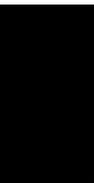


MA Design for Digital Media  
Digital Futures  
School of Art, Design and Media  
Critical Design  
University of Portsmouth

Markus Burkardt, UP671322

Research Portfolio for the Unit

Critical Design: Digital Futures



# Content

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**Section 03: References**

# Section 01: Digital Futures-Critical Design

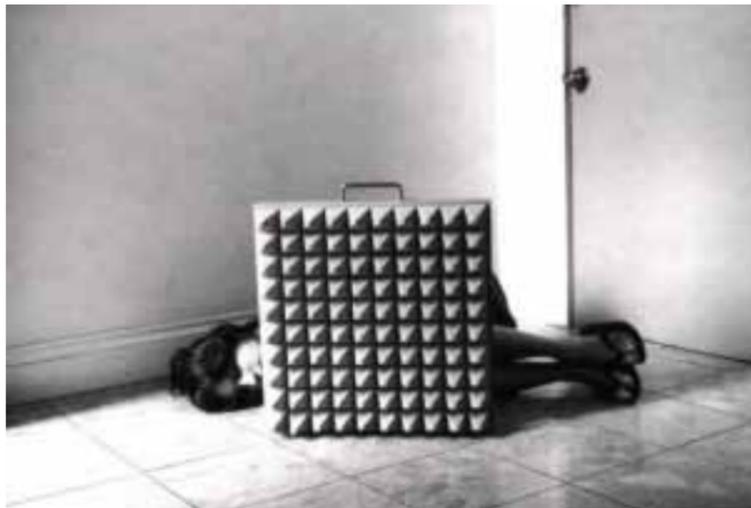


Image "Secret of Electronic Objects"  
(Dunne, Raby, 2001, Front Cover)

*"Critical Design, or design that asks carefully crafted questions and makes us think, is just as difficult and just as important as design that solves problems or finds answers. "*  
(Dunne, Raby, 2001, p:15)

## DIGITAL FUTURES: CRITICAL DESIGN

This document demonstrates the work of the Unit Digital Futures: Critical Design in the MA Program Design for Digital Media at the University of Portsmouth.

We created three prototypes along a journey from individual perception via the interconnectedness of things and biomimicry research to the meaning of semiotics, metaphors and affordances.

