

**DIVE 2008**

Task : »Skipping dimensions in Ljubljana«

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**Virtual environments and parametric architecture as generators of different site specific proposals.**

Reflections of real in virtual, reflections of virtual in physical environments and their connections.



**Etymologically definition of Virtual:**

“Virtual means full of virtue, virtue being taken here as a **capability to act**. According to the old philosophical distinction between capacity and act, virtual reality is nothing but a potential awaiting its full actualization. Virtual reality is by no means unreal, but its full effect is not yet in evidence...

Virtual reality can be interpreted as a germ, as the starting point of a dynamic evolution.”  
(Picon, A; 2007)



The virtual designates that which is **not yet seeable, explainable, representable in terms of already existing concepts or expectations.** Thus the actualization of the virtual must involve the creation of invention of the unforeseen, the emergence.

“The diagrammatic or abstract machine does not function to represent, even something real, but rather constructs a real that is yet to come, a new type of real.” Gills Deleuze, 1987



**Mental**  
learn from / by experience



**Virtual**  
All possible actions



**Physical**  
Actualized solution





**Koyaanisqatsi**

Ko.yaa.nis.qatsi (from the Hopi language), n.





What is a Public space ?

Philosophical concept:  
**a place where society is formed**

Public realm:  
**'the sphere of social relations going beyond our own circle of friendships, and of family and professional relations. The idea of a public realm is bound up with the ideas of expanding one's mental horizons, of experiment, adventure, discovery, 'surprise'.**

(Bianchini & Schwengel 1991, p. 229)

# Assignments for the spatial designers

Maarten Hajer & Arnold Reijndorp are interested in 'public domains':

"We are seeking opportunities for creating spaces that facilitate 'cultural mobility': places where people can have new experiences, where a change of perspective is possible!"

"...it is not the functional relations that are central, but the cultural significance of place."



The Wether Project, 2003 Olafur El

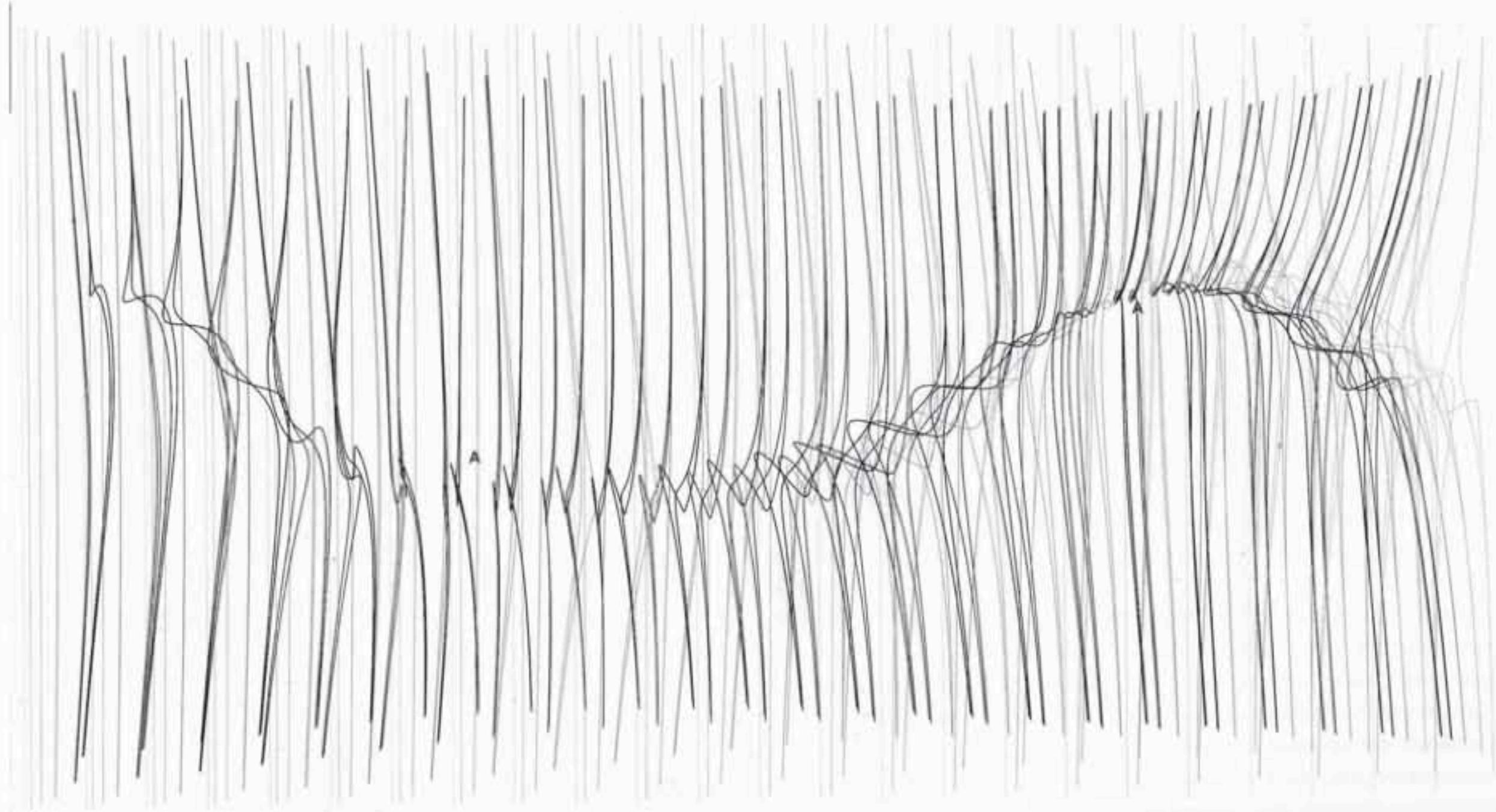


How do we orient, how do we feel, how do we group or ungroup?" All these questions have to be posed together with "how does it stand up?" Lars Spurbrouk



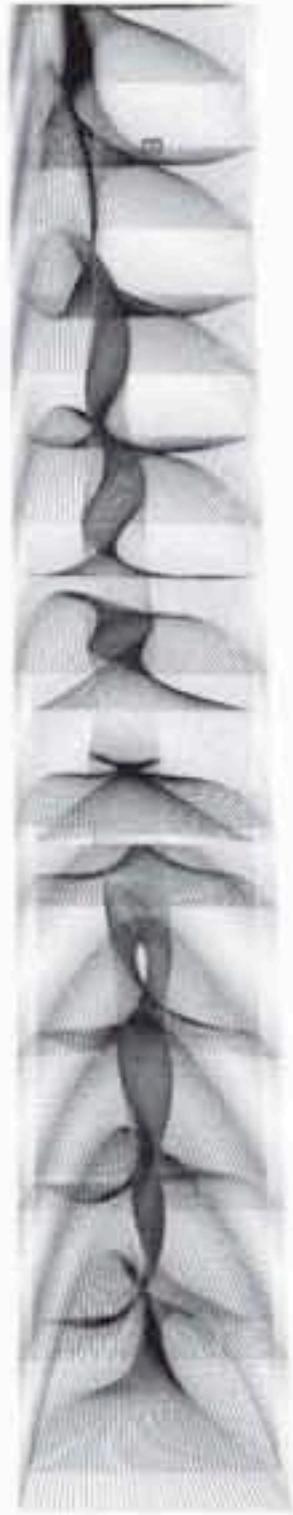
Olafur Eliasson, Your spiral view

"A cause always precedes its intended effect."  
(Rahim 2006)



Dynamical systems with Springs and particle Fields

Ali Rahim: Leisure Center for the 2004 Olympic C  
Athens (Rahim 2006 p35)

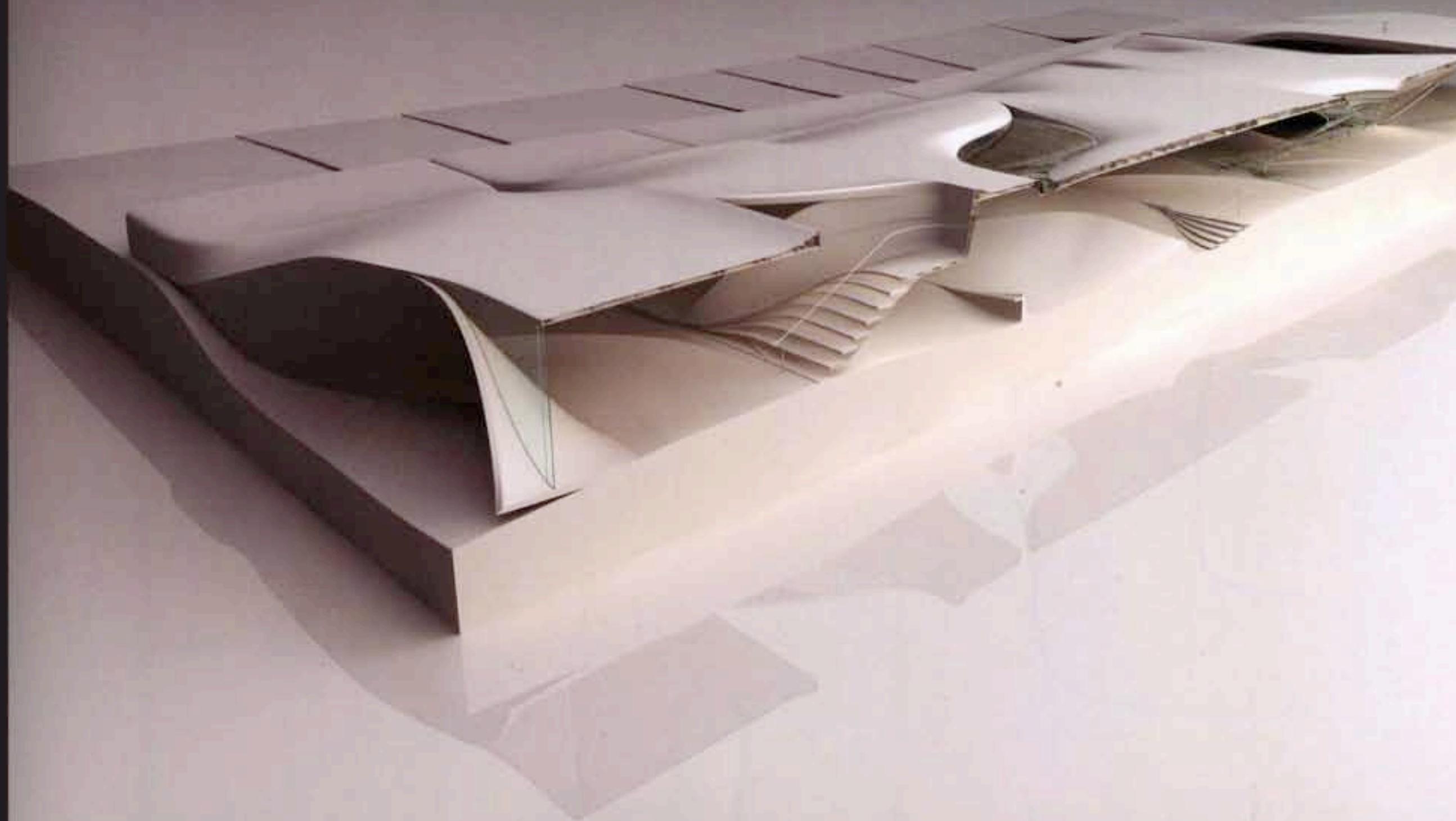


Dynamical systems with Springs mapped through Time

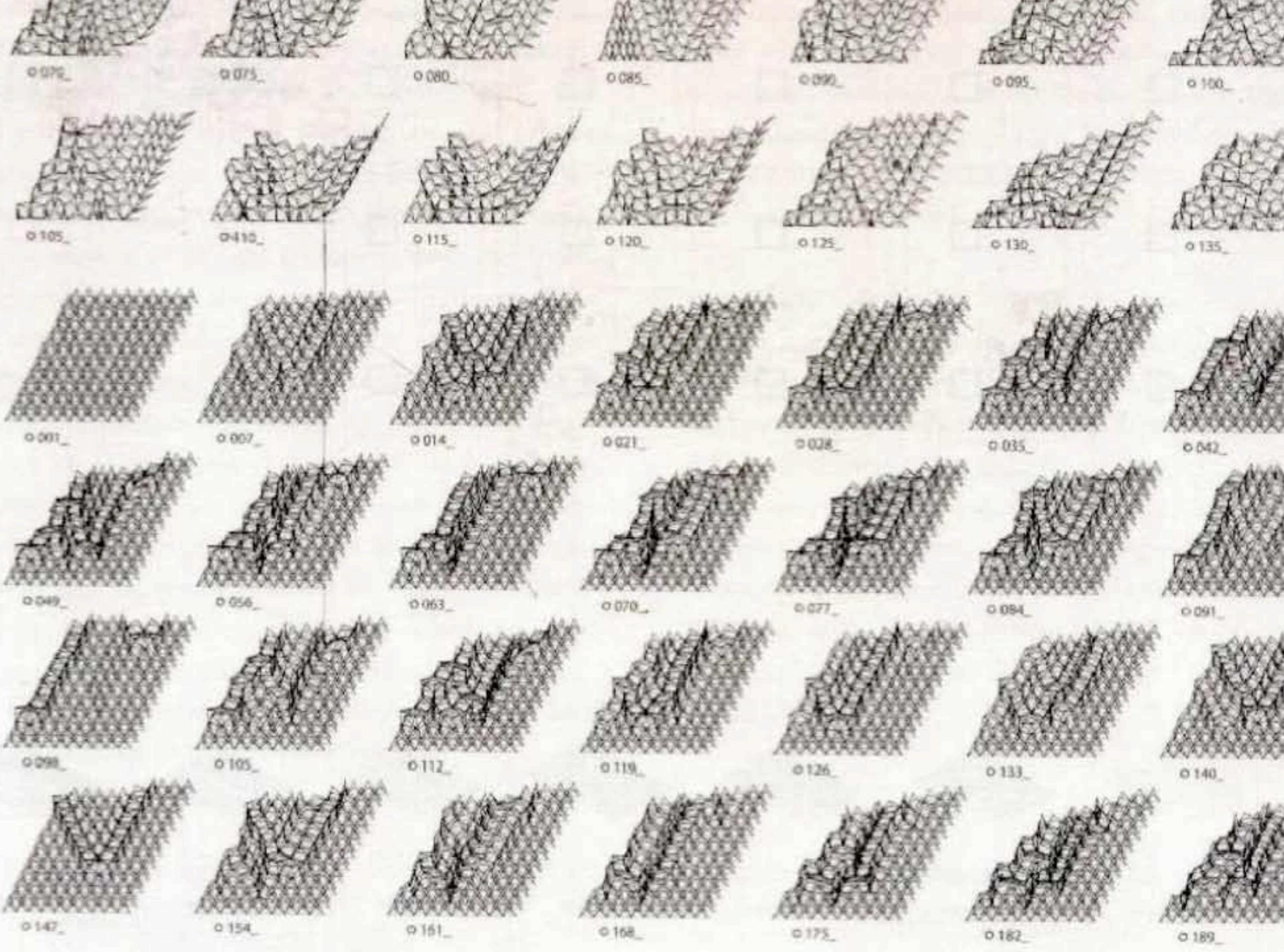


Ali Rahim: 'Performative Leisures' (2002-3).  
(Rahim 2006 p35)









