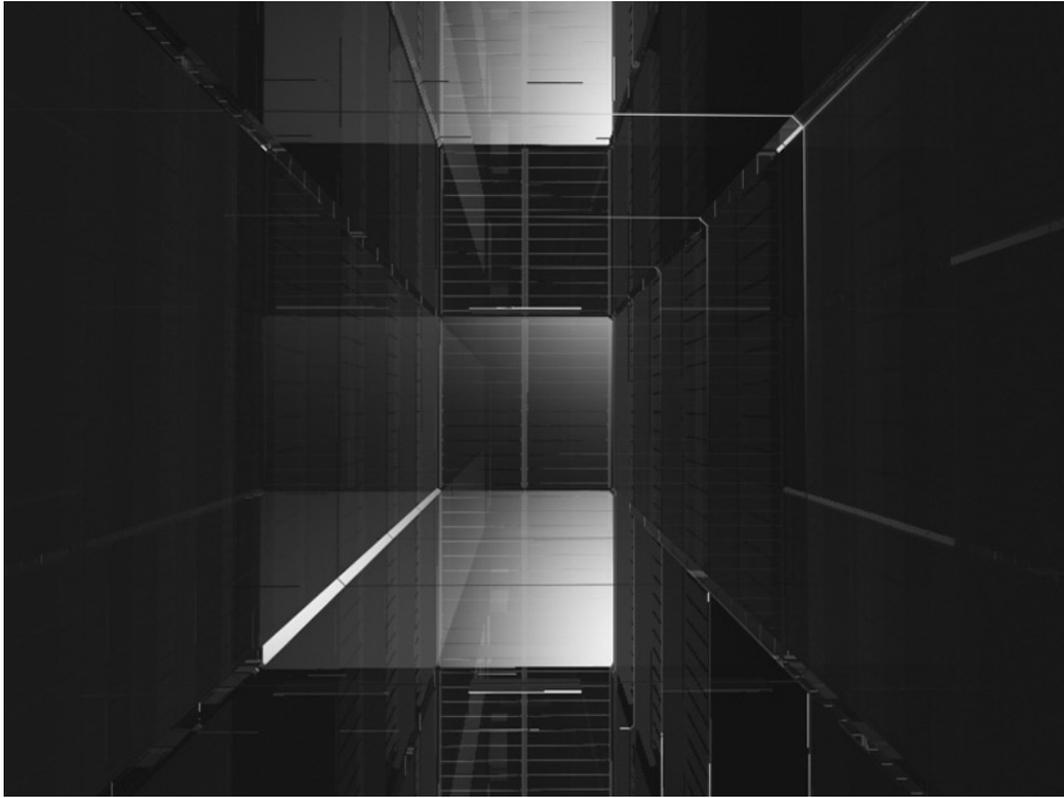
[img. 20]



[Img. 21]



[Img. 22]

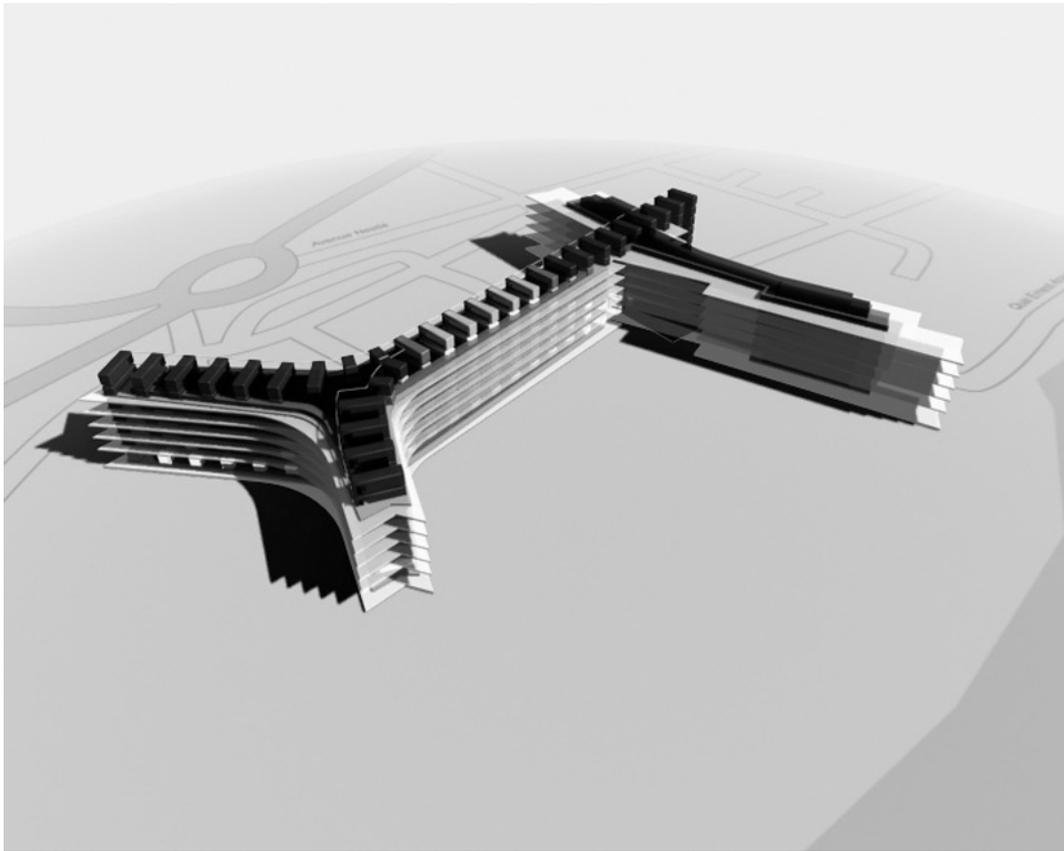


[img. 23]

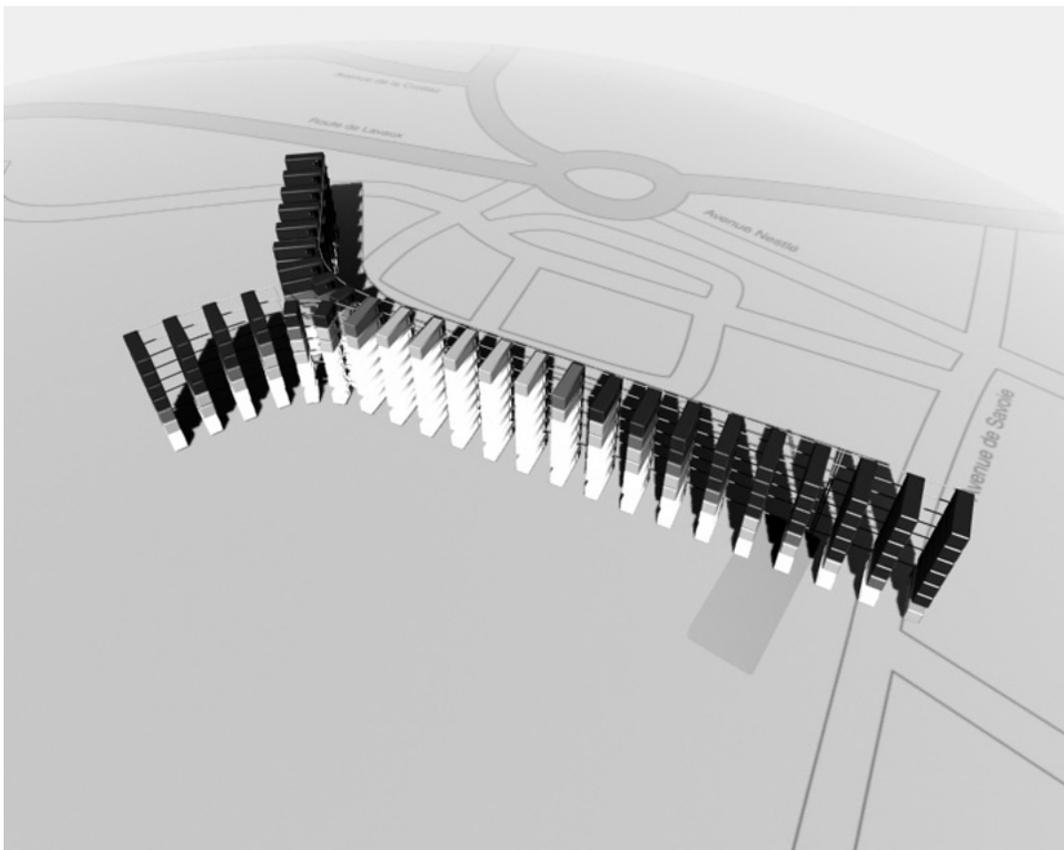
## **Nestlé World Headquarters, 2005**

**Insertion of RealRoom(s)**

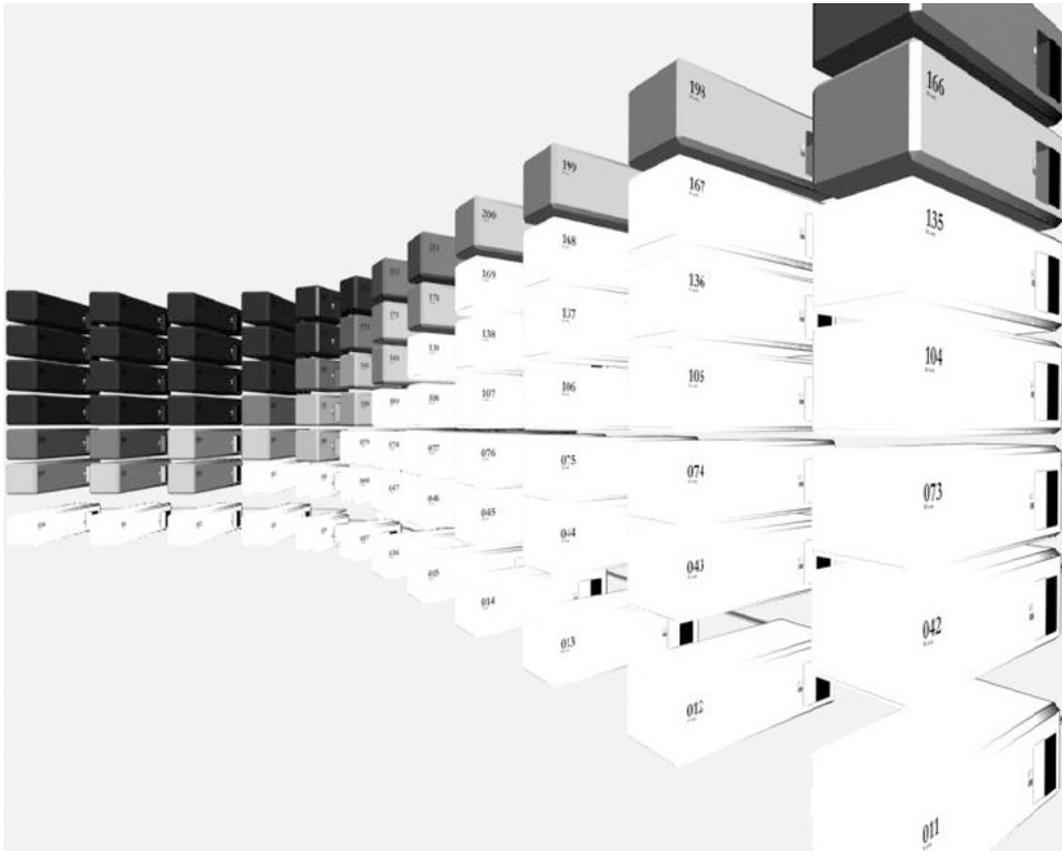
[img. 24]



[Img. 25]



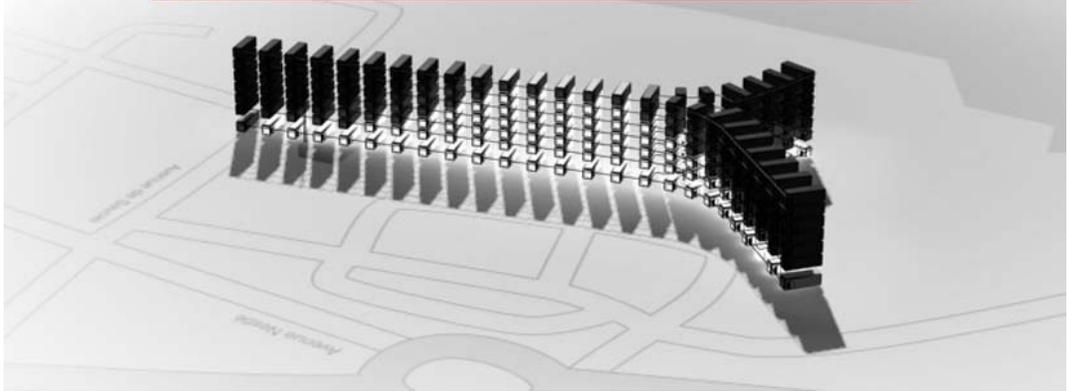
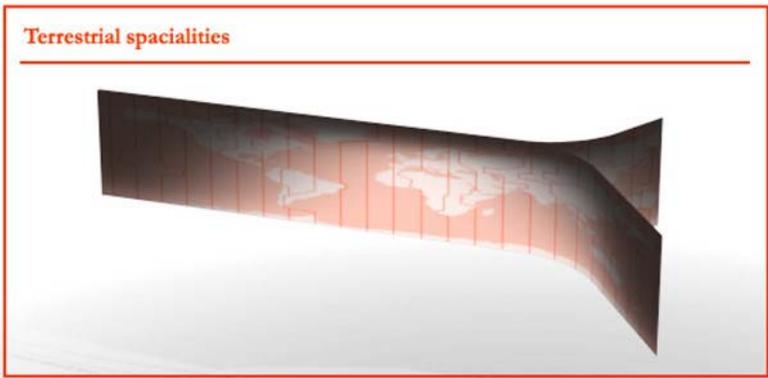
[Img. 26]



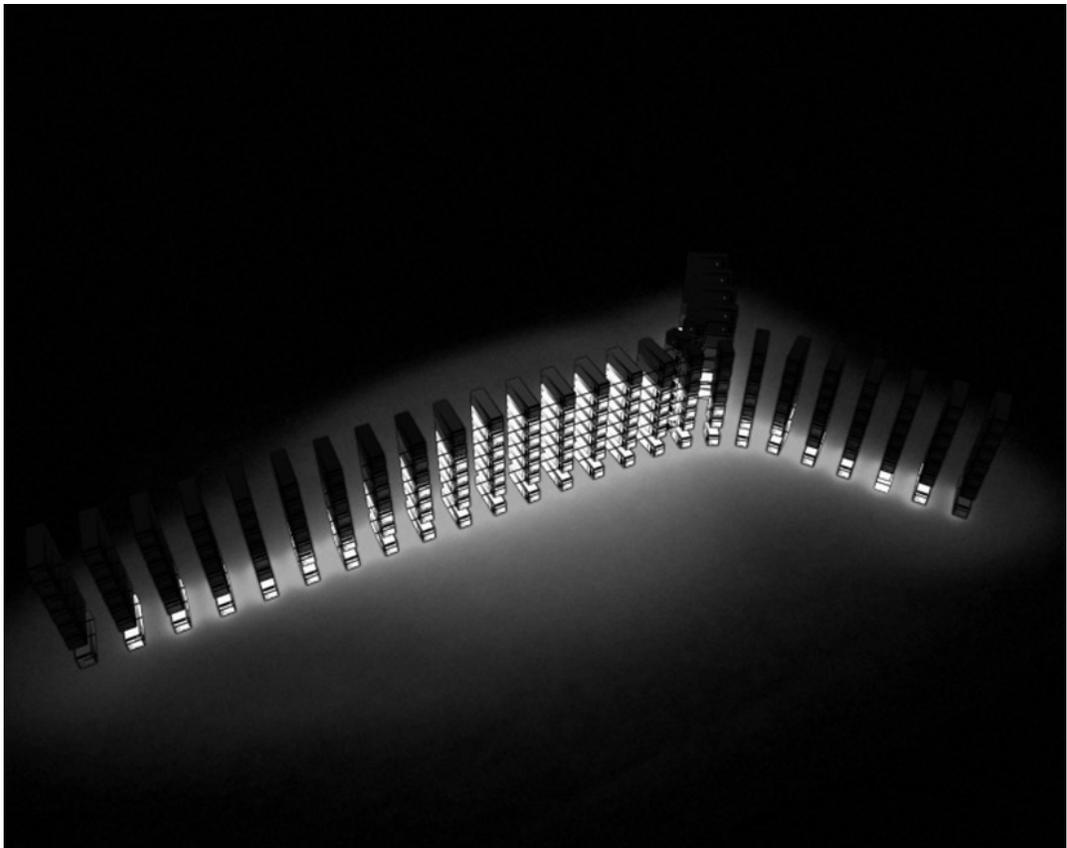
[Img. 27]



[Img. 28]



[Img. 29]



[Img. 30]

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## Image captions:

- [Img. 1] Video, title of the sequence about RealRoom(s). The project was presented during the exhibition 'Architecture invisible' at the Centre Culturel Suisse, Paris. Curator was architect Philippe Rahm.
- [Img. 2] Video, part1: analysis of Nestlé as a global brand.
- [Img. 3] Video part 1: analysis of Nestlé as global brand. Sales.
- [Img. 4] Video part 1: analysis of the Nestlé world headquarters (building by Swiss architect Jean Tschumi).
- [Img. 5] Video part 1: conditioned areas in the existing building. Light conditioning and air conditioning.
- [Img. 6] Video part 1: existing building as part of a global network.
- [Img. 7] Video part 1: Nestlé "lives" in this network, on all continents & time zones simultaneously, contraction of time and space.
- [Img. 8] Video part 2: focus on RealRoom(s) Nr 103 to 133.
- [Img. 9] Video part 2: RealRoom(s) 130 (05 am), 131 (06 am), 132 (07 am), 133 (08 am). Front side view.
- [Img. 10] Video part 2: RealRoom(s) 130 (05 am), 131 (06 am), 132 (07 am), 133 (08 am). Back side view.
- [Img. 11] Video part 2: RealRoom(s) 132 (07 am space sample), side view.
- [Img. 12] Video part 2: a RealRoom(s) is a 100% conditioned space. It is in permanent connection with atomic clocks and weather stations. Time, temperature, humidity and pressure conditions are captured from a specific source (a weather station) and reproduced in a RealRoom(s). It is a networked reality, an abstracted ubiquitous space.
- [Img. 13] Video part 2: same RealRoom(s), distant capture of luminosity.
- [Img. 14] Video part 2: RealRoom(s) Nr 133 (08 am), 30° North. Unless a real and located space, a global, abstract and conditioned space can be highly variable. In this case, time is blocked for ever: it is always 08 am in this specific RealRoom(s), but the illumination and air conditioning information are captured and streamed time zone after a time zone, moving to the "previous" time zone hour after hour so to stay always at 08 in the morning.
- [Img. 15] Video part 2: RealRoom(s) 133, entering the space sample.
- [Img. 16] Video part 2: RealRoom(s) 133, door from inside.
- [Img. 17] Video part 2: RealRoom(s) 133, in the main space. What would be the function of a space where it is always 8 o'clock in the morning? Sides of the main space are made out of slightly dulled glass (equipped with polarizing lcd filters) and strong neon lights, floor and ceiling are made out of mirrors.
- [Img. 18] Video part 2: RealRoom(s) 133, within the main space. Entrance view.
- [Img. 19] Video part 2: RealRoom(s) 131, detail.
- [Img. 20] Video part 2: RealRoom(s) 131, inside view.
- [Img. 21] Video part 2: RealRoom(s) 130, 05 am, side elevation.
- [Img. 22] Video part 2: RealRoom(s) 130, 05 am, 30° North.
- [Img. 23] Video part 2: RealRoom(s) 130, inside view.
- [Img. 24] Video part 3: insertion of RealRoom(s) in the Nestlé's world headquarters.
- [Img. 25] Video part 3: 217 RealRoom(s) are inserted in the building. 7 levels for 7 latitudes (-90°, -60°, -30°, 0°, 30°, 60°, 90°), 24 + 1 RealRoom(s) by level for a full revolution of 24 hours (from 12 am to 12 pm). The insertion happens in the already artificially controlled zones of the building.
- [Img. 26] Video part 3: the 217 RealRoom(s). A current & conditioned reality of the global earth updated every second. Night & day are present so as cold & warm climates, deserts and poles, etc.
- [Img. 27] Video part 3: another view on some of the 217 RealRoom(s).
- [Img. 28] Video part 3: a few RealRoom(s) from the other side with their number, time and latitude information.
- [Img. 29] Video part 3: 217 RealRoom(s) equal a live, displaced & paradoxical terrestrial space.
- [Img. 30] Video part 3: 217 RealRoom(s) at night.

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# Txt

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## RealRoom(s)

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### RealRoom(s), Peripheral Architecture for the Nestlé World Headquarters

RealRoom(s) is an architectural project for the Nestlé World Headquarters in Vevey (Switzerland). This project proposes to insert a series of spatial entities into the air conditioned intermediary areas at the very heart of the building. The RealRoom(s), informed by atomic clocks, luminosity, heat, pressure and humidity sensors, are distributed in a regular framework across a space representing the entire globe (one RealRoom per time zone, on 0°, +/-30°, +/-60° and +/-90° latitude). These RealRoom(s), connected permanently, directly recreate in an artificial but perceptible way, a global "terrestrial spatiality" fitting to the scale of Nestlé in 2005.

With RealRoom(s), fabric | ch's intention is to propose new modes of architectural "presence", in a contemporary space which is not uniquely material and localized, but whose spatial spectrum covers a much wider field: from material to non-material, from visible to invisible, from habitable to uninhabitable, from located to distributed, from unique to ubiquitous.

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From within several different time zones, day and night, from North to South, at various latitudes, in cold and hot weather, each Nestlé office can exchange data, take part in the migration of information flow and work in a simultaneous manner: in a word, each office can exist today in a worldwide, variable and potentially multiple space. It is in this space, global in the true sense of the word, that the Nestlé World Headquarters are located, in a recently renovated building conceived in the early Sixties by Swiss architect Jean Tschumi.

Like many other contemporary administrative buildings in Tokyo, Paris, Rio de Janeiro, Berlin, the interior space of the Vevey building is artificially conditioned (electric lighting, air-conditioning systems, modern classic furniture etc.). There is a kind of "global" consensus about what constitutes a "comfortable" space in which to work and live. There is a shift towards "100% artificial" spaces maintaining the same climatic, visual "comfort". RealRoom(s) does not propose to eliminate artificial spaces but to provide new ways to "inform" them, using a global networked environment of data to create architectural "fictions".

Indeed, the RealRoom(s) remain artificial. But, first and foremost these spatial entities become dynamic. Their architectural parameters vary in real time according to climatic, luminous, sound and visual data, connected to various sources of information all over the globe.

RealRoom(s) invites us to consider this artificiality in its "worldwideness", or to consider the « 100% artificial » space as a fundamentally global and abstract space, distinct from local and factual reality. Thus, RealRoom(s) is a way to conceive these « 100% artificial » places in a global spatial spectrum, which takes into account the new parameters set by our transformed contemporary environment. Architectural concerns about the functionalism of spatial comfort are thus suspended.

RealRoom(s) is also a thinly veiled reference to a software which transformed the use of Internet and its content diffused on the Web a few years ago: RealPlayer. Suddenly it was possible to see videos (RealVideo) or to listen to music (RealAudio), in a continuous "stream" of data. It was also possible to receive images from distant cameras (webcams), filming continuously the same bit of planet, the same urban crossroads or the same unknown place. Unlike RealPlayer, but by using the same process of continuous stream of information, the RealRoom(s) project proposes to "stream" reality (time zones, light, climate, etc.). It is now possible to encode all this data, to transmit it through digital information networks and then to duplicate, multiply, and diffuse it as a potential information object and architectural component.

A RealRoom(s) prototype can thus be considered as a computer peripheral. However, instead of displaying images or printing documents on paper, this device is a spatial, architectural peripheral which can diffuse temporalities and places, and interface light, sound, heat, humidity or information. This architectural data-processing peripheral can be connected to distant sources of information and can duplicate or multiply an existing situation. Above all, this peripheral spatiality can also create new architectural fictions, permitting one to block time, to hybridize climates, to live at a satellite rhythm, to connect luminous and climatic flows to oil or stock exchange prices, rather than merely duplicating the same "comfortable" controlled environments all over the globe. RealRoom(s) uses various elements of our physical space to suggest new situations - sometimes comfortable, but also uncomfortable, strange, playful, cognitive, or oblique.

In the context of this project for the Nestlé World Headquarters, each RealRoom(s) is blocked on a fixed hour, on a fixed latitude. So as to preserve this fixed situation, the information source of each RealRoom(s) changes hour by hour. In the space of 24 hours a RealRoom carries out a fictitious climatic and luminous round-the-world trip. It is always the same time and the same latitude in one of the RealRooms. Only the longitude of the source changes, hour by hour, permanently involving a slight modification of light and a more marked modification of humidity, heat or sound. Thus it produces a new spatiality, at the same time present and distant, built up by information collected in reality.

The "minor" circulation area of the Nestlé World Headquarters is devoid of any natural referent. Ideally, it is re-occupied here by a series of RealRoom(s) informed by real, "streamed" situations:

- 7 levels for 7 latitudes (-90°, -60°, -30°, 0°, 30°, 60°, 90°)
- 24 + 1 RealRoom(s) by level for a full revolution of 24 hours (from 12 am to 12 pm).

Based on the morphology of the building, 6 time zones are duplicated to occupy the duplicated space of the second branch of the Y. Thus, there are 217 RealRoom(s) in total which invest this intermediary space.