## CRITICAL DESIGN

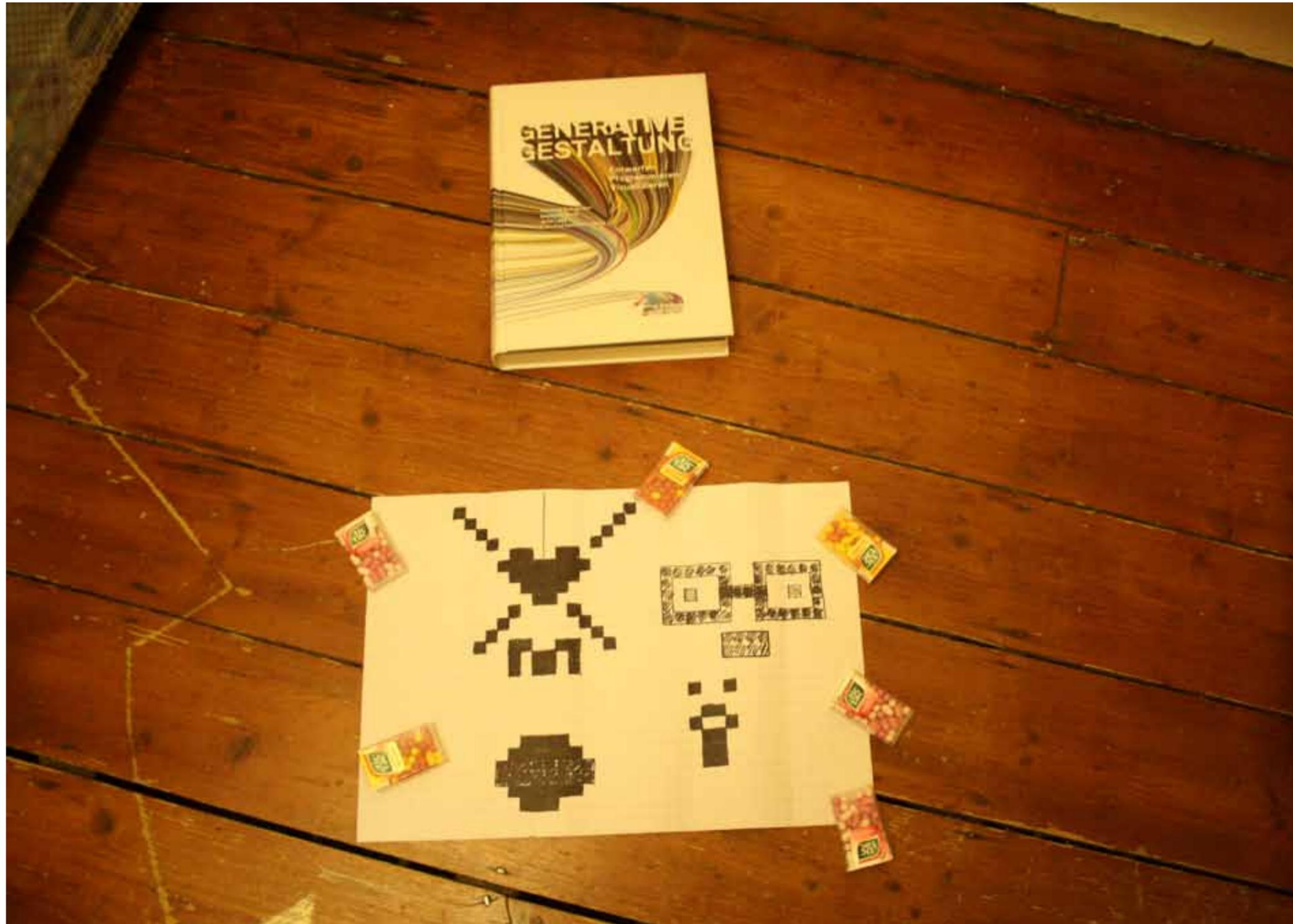
The idea of critical design is to create things according to real human needs, free from industrial market pressure. It is design which shall make us think, almost like art, but connected to our everyday life. "Its purpose is to stimulate discussions and debate amongst designers, industry and the public about the aesthetic qual-

ity of our electronically mediated existence." (Dunne, Raby, 2001, p.58) Furthermore Dunne and Raby elaborate in the same chapter that in other fields, like architecture, this level of "intellectual maturity" has already been reached and is essential for the discipline of design, in order to not become an "agent of capitalism" which simply supports artificial needs created by the industry. According to Dunne and Raby the idea is to challenge conventional values instead of simply implementing them and limiting the designers' role to think about user-friendliness or corporate identities.

They propose stepping up against global corporations "as they become more powerful than states" (Dunne, Raby, 2001, p.58) and invite to fight, reflect and rethink.

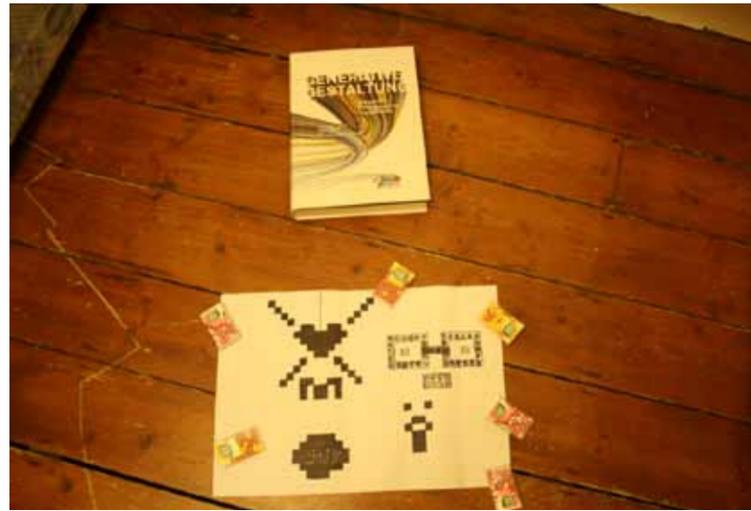
# Section 02: Projects

## Sensory Interaction



# Section 02: Projects

## Sensory Interaction



Picture taken by the author

*"Synesthesia: A condition in which a person quite literally tastes a shape or sees a colour in a sound. This is not just a way of describing experiences as a poet might use metaphors. Synaesthetes actually experience the sensations."*