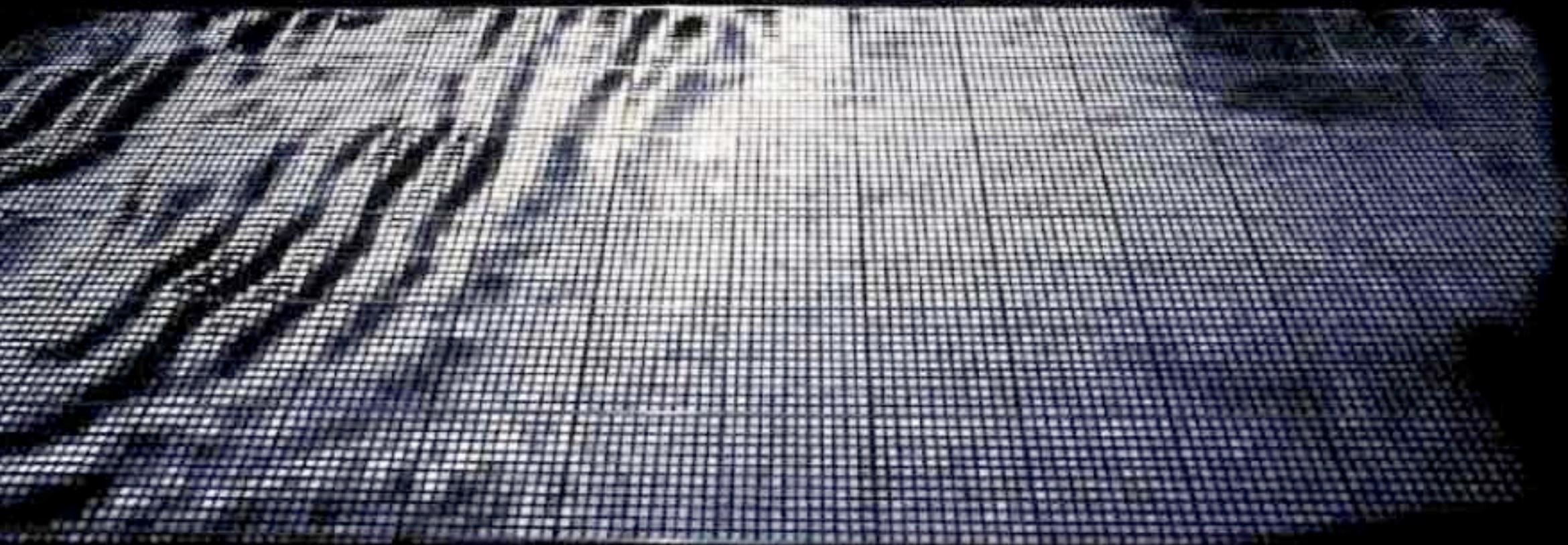


M2 Vanløse  
M2 Vanløse

3 min  
12 min

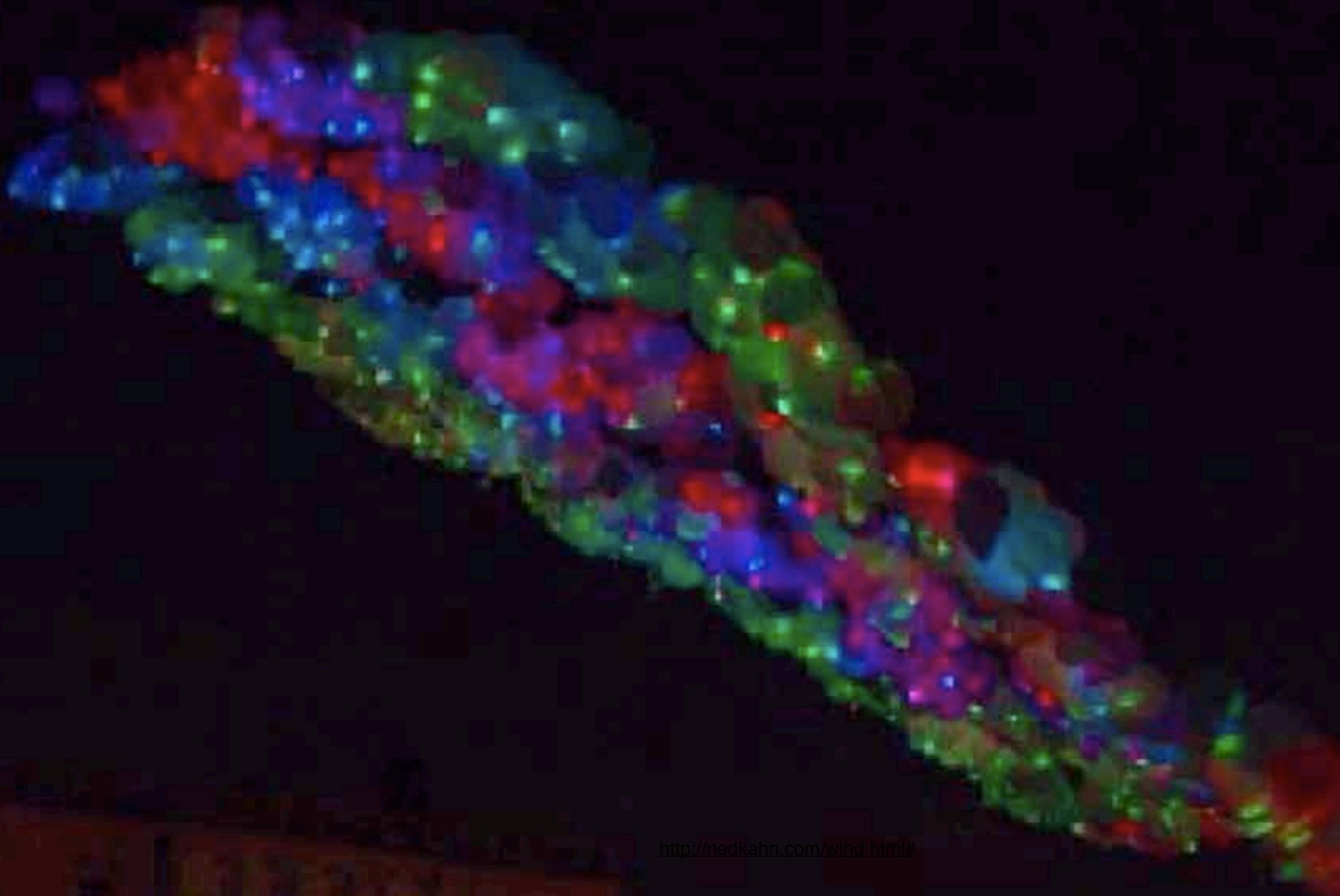
M2





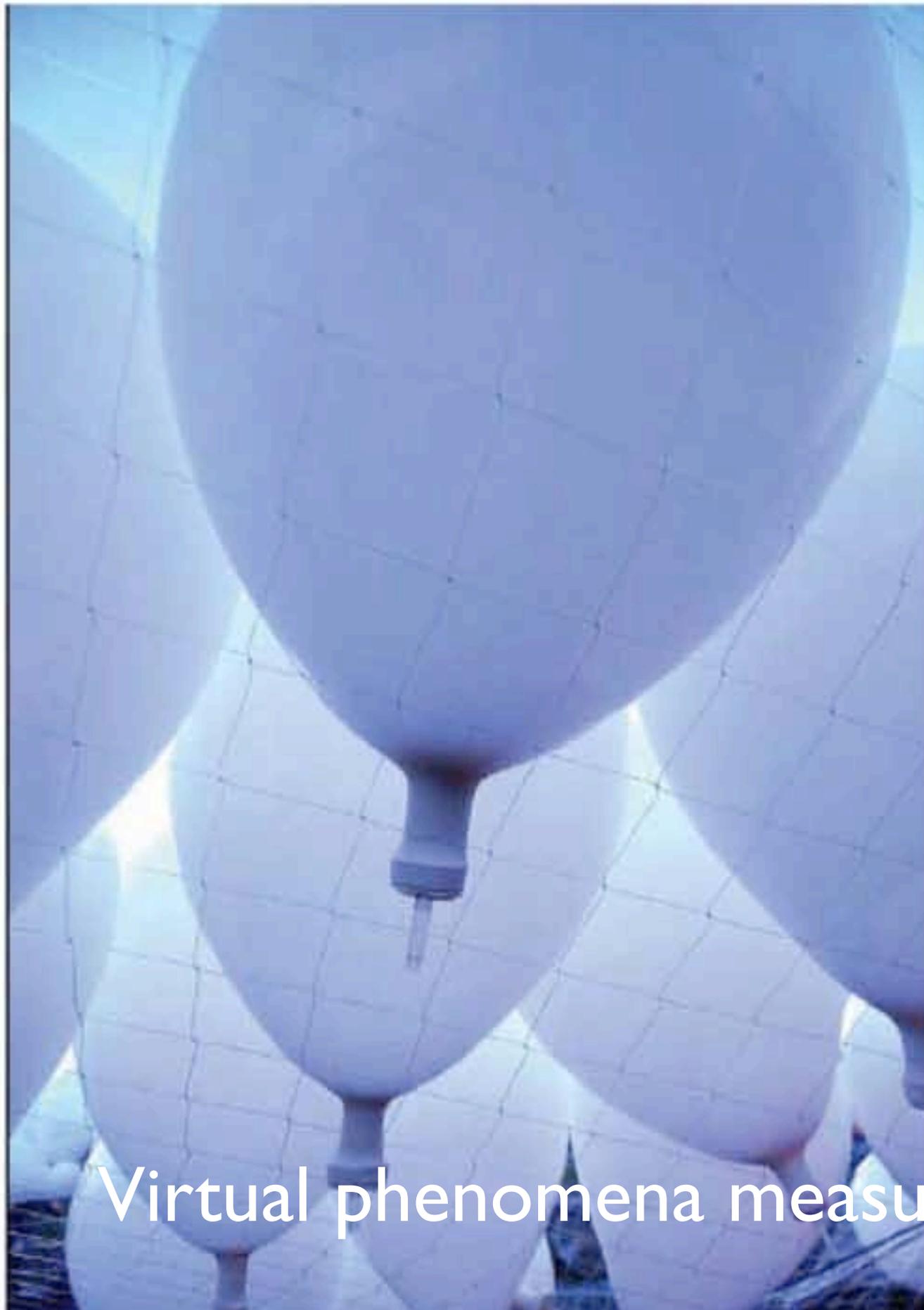
Wind Veil - Gateway Village, Charlotte, North Carolina. 20

Virtual phenomena measured in space



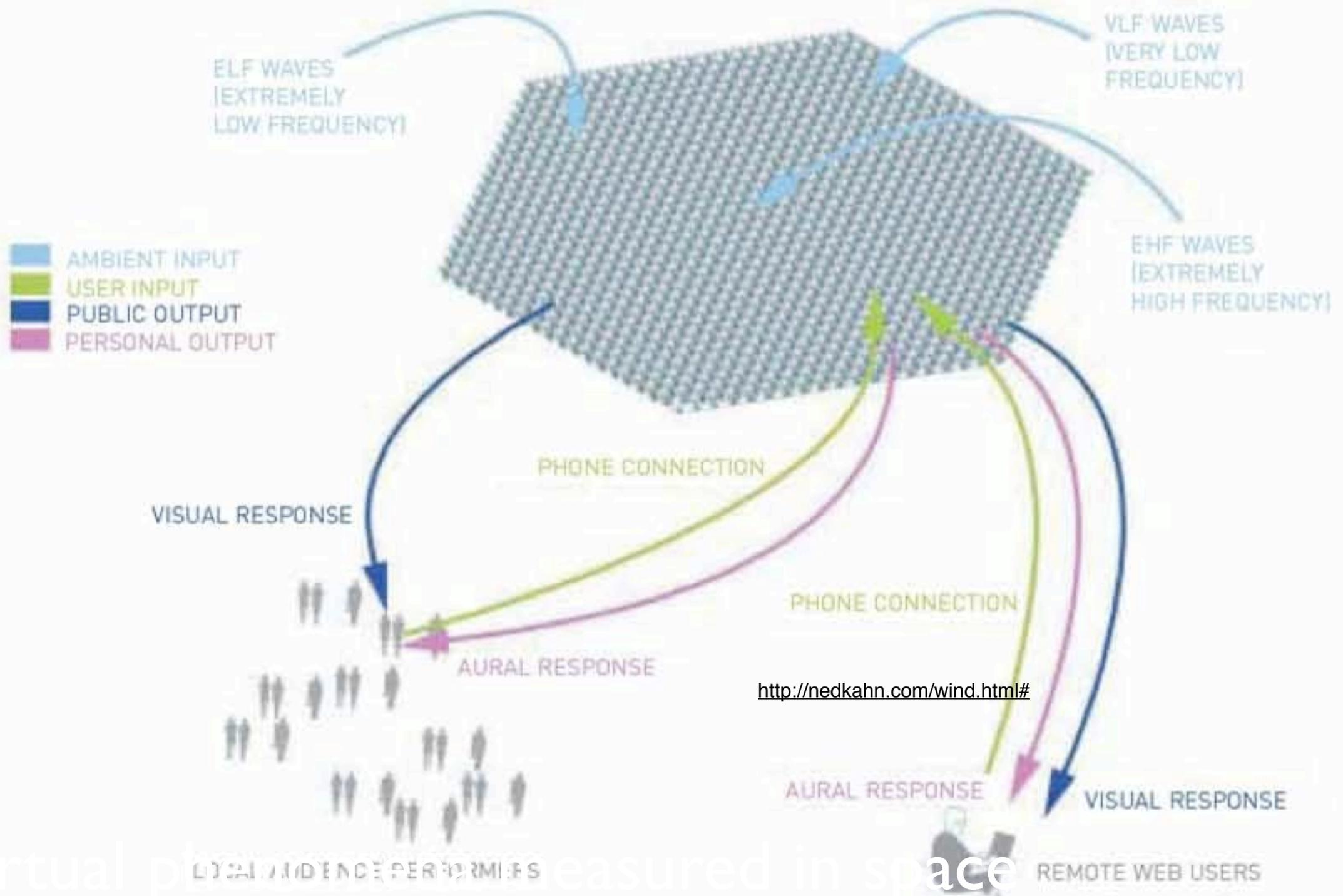
<http://nedkahn.com/wind.html#>

Virtual phenomena measured in space



<http://neckahn.com/wind.html#>

Virtual phenomena measured in space



Virtual performance measured in space

**SKY EAR**



## **The importance/power of the quasi-object**

'Mediators...cannot be counted as just one; they might count for one, for nothing, for several, or for infinity... Their input is never a good predictor of their output; their specificity has to be taken into account every time... mediators transform, translate, distort, and modify the meaning or the elements they are supposed to carry' (Latour 2005: 39)

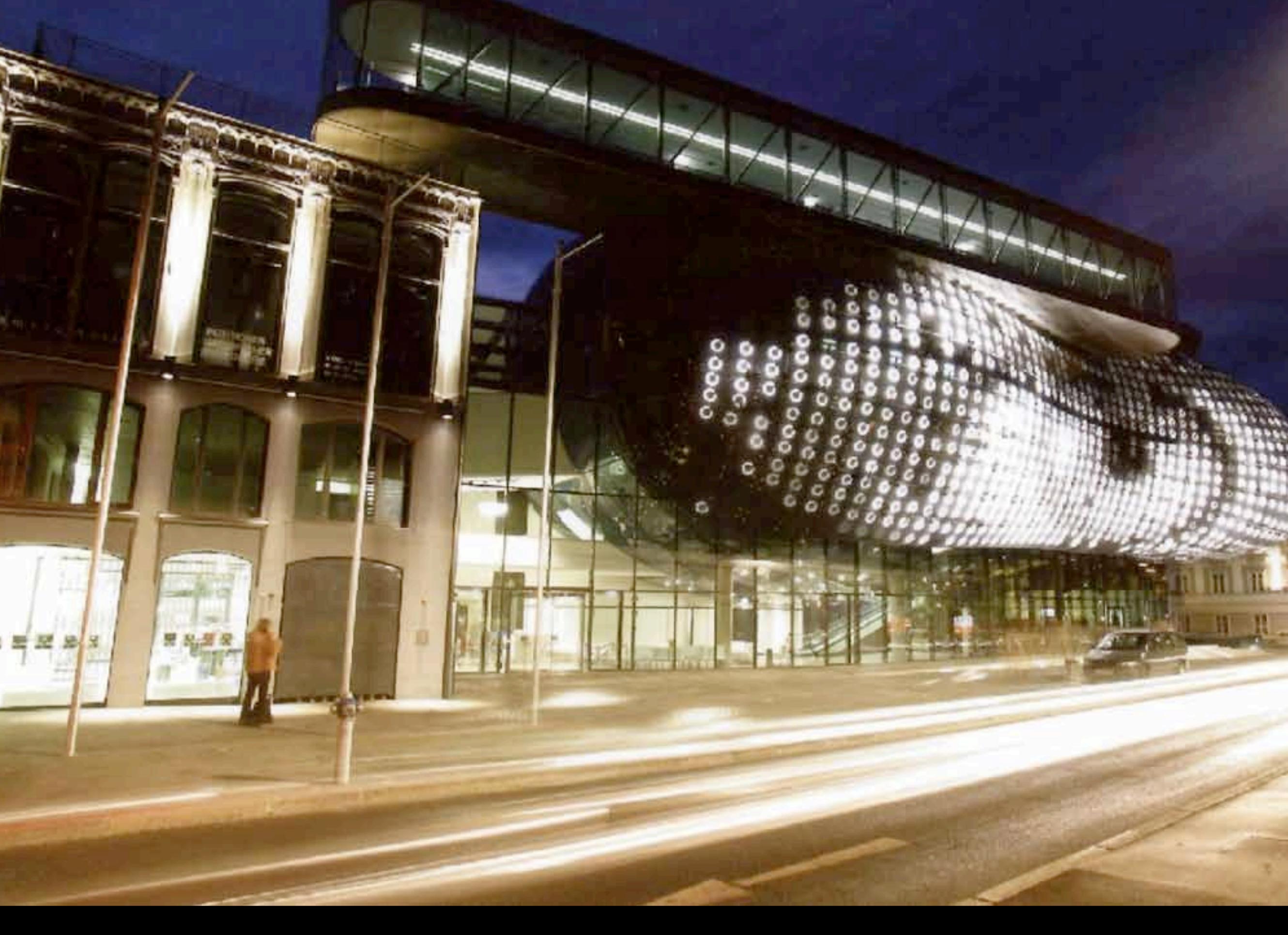
'In a world where message systems dominate, those who set them in motion are also in a position to switch them off. We only realize how important they are when they stop.'  
(Serres 1993: 106)