-

Rather like 217 slow satellites rotating every 24 hours around the Earth at ground level, collecting and transmitting information, RealRoom(s) reproduces a "terrestrial spatiality", with its extremes, its deserts, its seas, its poles, its cities, its days and its nights, its passing time. It is this vibrant, perceptible, "terrestrial spatiality, which is created in 217 samples of variable architecture in the artificial spaces of the Nestlé World Headquarters.



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# MIX-m

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## 2005

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Project by fabric | ch, in collaboration with curator Simon Lamunière.

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Funding: Swiss Federal Office for Cultural Affairs (CH), Loterie Suisse Romande (CH)

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Locations: Geneva (CH), Internet

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Exhibited at BAC (Bâtiment d'Art Contemporain, Geneva, CH), CAC (Centre d'Art Contemporain, Geneva, CH)

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With the support of OFC (Swiss Federal Office for Cultural Affairs), FCAC (Fonds Cantonal d'Art Contemporain, City of Geneva, CH) and Lotterie Suisse Romande (CH)

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<http://www.mix-m.org>

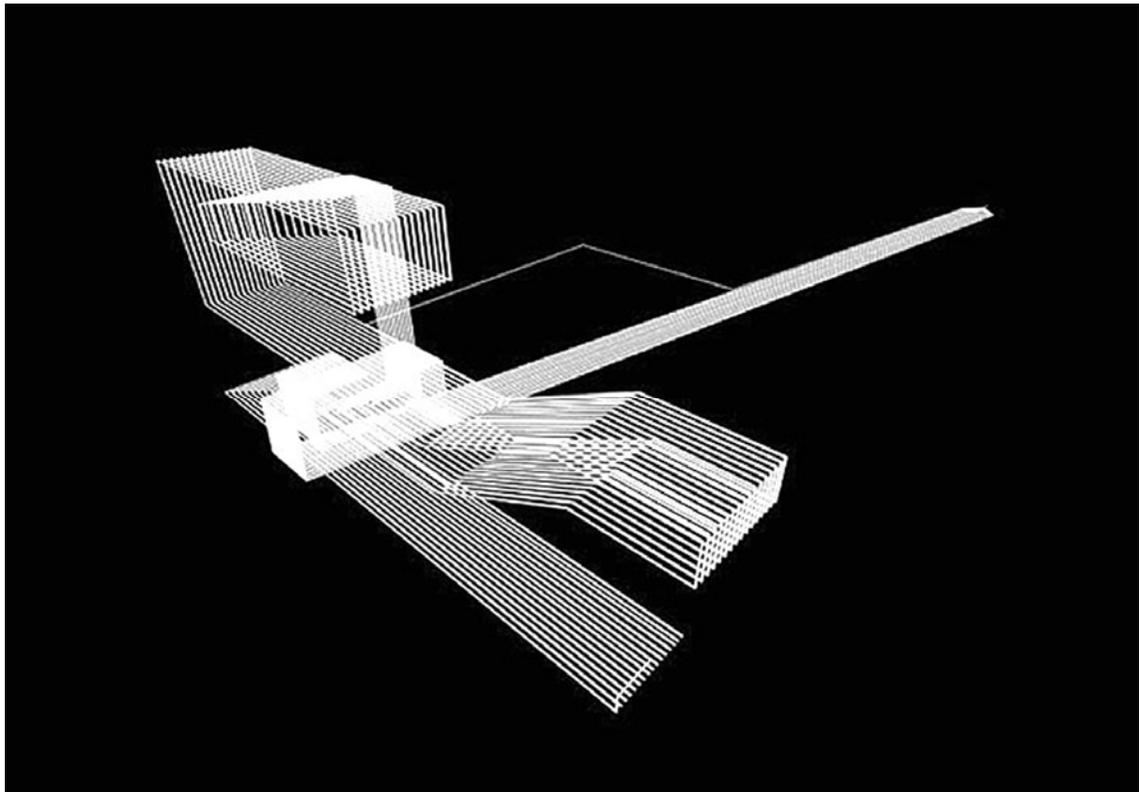
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- **Digital and twin extension to BAC** (Bâtiment d'Art Contemporain, Geneva, CH)
  - **Intertwined exhibition space** (physical-digital & located-networked museum)
  - **Game-like architecture**
  - **Black to white exhibition space**
  - **Information flow lighting**
- 

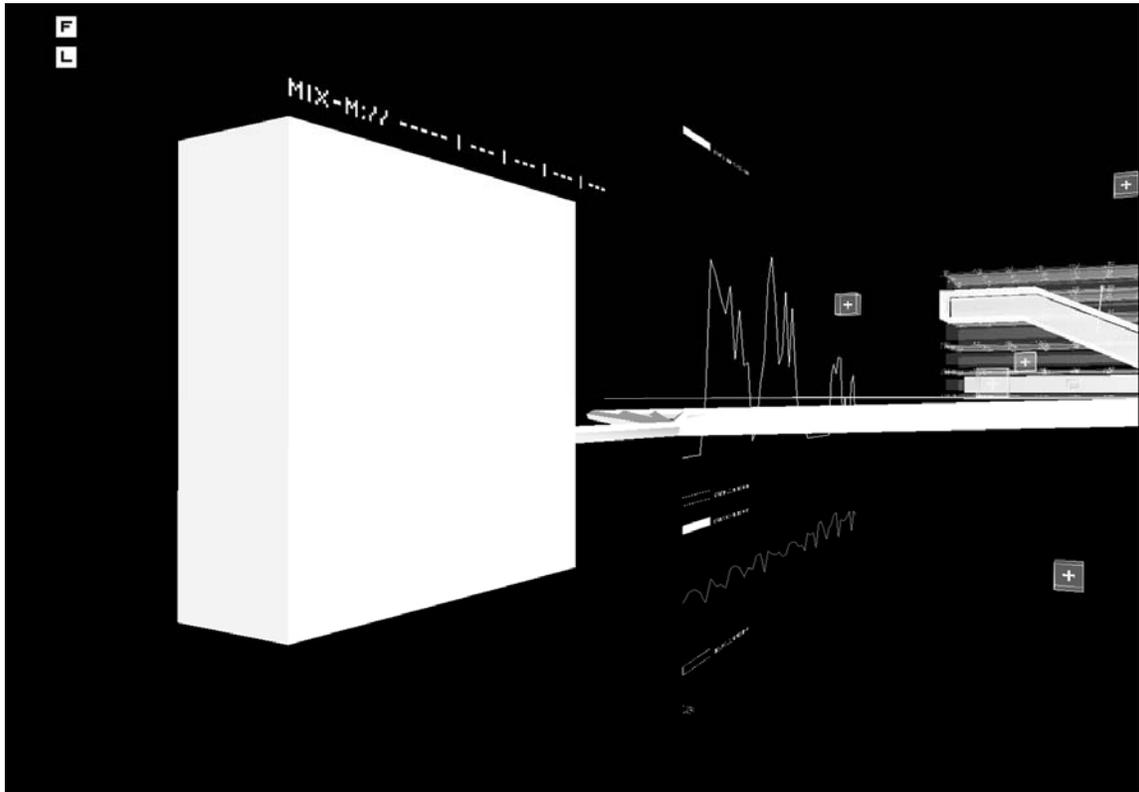
- **Art installations**  
Curator: Simon Lamunière  
Artists: Joël Flumet (CH), Yves Mettler (CH), Scanner (UK), Nedko Solakov (BG), Heimo Zobernig (AT)



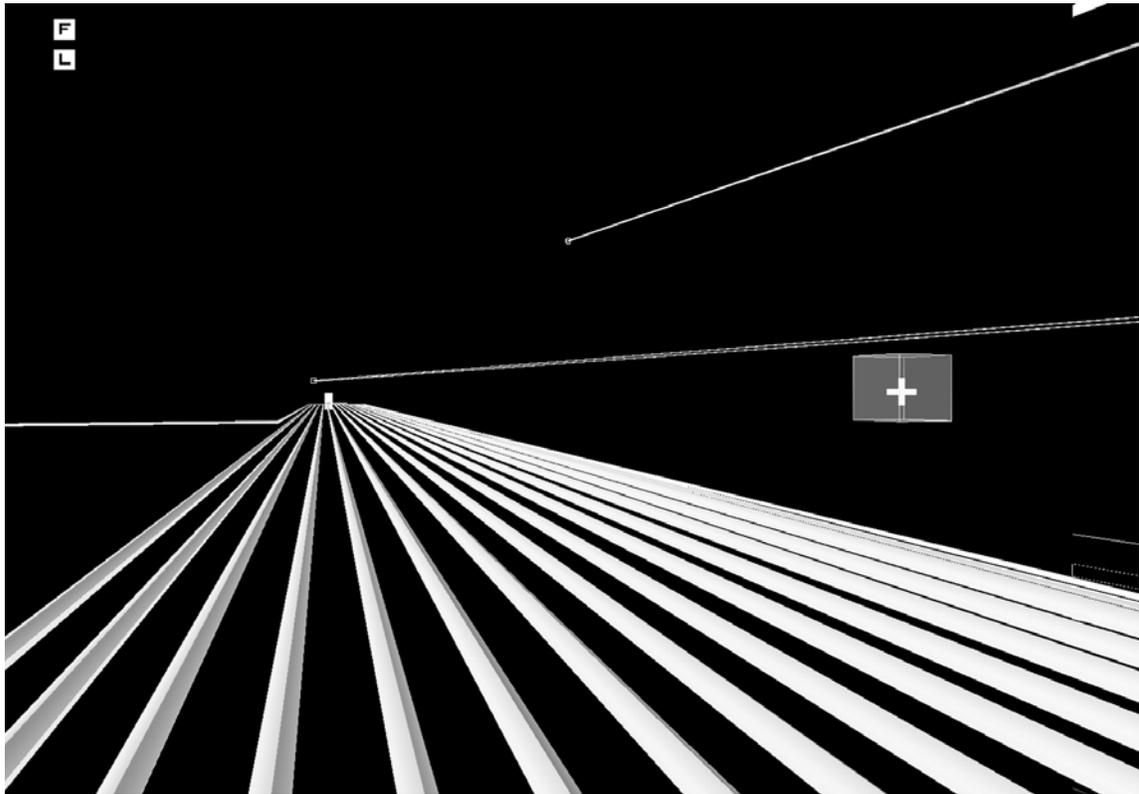
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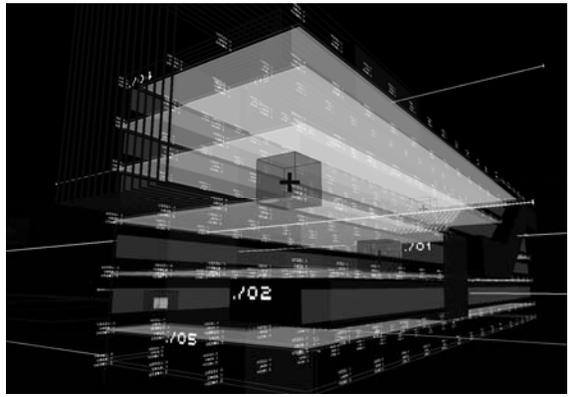
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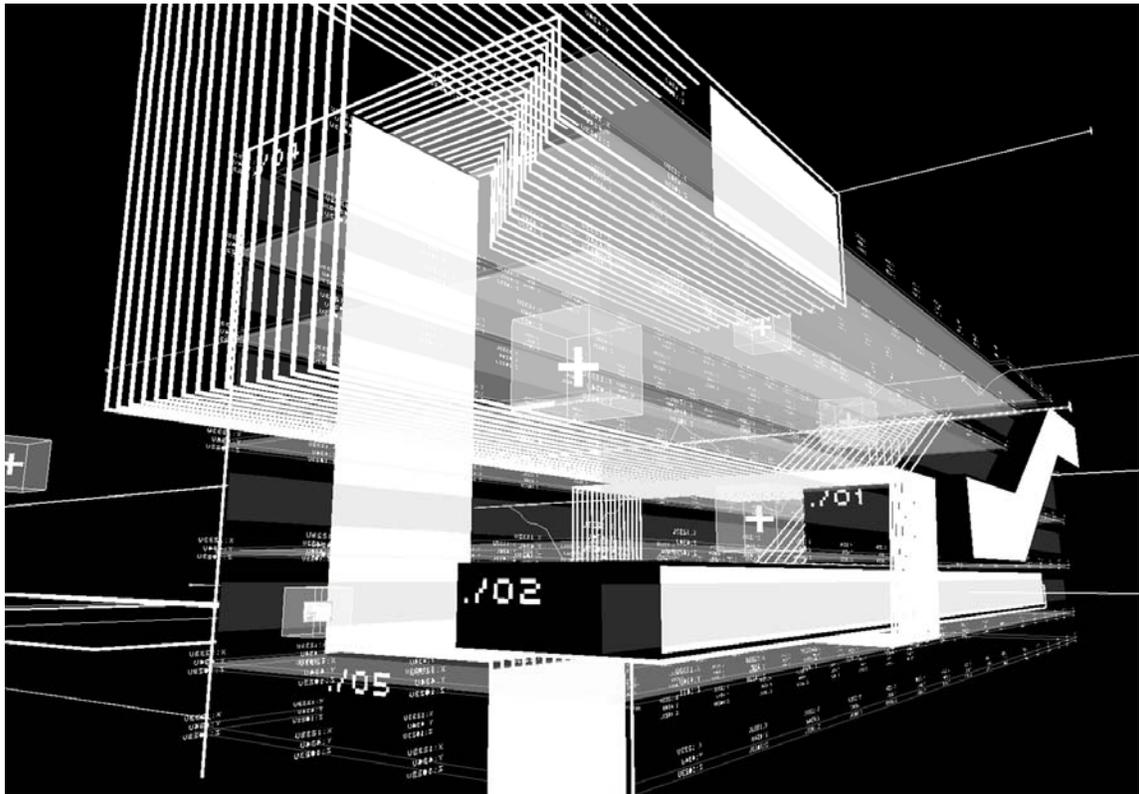
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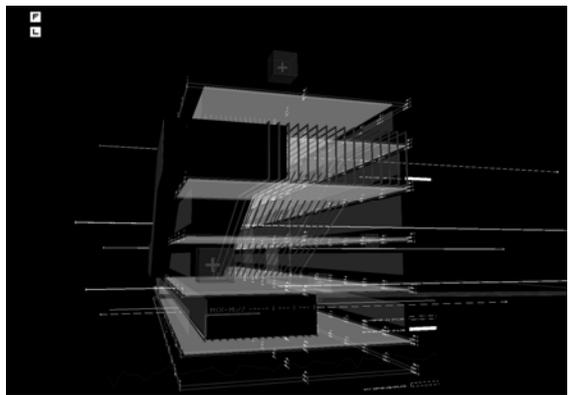
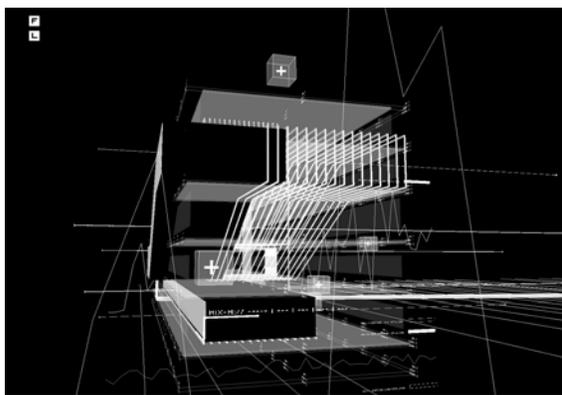
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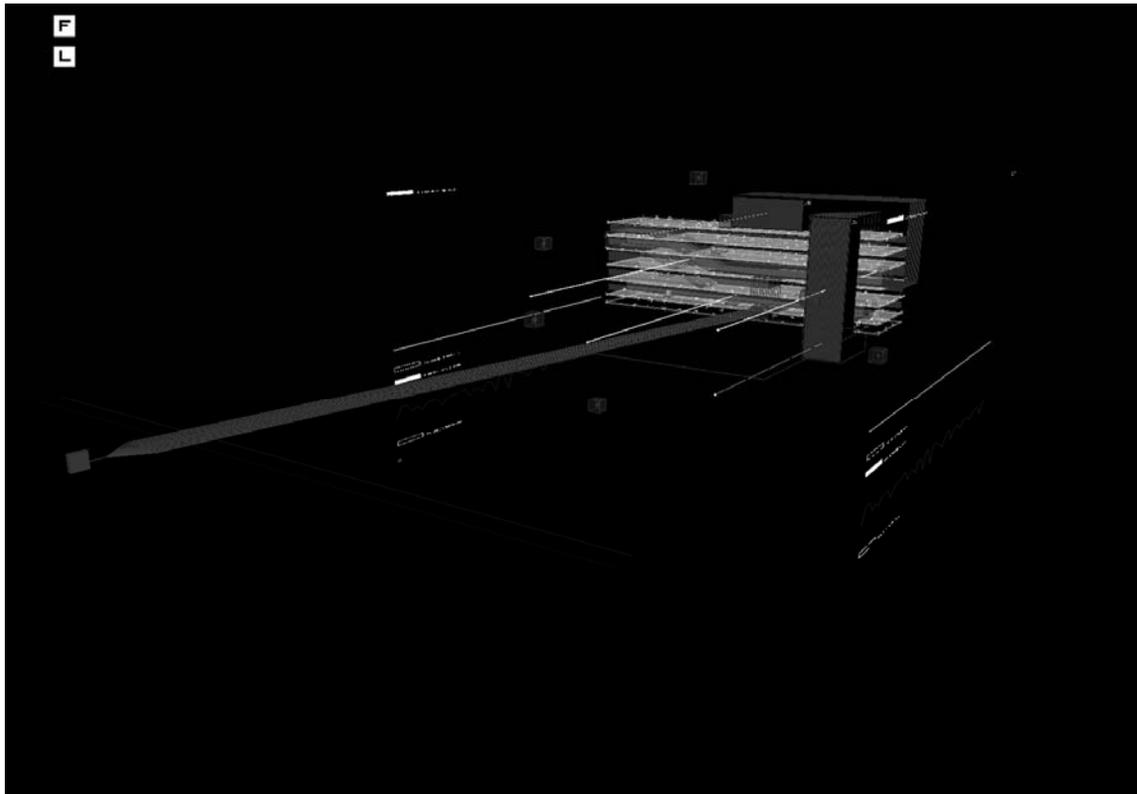
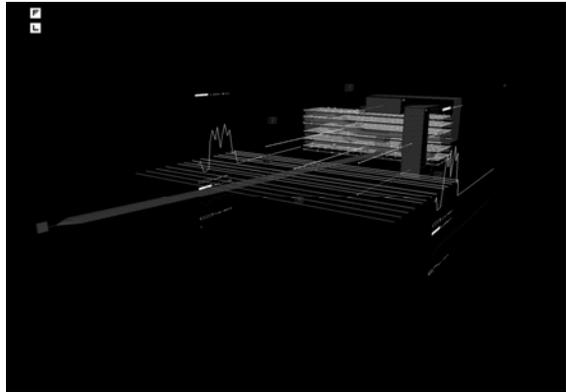
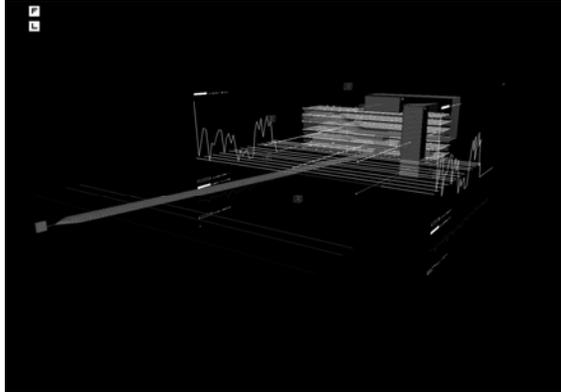
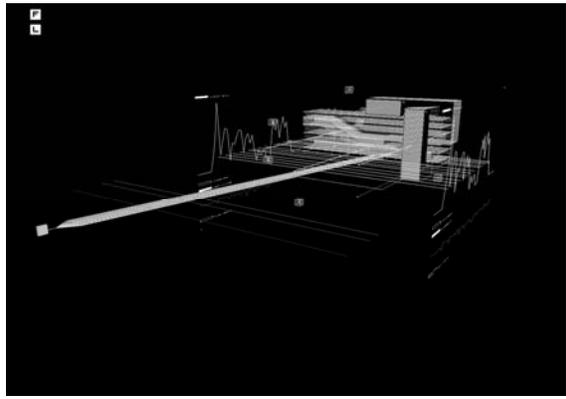
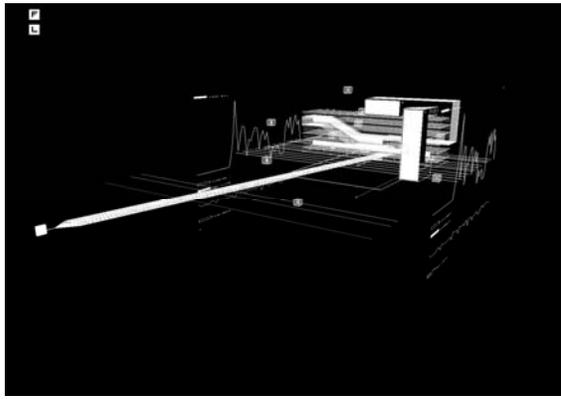
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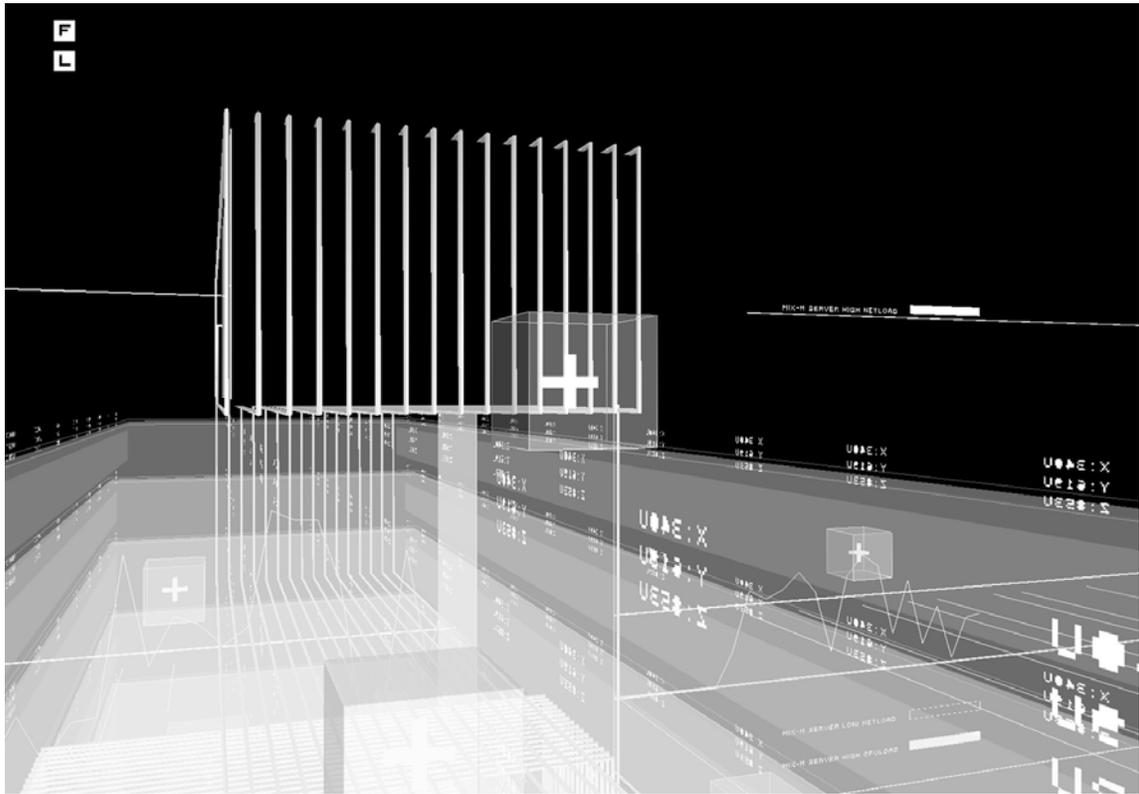
[Img. 7]



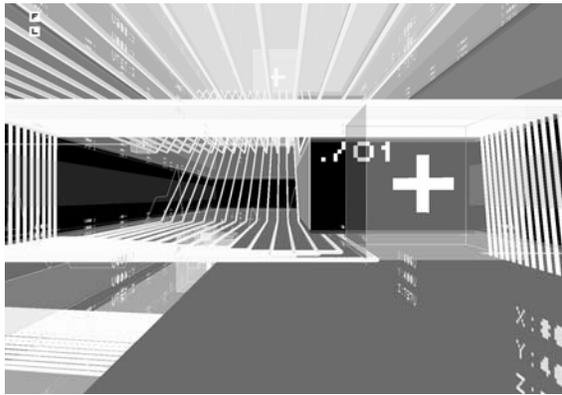
[Img. 8, 9]



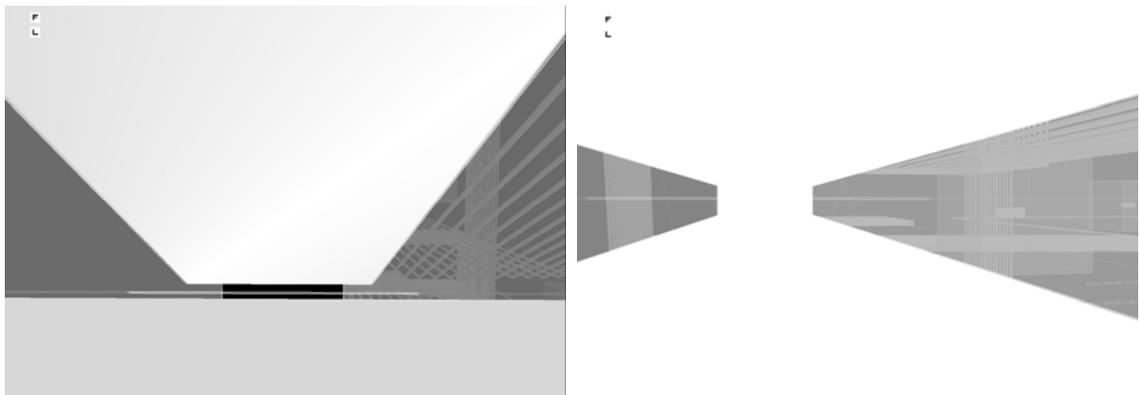
[Img. 10, 11, 12, 13, 14]