(Ramachandran, S., 2006, )

### THE GRID SCANNER

Based on the theory of Synaesthesia, we analyzed how complete multisensory experiences can be synthesized in multimodal interfaces. As “multisensory interactive technologies necessarily break down the human experience into separate channels (input and output)”, it is the task of the designer to put them together in a way which enables the user to experience them as a whole. We introduced the concept of distortion to approach this topic: How can a multisensory experience be mediated to people who perceive things differently? By using a 25 x 25 squared paper as an analogue pixel sensor and a self-developed processing-sketch (as mash-up based on code from the book Generative Design) we visualize the idea

of a multi-sensory recording and translation technique which analyzes images as data storages for multisensory experiences.

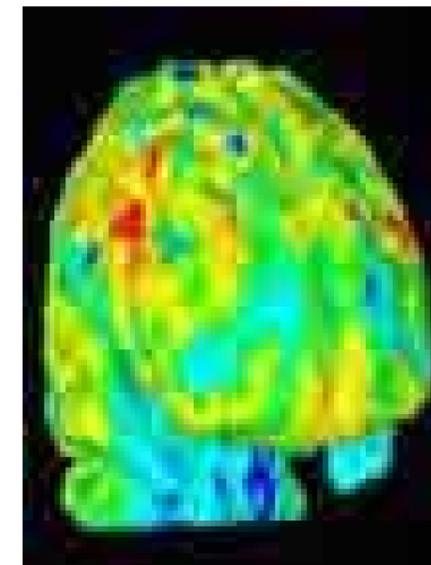
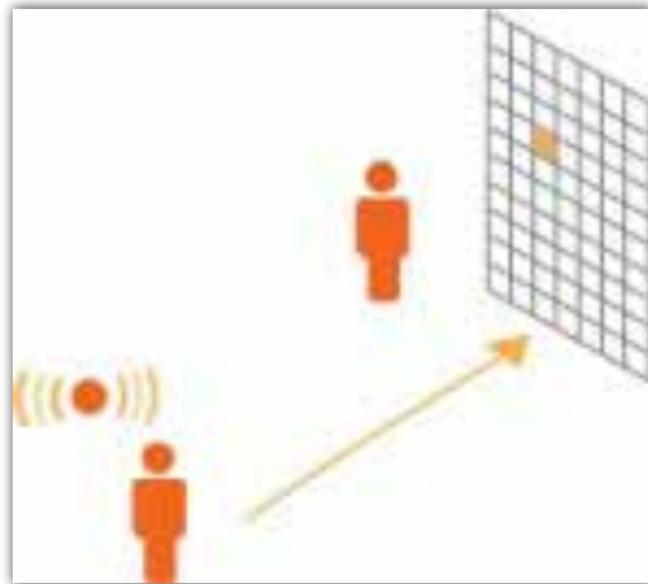