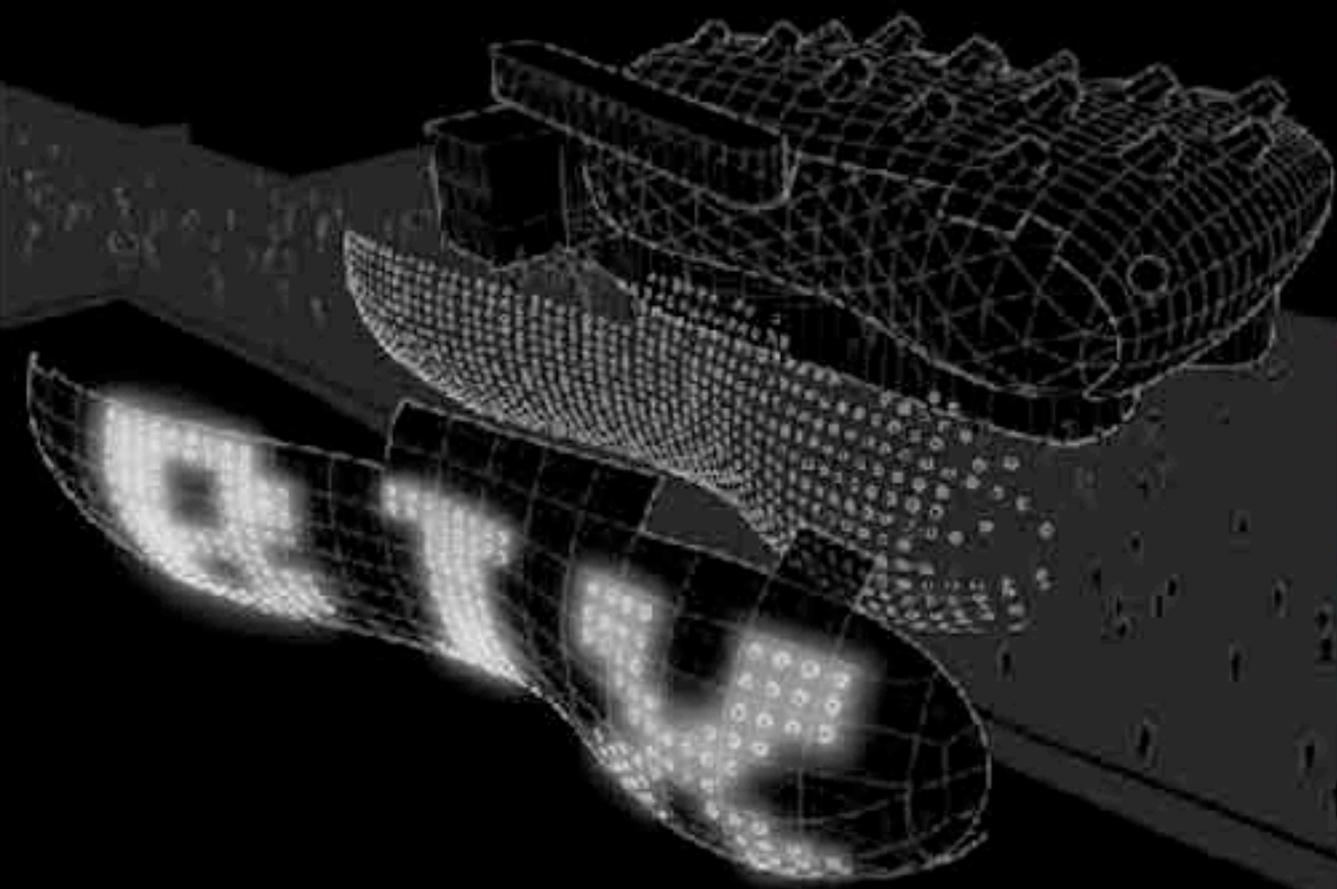


G O L L U M











We cannot be conscious without being conscious of something.  
Consciousness constructs a relation between the self and the  
world. Cresswell S.22

## Mediating relations, interactive art movement







# situation P

Tegnesalen Gammeltorv  
Åbning: 3/4 kl. 1900  
3/4 - 14/4

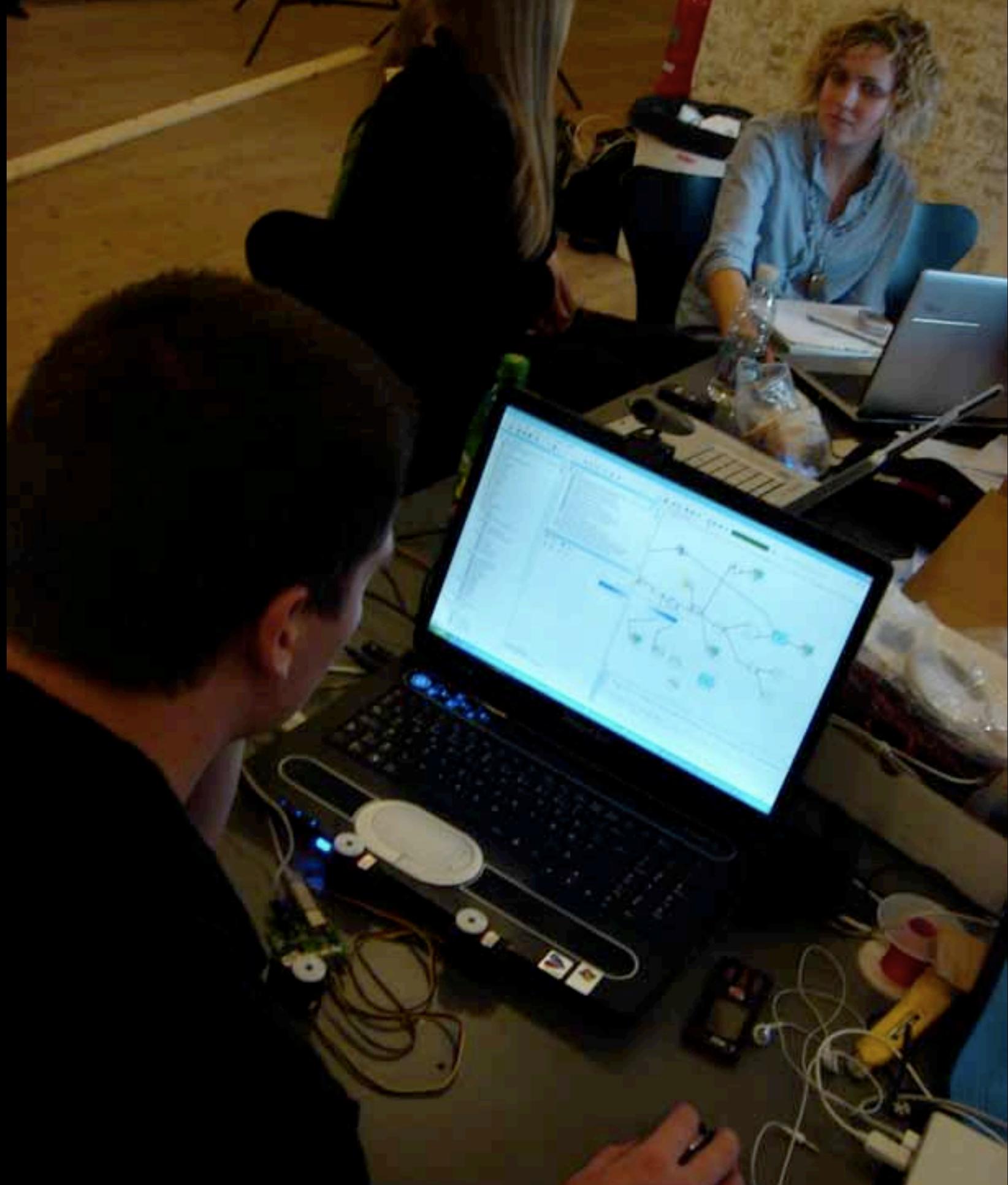
SITUATION P  
SLOTTE | HORSENS 01.03.08 - 01.04.08