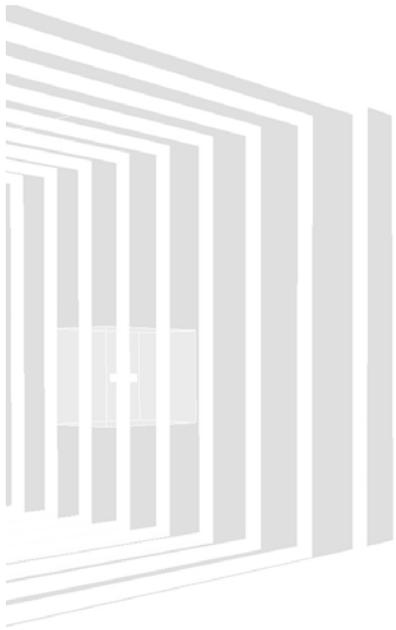
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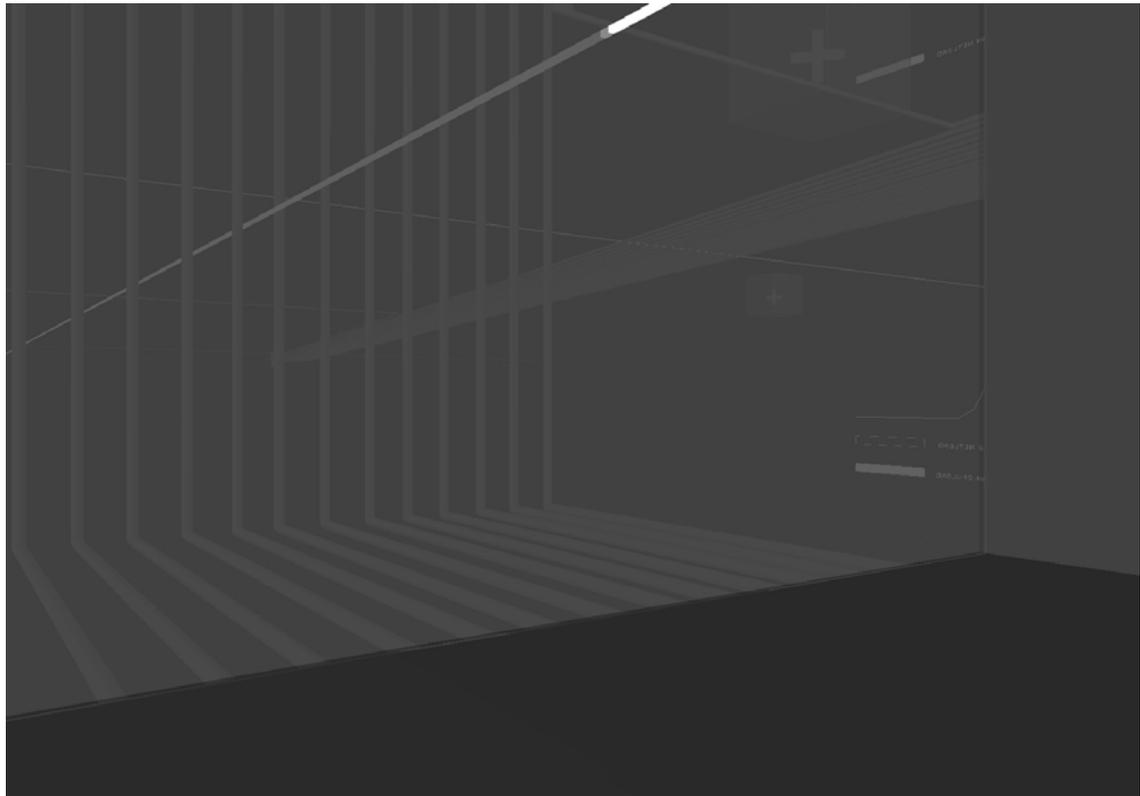
[img. 16]



[img. 17, 18]



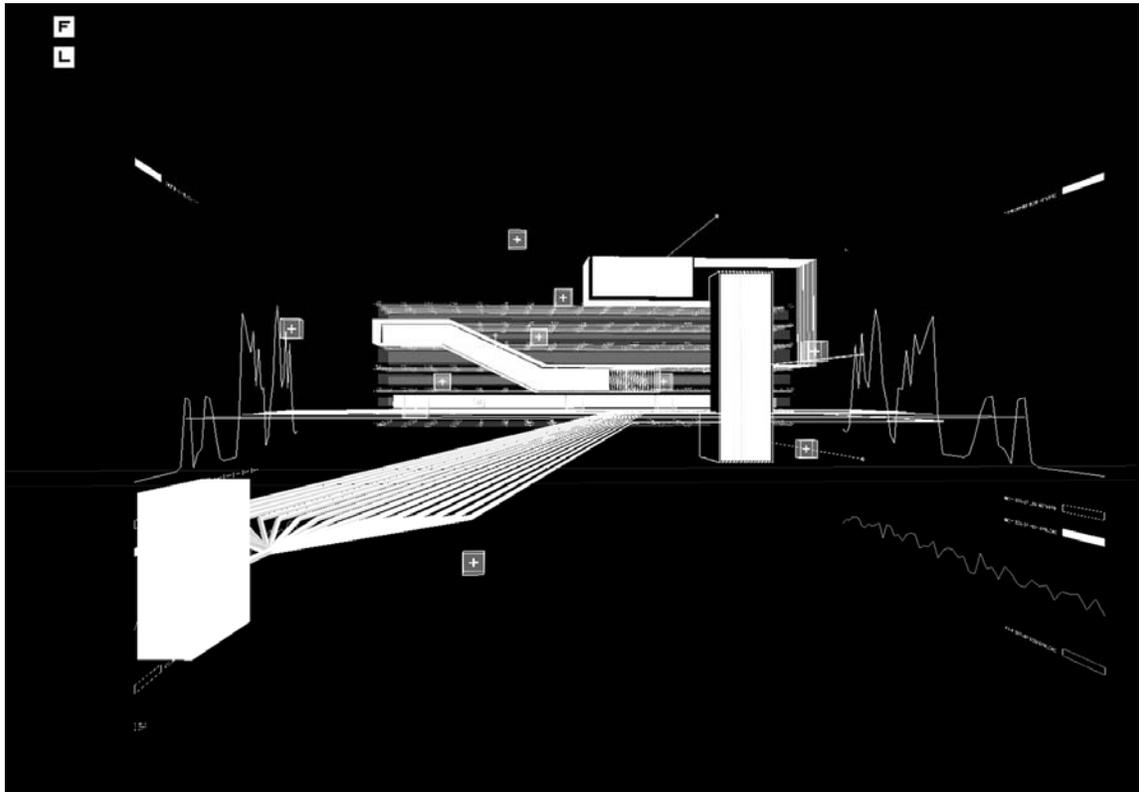
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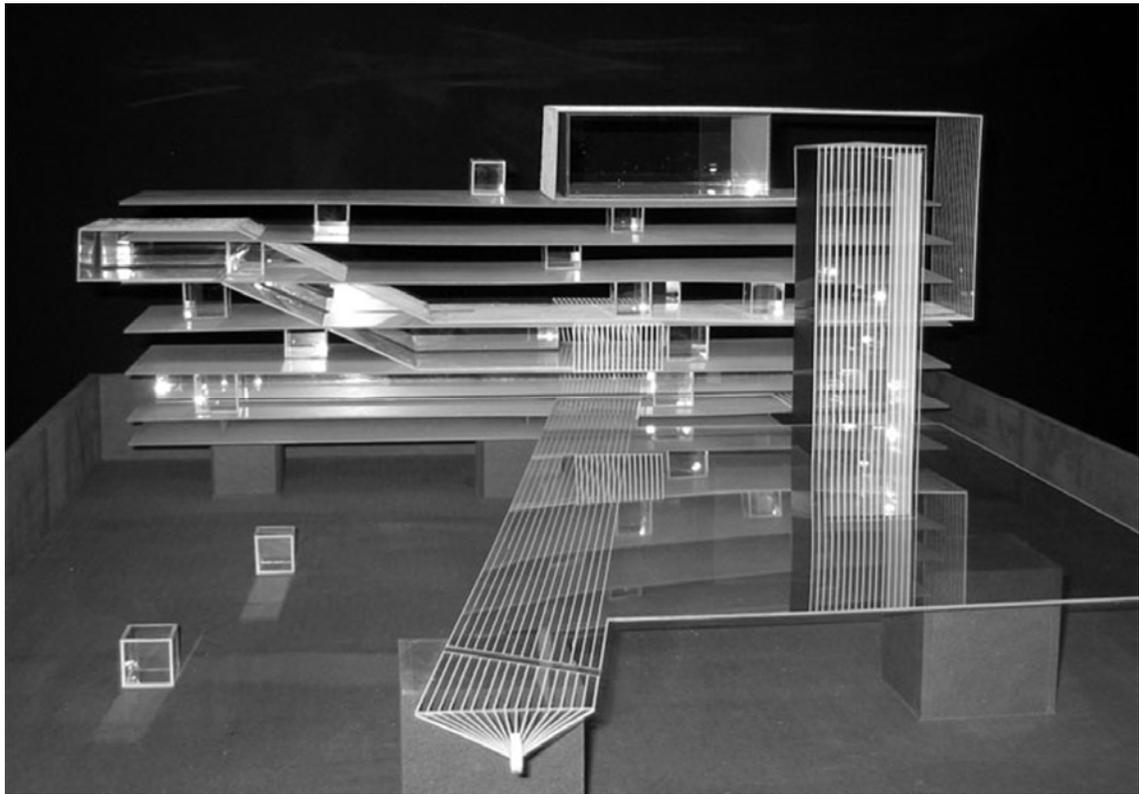
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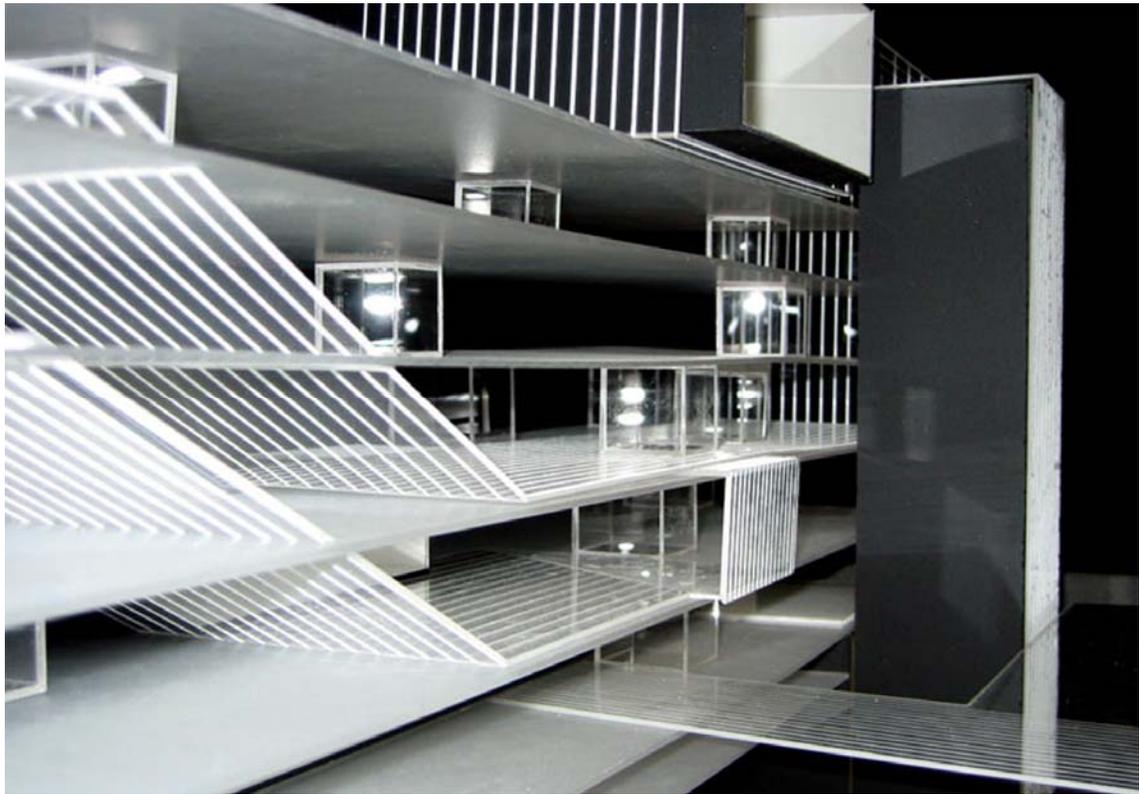
[img. 21, 22, 23]



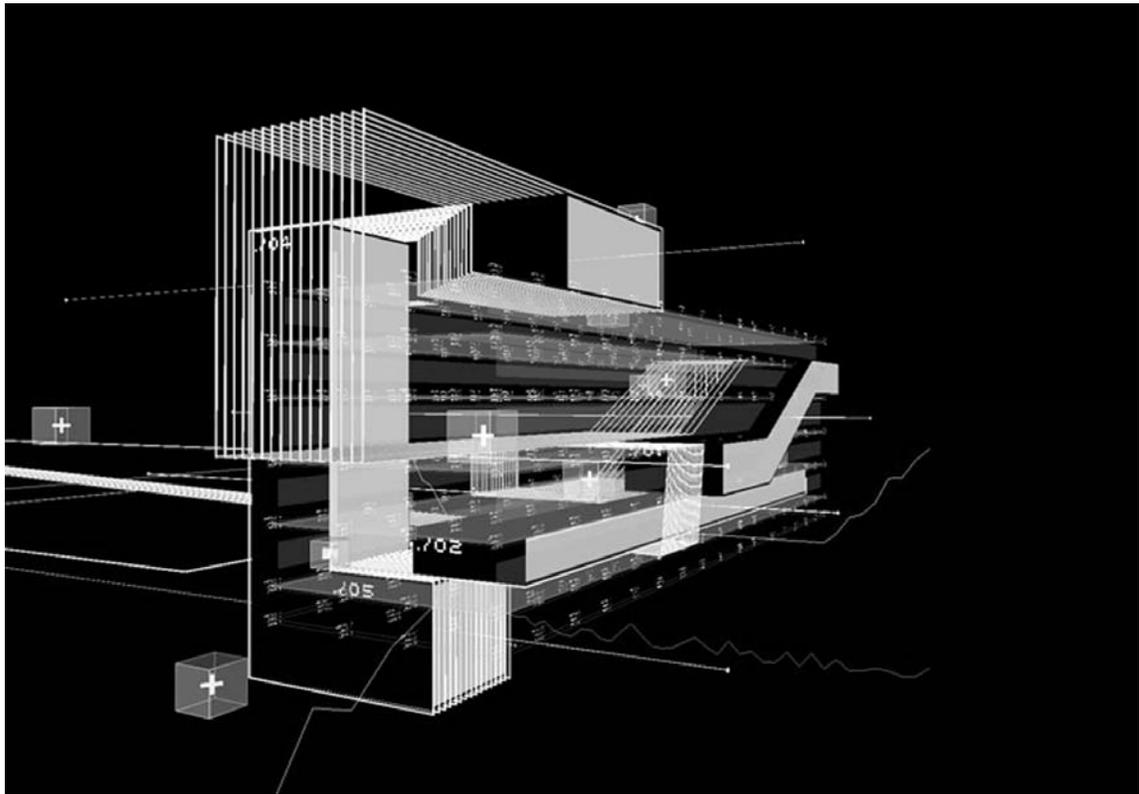
[Img. 24]



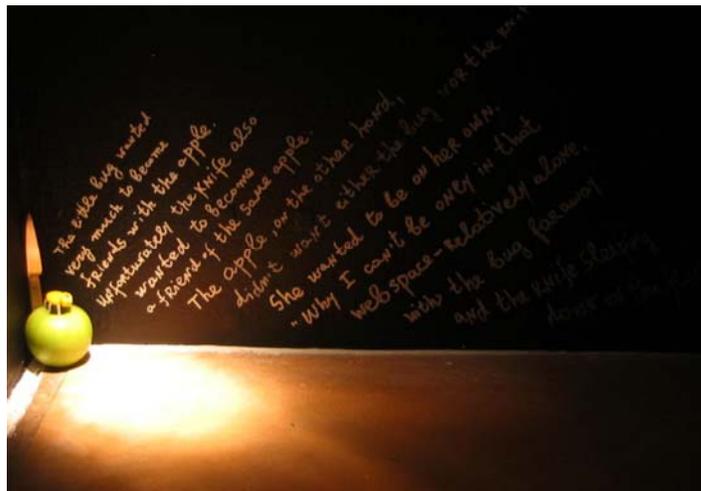
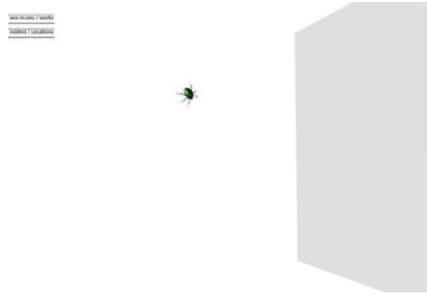
[Img. 25]



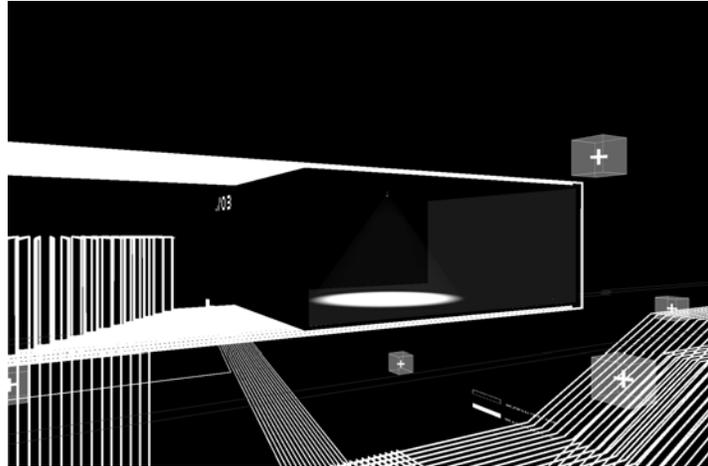
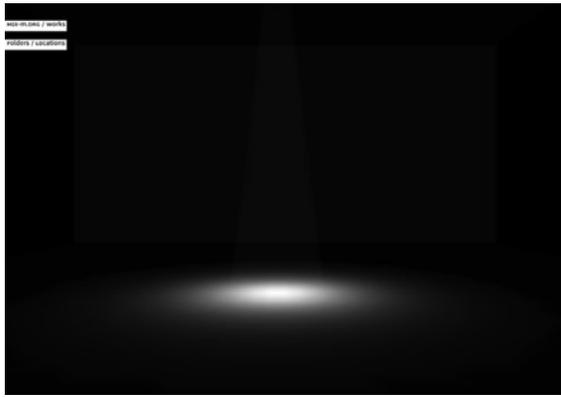
[Img. 26]



[Img. 27]



[img. 28, 29, 30, 31, 32, 33]



[Img. 34, 35, 36, 37]



MEX-01.040 / works  
Folders / Locations

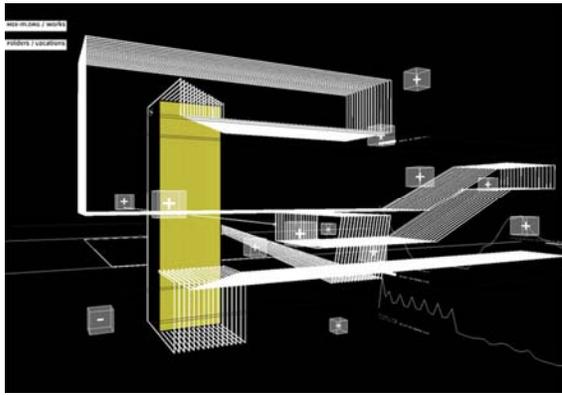
**“ C'est mon coup de coeur !**  
Résistante aux intempéries, traitée anti-UV et sans aucun entretien, elle est plus vraie que nature... En plus, je la garantis 5 ans !

**André DOOR**  
Fondateur d'OUTIDOR

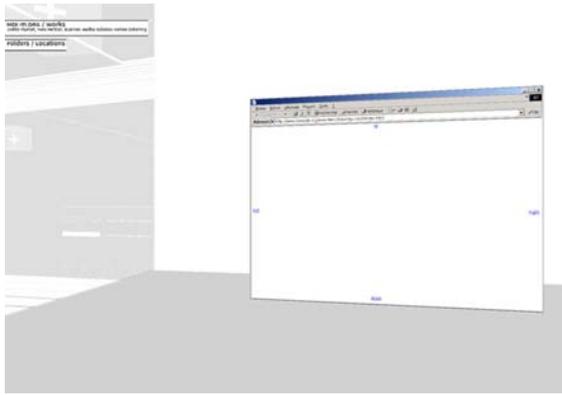
**L'aspect naturel du thuya**  
**UNE HAIE PERMANENTE** plus vraie que nature.

**S'adapte à vos mesures**  
Les brins de 1,80 m se coupent en 2 votre brin de 1,80 m et vous obtenez deux fois plus de longueur.

[Img. 38, 39]



[Img. 40, 41]



[Img. 42, 43, 44, 45, 46]

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## Image captions:

- [Img. 1] Digital access to the electronic part of MIX-m.org (website access to 3d environment, presentation of projects). MIX-m stands for MIXed (space)-museum.
- [Img. 2] Main element of the digital extension to the physical space: a continuous lighting system/lines that induces "oblique" spaces.
- [Img. 3] Within the electronic space, a representation of MIX-m.org server, the origin of the lighting system/lines.
- [Img. 4] MIX-m.org server as a starting point for the lighting lines in the 3d environment.
- [Img. 5] The physical side of the museum, BAC (Bâtiment d'Art Contemporain, Geneva, which contains some of the main contemporary art institutions of the city such as MAMCO (Musée d'Art Moderne et Contemporain), CAC (Centre d'Art Contemporain), CIC (Centre pour l'Image Contemporaine) and CP (Centre de la Photographie).
- [Img. 6] Inactivated (black status), the electronic side of MIX-m.org has exactly the same x, y, z, volume as the physical building. The two volumes co-exist in parallel, they are twins: the first one is located in the physical world, the other one, digital and 3d, like a game environment, is distributed over the Internet.
- [Img. 7] Activated (white status), MIX-m.org reveals all its new exhibition volumes (5 new volumes labelled ./01, ./02, ./03, ./04, ./05). These volumes could not exist in this way within the physical building (volumes between three floors, on the roof, under the building, vertical -6 floors-, etc.). Each of the two sides (physical, digital) of the museum acts as an alternate space or as an extension for the other.
- [Img. 8-9] Side view, active and white status or inactive and black status.
- [Img. 10-14] The digital museum, viewed from far with the "server" on the left and museum's volumes on the right. The "white to black to white" status of the overall digital structure is driven by the information flow of MIX-m.org server: a big information flow on the server triggers the white parts to appear while few or no flow makes them disappear, revealing the original volume. The same information flow system drives the fluorescent lights of the physical building in the Bâtiment d'Art Contemporain in Geneva.
- [Img. 16] Inside the structure. The + (and -) signs serves as one of the navigation systems through the overall digital environment. ./01 is a space dedicated to future exhibitions.
- [Img. 17] Within space ./01 (or also folder ./01, considering the fact that this space is really a folder on the MIX-m.org server). This particular space occupies "virtually" three levels of the physical twin building.
- [Img. 19] A particular view within space ./01 during a white phase. White and black phases are echo for two of the most well known type of museum types (the modern "white box" vs the "black room" – the video/screen media room –). The space is modulated between these extremes and between presence and absence.
- [Img. 20] Getting close to a black phase within space ./04. Black and white phases bring the 3d environment close to a 2d and flat one. It flatten the space and opens it to 2d propositions.
- [Img. 21-23] Simple physical presence at CAC (Centre d'Art Contemporain) in Geneva. Each machine/screen, which is also a space within the digital structure, hosts an artist's work specifically created for the mixed space museum. Fluorescent linear tube lights on the ceiling of the physical space of the museum oscillate in the exact same manner as the "white to black" status within the digital structure.
- [Img. 24] Digital building, server side.
- [Img. 25] Same view of the built model of the digital museum, exhibited in CAC.
- [Img. 26] Built model of the digital building.
- [Img. 27] View from front, digital building.
- [Img. 28-33] "My (almost killed) imagination" by Nedko Solakov in both physical and digital space.
- [Img. 34-37] "Needle light", Scanner's light and sound based work for MIX-m.org.
- [Img. 38-39] "Fire-wall de salon", by Joëlle Flumet.
- [Img. 40-41] "It looks like the weather keeps up" by Yves Mettler's work for MIX-m.org. Light, colour and sound installation based on live weather data.
- [Img. 42-46] "A basic work", Heimo Zobernig's work for MIX-m.org in both physical and digital space.

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# Txt

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## MIX-m

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MIX-m.org is a mixed space architecture and exhibition created by fabric | ch, in collaboration with curator Simon Lamunière (CH), and that exists at the same time in variable and complementary spaces: physical space (Contemporary Art Centre, Geneva), digital space (a multi-users and game-like environment), model space (a model of the digital structure), and networked spaces (distributed over the internet). MIX-museum stands literally for spatially combined/mixed and twin extended museum. This is the case in the sense that the physical museum is "augmented" by the digital one, while this latter one is extended in the same way by the physical dimension).