Image:  
<http://www.bbc.co.uk/radio4/reith2003/lecture4.shtml>

# Section 02: Projects

## Sensory Interaction

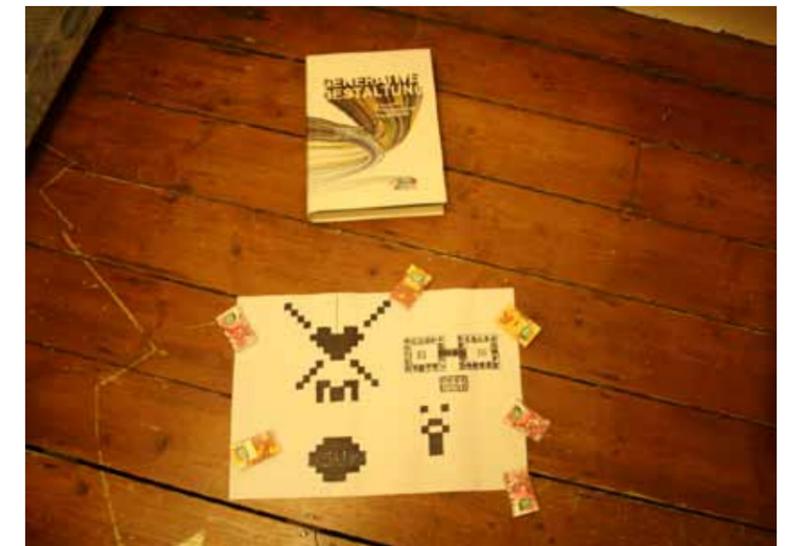


### APPROACH

Our approach consisted of capturing experiences with a creative recording techniques for locations which had an affective impact to us.

Multi sensory experiences encoded in shadings of a few pixels to enrich the mediation of the visual experience.

Capturing experiences with a 25x25 squared grid forced us to think differently, to analyze the situation mindfully and to become aware of our own sensory interactions, how our senses act together and shape a holistic experience. It put us in the state of a mindful observation of "What shapes an experience" .



We encode rather personal perceptions than images and maybe overemphasized certain impressions to make them clear. By making such hierarchical decisions we touched aspects of information design.

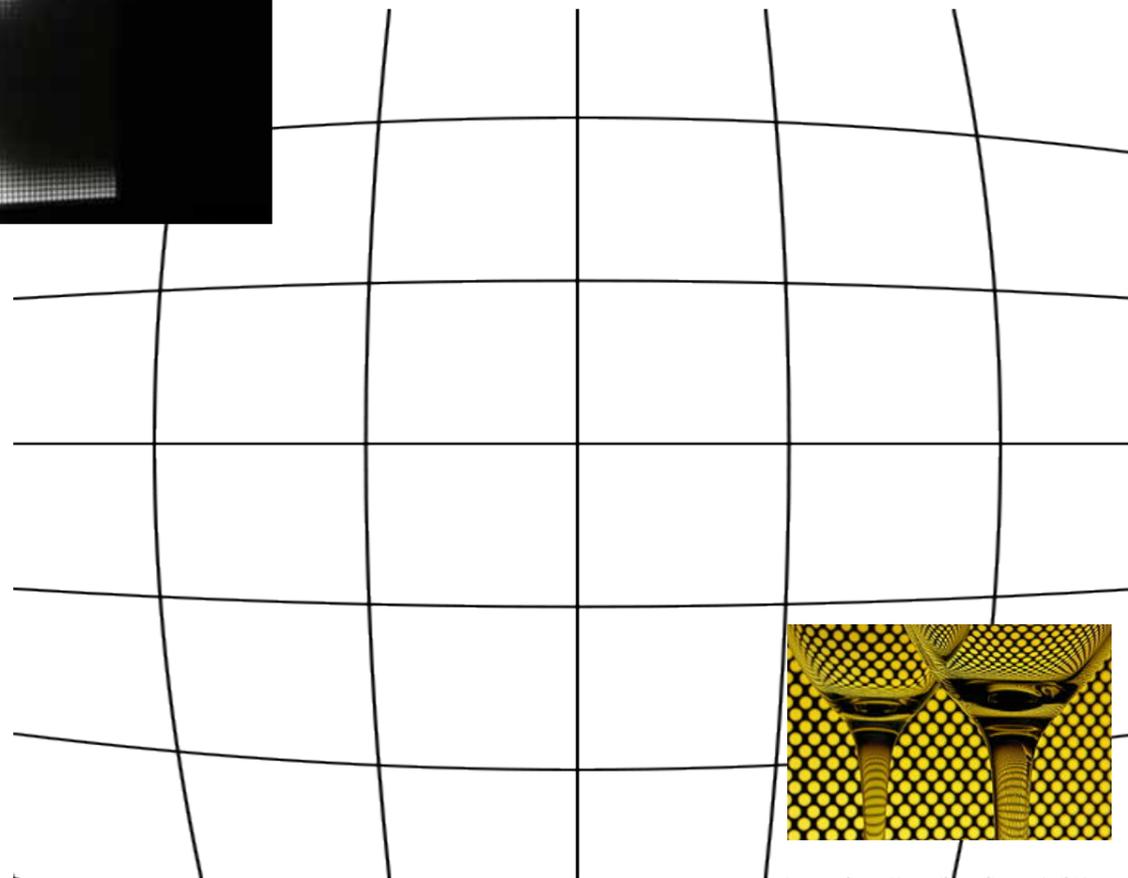
Which information is the important one?