## SLOTTET  
[www.slottetihorsens.dk](http://www.slottetihorsens.dk)



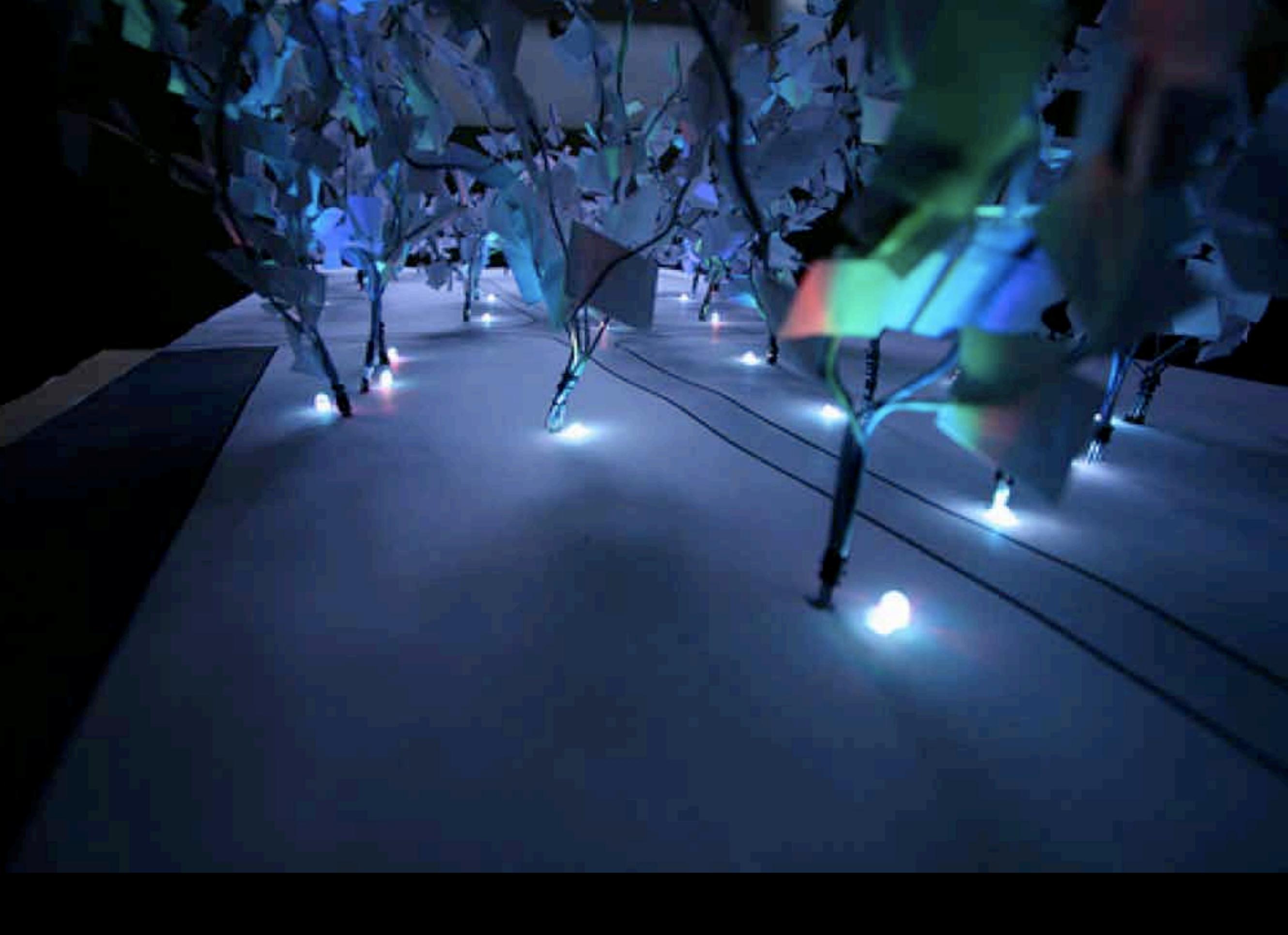










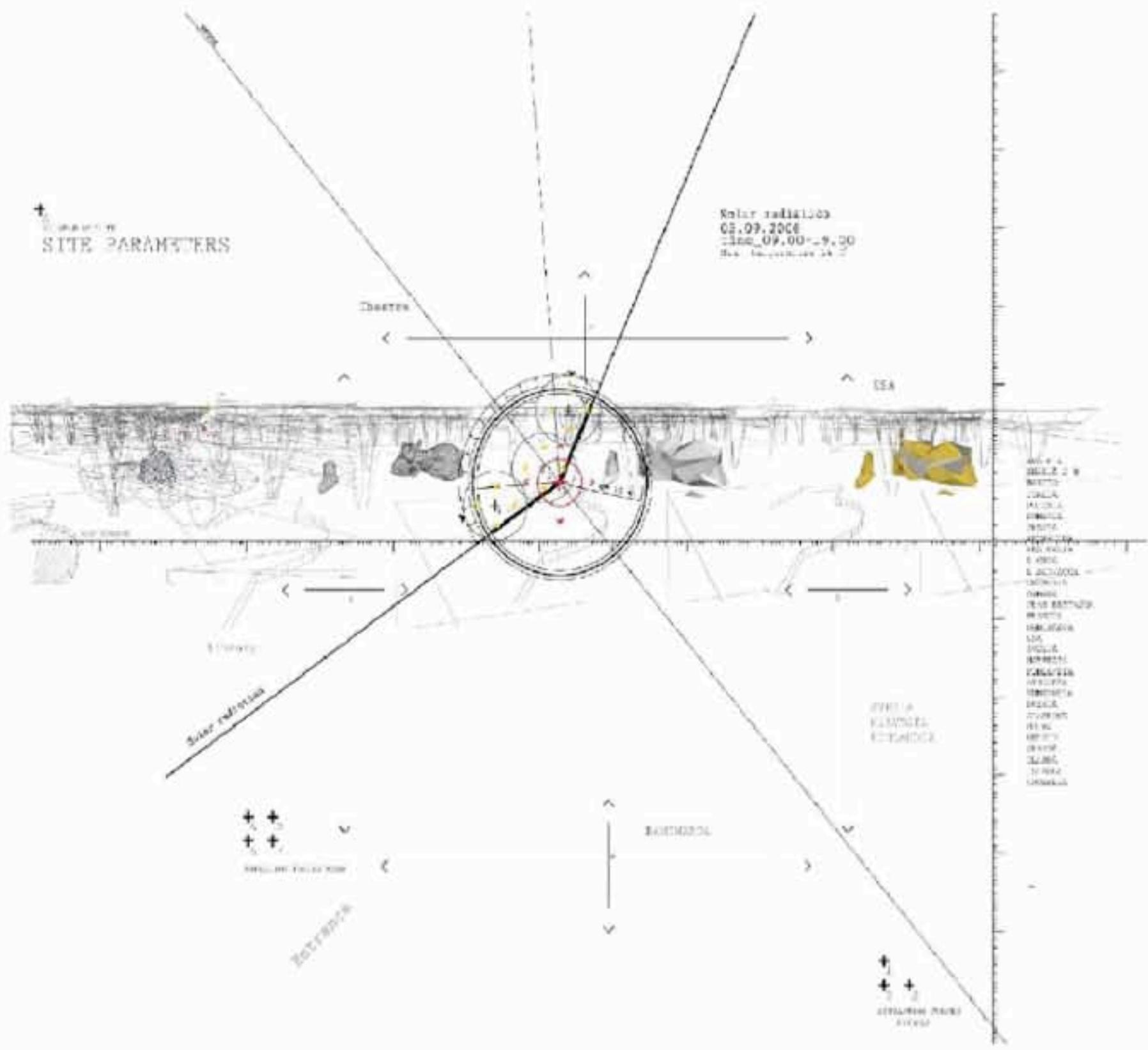




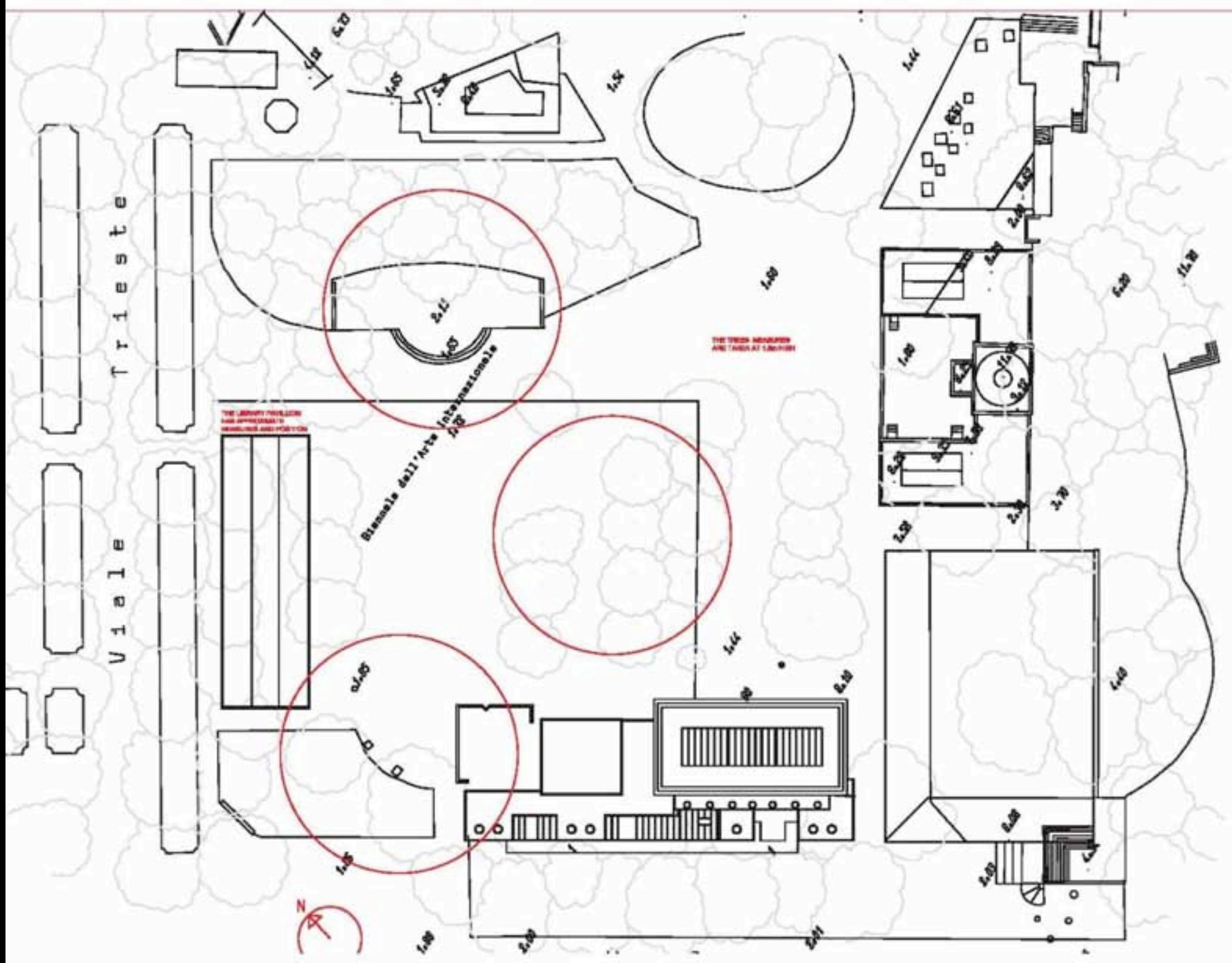


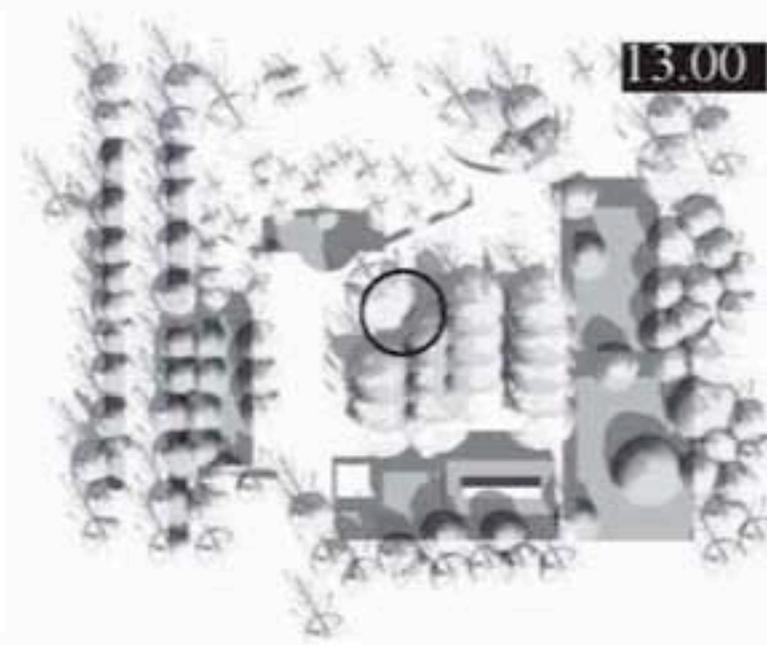
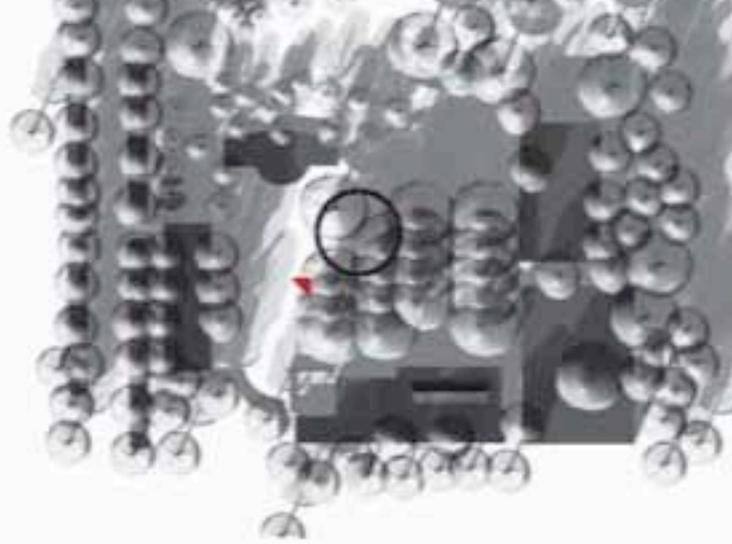
**SITE PARAMETERS**

Solar radiation  
02.09.2008  
Time: 09.00-9.30  
Sun: 14.000.000.000

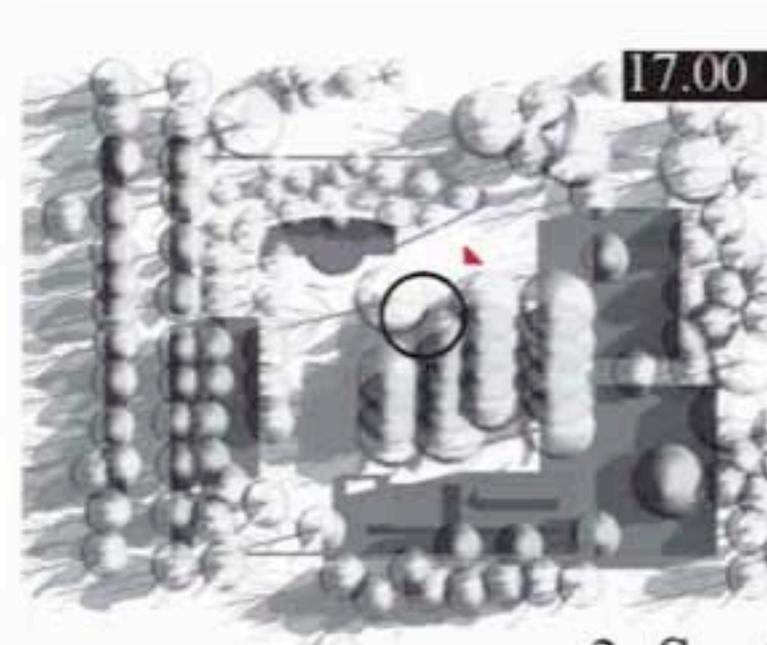


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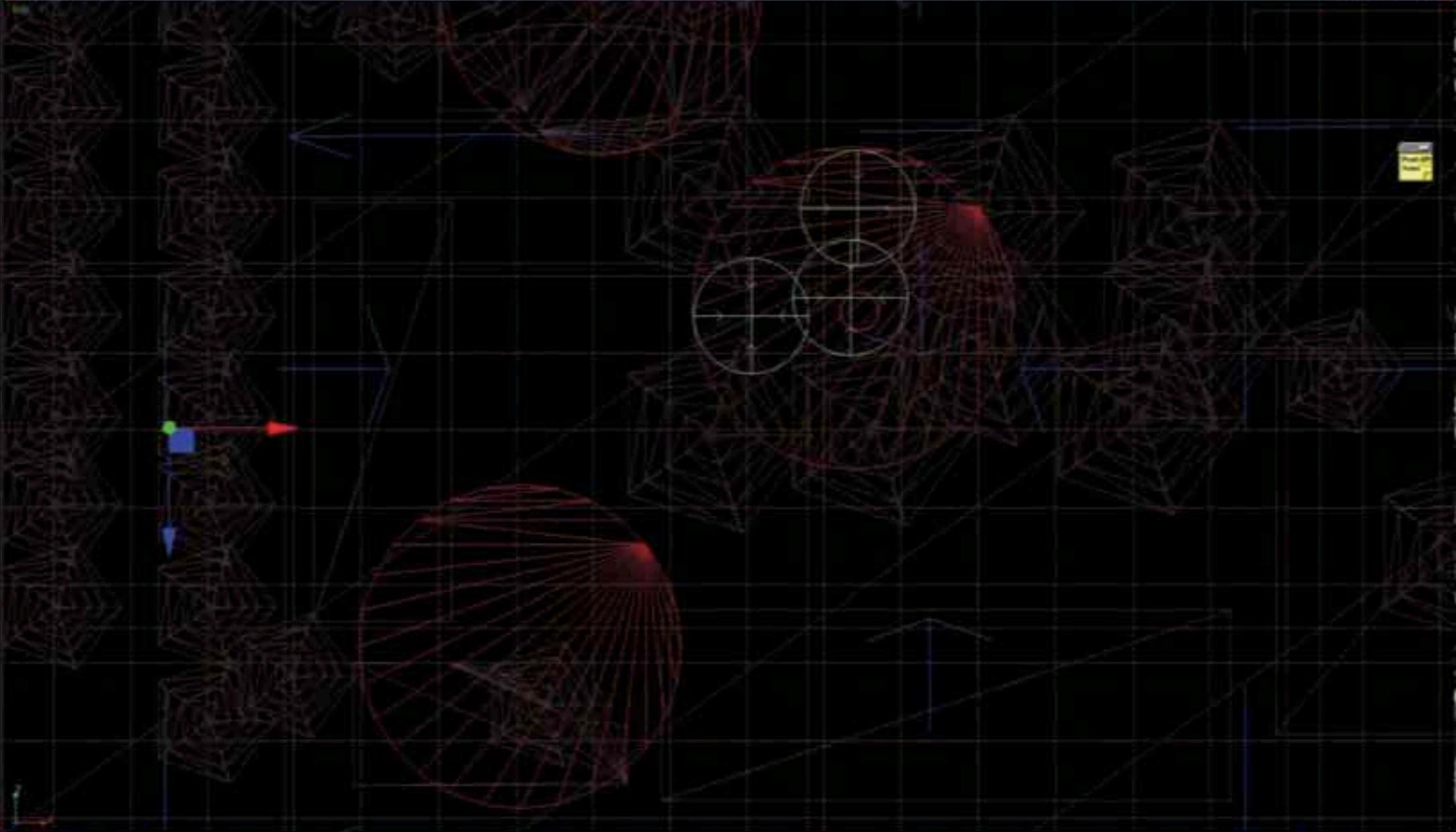
13.00

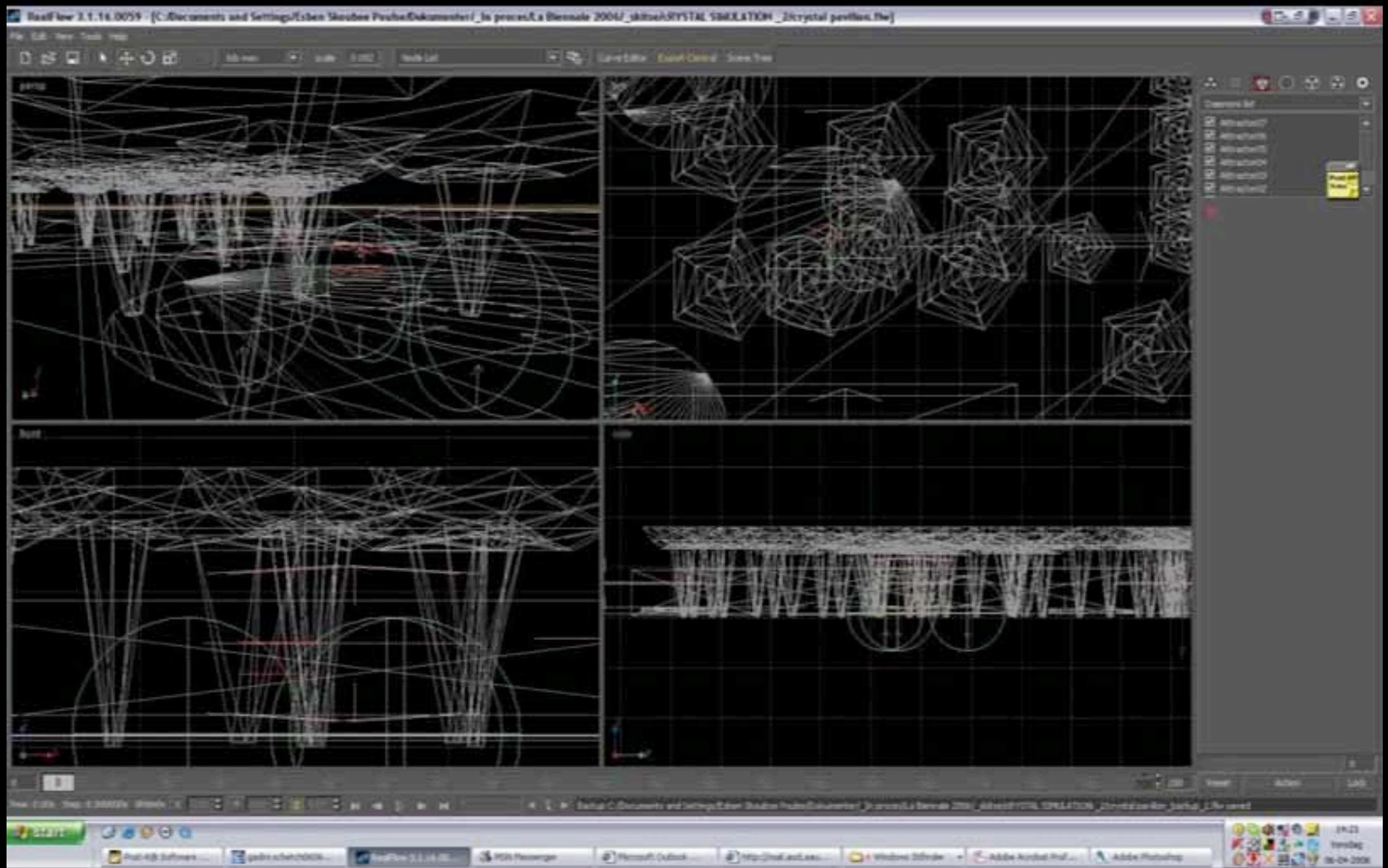


17.00

3 September max temp 24C









File Edit View Tools Help

30mm 0.00 0.00 0.00

Draw Edit Copy Paste Save File

front back top side

Mesh

- Texture
- Wire Mapping: off (white)
- Use texture:
- Wing: Yes
- Apply material: Yes
- Specular: No