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MIX-m.org exists also at different scales. Its actual scale depends on the one set as "real" by each user (1:x, 1:50, 1:1, 50:1, x:1). It is basically a 2d-3d architecture project, both physical and digital.

Oscillating and hesitating between black and white, between 2d and 3d, MIX-m museum echoes some historical exhibition space archetypes: the "white cube" of the modern museum as well as the "black box" needed by video-art or media installations. It also distant echoes some historical "special effects" environments (Tron black and white movie sets, before post-processing effects were added).

Translated into "screen based" or "beamer based" architecture, this white to black condition becomes an over- to under- illuminated situation. Far from a functional intention, it proposes an evolving illumination system connected to the global activity of MIX-m.org server (rate of information). This system exists both in physical (neon light) and digital spaces (illusionary rendering light). MIX-m as a mixed and extended museum becomes therefore a variation between architectural types and references, playing with the user's eye and cultural habits.

MIX-m is a project by fabric | ch (architecture) and Interversion (curation).

fabric | ch, June 2005



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# Electroscape 003

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2004

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Project by fabric | ch

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Funding: Pro Helvetia (Zürich, CH), Cahier d'Artiste 2004

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Location: fictional

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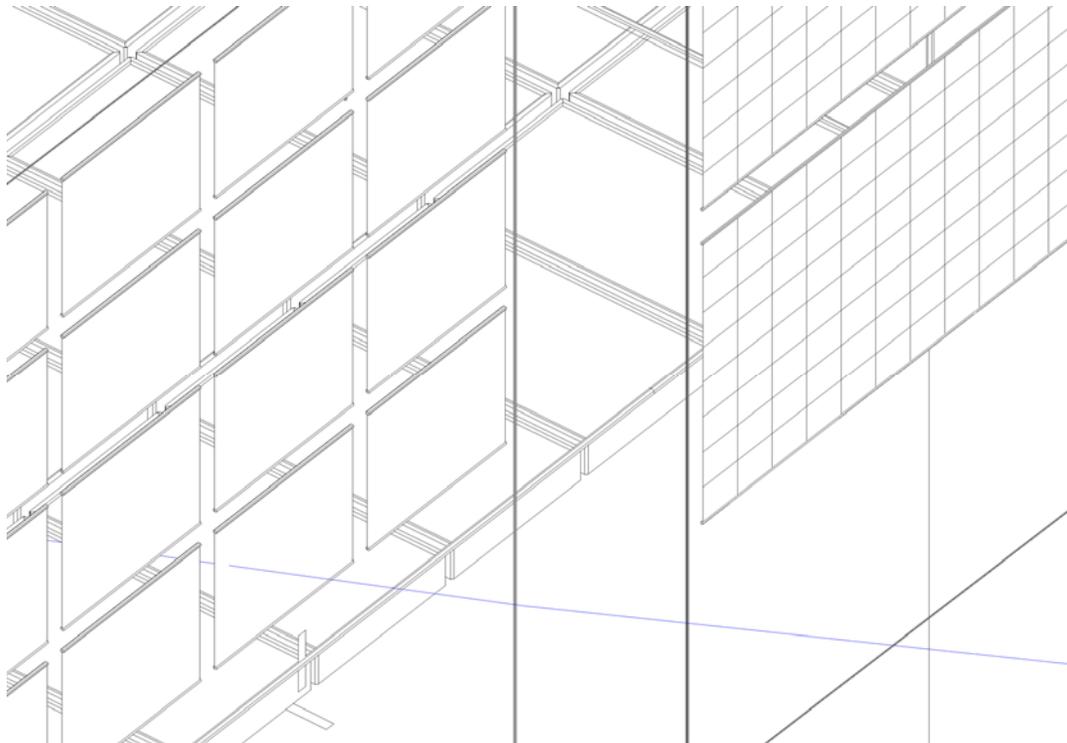
<http://www.electroscape.org/003>

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- A space to generate books
- A book in place of a walkthrough video
- A video to emulate a space
- Paper-based "datascape"



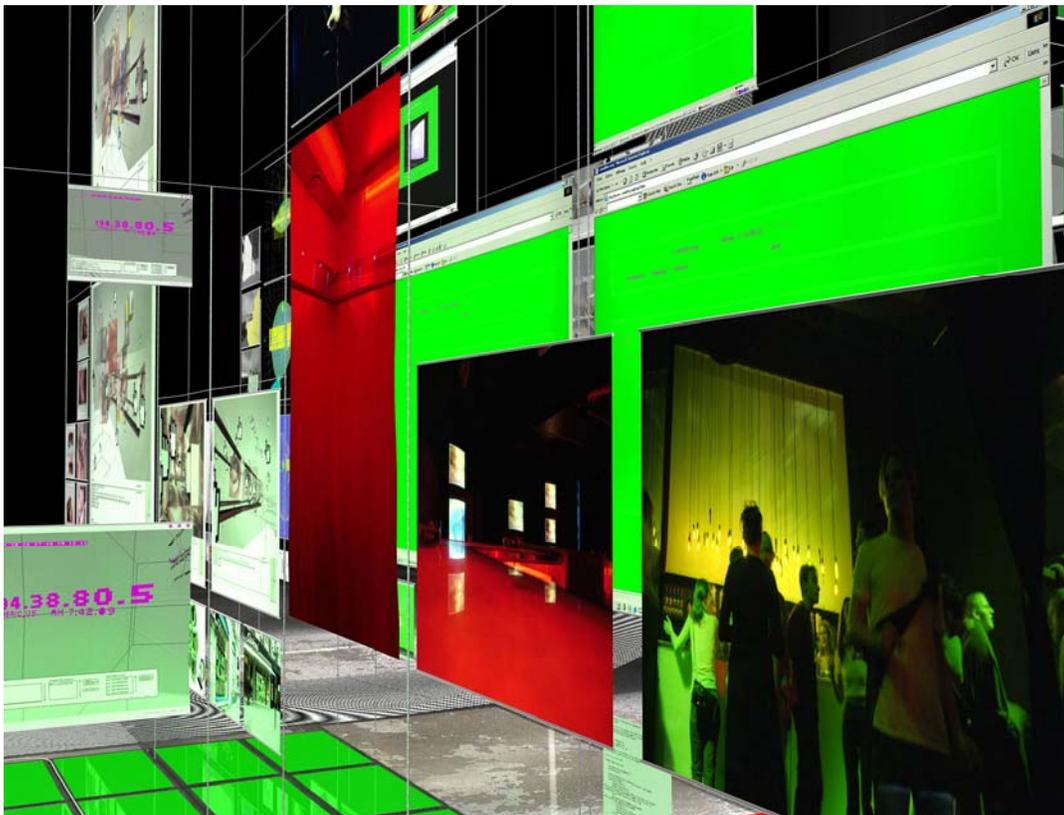
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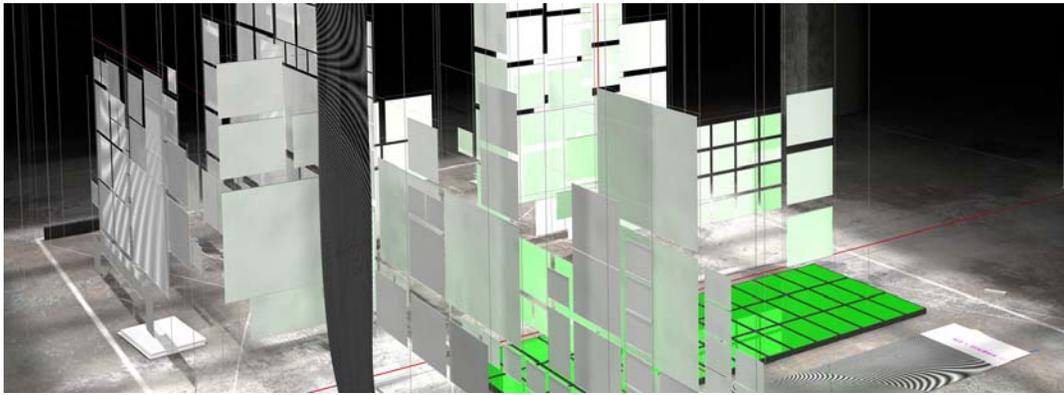
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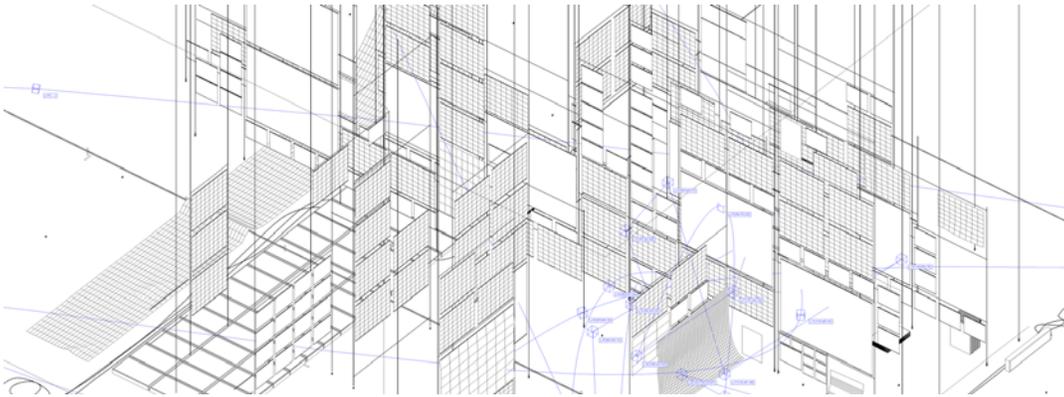
[Img. 3]



[Img. 4]



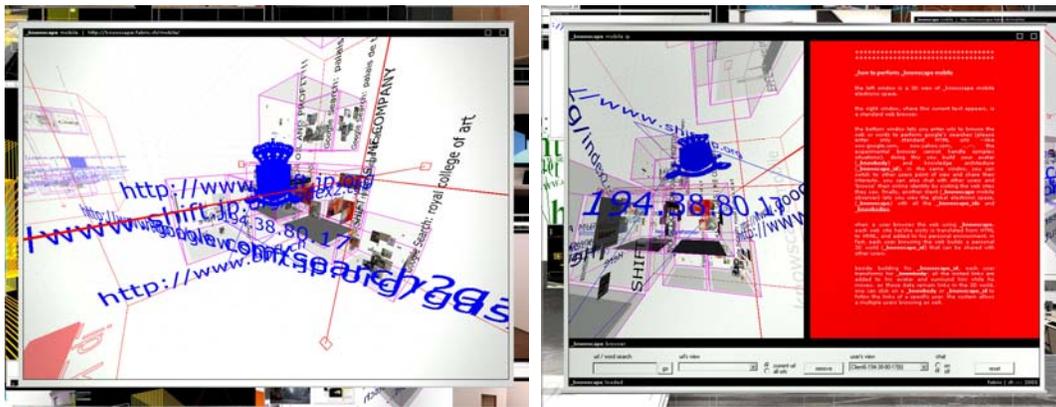
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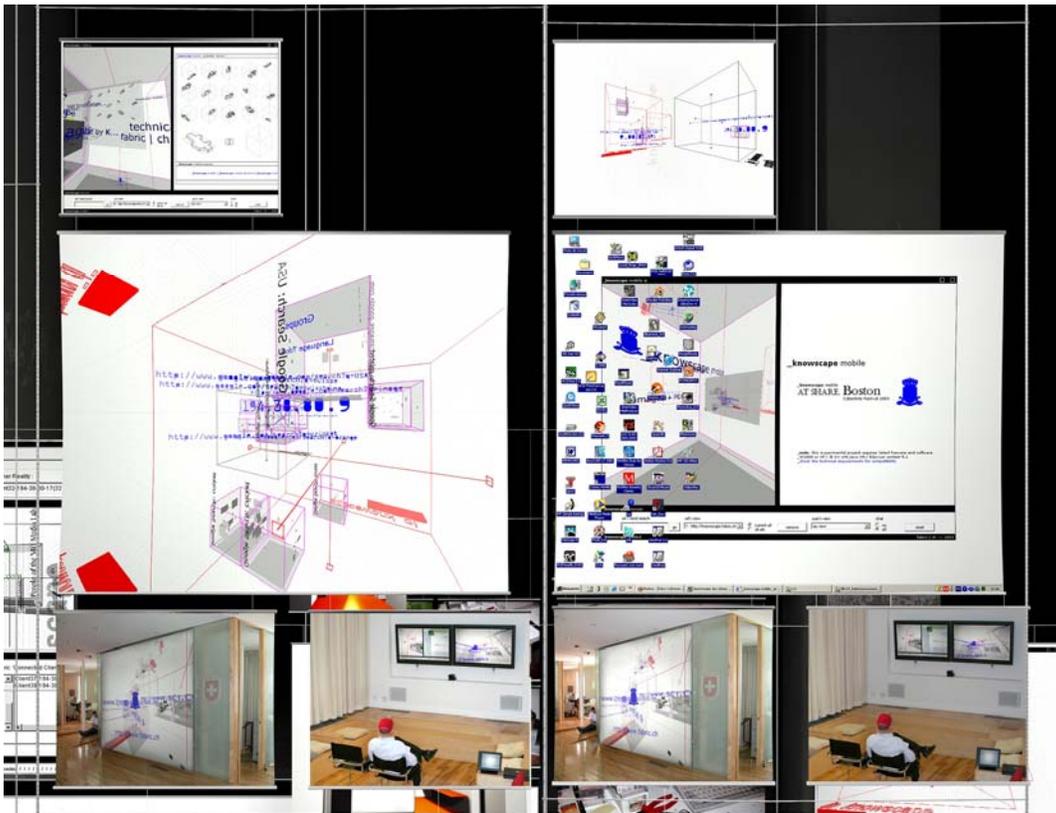
[Img. 6]



[Img. 7]



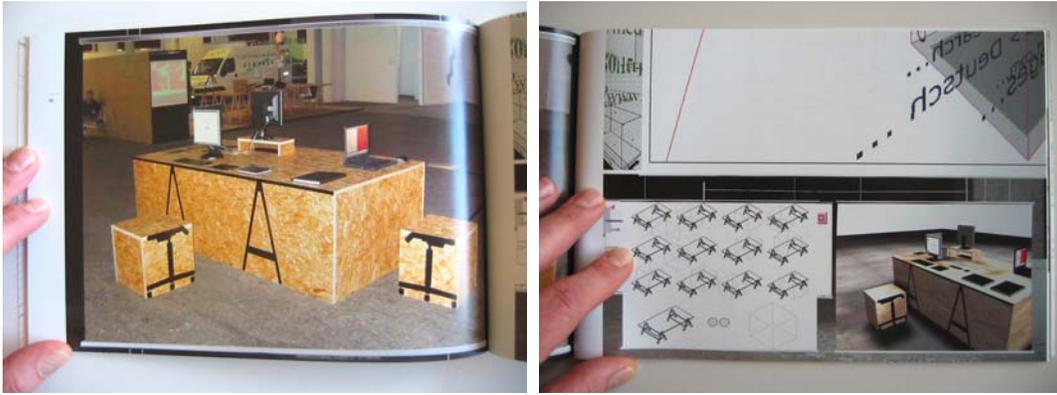
[Img. 8, 9]



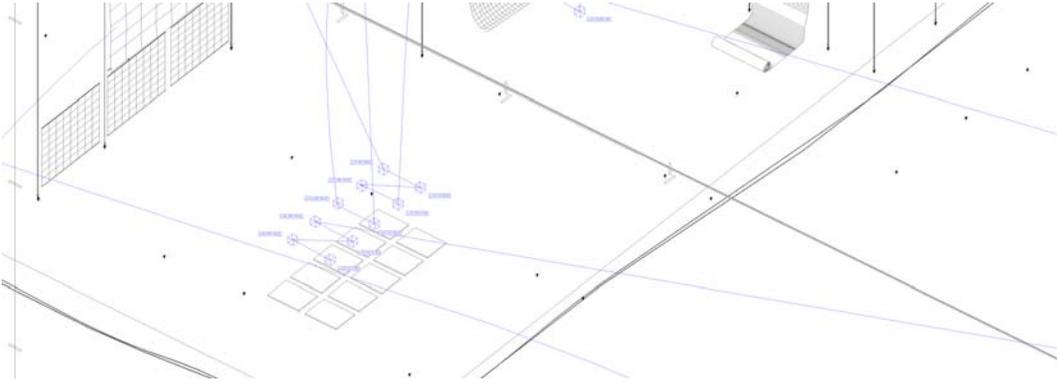
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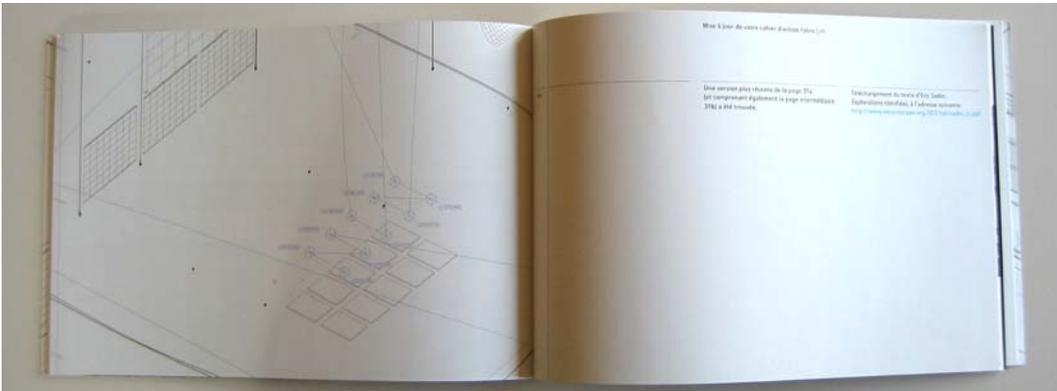
[Img. 11, 12]



[Img. 13, 14]



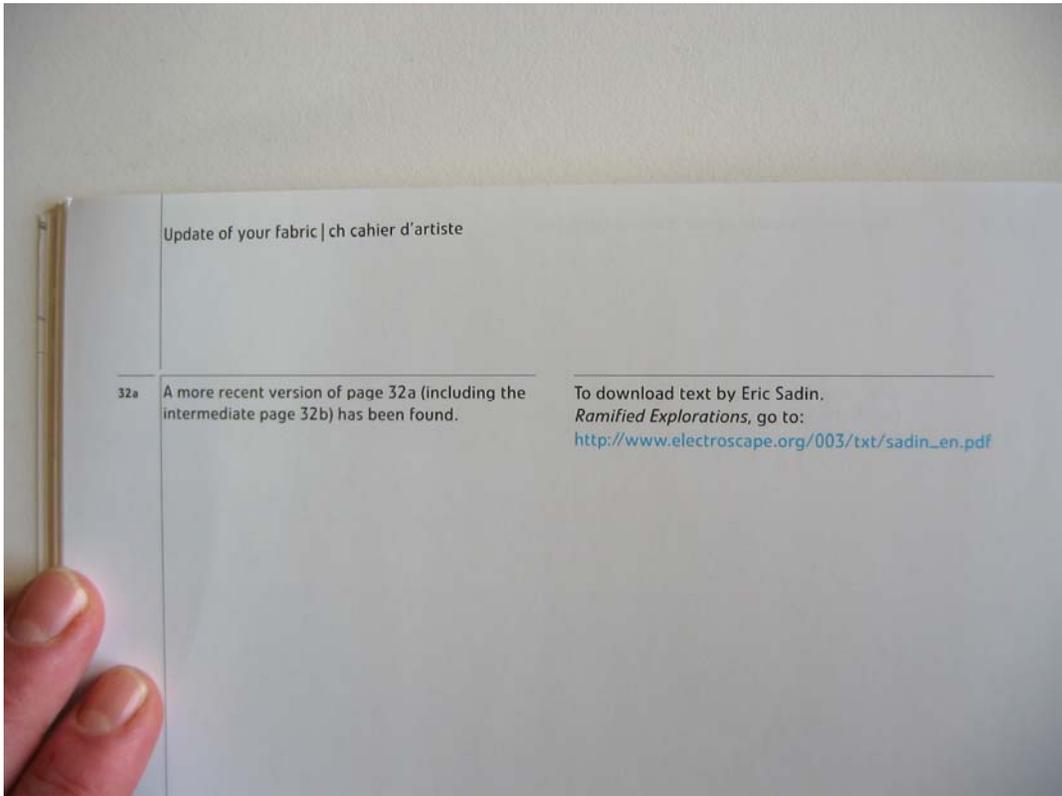
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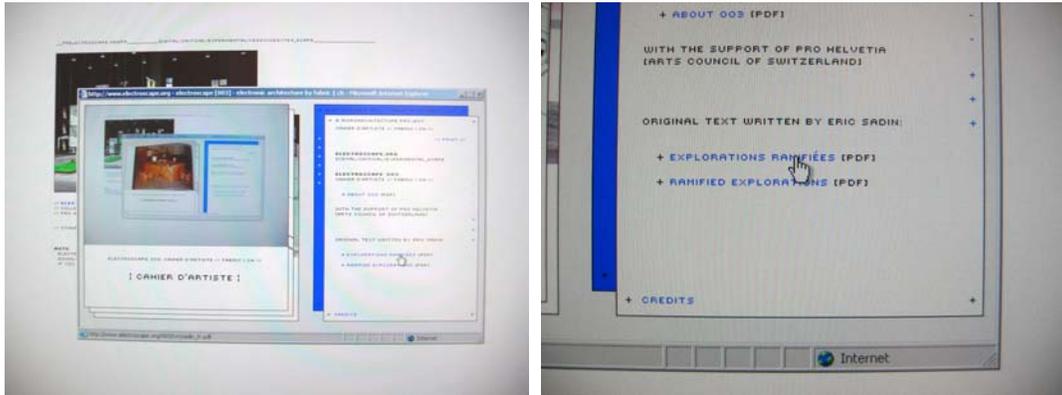
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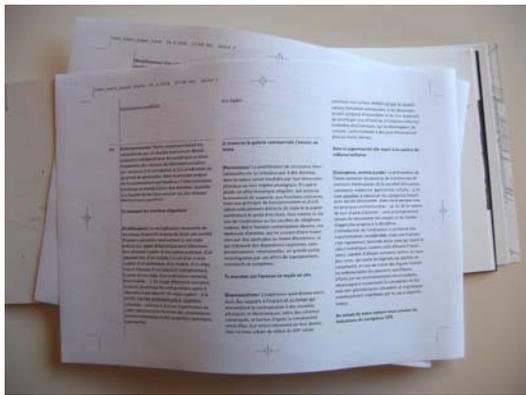
[Img. 17]



[Img. 18]



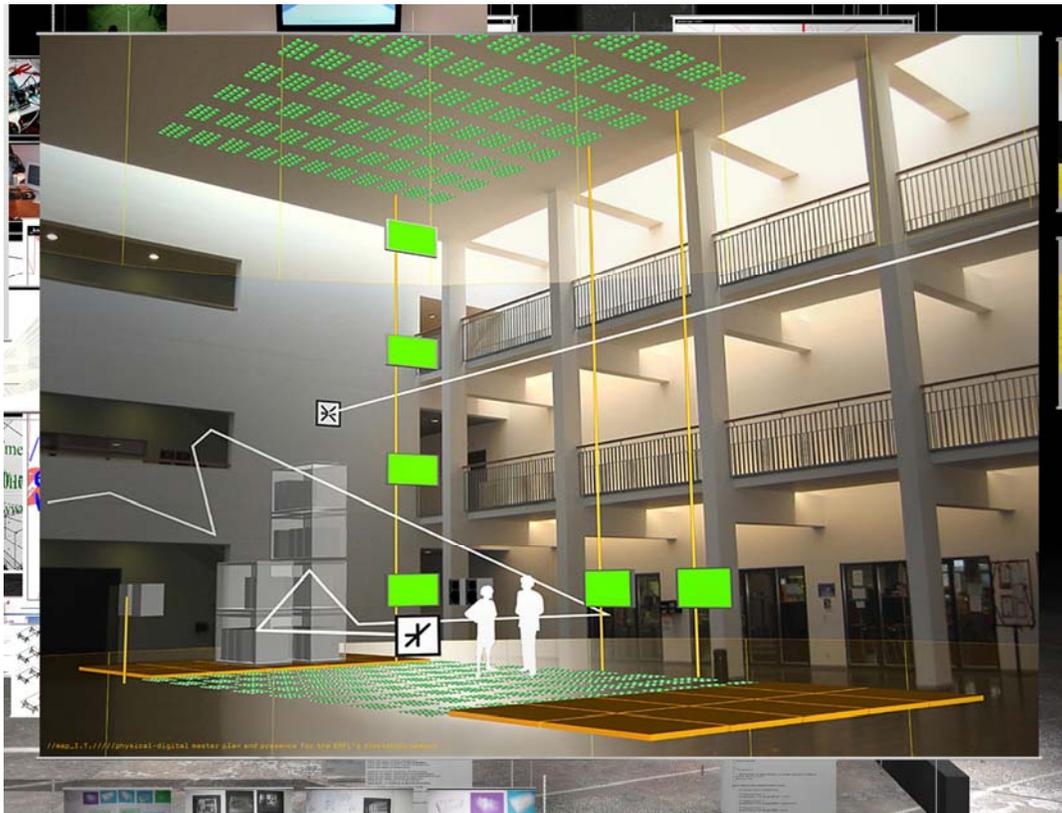
[Img. 19, 20]



[Img. 21]



[Img. 22]



[Img. 23]