# Section 02: Projects

## Sensory Interaction



Picture taken by the author in the V&A Museum in London



Visualisation of a distortion

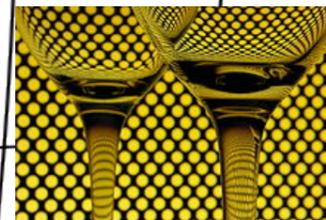


Image: <http://en.wikipedia.org/wiki/File:Uniformity.jpg>

We can summarize this approach as such:

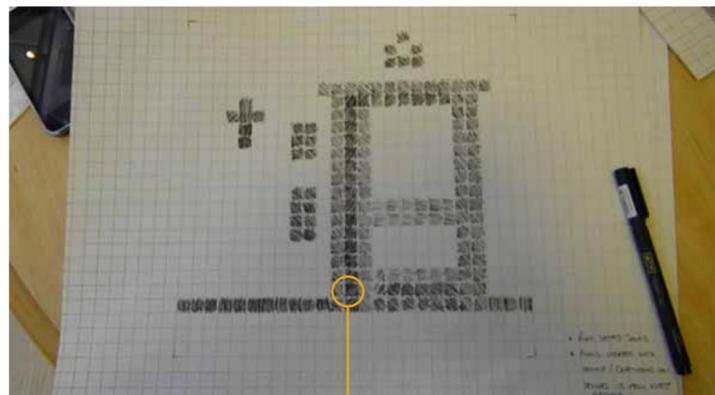
Communicating experiences is part of digital media and multimodal interfaces and we were wondering if it wouldn't be good if...

...we had a mindful awareness of what a sensory experience actually exists?

...we understood of how our senses work together and shape an experience?

...we could mediate such an experience and communicate it to others. Even to those who have a distorted perception or being disabled?

We decided to capture experiences with a low res-25x25 squared grid. Can an experience be turned into code and be mediated this way?  
Can one capture the atmosphere of a scene (see pictures) with such a low-res pixel grid?  
Light, Sound, Impression? How can this multimodal experience be translated in code and be mediated?



Focus on perception which shaped our impression.  
The shading of the pixels encode our experience of sound and light in the scene.