Face

- Wire visible: No
- Resolution: 6.1
- Version: 3.0
- Step: 20

Clipping

- Clipping box:
- Clipping planes:
- Draw items:
- Draw clipping: No
- Realtime Clipping: No

Options

- Offset: Curvature
- Range Selection: 1
- Dot Threshold: 20.0
- Face selection: No
- Sub Threshold: 0.0

Display

- Color:
- Transparency: 0.0
- Red face culling: Yes

75% View Action LMB

File Edit View Tools Help

1.00 1.00 1.00

Simulation started

File Edit View Tools Help

3ds max 3.00 1.7 (64bit) Curve Editor Object Properties Scene Time

front

back

top

side

Properties

Material

|                |            |
|----------------|------------|
| Wire Mapping   | Off (Auto) |
| Use Instance   |            |
| Weld           | Yes        |
| Apply Instance |            |
| Smooth         | Yes        |

Mesh

|              |     |
|--------------|-----|
| Wire visible | Yes |
| Resolution   | 0.1 |
| Vertex       | 0.0 |
| Step         | 20  |

Clamp

|                      |        |
|----------------------|--------|
| Clipping box         |        |
| Clipping objects     |        |
| Wire Clamping        | Inside |
| Camera Clamping      | No     |
| Environment Clamping | No     |

Custom

|                  |        |
|------------------|--------|
| Reference        | Corner |
| Range Direction  | 7      |
| Do Threshold     | 20.0   |
| Face subdivision | No     |
| Sub Threshold    | 1.0    |

Display

|                   |     |
|-------------------|-----|
| Color             |     |
| Transparency      | 0.0 |
| Back face culling | Yes |

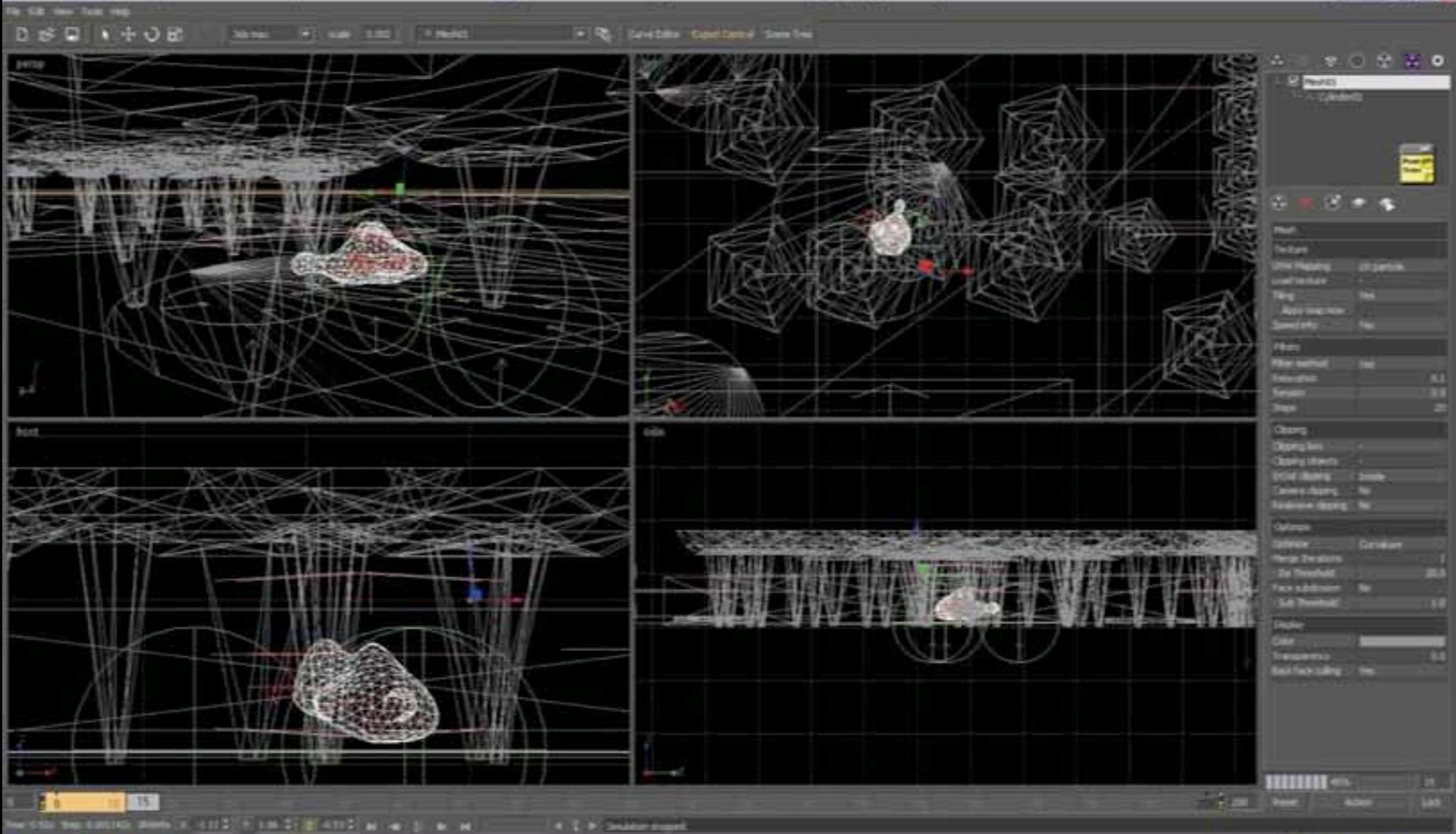
75% Front Active LAY

View: 0.25 Step: 0.201194 Wire: 0.01 F: 1.00 A: 4.71 Simulation stopped





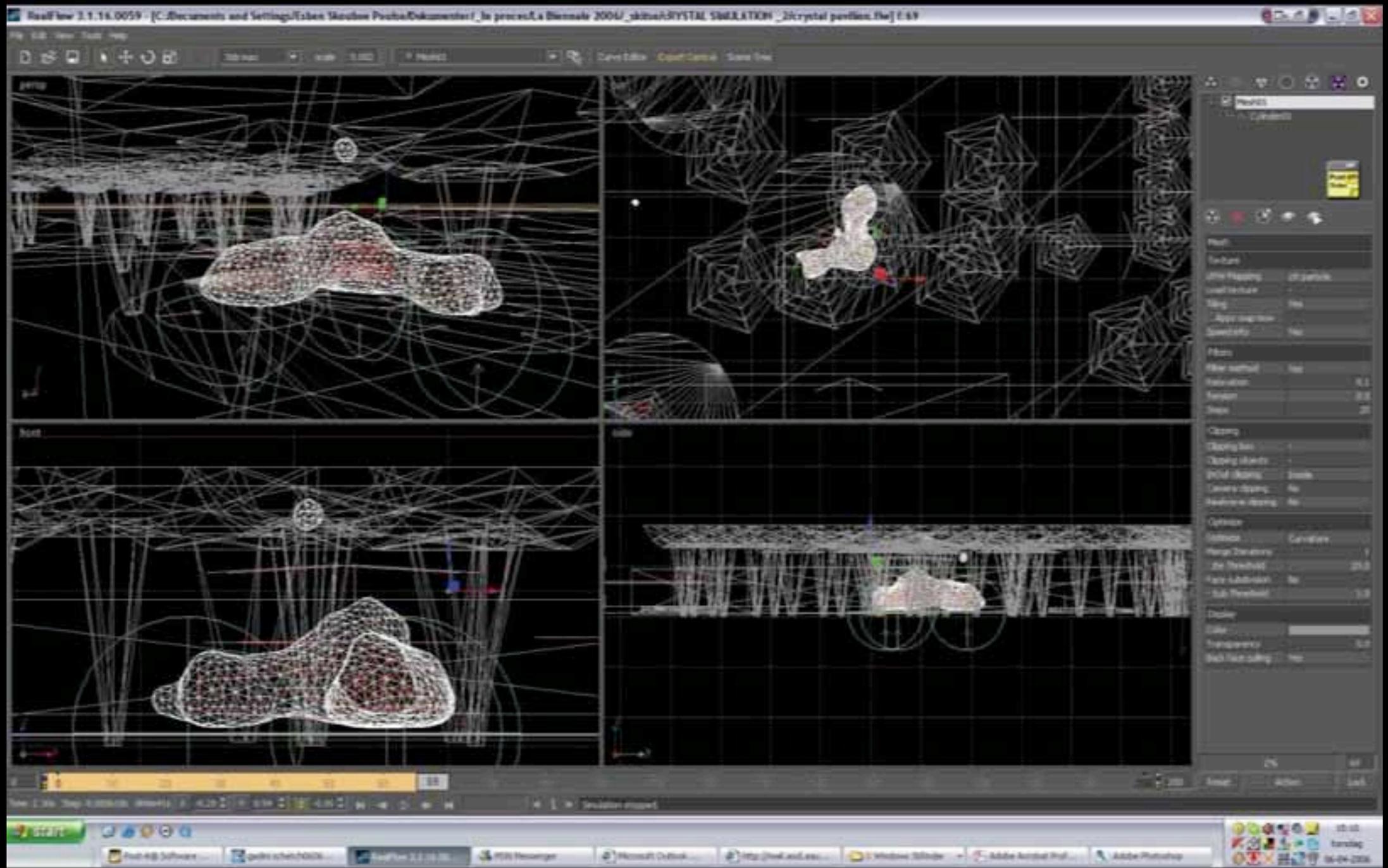












File Edit View Tools Help

3ds max | Scale 0.00 | 7 Nodes | Curve Editor | Object Editor | Scene View

Left Viewport: Perspective view of a complex, multi-lobed crystal structure.

Top Viewport: Top-down view of the same structure.

Bottom Viewport: Front view of the structure.

Right Viewport: Side view of the structure.

Properties Panel:

- Material: **Material**
- Unit Mapping: **Off**
- Use Instance: **No**
- Warp: **No**
- Apply Instance: **No**
- Smooth: **No**
- Filter: **None**
- Filter Method: **None**
- Resolution: **64**
- Render: **3.0**
- Depth: **20**
- Clipping: **None**
- Clipping Box: **None**
- Clipping Objects: **None**
- Wire Clipping: **None**
- Camera Clipping: **No**
- Hardware Clipping: **No**
- Options: **None**
- Color: **Color**
- Range: **0.000000**
- Zr Threshold: **25.0**
- Face Subdivision: **No**
- Sub Threshold: **5.0**
- Display: **None**
- Color: **None**
- Transparency: **0.0**
- Back Face Culling: **No**