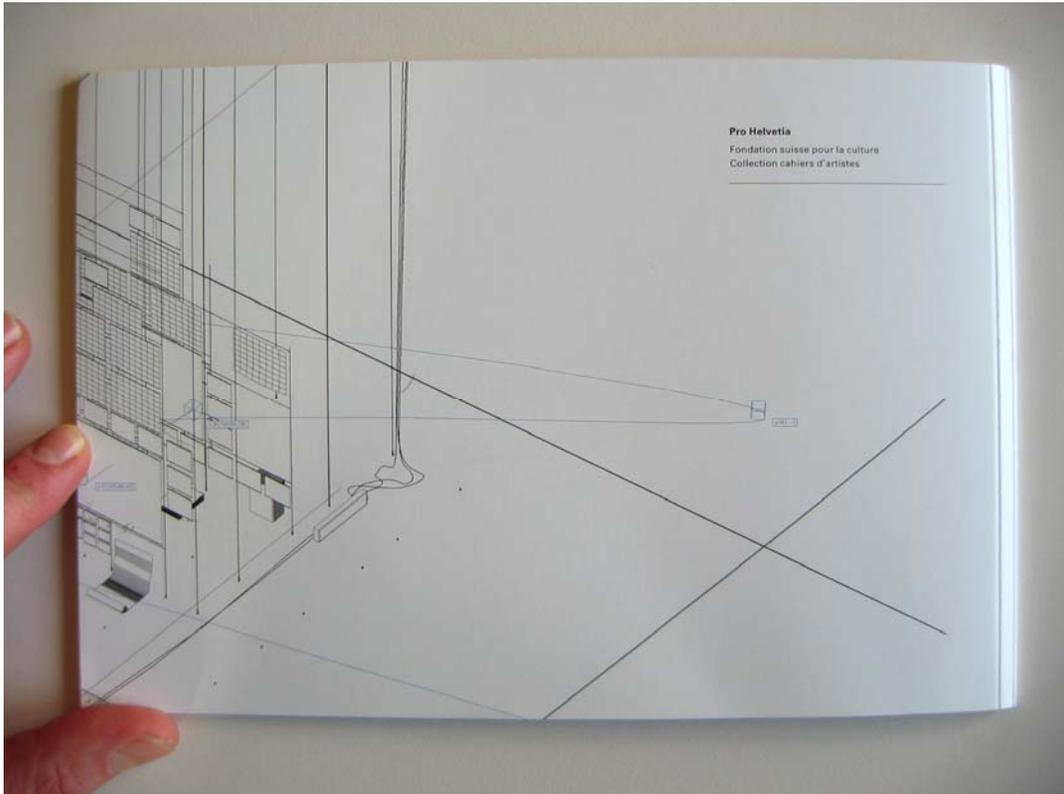
[img, 24]



[img, 25]



[img. 26]



[img. 27]

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## Image captions:

- [Img. 1] P.2 (of the book/"Cahier d'artiste"): general view of the installation (the space) used for Electroscape 003. The data (images taken from fabric | ch's projects, period 1997-2003) are organized in a very "rationalist" way: 3 axes, where x = years 97-03, y = research-applied and z = unpaid-paid works.
- [Img. 2] P.16: the same model in a different type of rendering (axonometric, wireframe) serves as the non linear "railroad" for the "Cahier d'artiste" and reveals its non material nature (simulated? fake?). Based on this installation, many "Cahier d'artiste" could have been produced, each one telling a new linear and "walkthrough" story about fabric | ch.
- [Img. 3] P.6: general view of the installation occupying a 1280 x 1024 x 768 units' volume. Some of fabric | ch's projects from left to right (97-03): La\_Fabrique, l-Weather, Digital BM, Knowscape Mobile, map\_I.T.
- [Img. 4] P.5: inside view on the images of the "Experimental night" project (2000). The image on the right shows a project, Melatonin Bar, by Décosterd & Rahm, associés who collaborated on the overall project.
- [Img. 5] P.14-15: the "datascape" made of paper on its non printed side (but with some beamed patterns).
- [Img. 6] P.18 & 21: view from the opposite corner in axonometric mode. This model serves as matrix for hundreds of potential books about fabric | ch (including the one possibility that has been printed as "Cahier d'artiste" by Pro Helvetia). The blue line is the path for the walkthrough video and therefore also for the sequence of pages in the Cahier. This camera movement serves to produce a video as well.
- [Img. 7] P.13: the "École Piottet" project surrounded by Knowscape Mobile's posters.
- [Img. 8] From p.23 on, images in the Cahier switches from an ambient presentation of Electroscape 003 (the paper-based datascape) to a frontal presentation of specific projects (Knowscape mobile, Electroscape 002, map\_I.T.), with little surroundings.
- [Img. 9] P.24: another close up view to the Knowscape Mobile project.
- [Img. 10] P.25: a less close view to Knowscape Mobile's posters that show different displays/installations of the project.
- [Img. 11] P.26: a detail on one of Knowscape Mobile's installations.
- [Img. 12] P.27: Knowscape Mobile images, the Basel installation.
- [Img. 13] P.28 image shot from the "Cahier d'artiste", Knowscape Mobile at Swiss Art Awards, Basel.
- [Img. 14] P. 30: different representations of the same object in the "Cahier d'artiste".
- [Img. 15] Double width image that has been used for pages 30 and 33. It shows the camera movement in the world over white blank sheets of paper. This will be used for all the text pages in the Cahier.
- [Img. 16] P.30 & p.31a: insertion of white pages and texts. On the right page (p.31a) is printed a link to download some missing parts of the "Cahier d'artiste" from its website ([www.electroscape.org/003](http://www.electroscape.org/003)). It allows therefore to update the Cahier over and over again if necessary.
- [Img. 17] P.20: another text page in the book.
- [Img. 18] Detail of page 32a, with link to the online part and update for the "Cahier d'artiste".
- [Img. 19] Following the link to [www.electroscape.org/003](http://www.electroscape.org/003).
- [Img. 20] Link to the download section of the missing text. To be printed and included in the Cahier.
- [Img. 21] Once printed... p. 32a & 32b by French writer and essayist Eric Sadin, to be inserted in the Cahier.
- [Img. 22] P.34 & p.35: another project presentation (Electroscape 002, hybrid museum).
- [Img. 23] Image for p.41: the map\_I.T. project is a master plan for the Digital Campus of EPFL (Swiss Federal Institute of Technology, Lausanne, CH).
- [Img. 24] P.44: return into the main environment, an overall view towards the past (x-axis of the data structure).
- [Img. 25] Picture of p. 44 & p.45: two different ways of displaying a CV (image or text based).
- [Img. 26] Last pages with the "railroad" matrix environment of the book totally revealed.
- [Img. 27] Back cover.

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# Txt

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## Electroscape.org

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Electroscape.org is a place/space/network, an open project and online edition through which digital and mutated landscape, mixed, distorted or enhanced reality, "infoscape", electromagnetic territories are questioned, made tangible. It is about the creation of challenging spaces.

Electroscape.org is a platform set up by fabric | ch to conduct experiments on contemporary space. In particular it explores one of its subset that we name "screen-scape", a 1280 x 1024 x 768 units' mobile space, with variable scales depending on the context of installation (from pixels to decameters, from screen to neighborhoods). Electroscape.org is an open and ongoing project/playground, where different modes of creation can be experimented.

The different processes that are going on under this Electroscape's generic title can lead us both in the development of new critical concepts and environments as well as in the set up of technologies (that act on space). This prospective work develops itself both in the architectural field and in the scientific one, testing the potentialities of processed spatiality.

Being a clear vector of transformation for our contemporary societies, sciences are considered as fully part of this context of work (in particular information sciences in this case). It is then clear that our approach can lead us to question both traditional architectural approach about space (and interaction) as well as traditional and functional approach about sciences. Our context of work includes what laboratories are producing or publishing before they hit the society. Our approach is a form of prospective architecture.

Nowadays, we can witness the emergence of various spaces linked to the screen. These can be simulated 3d environments like the ones we see in games, networked 2d or 3d ubiquitous spaces, or on the other side of this space spectrum, real spaces being monitored by cameras or other visual tracking devices.

Screen space is therefore a strange place, somewhere in between 2d and 3d, between flat and volume, between here and there or even both at the same time. But it always have a close link to screen resolution, to s(t)imulation and to information processing.

In these successive processes (001 to 004), this spatiality is explored, deployed, played with: physical and immaterial, visible and invisible, located and distributed at the same time.

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# Txt

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## Electroscape 003

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003: cahier d'artiste // fabric | ch //

What is a paper edition or a small book? Is it a rather linear and rational succession of immutable images and texts printed on pages, or can we consider it in our Electroscape's context as a kind of space as well? Or better: a potential space and its visualization device and its materialized substitution, all together?

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We've taken the opportunity of a publication about the work and experiments of fabric | ch (97-03) made by Pro Helvetia (Art Council of Switzerland) to think about these questions and to experiment with this concept of substitution (something in place of the real thing, producing the effect of it in the mind and/or the body). Our work of the past seven years being mostly digital and low-res, being frequently spatial and non linear as well, how would we translate it into a linear, hi-res, static publication? The space being in this case a book generator, the book or Cahier can become a legitimate part of it or its natural production: the book is the space and the space is the book?

Electroscape 003 is our attempt to answer to this set of questions. This new situation has become a datascape where screenshots of our works have been printed and installed in space following precise and seemingly abstract rules. In this 3d graph environment (1280(years) x 1024(level of experiment) x 768(amount of money)) are mapped most of our works from the last 7 years, including the ones we probably don't like anymore or some we are less interested into. In addition, works are grouped onto layers that are our main themes of work. The exact status, nature and location of this space remain unclear, unspoken, but opened to readers' speculations. The datascape (or rather say an analogical and paper based datascape, our works being the data) shows our past, present and potential future processes of work without precise hierarchies, beginnings and ends, and does then not focus in the first sight on some precise works.

But eventually it can...

So the rules of the datascape / screenscape were planned to produce a 3d, non linear "chemin de fer" (-railway in English- or a way to name in French the overall organization, structure and sequence of a publication) or book sequence generator. Using software cameras, we could produce any kind of high-resolution image out of it and any type of pages sequences (where the 4/3 screen based ration would be kept), producing at the same time different types of thematic Electroscape 003's walkthroughs. The 3d environment is about data, while the camera that produces the suite of pages sequence is about theme.

In fact, the final paper publication is one among lots of other possibilities, which is of course always the case. The only difference is that these "lots of others" are still present in the book, barely visible but at rest there in the installation, as potential other books. A space, a book, a graph and a video sequence: substituted and distorted presence, one in place of the other or "Electroscape 003: cahier d'artiste // fabric | ch //".

fabric | ch, Lausanne, March 2004

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# Knowscape Mobile

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## 2003-2005

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Project by fabric | ch

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Locations: Internet, Boston, Basel, Brussels, Los Angeles

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Exhibited at SHARE (Boston, USA), Swiss Art Awards (Basel, CH), DIS 2004 (Cambridge, USA), Mediaruimte (Brussels, BE)

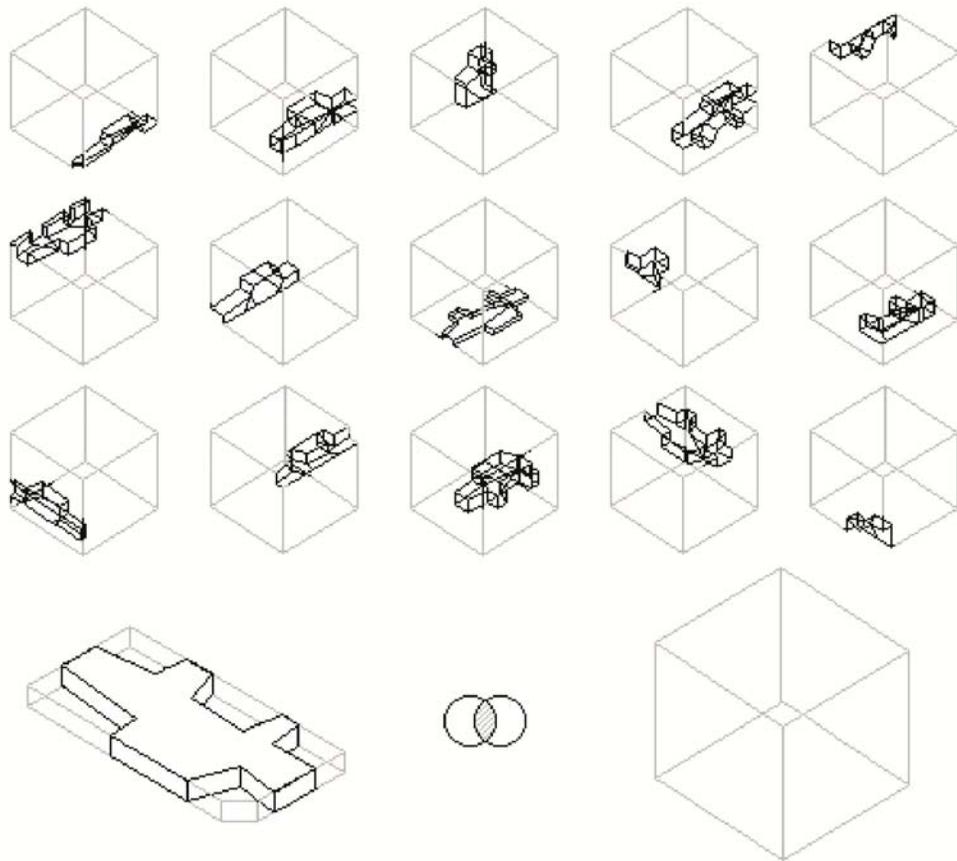
Presented in conference during Siggraph 2004 Conference (Los Angeles, USA)

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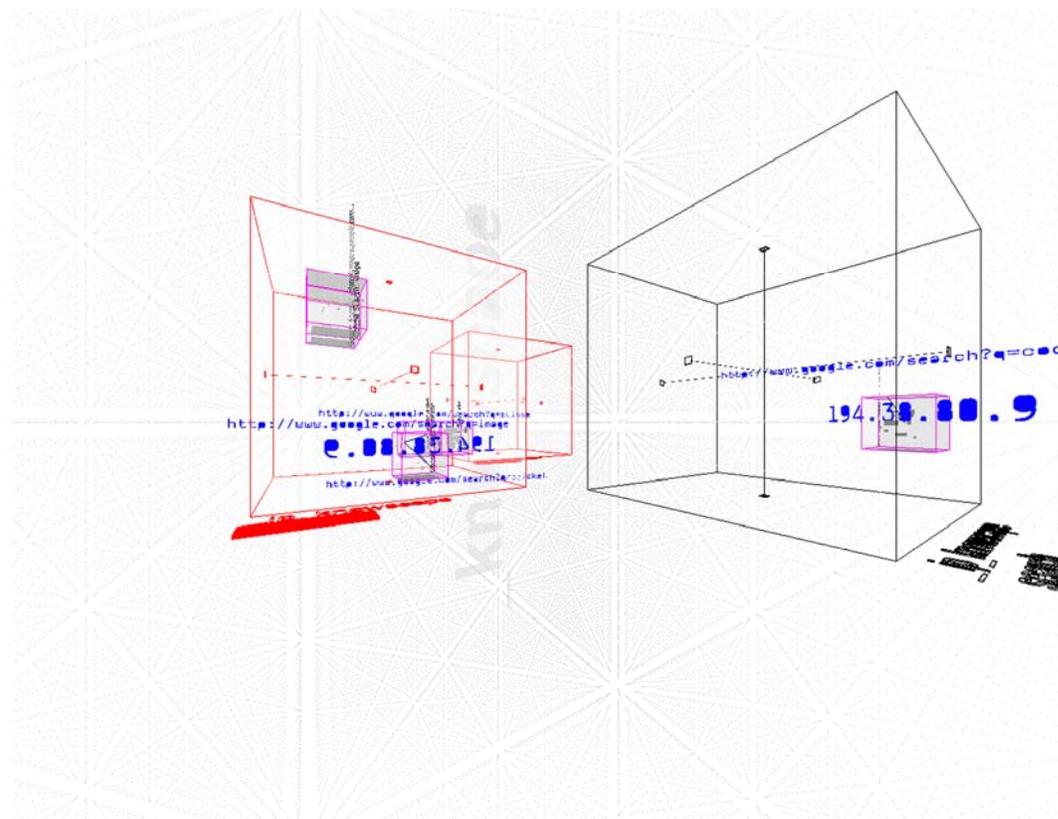
<http://knowscape.fabric.ch/mobile>

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- Mobile & downloadable space
- Data, information architecture
- Relational environment
- Open & shared profiling
- Information based avatars
- Bots (web-crawlers) avatars
- Alternate 3d web browser and multi-user environment (based on the previous Knowscape alternative 3d web browser)

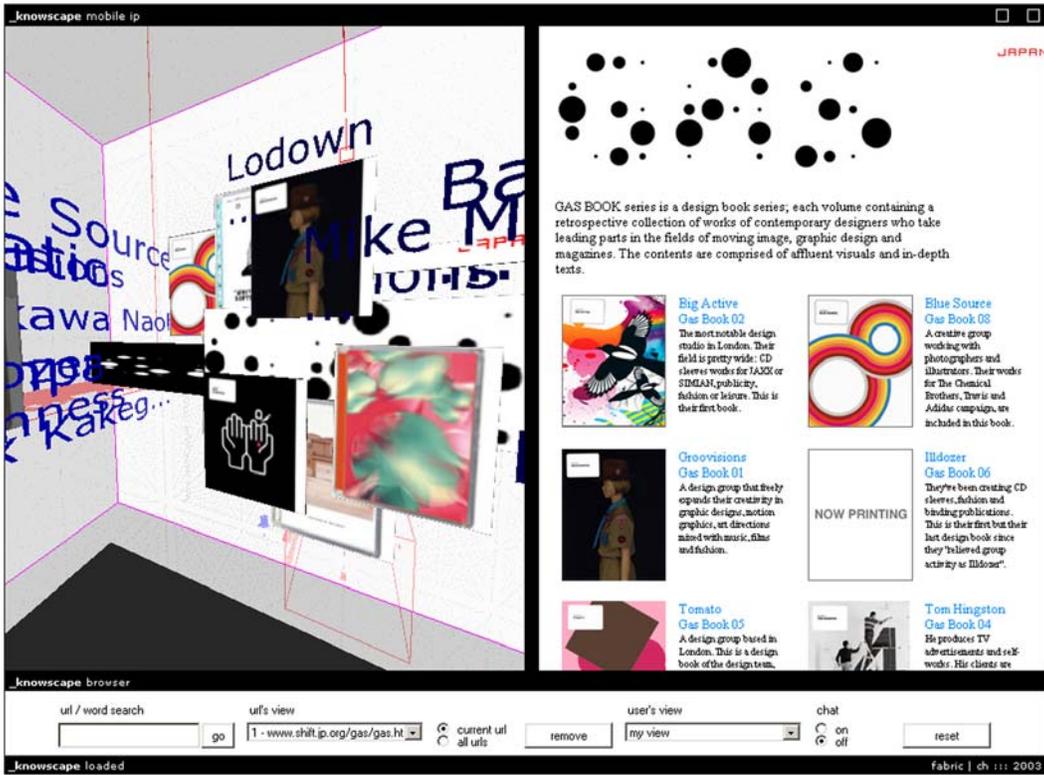


[img. 1]

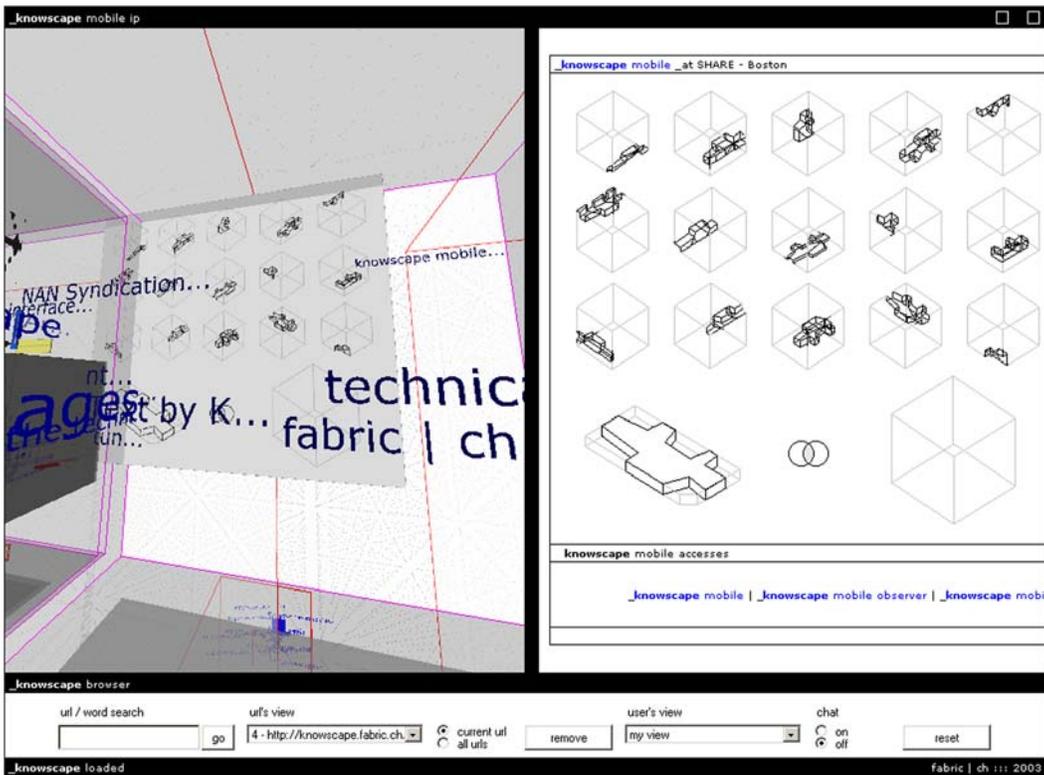


[img. 2]

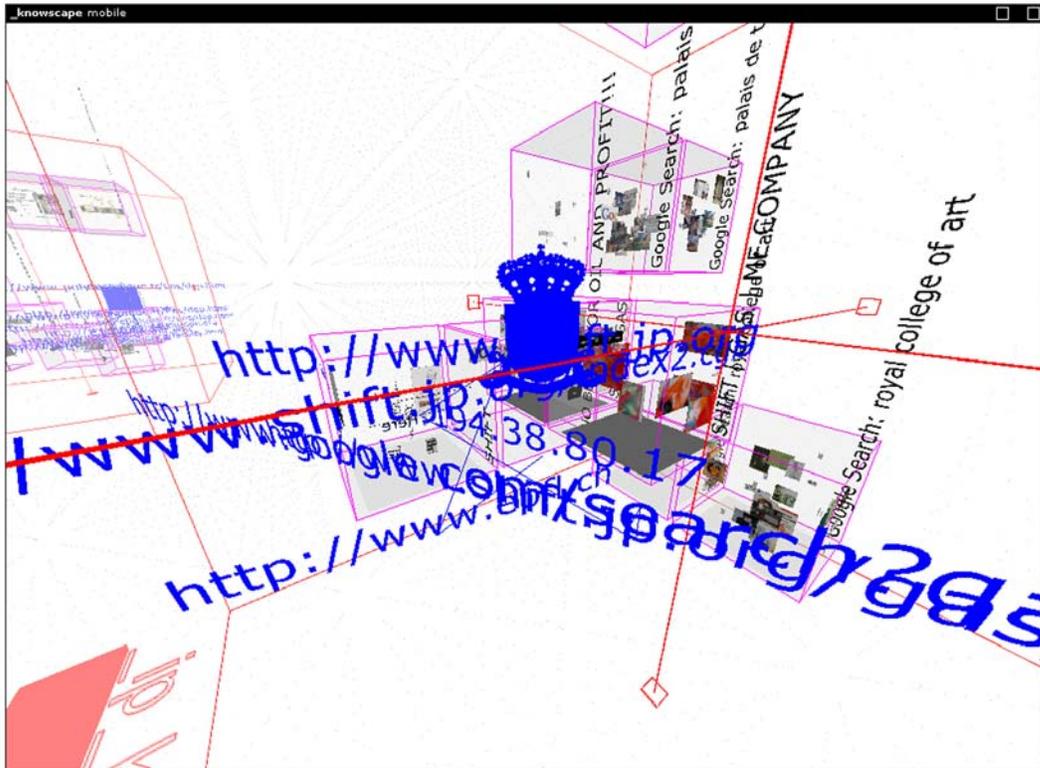




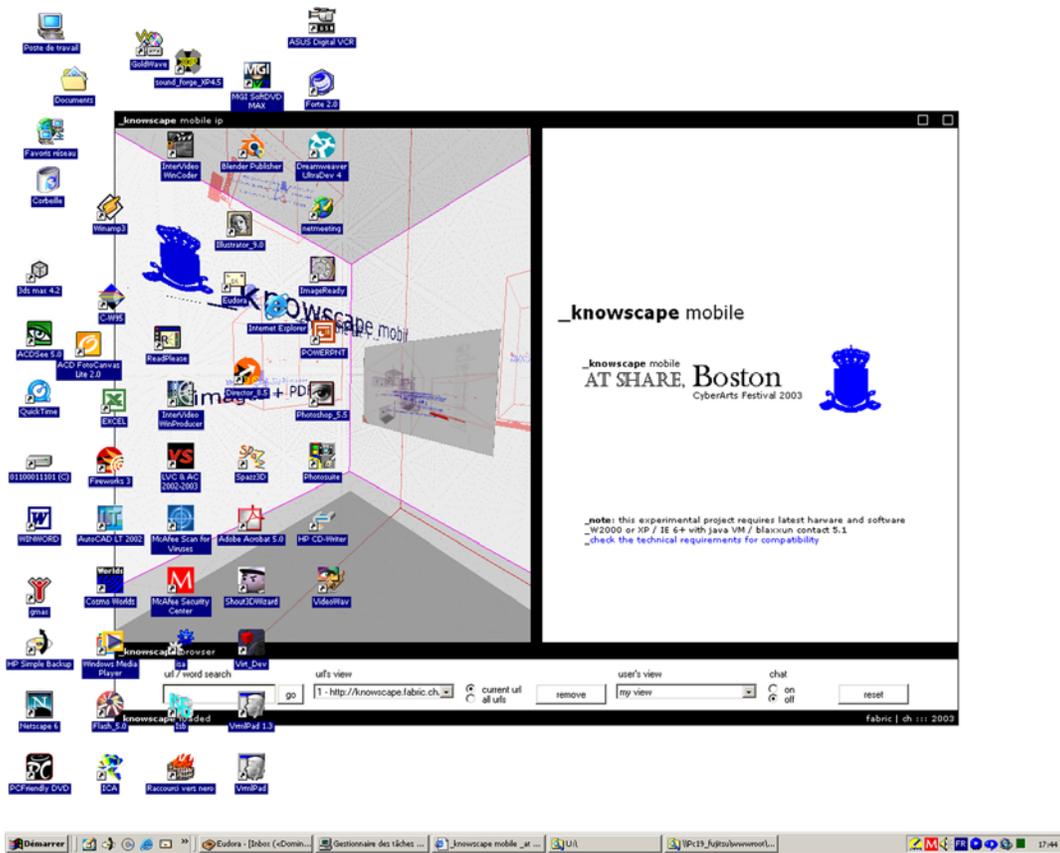
[Img. 5]