# Section 02: Projects

## Sensory Interaction



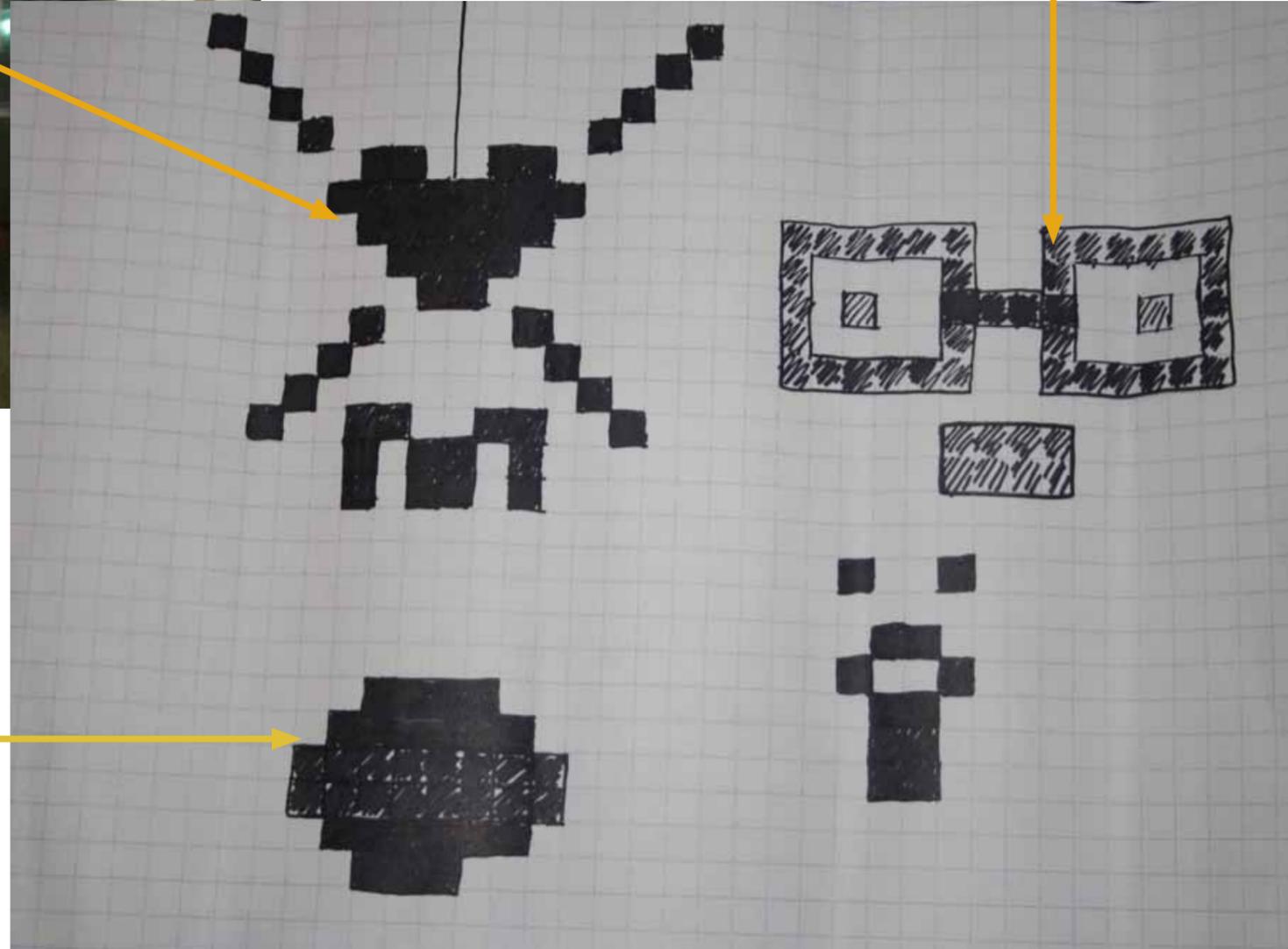
The lamp which I liked a lot, encoded with positive emotions (dark color).



The man who freaked me out (encoded with bad emotions/stripes)