71

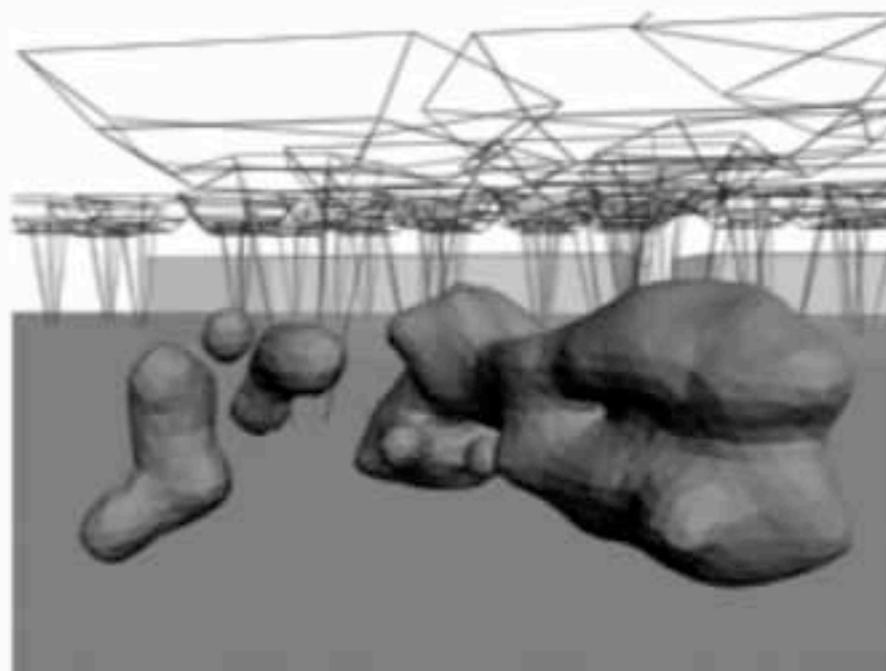
Simulation stopped

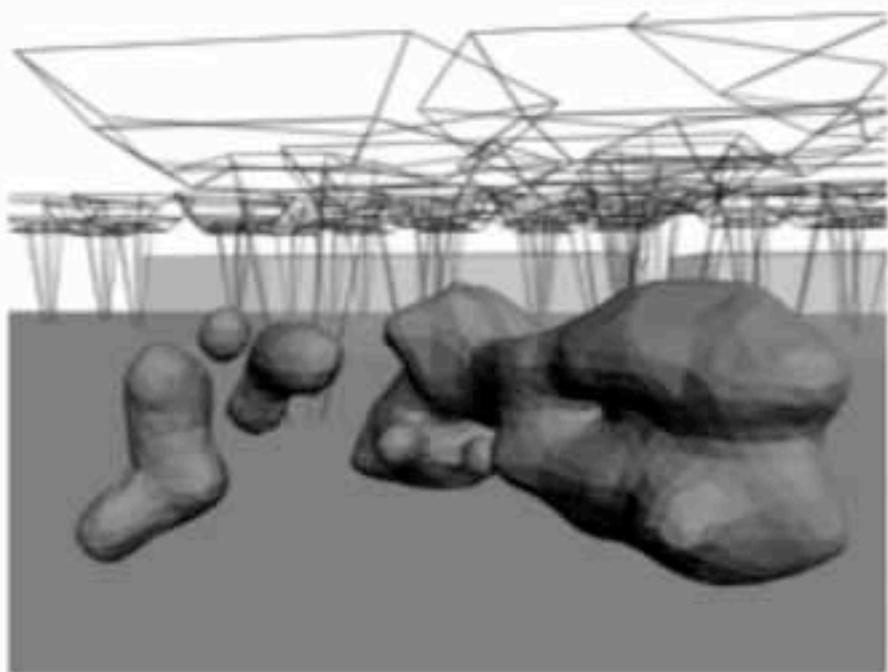


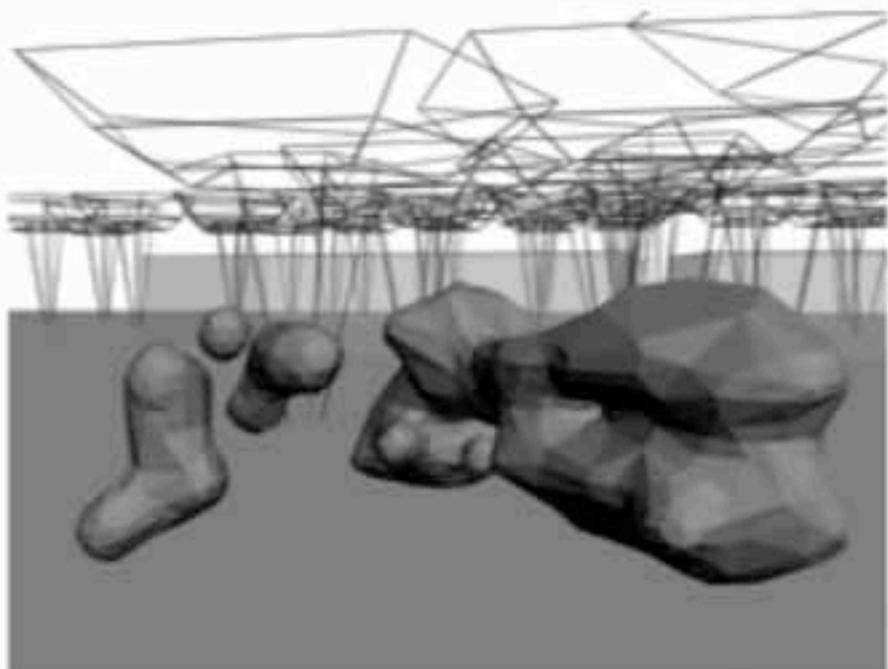


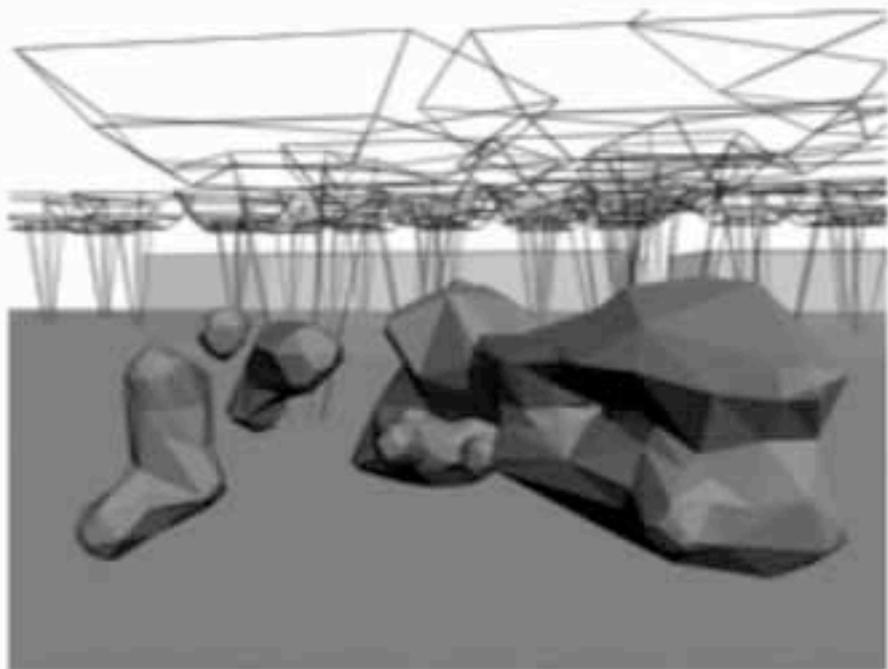
The image displays the RealFlow 3.1.14.0059 software interface. The main workspace is divided into four viewports: front, back, left, and right. Each viewport shows a 3D simulation of a complex, crystalline structure. The structure consists of a central, irregularly shaped mass with a textured, porous surface, surrounded by a dense network of thin, vertical and horizontal lines that form a grid-like framework. The simulation is set against a dark background with a grid. The front and back views show the structure from a perspective view, while the left and right views show it from a side-on perspective. The Properties panel on the right side of the interface is open, displaying various settings for the selected object. The panel is organized into sections: 'Material', 'Filter', 'Clipping', 'Options', and 'Display'. The 'Material' section includes 'Color' (set to white), 'Transparency' (set to 0.0), and 'Back face culling' (checked). The 'Filter' section includes 'Filter method' (set to 'No'), 'Resolution' (set to 0.1), 'Version' (set to 0.0), and 'Step' (set to 20). The 'Clipping' section includes 'Clipping box' (set to 'None'), 'Clipping objects' (set to 'None'), 'Front clipping' (set to 'Inside'), 'Camera clipping' (set to 'No'), and 'Backplane clipping' (set to 'No'). The 'Options' section includes 'Smooth' (set to 'Curvature'), 'Merge Threshold' (set to 1), 'Zr Threshold' (set to 25.0), 'Face Subdivision' (set to 'No'), and 'Sub Threshold' (set to 0.0). The 'Display' section includes 'Color' (set to white), 'Transparency' (set to 0.0), and 'Back face culling' (checked). The interface also features a top toolbar with various tools and a bottom status bar showing 'Simulation stopped'.

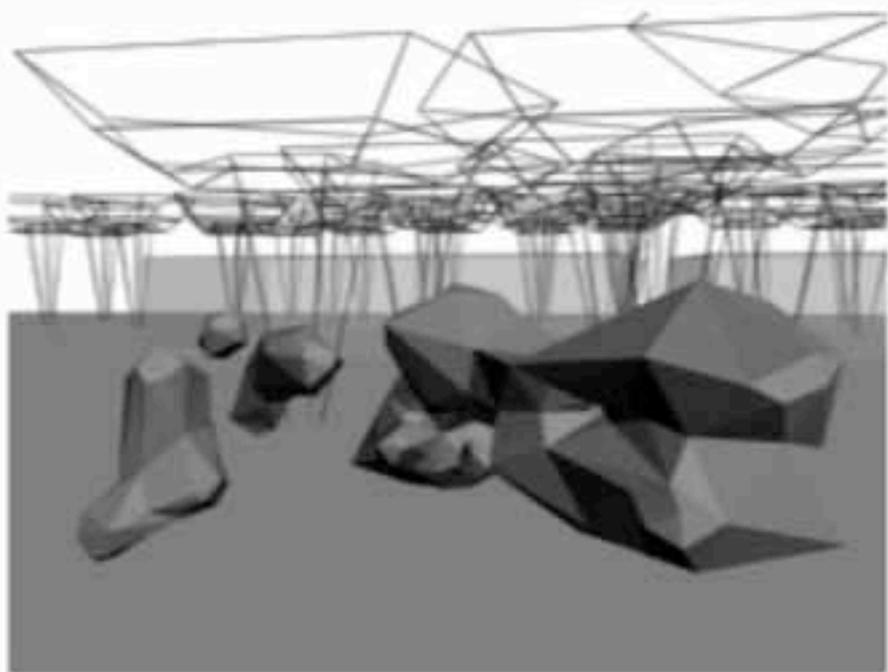


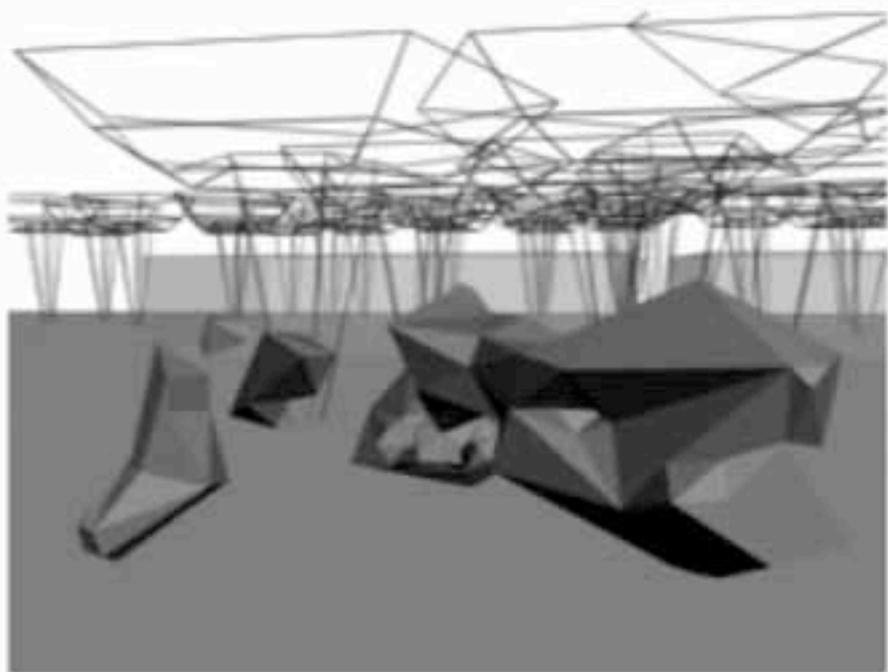


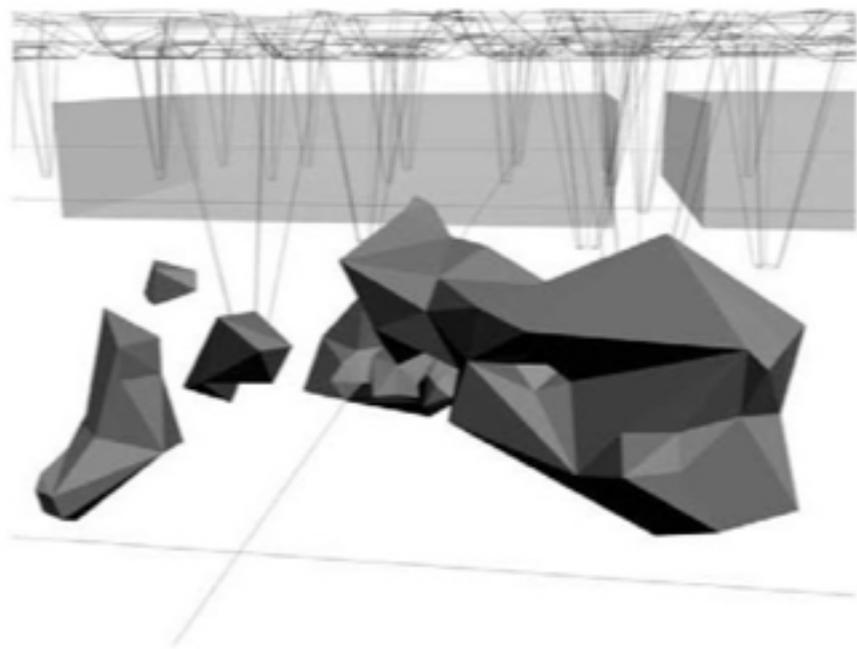


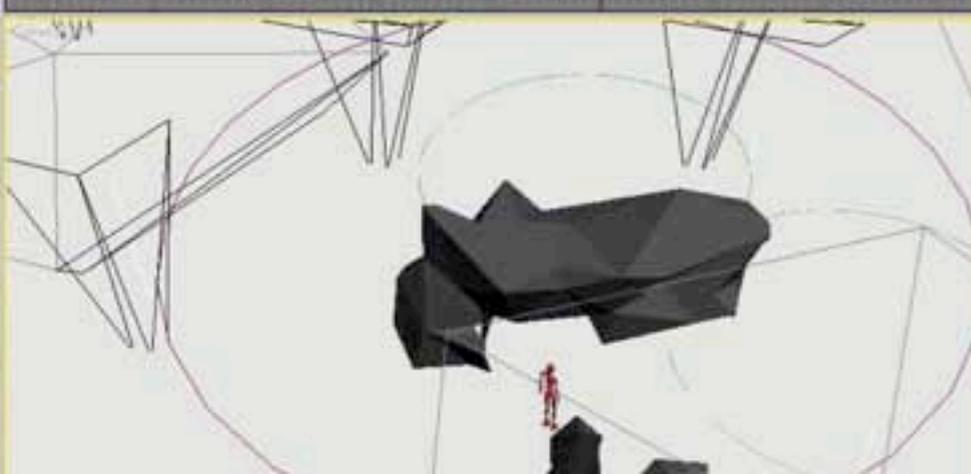
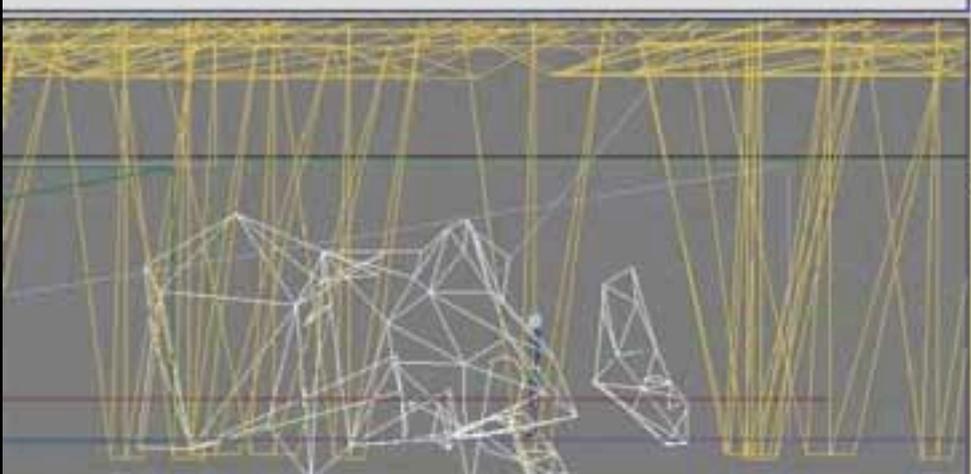
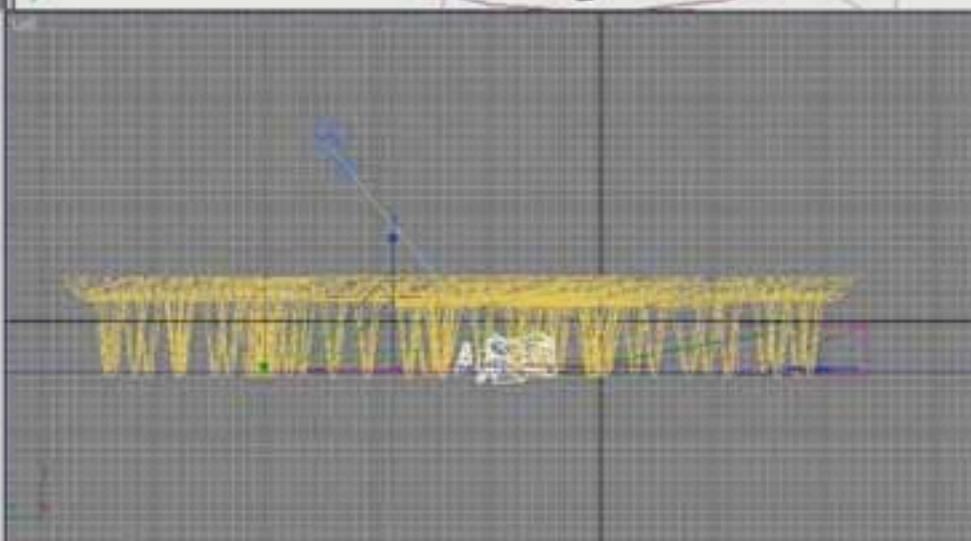
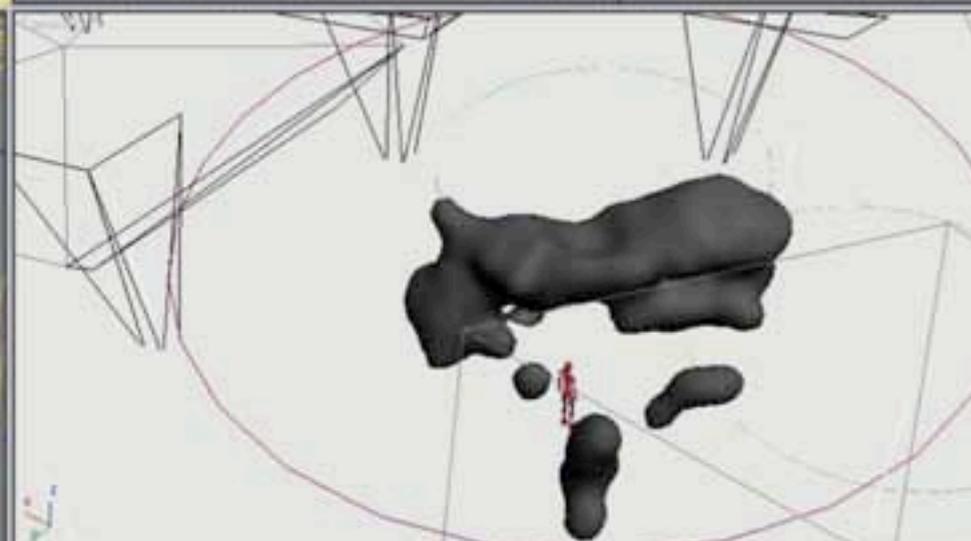
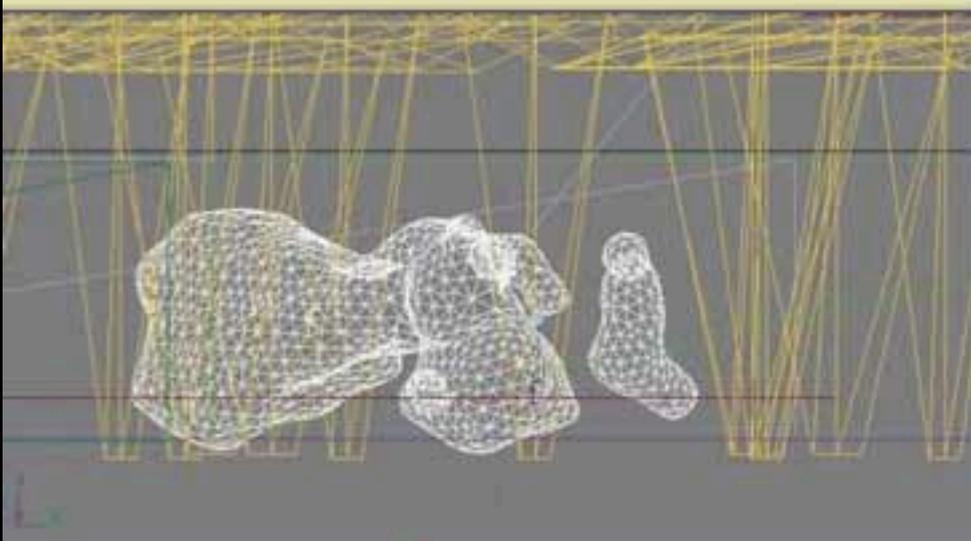