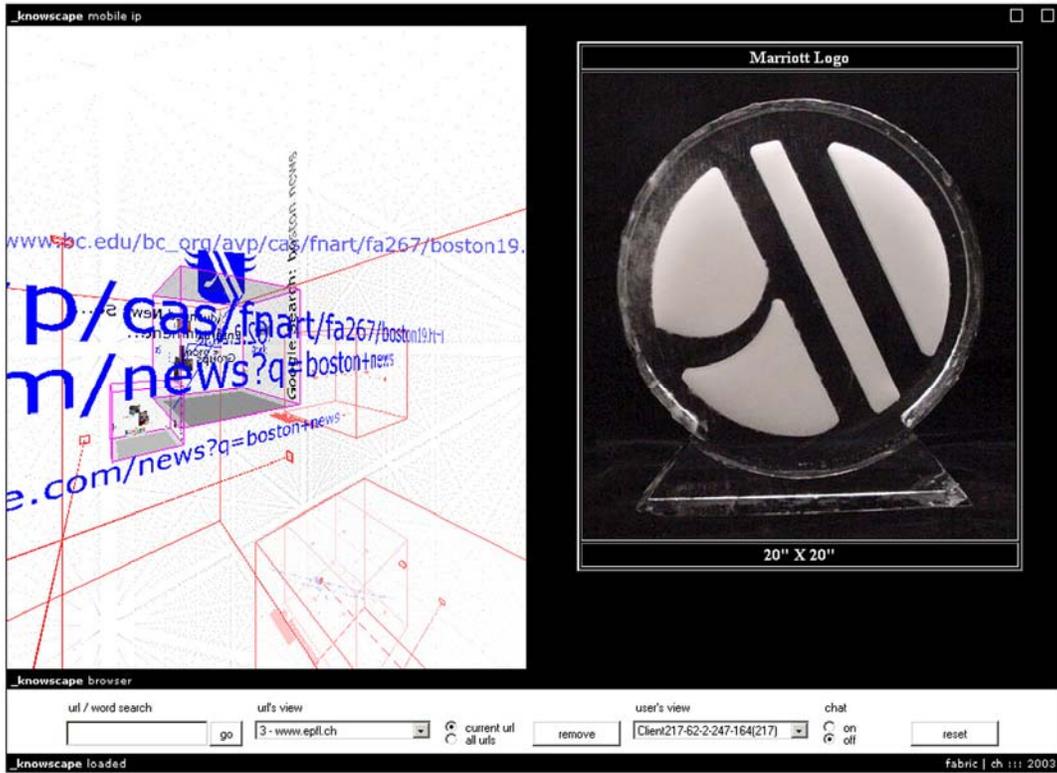
[Img. 6]



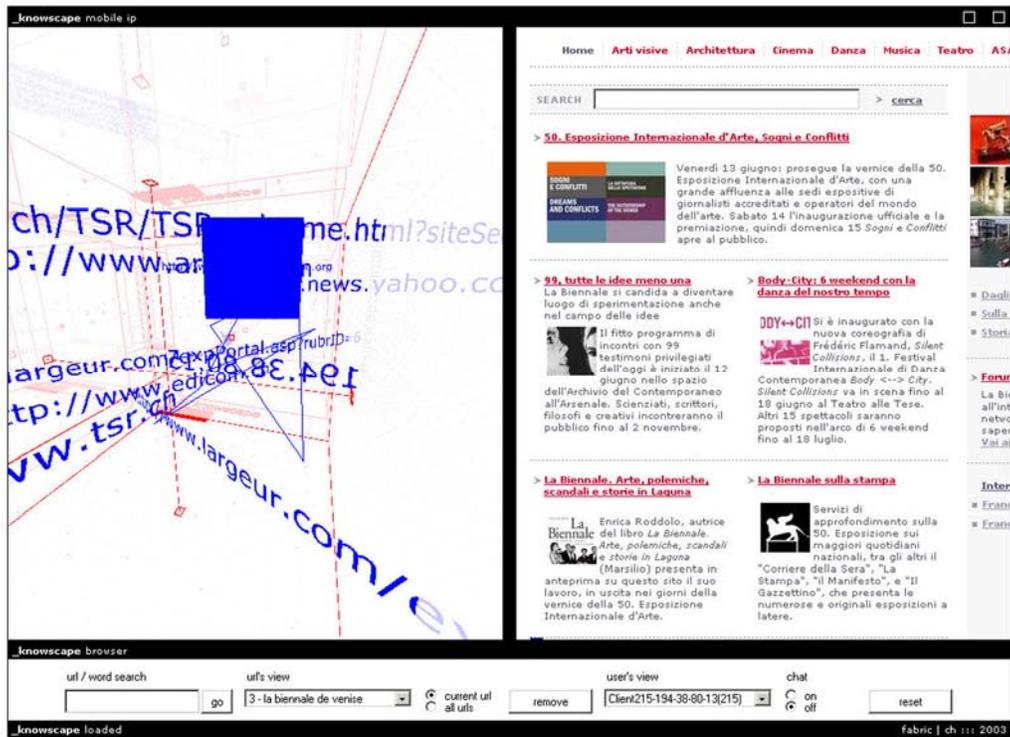
[Img. 7]



[Img. 8]



[Img. 9]



[Img. 10]



[Img. 11]



[Img. 12]

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## Image captions:

- [Img. 1] Knowscape Mobile is a "boolean" and hybrid space. Principles of associations between physical space and digital one are based on "Boolean" operations. Knowscape Mobile will follow fabric | ch and will be re-(geo)localised, from place to place, from time to time, from installation to installation.
- [Img. 2] A view into Knowscape Mobile 3d multi-user and data environment: a generated information space with no precise scale; a temporary and un-clear location inhabited by web bots as well as by local and distant users.
- [Img. 3] A user and its avatar (its digital representation, in blue) in the 3d environment, with associated links and data construction made out of information from the web pages he's been visiting.
- [Img. 4] Another user from SHARE (first Knowscape Mobile location was in SHARE Boston) in front of its construction. The visual display here is the alternate browser with 3d graphics and dynamic data construction on the left and the traditional 2d web browser on the right.
- [Img. 5] A 3d multi-user display of a web page on the left vs. a single user, 2d and traditional display on the right. The 3d content is just a visual résumé of the web page to give a quick overview. Flat 2d web pages remain the right way to consult images and texts. The content comes from the web page of SHIFT magazine, Japan.
- [Img. 6] Another situation with the same image from Knowscape Mobile's website in the 3d and 2d displays.
- [Img. 7] A close up on an avatar logotype with its IP number underneath. The avatar contains all the links that its user has previously browsed. These links remain "clickable": any another connected user can experience and share the user/avatars's interests and share its browsing session.
- [Img. 8] Knowscape Mobile used as dynamic background on a Windows desktop.
- [Img. 9] Avatar and logo during a browsing session at DIS 2004, Cambridge (the conference is taking place within a Marriott Hotel).
- [Img. 10] Another avatar that represents a web spider or network bot (net search bot) during its daily activities of browsing thousands of web pages (during Art | 34 | Basel).
- [Img. 11] Installation: a simple screen/projection based presence of Knowscape Mobile in Boston (SHARE). Thanks to GPS localisation, the volume of the data architecture (basically a cube with no border) has been re-located over the Swiss embassy so to totally contain it. Screens acts literally as opened windows into the information landscape of Knowscape Mobile. The mix of the real and data space produces an hybrid architecture, both physical and digital.
- [Img. 12] Another set of screens/windows at SHARE in the virtual conference room. On the left is displayed the Knowscape Mobile browser while on the right appears another located view into the digital architecture.

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# Txt

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## Knowscape Mobile

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**Knowscape** is an experimental electronic space: a digital data territory made of links, connections, relations, knowledge: a networked space. Initially Knowscape has been conceived as an alternative multi-user browser (Knowscape, 2001) using data "tracking" and "profiling" techniques to question, to reverse them, so to finally produce open data territories, shared browsing experiences and "open users' profiles".

Knowscape evolved and became in 2003 a mobile downloadable space, a variable space with no fixed or frozen size as well as no definite location: Knowscape Mobile. Since 2003, Knowscape Mobile has moved to various places for performances and exhibitions: Boston, Basel, Cambridge and Brussels. In each relocation, there are always both a temporary location in the physical space and a world wide digital one over the Internet. This mobile information architecture can be described as a downloadable relational spatiality. its installation into physical places creates a space of reversed surveillance, an "open data architecture". Therefore, Knowscape Mobile questions and transforms in a soft and transitory manner the functionality, the materiality, the unicity and the scale of each sensible space it is installed in.

Based on low aesthetics and close to machines direct visual outputs, Knowscape Mobile builds electronic spaces with information-based voxels (3D pixels). Each user creates its own data architecture, made of contiguous voxels, the addition of these spaces creates a shared knowledge 3d territory.

Knowscape Mobile relation to physical space is also simple and direct: boolean. Indeed, Knowscape Mobile uses boolean algebraic operations to mix data space with physical one: in each installation, electronic devices open windows on this re-localized data territory, which allow visitors to interact either from the physical space or from the internet.

Knowscape Mobile is thus an architectural space temporarily associating territory of data and physical space, linking architecture, knowledge and browsing.

fabric | ch, April 2003

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# Relocation\_1/exhibit

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## Knowscape Mobile at SHARE, Boston (Boston CyberArts 2003)

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SHARE (Swiss House for Advanced Research and Education, Boston) hosts Knowscape Mobile from April 30 to May 9 2003. Through a "Boolean" operation (intersection), electronic and physical space are gathered into a mixed reality.

-  
Electronic devices (laptops, plasma displays, beamer, ...) open windows from the lobby on this re-localized data territory, which allow visitors to interact, either from the sensible space or from the internet, within this new kind of hybrid environment.

-  
Knowscape Mobile at SHARE is thus an architectural space associating a distributed territory of data and a physical localized space during a defined period of time, linking architecture, knowledge and browsing.

-  
April 30, 2003 (6-7 pm EST, 1-2 pm GMT)

Mixed realities

Interconnections between digital and physical spaces

- 
- + Christophe Guignard (fabric | ch - electronic architecture)
- + Tad Hirsch (Medialab - Computer Culture)
- + Jeffrey Huang (Harvard Design School)
- + Karrie Karahalios (Medialab - Sociable Media)
- + Muriel Waldvogel (Boston Architectural Center)

+ George Fifield, moderator (Boston Cyberarts Festival)

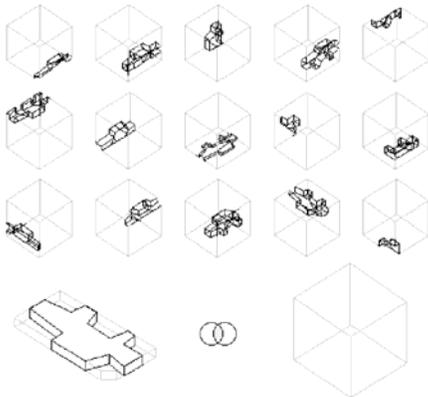
-  
Swiss House for Advanced Research and Education  
420 Broadway, Cambridge, MA 02138

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April 30, 2003 (7-8 pm EST, 1-3 pm GMT)

**Knowscape Mobile** opening at SHARE - Boston

Swiss House for Advanced Research and Education  
420 Broadway, Cambridge, MA 02138



fabric | ch, Lausanne, April 2003

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# Relocation\_2/exhibit

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## Knowscape Mobile at HALLE 3.0, Basel (Swiss Art Awards)

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From June 6 to 23 2003 Knowscape Mobile stands at the SWISS ART AWARDS exhibition, which takes place in the HALLE 3.0 during ART basel.

-  
Through a boolean operation (intersection), electronic and physical space are gathered into a mixed reality. It generates a microarchitecture, a distributed (work-)place, where electronic devices (laptop, TFT displays, ...) open windows on a localized data territory.

-  
Visitors are invited to interact, either from the sensible space or from the internet, within this new kind of hybrid environment.

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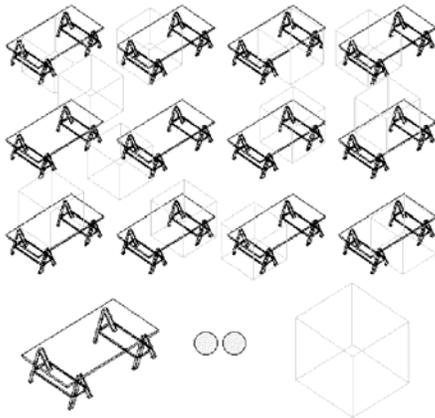
**Knowscape Mobile** at HALLE 3.0 is thus a microarchitecture associating a distributed territory of data and a physical localized space during a defined period of time, linking architecture, (work-) place, knowledge and browsing.

-  
June 16, 2003 (6-8 pm CET, 4-6 pm GMT)  
**Swiss Art Awards** opening at HALLE 3.0, basel  
HALLE 3.0, Messe, CH-4005 Basel

-  
June 17-23, 2003  
**Knowscape Mobile** at HALLE 3.0, basel  
**Swiss Art Awards**  
HALLE 3.0, Messe, CH-4005 Basel  
Free admission - every days from 10 am to 7 pm CET

-  
June 19, 2003 (10 am CET, 8 am GMT)  
**Swiss Art Awards invites Art | 34 | Basel**  
HALLE 3.0, Messe, CH-4005 Basel  
Free admission

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fabric | ch, Lausanne, June 2003

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# Relocation\_3/exhibit

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## Knowscape Mobile at DIS2004, Cambridge [ACM SIGCHI 2004]

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From August 1 to 4, 2004, Knowscape Mobile stands at DIS2004 symposium (ACM SIGCHI), which takes place in the Boston Marriott Cambridge Hotel in Cambridge (Massachusetts).

- This time, Knowscape Mobile simulates space configurations in relation to architectural typologies and architectural models (1:20 I-shaped building, T-shaped building, cross-shaped church, square-shaped courtyard). Through a series of "Boolean" operations (intersection and exclusion), Knowscape Mobile mixes electronic and physical spaces to generate 4 distributed microarchitectures (one per day). For each typology, a specific relationship between electronic and physical spaces is created, producing a kind of "space tagging".

- To generate these "networked typologies" (augmented information / reduced presence), all the electronic devices (laptops, beamer, ...) are networked and localized, which transforms each of them into a visual interface, open and linked windows on the data territories.

- Visitors are invited to interact, either from the sensible space (Boston Marriott Cambridge, 2 Cambridge Center (Broadway & 3rd Street) Cambridge, MA 02142 USA, GPS 42° 21' 45" / -071° 05' 11") or from the internet, within this new kind of hybrid environments.

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August 1, 2004 (6-9 pm EST, 10 pm - 1 am GMT)

### **I-shaped networked typology**

DIS2004 Registration at Boston Marriott Cambridge

GPS 42° 21' 45" / -071° 05' 11"

-

August 2, 2004 (7-9 pm EST, 11 pm - 1 am GMT)

### **T-shaped networked typology**

DIS2004 Opening Ceremony at Boston Marriott Cambridge

GPS 42° 21' 45" / -071° 05' 11"

-

August 3, 2004 (3:30-7:30 pm EST, 7:30-11:30 pm GMT)

### **Cross-shaped networked typology**

DIS2004 Design Open House at Boston Marriott Cambridge

GPS 42° 21' 45" / -071° 05' 11"

-

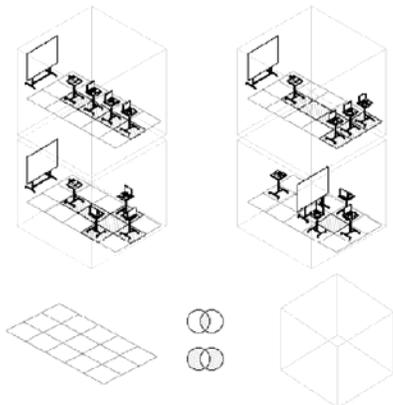
August 4, 2004 (1:30-3:30 pm EST, 5:30-7:30 pm GMT)

### **Square-shaped networked typology**

DIS2004 Closing Session at Boston Marriott Cambridge

GPS 42° 21' 45" / -071° 05' 11"

-



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# Relocation\_4/exhibit

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## Knowscape Mobile at Mediaruimte, Brussels

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MEDIARUIMTE (XYZ 01T, Brussels) hosts **Knowscape Mobile** from April 14th to 21st 2005. Through a "Boolean" operation (union), electronic and physical spaces are gathered into a mixed reality.

The scale of **Knowscape Mobile** at MEDIARUIMTE, Brussels is set according to the size of the building and its floors: the cubes generated by visited web pages, translated from HTML to VRML, from 2D to 3D, fit into the built space, between floor and ceiling. They pile up to fill the environment with distributed spaces made out of knowledge, information and sounds. The result mixes the physical architecture of the gallery with a space mostly populated and generated by bots and "webspiders".

Through a logical operation (union), electronic and physical spaces are gathered to create a new kind of architecture: geolocalized and distributed, material and non-material.

Electronic devices (desktops, laptops connected to TFT displays, beamers, ...) open 'windows' from the lobby on this re-localized data territory. Instead of a 'cave' system, which offers one point of view, these visual outputs are coordinated to create an unlimited series of localized and connected views: each of them has its own point of view but is linked spatially to the others. The gallery becomes the (multi-)viewer.

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**Knowscape Mobile** at MEDIARUIMTE is thus an architectural space associating a distributed territory of data and a physical localized space during a defined period of time, linking architecture, knowledge and browsing.

April 14, 2005 (18:00 - 22:00 GMT+1)

**Knowscape Mobile** at MEDIARUIMTE, Brussels

Opening

MediaRuimte (XYZ 01T)

104 rue de Laeken, 1000 Brussels, Belgium

April 15, 2005 (20:30 - 22:00 GMT+1)

**Information Architecture, Artifices and S(t)imulated Spaces**

Conference by Christophe Guignard, fabric | ch

MediaRuimte (XYZ 01T)

104 rue de laeken, 1000 Brussels, Belgium

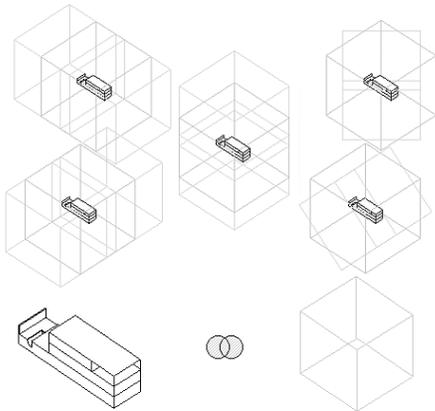
April 14-21, 2005

**Knowscape Mobile** at MEDIARUIMTE, Brussels

Every day from 18:00 - 22:00 GMT+1

MediaRuimte (XYZ 01T)

104 rue de Laeken, 1000 Brussels, Belgium



fabric | ch, Lausanne, June 2003



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# La\_Fabrique

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## 1999-2001

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Project by fabric | ch

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Client: CANAL+ (Paris, FR)

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Location: Internet

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Workshop @ CAAD / ETHZ (Swiss Federal Institute of Technology, Zürich)

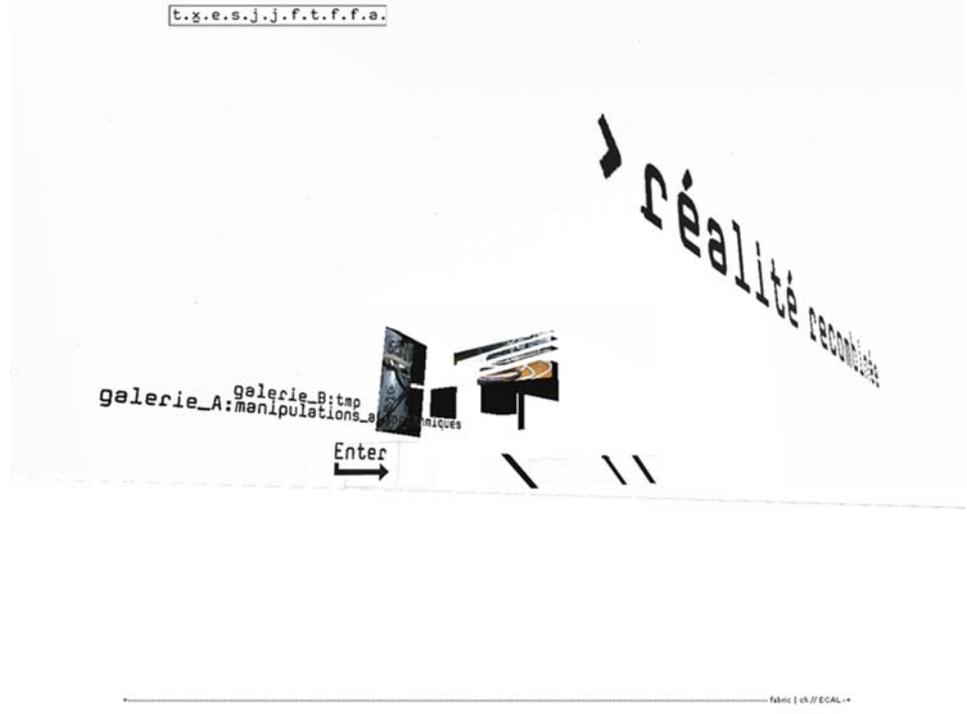
Workshop @ ECAL (University of Art and Design, Lausanne)

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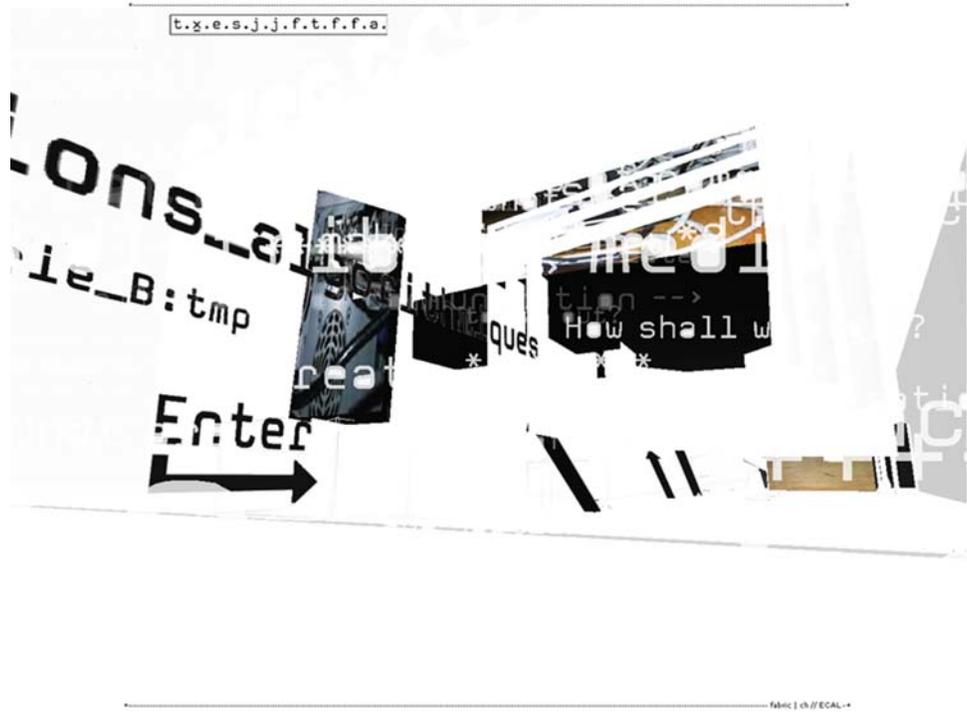
Exhibited during Web3D RoundUp 2000 (Monterey, USA), ISEA 2000 (Paris, FR), Art Gallery Siggraph 2000 (New Orleans, USA), Numer 2002 in Beaubourg (Paris, FR), Web3D Art 2003 (CA, USA), ICA (London, UK), Siggraph Art Gallery 2010