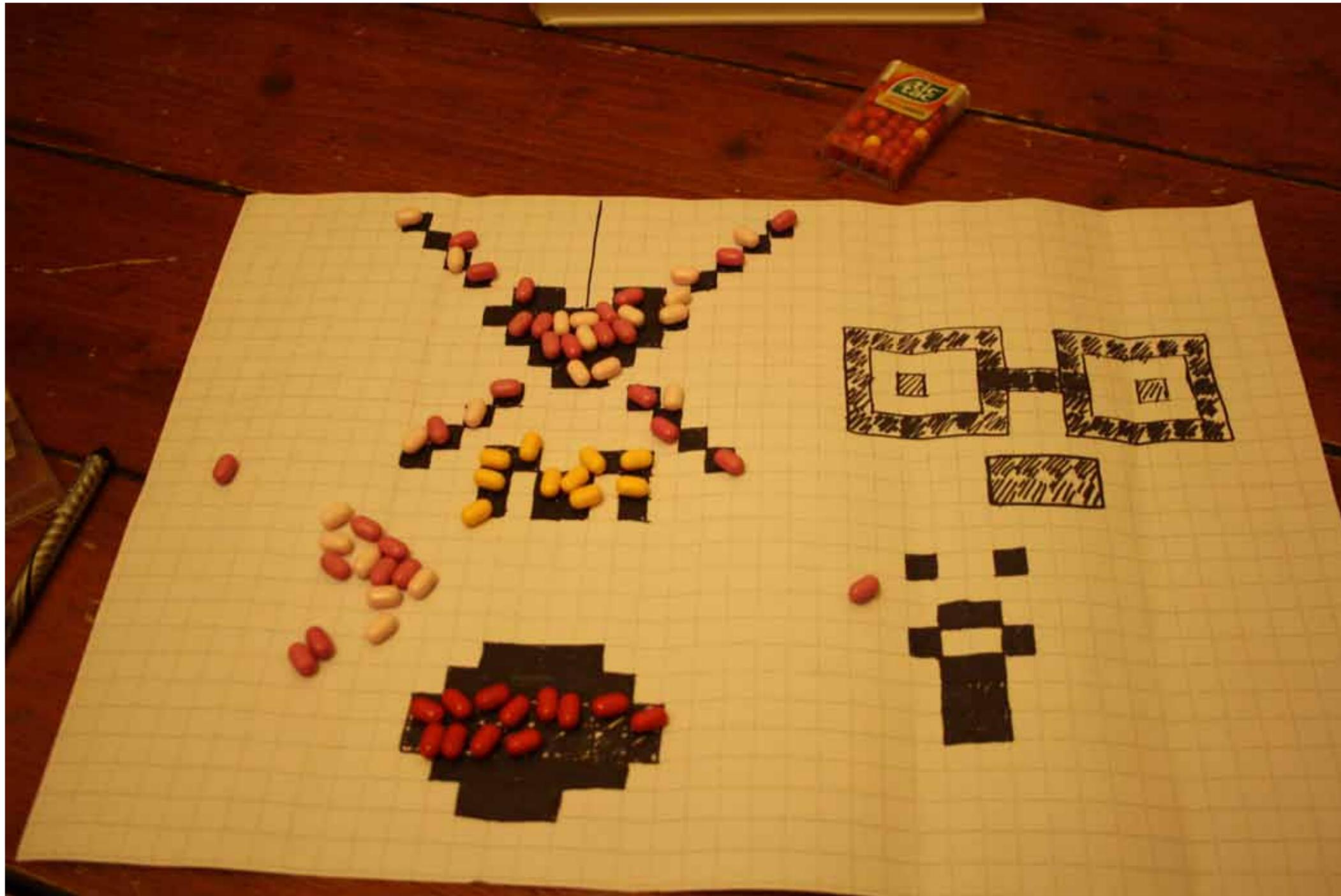


The food (burger is not in the photograph, encoded with positive emotions /dark color)



# Section 02: Projects

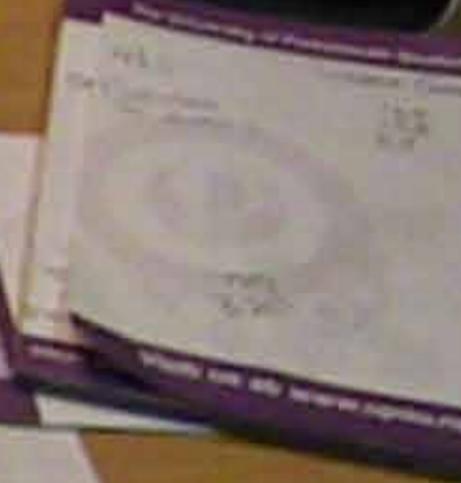
## Sensory Interaction



How can we decode our experience? Shall we turn it into an olfactory display which allows to be perceived by blind people?