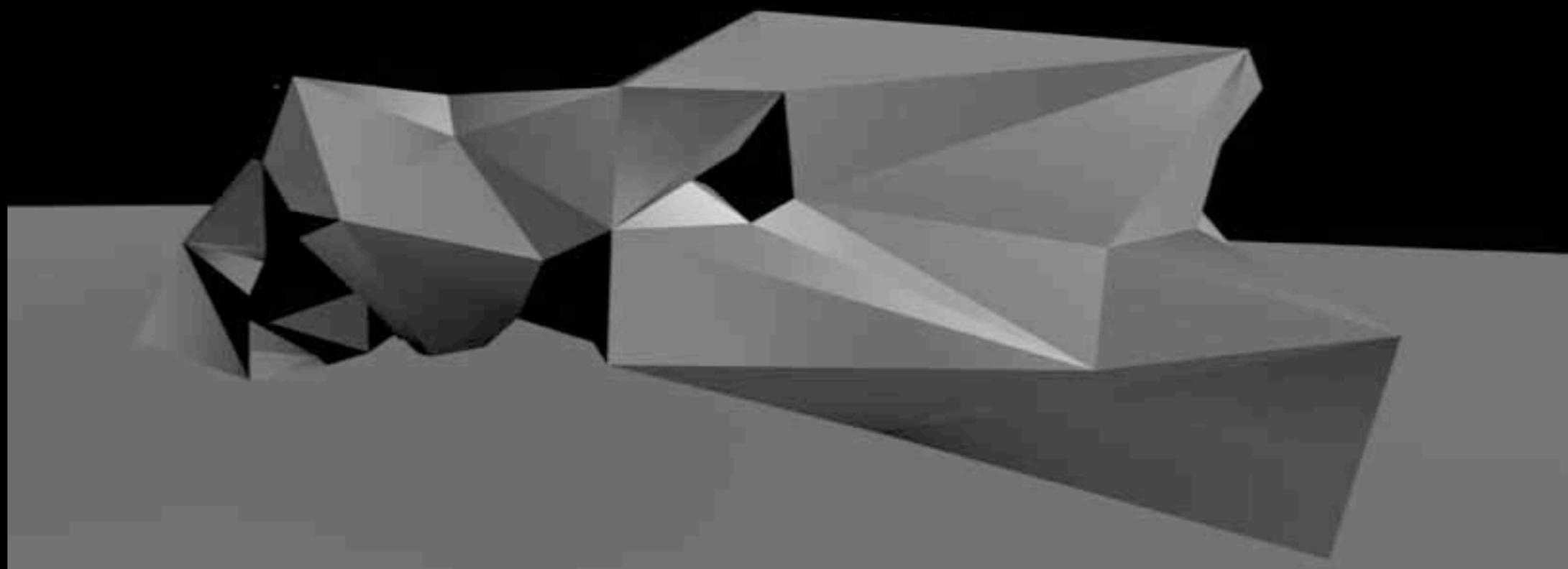


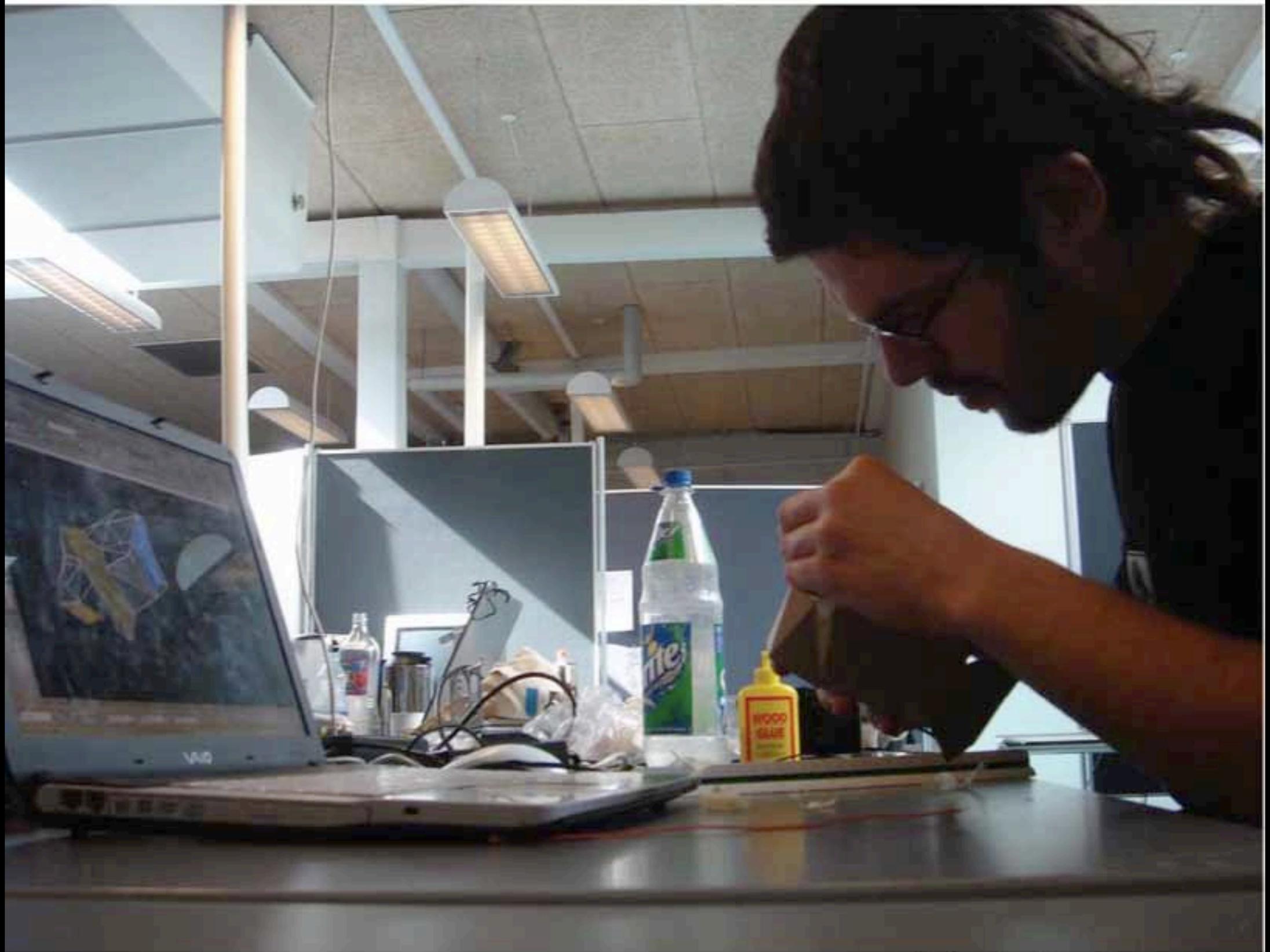




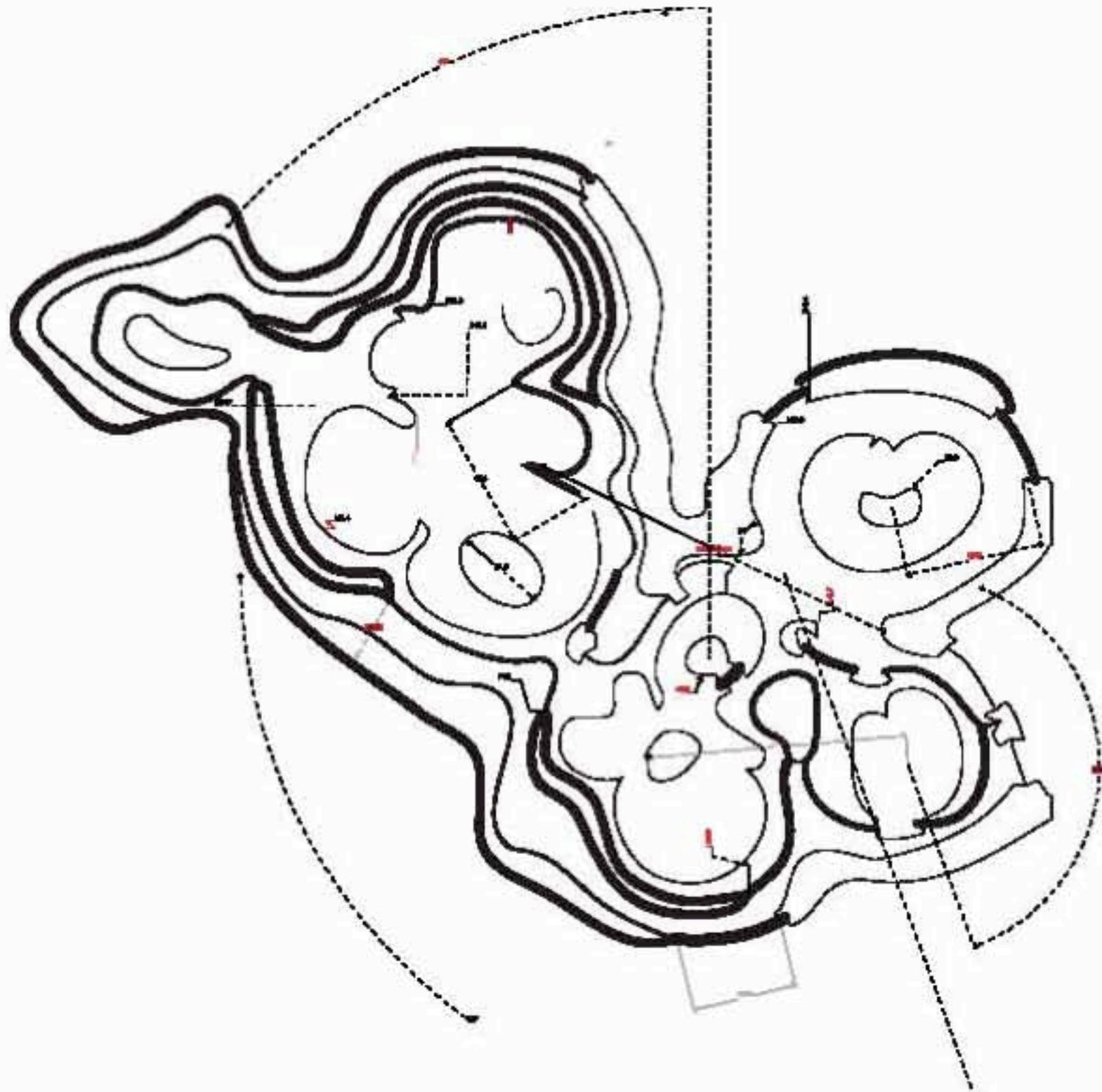








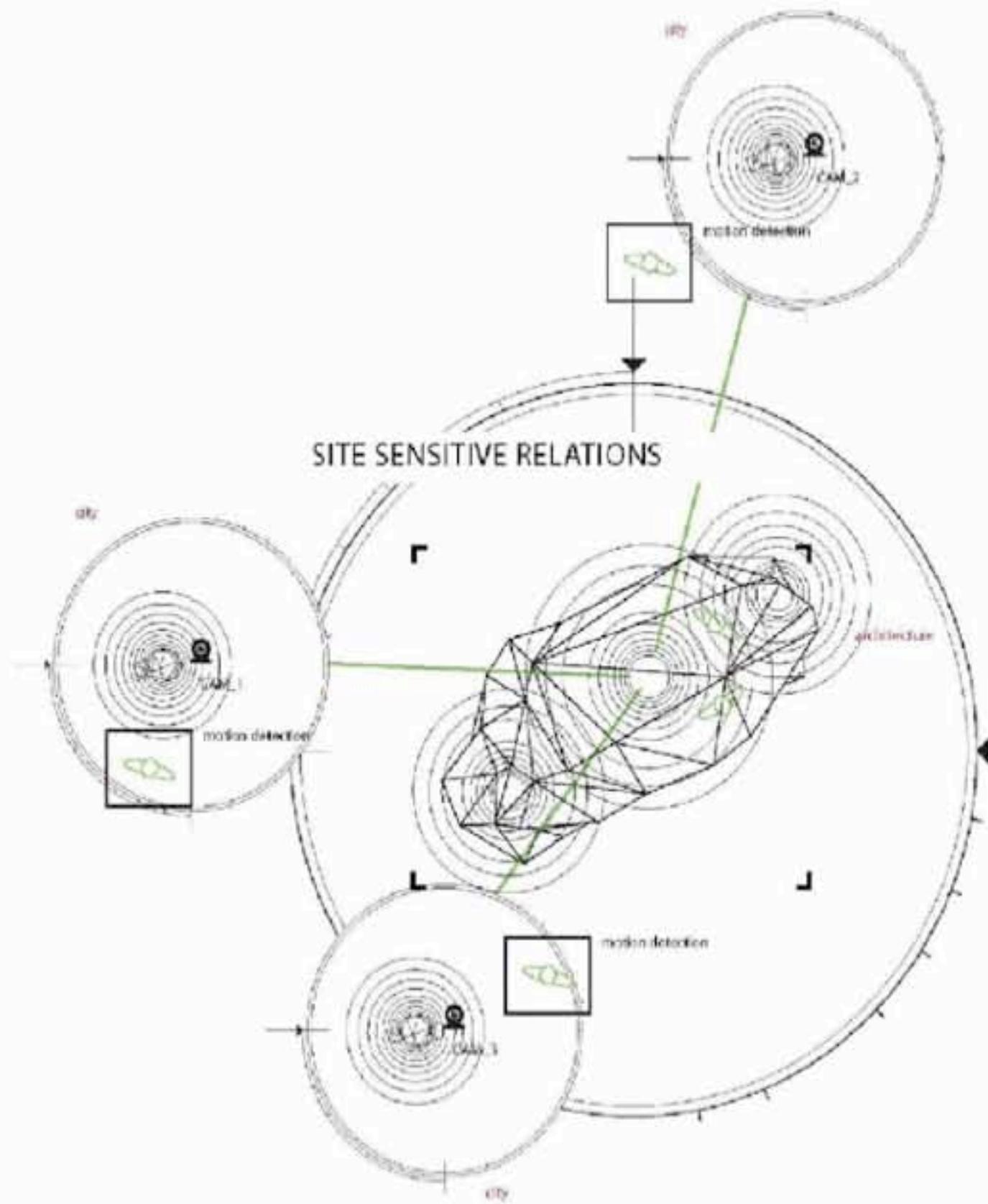
Understanding Geomeatry



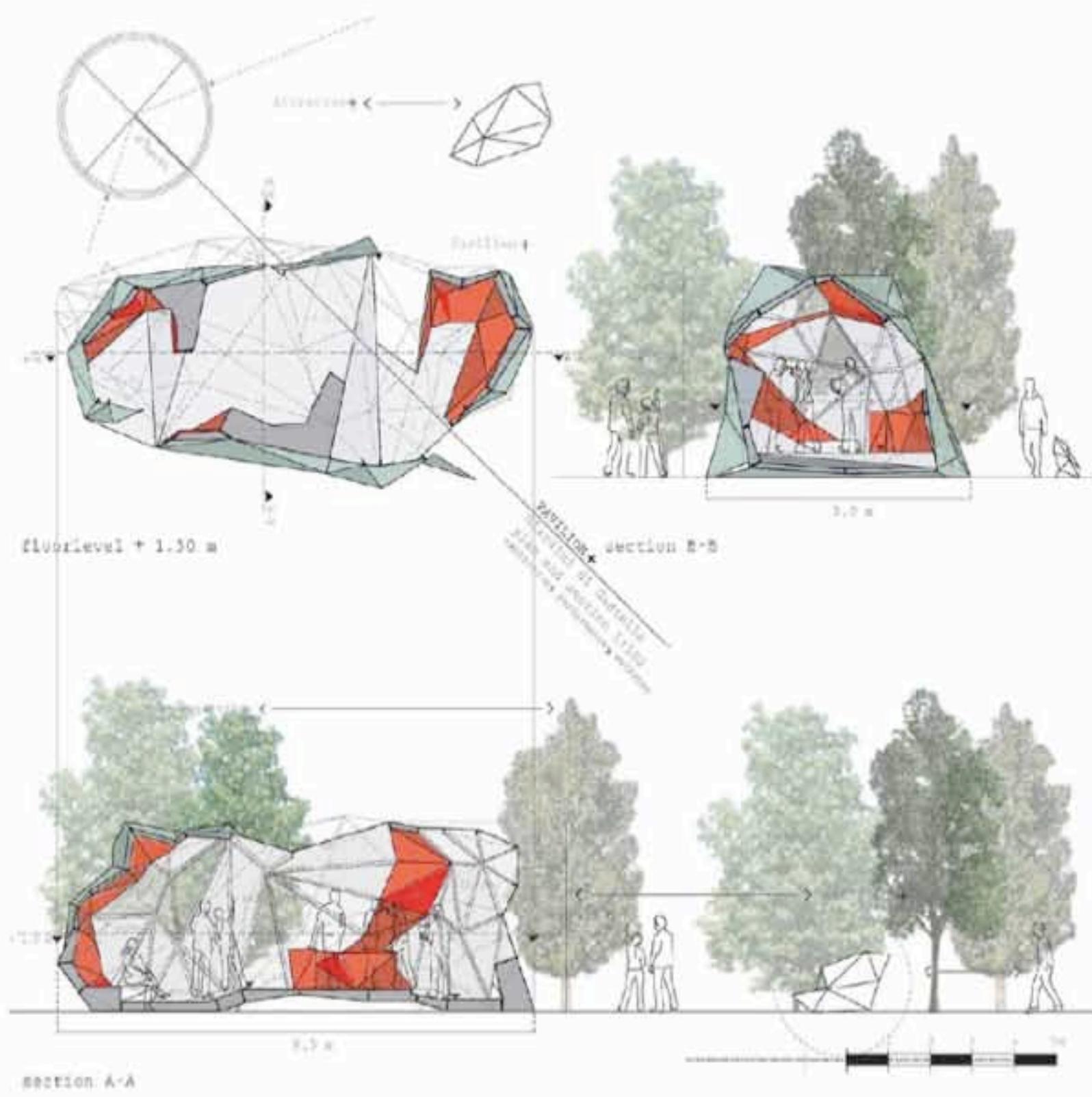
Nora: Sensing Place.

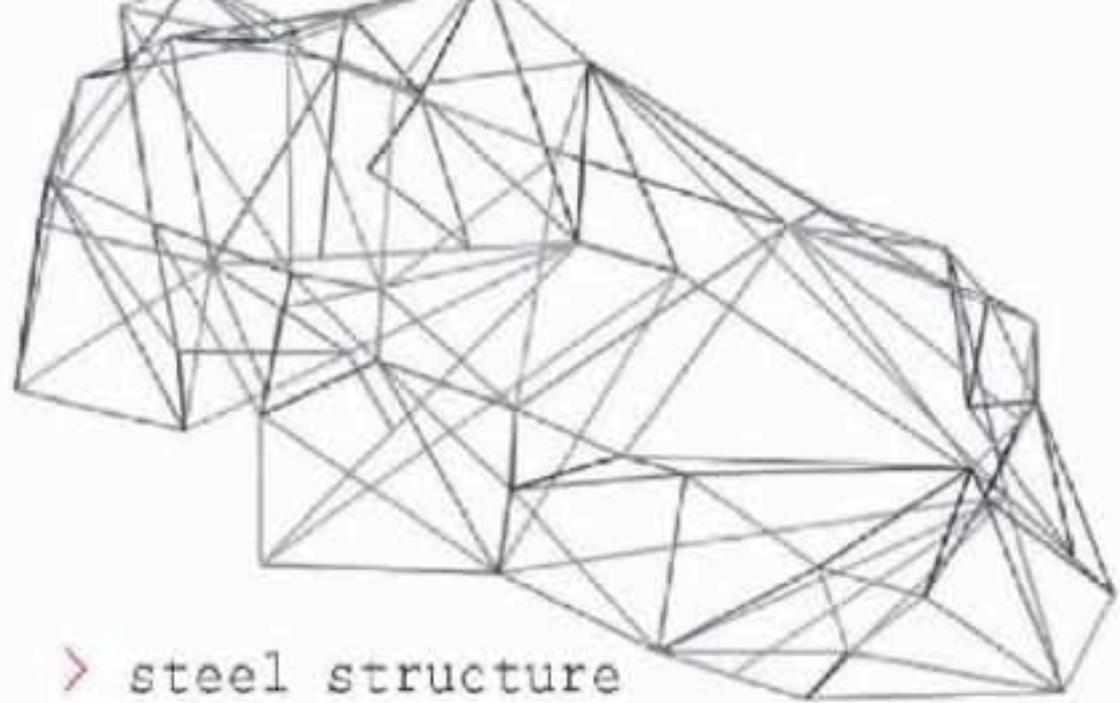
The organic lines indicate how sensor technology can extend the architectural activity into urban space, and the urban performances can project itself into the ambience of the building. Maybe sensor technology can help us open architecture into a dynamic score of performance, making spaces more enjoyable?











> steel structure



> skin



> furniture



> NoRA













# pachube

logged in as [username]

[about](#) [community](#)

Welcome to Pachube, a service that enables people to tag and share real time environmental data from objects, devices and spaces around the world. The key aim is to facilitate interaction between remote environments, both physical and virtual.

Logged in successfully



If you have a:

If you have a:

The key aim is to facilitate interaction between remote environments, both physical and virtual.

### output - use a feed

## japanese living room

<http://www.pachube.com/api/120.xml>

<http://www.pachube.com/api/120.csv>

Retrieved at: Mon Jun 30 15:29:42 GMT 2008, currently: live, Published by: aki

Living room information of Japanese country side family.

Website: <http://www.pachube.com/feeds/120>

Domain: *physical*

[Add to Favourites](#)

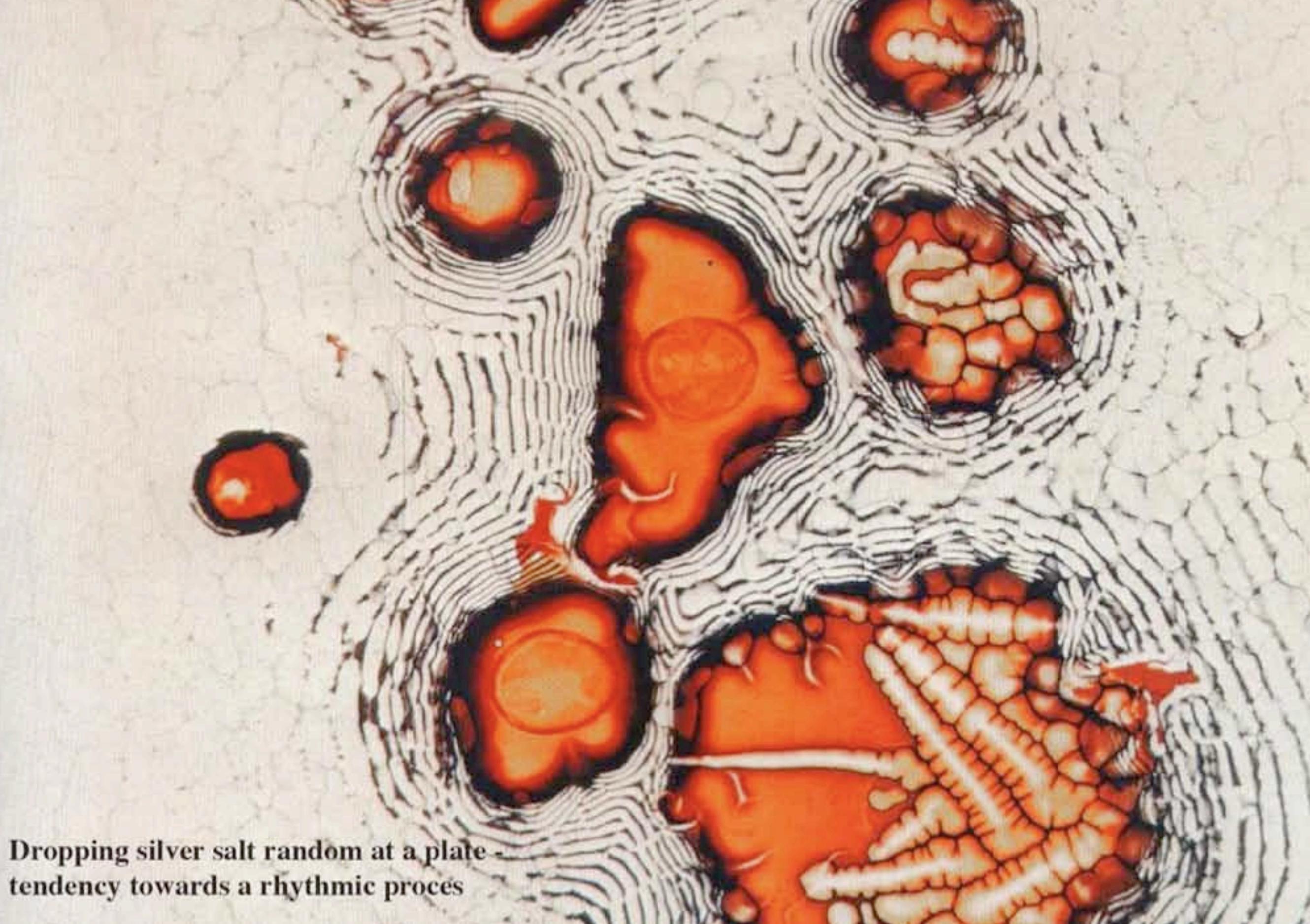


| ID | Tags  | Value | 24 hr History                        |
|----|---|-------|--------------------------------------|
| 0  | light sensor, light level, room light level, CDS, light on  | 4801  | <br><a href="#">Image or history</a> |
| 1  | room warmth, temperature sensor, celsius, temperature   | 1103  | <br><a href="#">Image or history</a> |
| 2  | TV, TV switch, remote control pulse counter, air conditioner remote, remote control, infrared pulse | -6182 | <br><a href="#">Image or history</a> |
| 3  | seconds, infrared time stamp, remote control time stamp   | 34    | <br><a href="#">Image or history</a> |

### input - add a feed

wind mainmeter Temperature in Celsius blockmeter blockbmeter tag0 blockmeter tag4 rainsensor  
 coldwater potentiometer hotwater valvestate controlvalve wind sensor c| mps windspeed  
 tag5 meterspersecond heatingflow flow interior airhumidity centigrade windvane vane  
 orientation is the first sensor value smaller than the second generated electricity Loudness -eflots darkness sensor  