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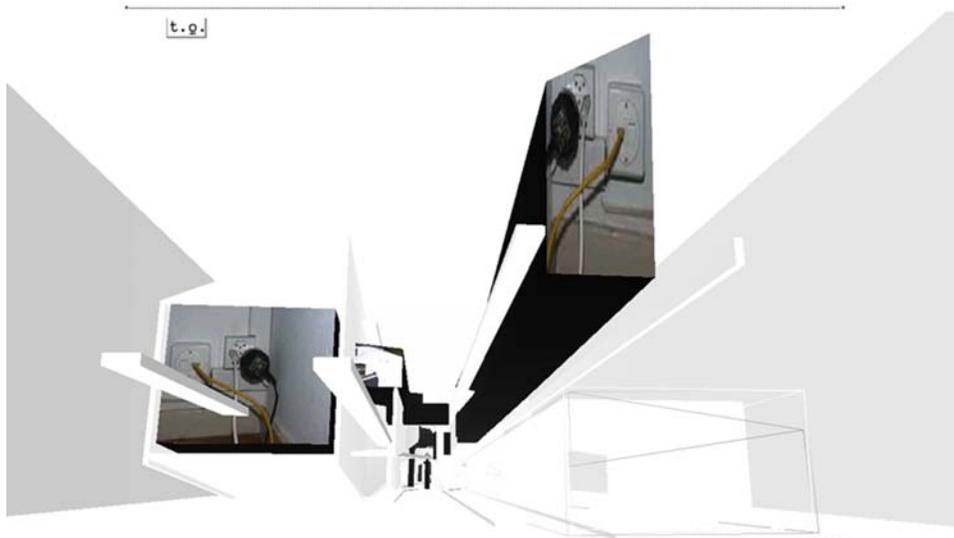
- 3d online museum
- Museum installed in a multi-player, game-like environment (MMORPG, 2<sup>nd</sup> World of Canal+)
- Prospective study and shared creations around the "Recombinant Realities" paradigm



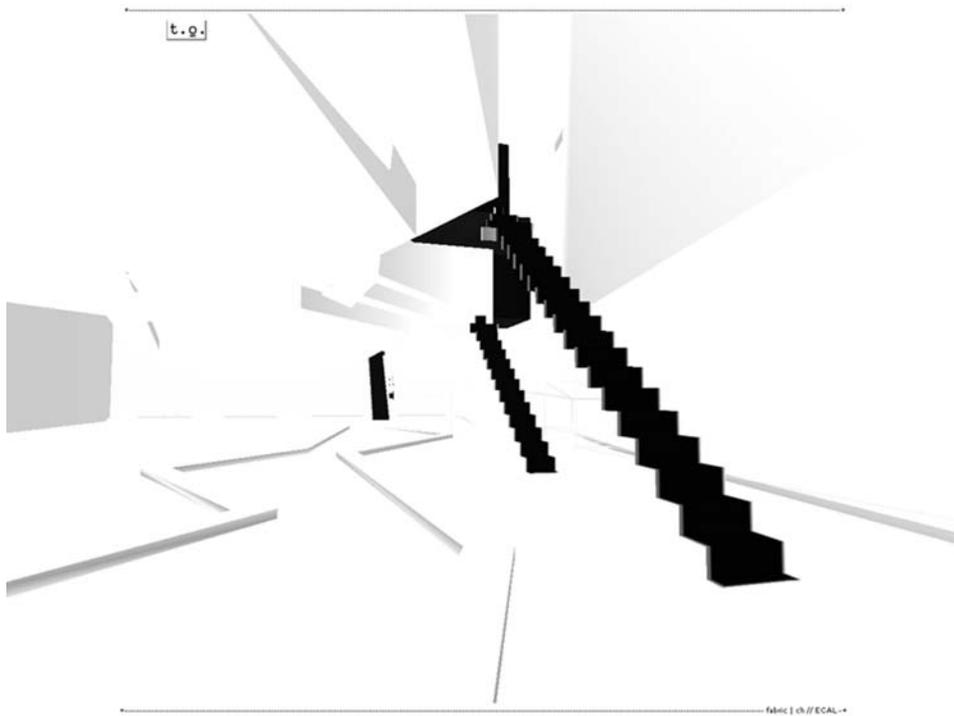
[Img. 1]



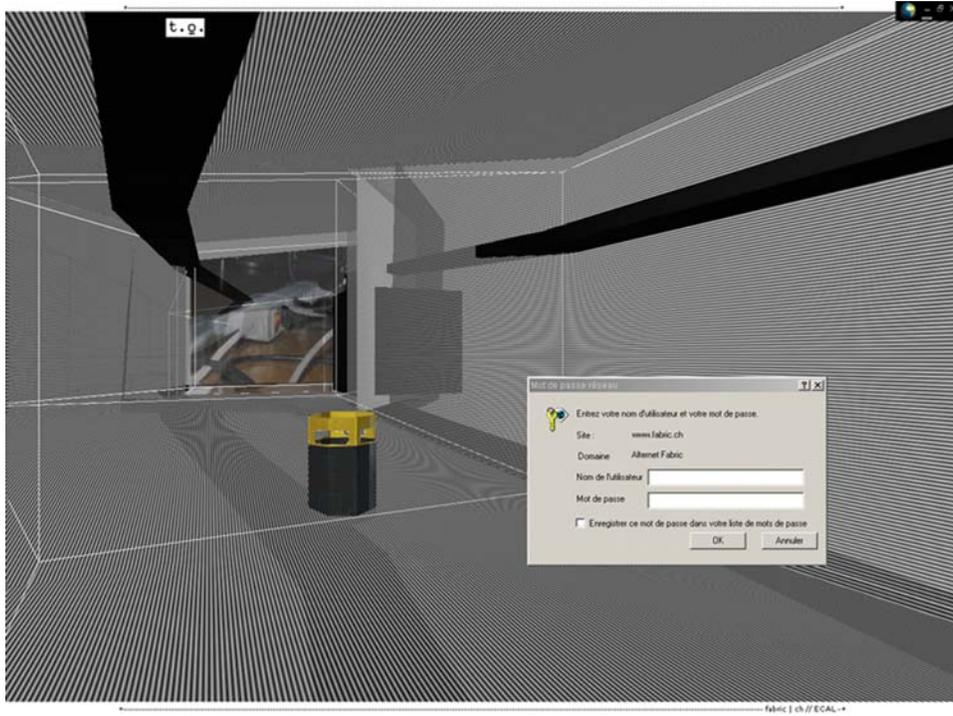
[Img. 2]



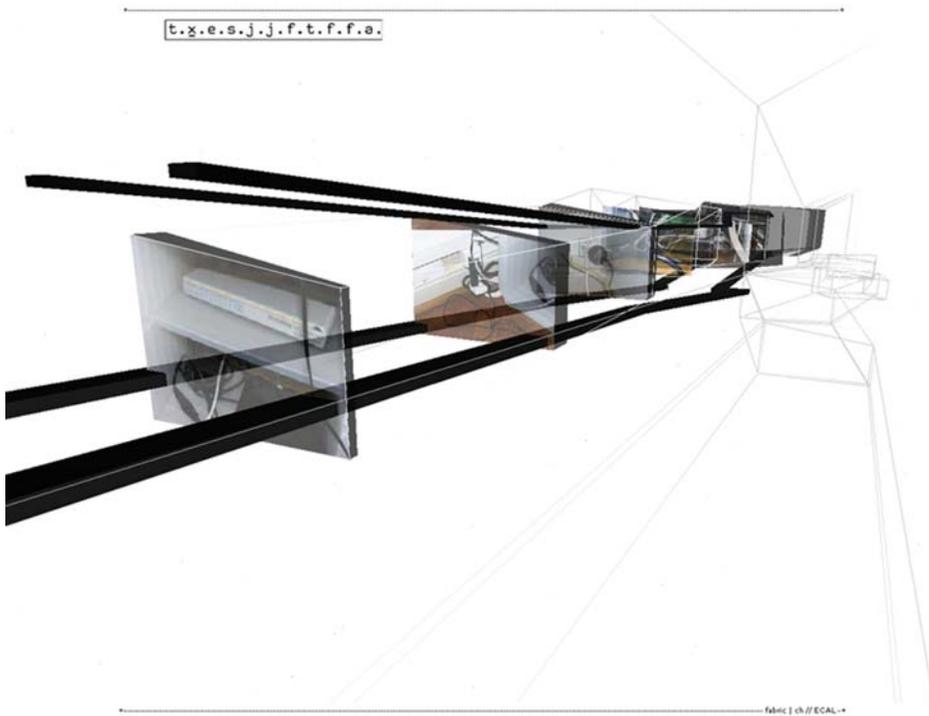
[Img. 3]



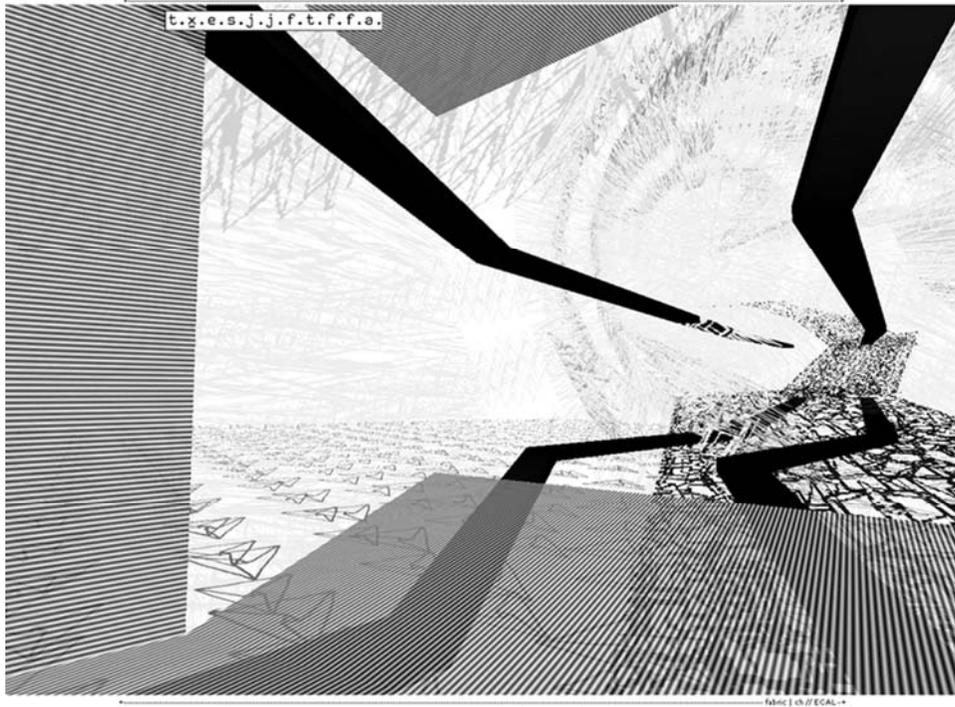
[Img. 4]



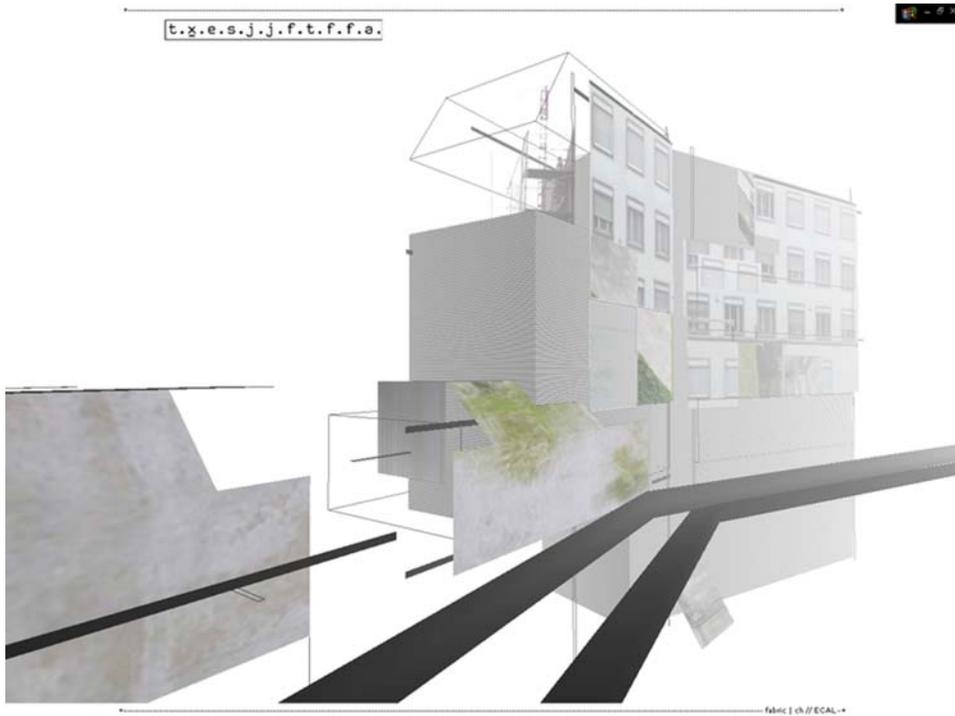
[Img. 5]



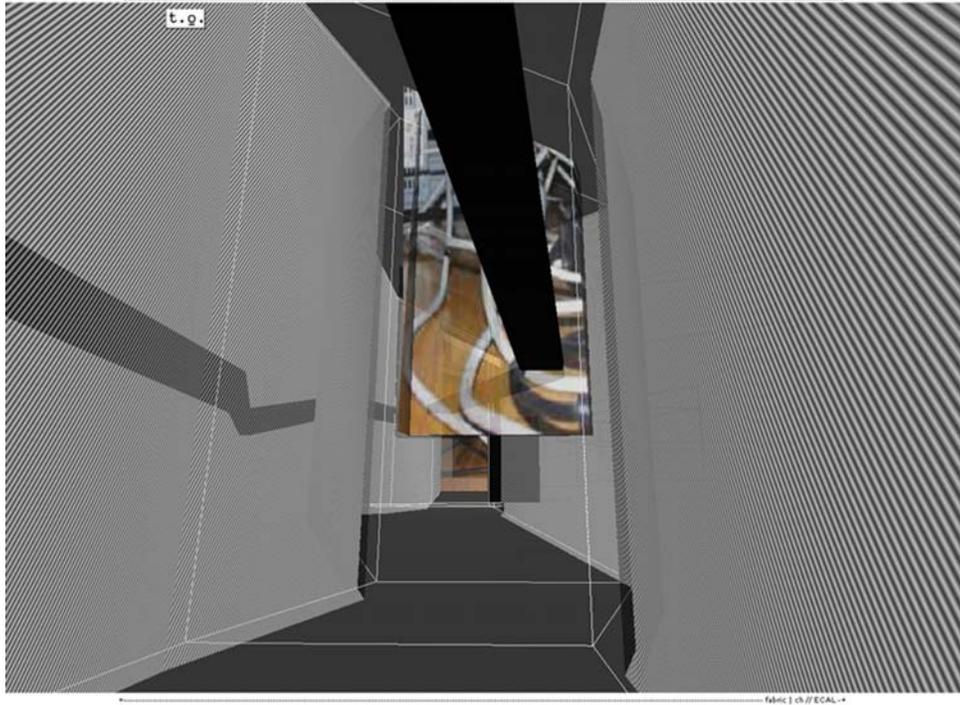
[Img. 6]



[Img. 7]



[Img. 8]



[img. 9]

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## Image captions:

- [Img. 1] Main access to the gallery: a space in between white flatness and volume, written thematics of the exhibition floating.
- [Img. 2] Thematic texts (project's subject for the workshop) floating in the screen at the entrance of the online gallery.
- [Img. 3] The back side view of the same structure.
- [Img. 4] Access points to the exhibition spaces: in between arrows and stairs.
- [Img. 5] Inside n°1: a limited intervention in this part of the gallery and a user/password requirement to access the hidden part / work by Emilie Renault.
- [Img. 6] Inside n°2: an unmodified part of the space with a real space image sequence.
- [Img. 7] Somewhere into the space of La\_Fabrique / work by Jérôme Rigaud.
- [Img. 8] Somewhere else into the space of La\_Fabrique / work by Franz Hoffman.
- [Img. 9] Inside n°3: another unmodified part of the space.

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# Txt

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## La\_Fabrique (1999)

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A certain conception of the network will lay in the background during the two years long creation process of the electronic gallery/file system La\_Fabrique. The involved artists or students may take position in regard to this conception. The precepts are the following: the network and the digital spaces represent the emergence of a mutating reality. This reality is a deformed expression, an accelerated evolution of our society and our physical world. A (new) world submitted to near natural and neo-darwinian processes of evolution and (technological) auto-selection, inside of which the values are melted and mixed (human, nature, machine, information). It is in fact a world that becomes more and more complex and that informs itself: a mutating reality or a recombinant reality<sup>1</sup>

We could describe this as a new layer (of information: the noosphere<sup>2</sup>), that adds itself to the already existing one, the biosphere.

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### Context

New or transformed landscapes and territories are emerging. Modified architectures as well, so as new social relations and transformed forms of communication. Our physical body and identity, the relations we have with the outside world, human-beings, machines, things are modified, altered.

### Background

We are here close to the basics of the information theory by Claude Shannon<sup>3</sup> and also Norbert Wiener's writings on cybernetic<sup>4</sup>. These theories describe physical and of energy relations between nature and machine, man and machine and in particular, man and computer. These theories consider everything as information/entropy, even man.

The notion of energy as well as information exchanges between physical world and machine world (in our case computers) will interest us in thermodynamics<sup>5</sup>. These scientific and philosophical theories and essays, those links, could serve as theoretical background to the exhibition as well as for the elaboration of the project. The mailing list that we will set up during the elaboration phase of each exhibit will be used, hopefully, as an exchange area between the people involved

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<sup>1</sup> <http://www.google.com/search?q=recombinant+reality>

<sup>2</sup> See P. Th. de Chardin and Vladimir Vernadski.

<sup>3</sup> <http://ink.yahoo.com/bin/query?p=%2Binformation+%2Btheory+%2Bshannon>

<sup>4</sup> <http://ink.yahoo.com/bin/query?p=%2Bcybernetics+%2Btheory+%2Bwiener>

<sup>5</sup> See i.e. J. de Rosnay, in L'homme symbiotique, ed. Seuil, Paris 1995 or Le macroscopie. ed Seuil, Paris 1992 and also <http://194.199.143.5/derosnay>

*Note: most of these links doesn't exists anymore under that syntax.*

## Intentions

As a project that will find its main context and "landscape" implantation into a chat room and a MMOG, we wish to stay really anchored into what constitutes the main substances of the web: interactivity, interfaces, images, sound, light, pixel, bits, programs, etc... Displaying galleries of paintings or sculptures in 3D which are the immediate and literal transcription / (bad) representation of a pre-existing reality is of no real interest in our eyes.

The gallery / file system is looking to create "actual and discursive thinking", a chat and/or a polemic exchange around the domain of electronic and networked art-work/architecture.

## Recombined Reality

*Note: recombinant is a biological term, it describe a genetically modified organism or cell.*

Recombinant reality: the term commits us to look at the binary worlds as a digitally transformed reality, recombined, mixed and manipulated. A kind of electronic extension of our reality with which information exchanges are continuously going on - i.e. the 2nd World of Canal+<sup>6</sup> could be already considered as a "mutant", a recombinant Paris, even if in this case, the type of exchange between Paris and Virtual Paris are limited.

Recombinant reality: the term let us think that an evolution is going on that will bring us to an unknown place. In this process, the constituent matters will interest us as much as the process in itself. In fact, "matter" is part of the process and we will be interested in light transportation, screen emissions, consumed energy, electromagnetic waves that are necessary to the life of the global information system. We will be interested as well in the amount of information that the system will return.

This material, or physical side of the Recombinant reality roots it surprisingly in a strong manner to our sensitive world. Like light or sound waves, there is now a big amount of artificial electromagnetic waves that is dedicated to carry human based or machine based information.

In summary, we will think with the artists as much to the semantic side as to the material one of the Recombinant reality during this first year (La\_Fabrique00) of the digital exhibitions.

## Architecture

The gallery / file system, La\_Fabrique, is made out of 3 different and distinct spaces/file systems. In principle, two of them don't evolve. The fourth one, dedicated to temporary exhibitions, mutates for each exhibition according to the themes.

According to the needs of Canal+, those 3 distinct spaces/file systems are dedicated to the following "functionalities": *an access street-hall*, *a gallery* dedicated to temporary exhibitions (modified for each exhibit), *a link gallery* giving access to some online works of the invited artists.

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<sup>6</sup> <http://www.cplus.fr/lab> -- no more accessible.

## Spaces

- *Access*: the *access street-hall* to the electronic gallery/file system. There will be displayed maybe one or two permanent electronic artworks. There will be "switch nodes" on top of the stairs/arrows to go directly in the gallery/file of each group of students.
- *Gallery*: thematic: the temporary thematic *rooms* are displaying the works of professional artists. Each creator will have the benefit up to 250K gzipped of disc space (including everything - sounds, environment, work, textures, etc... - gzip compresses approx. by a 1/3 factor the ACSII or WRL files), of course, in this particular case, less will be more...  
Each artist gets his own file/room/world to produce his work. This part is a fragment of the whole gallery/file system and/or a copy/paste of another file. The way to go from one artist's *room* to another will be managed via "doors/boxes/switches" and "switch nodes", maybe Level Of Details. 5-8 artists will exhibit their works during each exhibition in this particular space.
- *Urls' gallery*: the link room, a room in which we will find links to some of the artists online works and maybe as well to some online theoretical references.

## Process(-es)

Fragments (cut parts of gallery A, cut and paste of those different parts to create the right number of files corresponding to the number of artists) of the gallery/file system are given to the artists so that they can produce in it/with it/against it their work of electronic art/architecture.

At the end of the process of creation, where a strange/accomplice relation between electronic artworks and gallery/file system might emerge, fabric | ch will collect all the pieces/files to produce the final file.

Some points of connection between the different parts of the gallery/file system cannot move or be renamed because they assure the way to go from one file to another. These parts are being told to the artists.

Each part of the gallery/file system received by each artist could be made out of geometries, sounds, textures, links, lights, texts, etc... These data, their hierarchies real and virtual, the way they appear on the hard disk, their relation to the complete gallery/file system, constitutes the context of intervention.

The overall process of La\_Fabrique experiment will consist in 4 steps (steps 00, 10, 01 and 11)<sup>7</sup>. These four exhibitions will take place between years 2000 and 2001 as a way to map the creative situation within the field of digital arts, architecture and media design.

fabric | ch, June 1999

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<sup>7</sup> La\_Fabrique11 has never been produced due to the collapse of the « Dot-com bubble » in the early years 2000. The 2<sup>nd</sup> World of Canal+ was closed short after.

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# Txt

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## La\_Fabrique10 / Algorithmic Manipulations, 2001

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With the students of MID-ECAL, Dpt. of Visual Communication & Prof. Patrick Keller

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### Manipulations algorithmiques

" (...). In contrast, the computer media revolution affects all stages of communication, including acquisition, manipulation, storage, and distribution; it also affects all types of media -- texts, still images, moving images, sound and spatial constructions. How shall we begin to map out the effects of this fundamental shift? What are the ways in which the use of computers to record, store, create, and distribute media makes it "new"? "

Lev Manovitch, The Language of New Media, MIT Press, Cambridge, Massachusetts, 2001, p. 19-20.

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### Manipulations algorithmiques

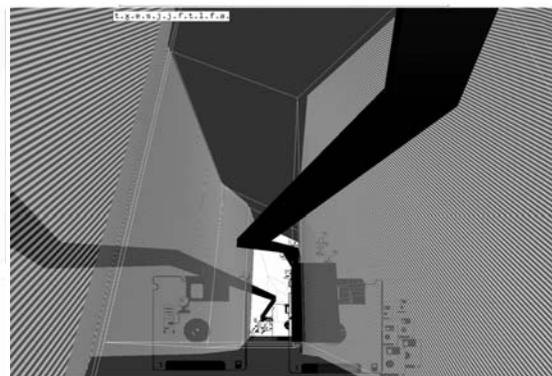
Dans ce qui (peut-être) constitue une révolution, selon les termes de Lev Manovitch, 4 mots semblent jouer un rôle fondamental: l'ordinateur, la digitalisation, la programmation et les algorithmes. La digitalisation du signe a fait passer celui-ci d'un statut physique (sur support matériel, figé) à un statut binaire (décrit par des nombres - 0 et 1) et dès lors manipulable par réorganisation et permutation de ces mêmes nombres. Le signe peut donc être décrit de manière mathématique, programmé et surtout manipulé par un ensemble de règles opératoires propres à un calcul (un algorithme). Cela peut s'effectuer sur une période de temps ou immédiatement, en temps réel. Le signe est devenu littéralement évolutif.

Dans le cadre de l'univers digital en trois dimensions de La\_Fabrique et de son "exposition virtuelle", nous vous proposons d'expérimenter et d'exposer cette manipulation, de la mener un pas plus loin: faire muter la 2d vers la 3d, le réel vers le virtuel ou encore le physique vers le binaire.

Autour de cette problématique de la "manipulation algorithmique", vous devrez investir une des "pièces d'exposition" de La\_Fabrique. L'environnement de base fourni par cet espace virtuel 3D devra alors être lu, analysé puis modifié par vous-même et par votre projet.

(...)

fabric | ch, Lausanne, October 2001



[http://www.fabric.ch/La\\_Fabrique10](http://www.fabric.ch/La_Fabrique10)

With: ECAL-MID, Prof. Patrick Keller & Students: Emilie Renault, Stéphane Perroud, Jérôme Rigaud, Franz Hoffman, Thomas Eberwein, Laurent Emmenegger.