 presence lightsensor air\_temperature air\_pressure water\_temperature salinity current\_speed percent  
 Pressure mB Visibility current\_to\_direction wind\_speed lightlevel wind\_from\_direction wind\_gust  
 humidity randomizer position\_x position\_y david super power i\_feel co2 how\_bright\_am\_i  
 Bastrop light motion\_sensor\_x motion\_sensor\_y channel1 motion\_sensor\_z Wind Direction Wind Speed  
 mph Relative Humidity channel2 channel3 consumption watts Austin temp rH overall kama  
 security threat trustworthiness happy sad magic river flow analogRead1 tag3 thermistor1  
 darknessCounter numberOfTimesSatUpon thermistor2 song tag2 secondsSinceStartup track randomCounter  
 tag1 muonDetection light sensor dampness seconds Energy Gas Water analogRead0 Stockname  
 Stockvalue rain range sensor number of persons Lat km per sec solar wind speed Lon solar wind density  
 protons per cm3 Magnitude bttotal bz Depth brightness LDR cloud\_density sat\_on time\_of\_day z  
 collision\_count seconds\_since\_sat\_on time\_of\_last\_chat z\_mem distance\_to\_nearest\_avatar sl\_object\_key tag6  
 time\_of\_last\_collision z\_rr monitored\_avatar sl\_object\_name time\_of\_last\_slit nearest\_avatar sl\_owner\_name  
 touch\_count number\_of\_nearby\_avatars sl\_region bluetooth wind\_strength object\_x atmospheric pressure slurp  
 wind\_x millibars object\_y nigelSensor Leaf Wetness sun\_x thermistor wind\_y sebSensor object\_z  
 sun\_y wind\_z region\_fps sun\_z x chat\_messages\_count region\_time\_dilation time\_now y light level  
 mySensor love music room light level CDS playing light on room warmth motion temperature sensor  
 TV activity TV switch remote control pulse counter air conditioner remote remote control infrared pulse infrared  
 time stamp remote control time stamp now blush current time time since sta redress embarrassment length  
 distance extension satellites in view fix quality ifsensor horizontal dilution of precision speed knots altitude  
 MICROSOFT CP Apple INC AMAZON.COM INC nT interplanetary mag field EBAY INC eastward\_current  
 northward\_current celsius river level accesses noise level Sound level sound number of  
 accesses counter noise personX personY occupied television channel tv station dial door open  
 carbon dioxide air flow mouseX mouseY sebSensor STARBUCKS CP 3M NIKE WALT DISNEY FEDEX  
 NASDAQ COMPOSITE latitude longitude random number random numbers Google General Electric CO

### temperature



Dropping silver salt random at a plate -  
tendency towards a rhythmic proces