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# Txt

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## La\_Fabrique01 / Recombinants Interiors, 2000

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With the students of CAAD-ETHZ & Prof. Maia Engeli

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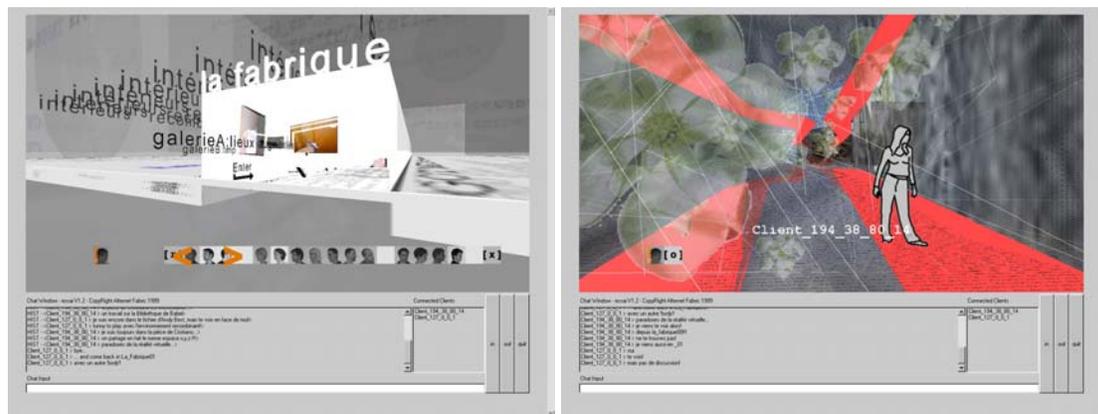
### Intérieurs recombinaants

Information reality or electronic reality infiltrates the pre-existing and physical one, the sensitive world, and vice versa. An information process is going on. A change seems to happen in our living. The inside space(s) finds its/their expansion(s) and extension(s) on the networks as well as in the real time virtual spaces/files systems. Seen from the data side, these extensions can be considered as electronic prosthesis of our built environment. Or maybe the physical environment can be considered as prosthesis to the electronic world.... Those spaces can as well be seen as 'augmented architecture' or also as interfaces between themselves and the digital networked world. The informed extensions and the displacement of spaces into virtual/informed environments lead us to new/alterd type of contexts and situations. Imbricated/deformed spaces, mixed realities, augmented realities and informed architecture: the space (inside, outside) is getting more complex and is certainly sometimes totally paradoxical (collapse of situations, distances, time, seasons, ...) As a result, these electronic extensions/prosthesis inform and transform the physical world in return: it might be an information process that goes in circle.

### Influences

Telepresence, teleworking, shared work or creation, 3d collaborative space, digital communities, mailing lists and forums, chat and 3d chat, private rooms, online sex and e-commerce, 'voyeur' cams and live cams, telepresence, distant learning, etc.

fabric | ch, Lausanne, March 2000



[http://www.fabric.ch/La\\_Fabrique01](http://www.fabric.ch/La_Fabrique01)

With: ETHZ-CAAD, Prof. Maia Engeli, Prof. Andrew Vande Moere and students Bence Szerdahelyi & Oliver Schwartz, Natalie Strohmaier, Lucas Elmiger, Maïke Schneider, Sigrun Gudjonsdottir, Ben Hendriksen, Jan Gloeckner, Nick Thanasis, Dimitri Kaden, Adrienne Fony, Giovanni Mammone.

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# Txt

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## La\_Fabrique00 / Digital Prosthesis, 1999

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With the artists

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### Digital Prosthesis

The body seems today to reach its limits and we can see several attempts that try to improve it, or to duplicate (clone) it. From the "doctor & sportsman" duet to the man genetically modified through the "man-machine", everything leads us to think that a mutation is ahead. Tackle at the notion of extension/reduction of the reality in the electronic universe. New prosthesis for space and body. Human wish to extend, modify the functionalities of ones body understood as a mixing of man and machine in the binary and information universe.

### Influences

Avatars, mutation, exoskeleton, mixed-media spaces, computed and genetic manipulations, information manipulation and manipulated reality, Man-machine interfaces, implants, softbots, sportive/doctors, data suits, I.A., robots and diverse prosthesis.

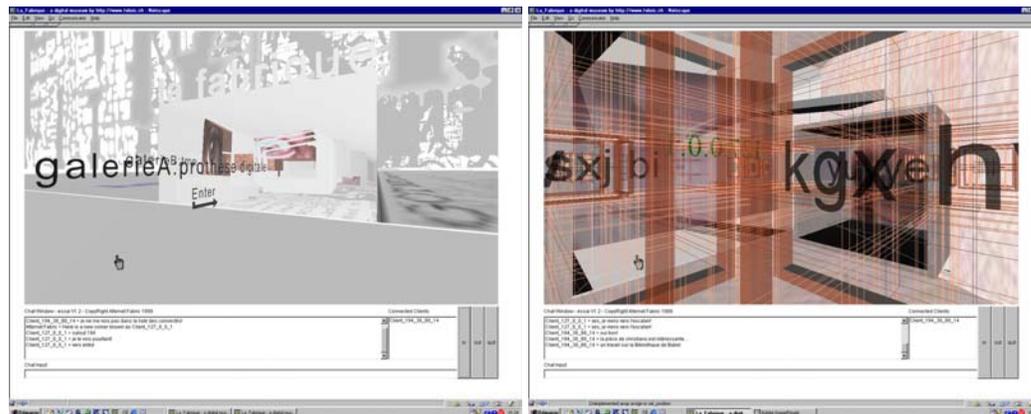
### Readings

La révolution biolithique, H. Kempf, éd. Albin Michel Sciences, Paris 1998

Babylon babies, M. G. Dantec, éd. Gallimard, coll. La Noire, Paris 1999

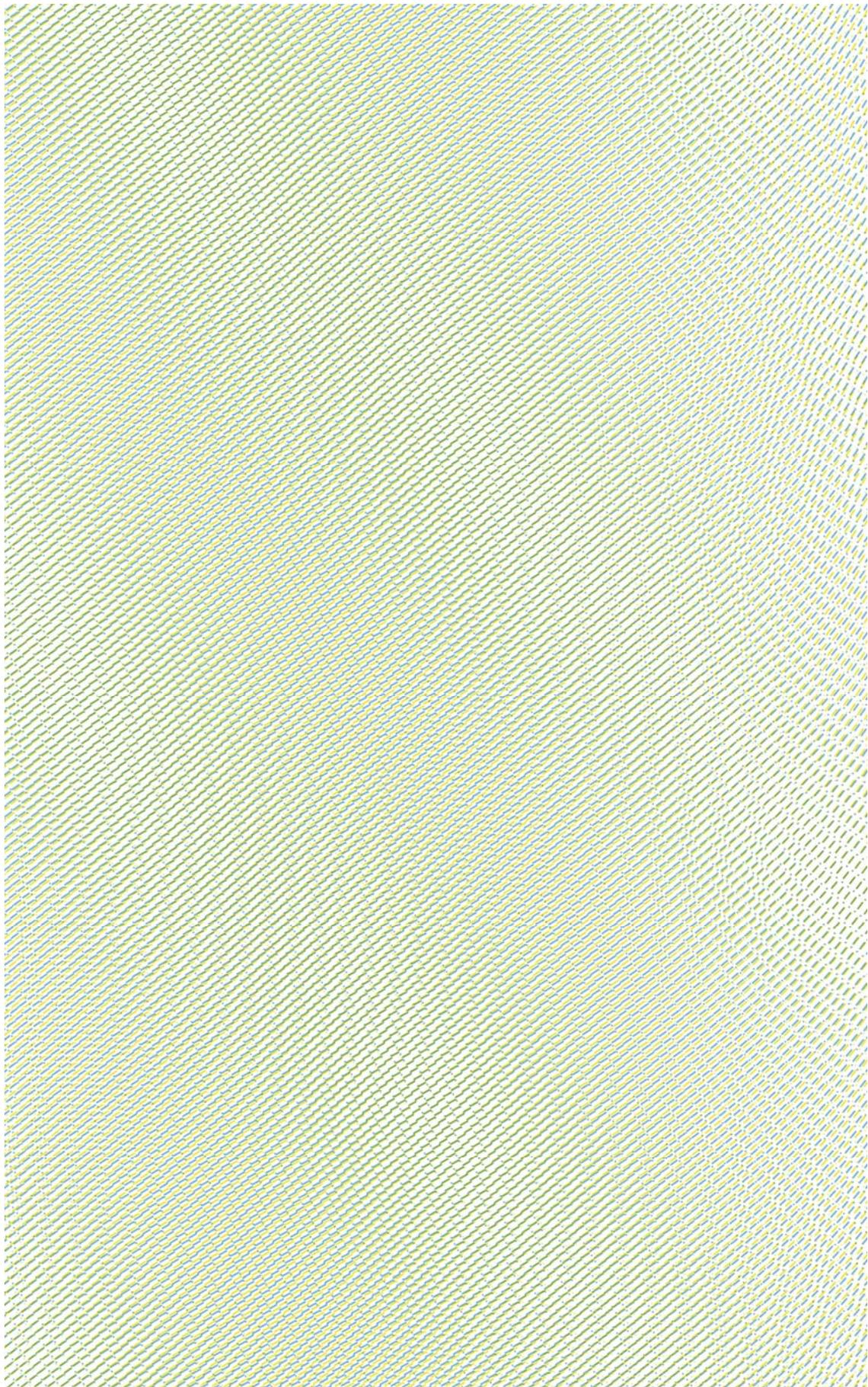
Les particules élémentaires, M. Houellebecq, éd. Flammarion, Paris 1998

fabric | ch, Lausanne, June 1999



[http://www.fabric.ch/La\\_Fabrique00](http://www.fabric.ch/La_Fabrique00)

With: Andy Best // Cristiano Bianchi // Jacques Perconte // Maurice Clifford // Patrick Keller & Christian Babski // Steve Guynup // Victoria Vesna & Craig Brown.



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## Exhibitions, selection 2014 - 1999

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### Exhibitions, residencies, researches and competitions of fabric | ch

- Architectural competition by invitation  
Information Pavilion for the future museum center (visual arts, design, photography) of the State of Vaud (CH)  
01.11.2014  
**Public Platform of Future - Past**
  
- Close, Closer  
Lisbon Architecture Triennale (Lisbon, PT)  
12.09 - 15.12.2013  
**Deterritorialized Living (Beijing sessions)**
  
- Natures artificielles  
EXIT Festival, MAC Créteil (Créteil, FR)  
04.04 - 14.04.2013  
**Perpetual (Tropical) Sunshine**, <http://www.fabric.ch/pts>
  
- Sensing Place  
Haus für elektronische Künste (Basel, CH)  
31.08 - 11.11.2012  
**Satellite Daylight, 46°28'N**
  
- Centre Dramatique National de Caen (CDN) & École Supérieure d'Arts et Médias de Caen (ESAM) (Caen, FR)  
In collaboration with Eric Sadin (FR)  
13.02 - 01.03.2012  
**Globale Surveillance (with Paranoid Shelter)**
  
- 01SJ - "Build Your Own World"  
01SJ Biennial, San Francisco Bay Area / San Jose (California, USA).  
01.09 - 19.09.2010  
**I-Weather as Deep Space Public Lighting**
  
- Collection "Cahiers d'Artistes" of the Swiss Art Council  
Swiss Art Awards / Art Basel (Bâle, CH)  
08.06 - 14.06.2009  
**Cahier d'Artiste fabric | ch**, <http://www.electroscape.org/003>

## Exhibitions, residencies, researches and competitions (...)

- Nuit Blanche 2008  
Nuit Blanche (Paris, FR)  
04.10 – 06.10.2008  
**Perpetual (Tropical) Sunshine**, <http://www.fabric.ch/pts>
  
- Nestlé's Permanent Collection – Contemporary Art  
Nestlé World Headquarters (Vevey, CH)  
01.10.2007 – present  
**Satellite Daylight, 40°,28'N**
  
- Swiss Art Awards 2006 (Architecture section)  
Swiss Art Awards / Art Basel (Basel, CH)  
12-18.06.2006  
**Perpetual (Tropical) Sunshine**, <http://www.fabric.ch/pts>
  
- Lyon Lumières 2005  
Festival Lyon Lumières (Lyon, FR)  
06-10.12.2005  
**Perpetual (Tropical) Sunshine**, <http://www.fabric.ch/pts>
  
- **MIX-m.org**  
Center of contemporary art (Geneva, CH)  
29.06-31.07.2005  
**MIX-m.org**, <http://www.mix-m.org>
  
- Invisible Architecture  
Swiss Cultural Center (Paris, FR)  
12.03-15.05.2005  
**RealRoom(s)**, <http://realrooms.fabric.ch>
  
- **Knowscape mobile**  
Siggraph Art Gallery (Los Angeles, USA).  
08-12.08.04  
**Knowscape mobile**, <http://knowscape.fabric.ch/mobile>
  
- Art unlimited.  
Art unlimited – Art Basel 35 (Basel, CH)  
16-21.06.04.  
**MIX-m.org**, <http://www.mix-m.org>
  
- Dalla pagina allo spazio.  
Museo Cantonale d'Arte de Lugano (CH).  
15.05-29.08.04  
**Electroscape 004 : A.I. vs. A.I. // in self-space //**,  
<http://www.electroscape.org/004>
  
- Versions multiples – L'image habitable  
MAMCO (Museum of Modern and Contemporary Art) (Geneva, CH)  
31.10.02 – 19.01.03  
**Electroscape 002**, <http://www.electroscape.org/002>

## Exhibitions, residencies, researches and competitions (...)

- **Knowscape**  
Institute of Contemporary Art (London, GB)  
03.2002  
**Knowscape**, <http://knowscape.fabric.ch/knowscape>
  
- **I-Weather**  
Museum für Gestaltung (Zürich, CH)  
In collaboration with Décosterd & Rahm, associés  
26.10.2001  
**i-weather.org**, <http://www.i-weather.org>
  
- Festival ISEA  
ISEA 2000, Georges Pompidou Center (Beaubourg) and Forum des Halles  
(Paris, FR)  
**La\_Fabrique**, [http://www.fabric.ch/La\\_Fabrique](http://www.fabric.ch/La_Fabrique)
  
- Festival Siggraph  
Siggraph 2000  
Convention Center (Nouvelle-Orléans, USA)  
**La\_Fabrique**, [http://www.fabric.ch/La\\_Fabrique](http://www.fabric.ch/La_Fabrique)
  
- Pixel, Prints, Pigmente  
Kunstmuseum Bern & Musée de la Communication (Bern, CH)  
18.08 – 31.10.1999  
**an [e-body] an an [e-body2.0]**
  
- Festival Siggraph  
Siggraph 1999  
Los Angeles Convention Center (Los Angeles, USA)  
**an [e-body2.0]**

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## Publications, selection 2014 – 1999

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### Books, exhibitions catalogues, specialized magazines and blogs:

- MOISY Isabelle, "fabric | ch: pour une architecture numérique", étapes 221, Paris, September 2014
  
- GALILEE Beatrice, Young Liam, Pestana Maria, Admiss Dani, Chong Cui José Esparza, Gaudencio Susana, Mateus José, « Deterritorialized Living (Beijing Session) », *LESS NO ! Close, Closer*, 2013 Lisbon Architecture Triennale, Lisbon, 2013
  
- BHATIA Neeraj, SHEPPARD Lola, & al., "Arctic Opening", *BRACKET [goes soft]*, ACTAR, Barcelona, 2013
  
- HIMMELSBACH Sabine, & al. "fabric | ch: Satellite Daylight, 46°28'N", *Sensing Place. Mediatizing the Urban Landscape*, Christoph Merian Verlag, Basel, 2013
  
- DIETZ Steve, Austin Jaime, "fabric | ch: I-Weather as Deep Space Public Lighting", *2010 ZERO1 Biennial Publication, Build Your Own World – The complete edition*, ZERO1, San Francisco, 2012
  
- GALILEE, Beatrice, "fabric | ch: Arctic Opening", *Domus Web / Architecture*, Internet, August 2010
  
- TWILLEY Nicola, "Day Out | The Mushroom Tunnel", *Edible Geography & BLGBLOG*, Los Angeles, September 2009
  
- HILL Dan, "Patrick Keller / fabric | ch / POSTOPOLISILA", *City of Sound*, London, April 2009
  
- LONG Kieran, "fabric | ch", *Hatch: The New Architectural Generation*, Laurence King, London, 2008
  
- FARMANI Hossein, & al. "fabric | ch", *LICC.01, London International Creative Competition, 01*, LICC, London, 2008
  
- KELLER Patrick, & al., *Variable Environment / Mobility, Interaction City & Crossovers*, ECAL, 2007

- DEBATTY Régine, "Christophe Guignard's talk at LIFT07", *We Make Money Not Art*, Paris, February 2007.
- TREVI Alexander, "Tropicalia", *Pruned*, Chicago, December 2006.
- SOLT, Judith, "fabric | ch: RealRoom(s), architecture périphérique & Perpetual (Tropical) SUNSHINE", *Archithese*, January 2006, p. 96-97.
- RAHM, Philippe, "Architecture Invisible", in *Centre Culturel Suisse 2002-2005*, Centre Culturel Suisse, Paris, 2006, p. 165-184.
- KELLER, Patrick, "ex-Dimensionnelle", *Faces*, no 61, hiver 2005-2006, p. 19-23.
- SCHENINI, Elio, "fabric | ch", in *Sentieri e avvistamenti*, CAMEC, La Spezia, 2005, p. 36-37.
- ENGELI, Maia and SADIN, Eric, *fabric / ch*, Pro Helvetia, Zurich, 2004.
- STOLZ, Noah, "Cahiers d'artistes editi da Pro Helvetia", *Kunst-bulletin*, July-August 2004.
- "i-weather.org", *Oeste 17, Arquitectura, Urbanismo, Arte y Pensamiento Contemporáneos*, June 2004, Madrid.
- CHARDRONNET, Ewen, "Entretien avec le consortium i-weather.org", *Art Presence*, no 47, july-august-september 2003, p. 40-45.
- CHARDRONNET, Ewen, "25 Hour living", *Makrolab*, The Arts Catalysts, London, 2003, p. 39-43.
- GUIGNARD, Christophe, KELLER, Patrick, "Electroscape 002 | Espace Multiplié", in *L'image habitable*, Centre pour l'Image Contemporaine, Geneva, 2002.
- VANDE MOERE, Andrew, "Recombinant Realities", in *Bits and Spaces*, Maia Engeli, Basel, Boston, Berlin, 2001, p. 126-131.
- GUIGNARD Christophe, KELLER Patrick, RAHM Philippe, DECOSTERD Jean-Gilles, NEUKOMM Jean-Gabriel « Towards an augmented architecture », refused for publication by the magazine *Matières*, ENAC-EPFL, Lausanne, 1999.

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## Lectures, selection 2014 - 1999

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### Lectures, seminars, workshops and interviews of fabric | ch:

— **Deterritorialized Living et autres soleils algorithmiques, novembre 2013.**

Christophe Guignard opens the exhibition of fabric | ch at the Maison de l'Architecture, in Pau (FR), with a presentation of recent works realized by the collective.

— **Deterritorialized Living (Beijing session), septembre 2013.**

As part of the call for projects launched by fabric | ch during Close, Closer (Third Lisbon Architecture Triennale, PT), Patrick Keller talks about the issues and stakes related to the theme of the competition.

— **Inhabiting the Computer Cabinet (with two suns), mars 2013.**

As part of an artist residency by fabric | ch in Beijing (Tsinghua University, CN) and at the invitation of curator and Prof. Zhang Ga, Patrick Keller runs a workshop and give a related lecture at the Tsinghua Media Art & Science Laboratory (TASML).

— **Localizing Networks, February 2012.**

Following an invitation by Alejandro Zaera Polo from the Berlage Institute in Rotterdam (NL), fabric | ch takes part to the final jury of the Master Class « Localizing Networks ».

— **I-Weather as Deep Space Public Lighting, September 2010.**

During the 2010 OISJ Biennial exhibition in San Francisco / San Jose (USA) and at the invitation of Steve Dietz and Jaime Austin (curators), Patrick Keller and Christian Babski present fabric | ch's exhibited project and explain the concepts of "I-Weather", the artificial climate, its relation to "Deep Space (Internet)" and to public space / public lighting.

— **Variable\_environment/, a research, October 2009.**

At the invitation of HEAD (University of Art & design, Geneva (CH)) and ECAL (University of Art & design, Lausanne (CH)), fabric | ch presents the working process and the results of the design and science research project "Variable\_environment/".

— **Inhabiting interferences & "spatial moirés", September 2009.**

At the invitation of Nicolas Nova and in the context of the LIFT Asia 09 conference on Jeju Island (KOR), fabric | ch develops its ideas about "spatial interferences" and about the increasing mediatization of our relation to contemporary space. Patrick Keller presents the state of the group's researches on issues affecting the inhabitability of these territories.

— **RealRoom(s), Atmospheric Relations & current questions, March 2009.**

During the POSTOPOLIS! LA conference in Los Angeles (USA) and at the invitation of Geoff Manaugh (BLDBLOG, DWELL Magazine, San Francisco), fabric | ch presents through three recent projects a speculative and questioning talk about inhabitable space, function, fiction, energy, globalisation, psychedelism and technology.

— **fabric | ch, recent works, September 2008.**

Conference of Patrick Keller and Christian Babski at Matadero in Madrid (ES), in the context of La Noche Em Blanco.

## Lectures, seminars, workshops and interviews of fabric | ch:

- **Variable Environment/, June 2008.**  
Patrick Keller presents the results of the joint research project between ECAL (University of Art & Design, Lausanne) & EPFL (Swiss Institute of Technology) at the "Ateliers de la recherche en design" in Nantes (FR).
- **Globale Surveillance – un prototype théâtral contemporain, April 2008.**  
Common presentation of a new project by Patrick Keller and Eric Sadin at the Palais de Tokyo, Paris (FR). In the context of the symposium "Globale paranoïa" organised by Eric Sadin.
- **Architecture ex-dimensionnelle, September 2007.**  
Conférence of Christophe Guigard at the Canadian Center for Architecture in Montreal (CA), during the symposium "Reconciling Poetics and Ethics in Architecture".
- **fabric | ch, projets récents, May 2007.**  
Conference of Patrick Keller at EPFL (CH), during the architecture workshop of Philippe Rahm.
- **Contemporary space(s), February 2007.**  
Presentation of the concept of ex-dimensional architecture during the conference Lift 2007, 7-9.02.2007 in Geneva (CH).
- **fabric | ch, projets récents, April 2006.**  
Conference of Christophe Guignard during the seminar « Poetic in poetics », organized during PixelACHE / Mal ou pixel festival 2006 in Paris (FR). Other guests: Haque Design + Research, Aether Architecture, Pablo Miranda, Barbara Sterk.
- **Ex-Dimensional, December 2005.**  
Conference of fabric | ch at the Architectural Association (AA), in London (GB).
- **Culture Plus, France Culture, May 2005.**  
Interview of Patrick Keller (fabric | ch) on France Culture (FR), during the broadcasting of Arnaud Laporte. Other guests: Eric Sadin (éc/artS), Clarisse Bardiot, Frédéric Bevilacqua and José-Louis Lestocard.
- **Dimensional crossovers, May 2005.**  
Conference of fabric | ch at Sabanci University in Istanbul (TR).
- **Architectures matérielles - non matérielles, February 2005.**  
Seminar about fabric | ch's works at UQAM in Montreal (CA).
- **Knowscape mobile, August 2004.**  
Conference during Web Graphics – navigation in [Siggraph 2004](#), Los Angeles (USA).
- **MIX-m.org, June 2004.**  
Presentation of MIX-m.org at Musée de la Communication in Bern (CH). "Mediaproject" with the support of Federal Office of Culture.
- **Visions interactives, April 2004.**  
Conference of fabric | ch at [Hochschule der Künste, Bern](#) (CH).
- **Mixed realities, April 2003.**  
Conference/panel at the Swiss House for Advanced Research in Education (SHARE) of Boston (USA). fabric | ch presents \*\_knowscape mobile\* at SHARE Boston\* and invites Jeffrey Huang (Harvard Design School), Muriel Waldvogel (Boston Architectural Center), Karrie Karahalios (Medialab), Tad Hirsch (Medialab) to debate about \*\_mixed realities\* during Boston Cyberarts Festival 2003.
- **Les créateurs d'espaces nouveaux, March 2003.**  
Round table with Charles Kleiber, Philippe Rahm and Patrick Keller about the design of new kind of spaces at the EPFL (CH).
- **Architecture électronique, November 2002.**  
Conference of fabric | ch at ENAC – EPFL (CH).

- **VERSION F, November 2002.**  
Colloquial about \*L'image habitable\* in the Center for contemporary image, Geneva (CH).  
Fabric | ch presents BAC +3 digit://
  
- **La\_Fabrique à Beaubourg, April 2002.**  
fabric | ch presents La\_Fabrique at Beaubourg (George Pompidou Center), in the context of festival Numer, Paris (FR).
  
- **Sometime between 395 and 509 Nm, March 2002.**  
Conference about i-weather.org during the 'Rencontres du 13 avril', organized by Leonardo/OLATS (MIT Press), the OURS Foundation the International Astronautic Academy in Paris (FR).
  
- **fabric | ch duplex talk, May 2001.**  
fabric | ch simultaneously talks at the Hochschule für Gestaltung und Kunst (HGKZ) in Zürich (CH) and the Forum for Architecture (FAR) in Lausanne (CH). Recent works.
  
- **La\_Fabrique, experimental online space edicated to art, May 2001.**  
Interview and presentation of the digital museum project in Le Lab, Canal+ (FR).
  
- **World Telecom 1999, October 1999.**  
Conference as part of World Telecom Internet Days, Geneva (CH).  
fabric | ch presents its relationship to the Internet through series of works in media design, interfaces and architecture.

fabric | ch, January 2015

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# Contact

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fabric | ch (15-97)

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**Architecture/Art direction:**

Patrick Keller

Christophe Guignard

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**Technical/Technological direction:**

Christian Babski

Stéphane Carion

-

**Team, current:**

Nicolas Besson, Sinan Mansuroglu, Yves Staub

-

**Team, past:**

Nicolas Baumgartner, Sara Bochicchio, Letícia Cabecadas Do Carmo, Maxime Castelli, Michaël Chablais, David Colombini, Gisèle Comte, Fabrice Consentì, Marc Escher, Luís Fetzner da Silva, Franz Hoffman, Laura Maccioni, Sinan Mansuroglu, Linda Martinez, Tatiana Rihs, Marianne Thalmann

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