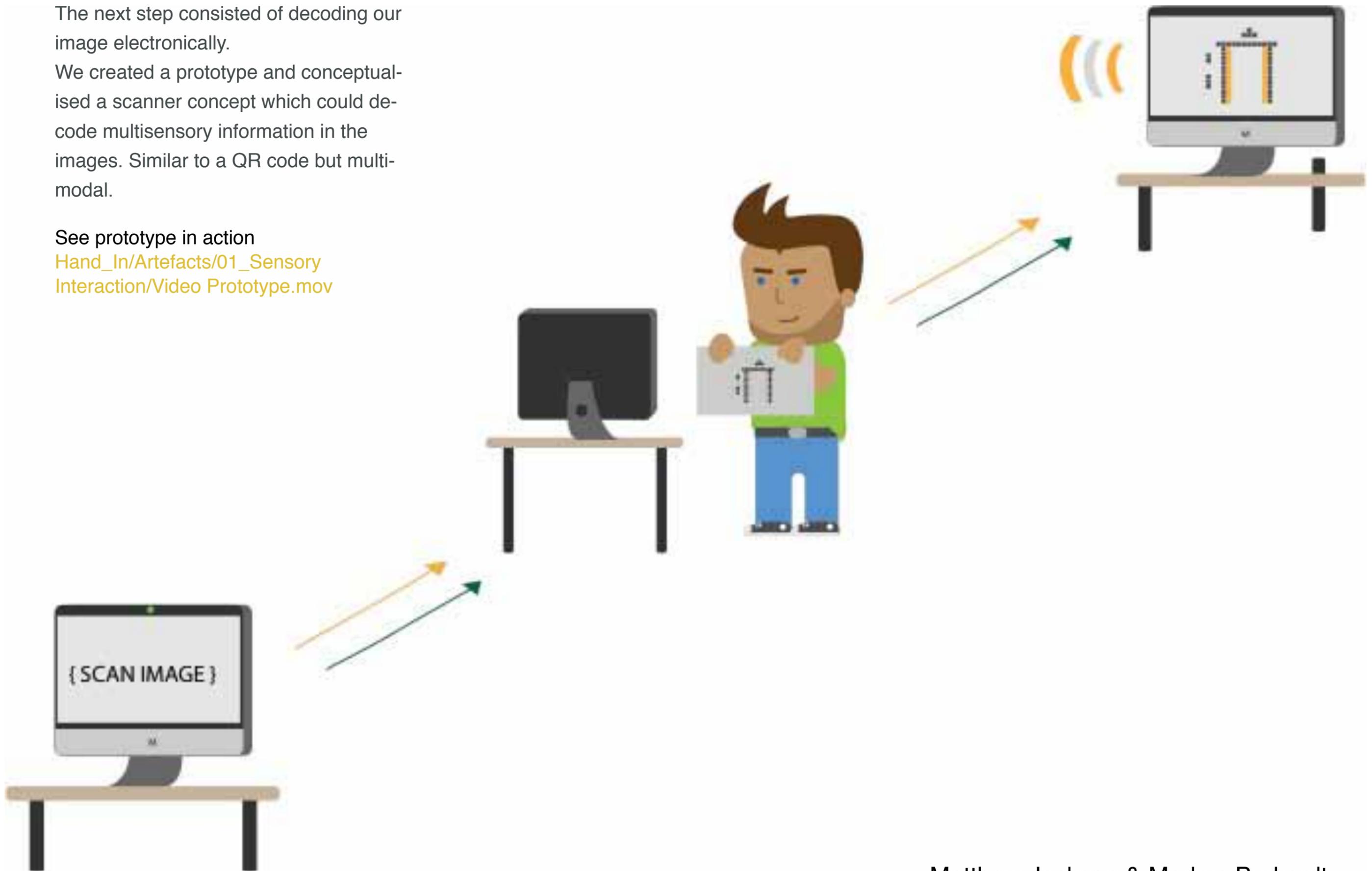


The next step consisted of decoding our image electronically.

We created a prototype and conceptualised a scanner concept which could decode multisensory information in the images. Similar to a QR code but multi-modal.

See prototype in action

[Hand\\_In/Artefacts/01\\_Sensory Interaction/Video Prototype.mov](#)

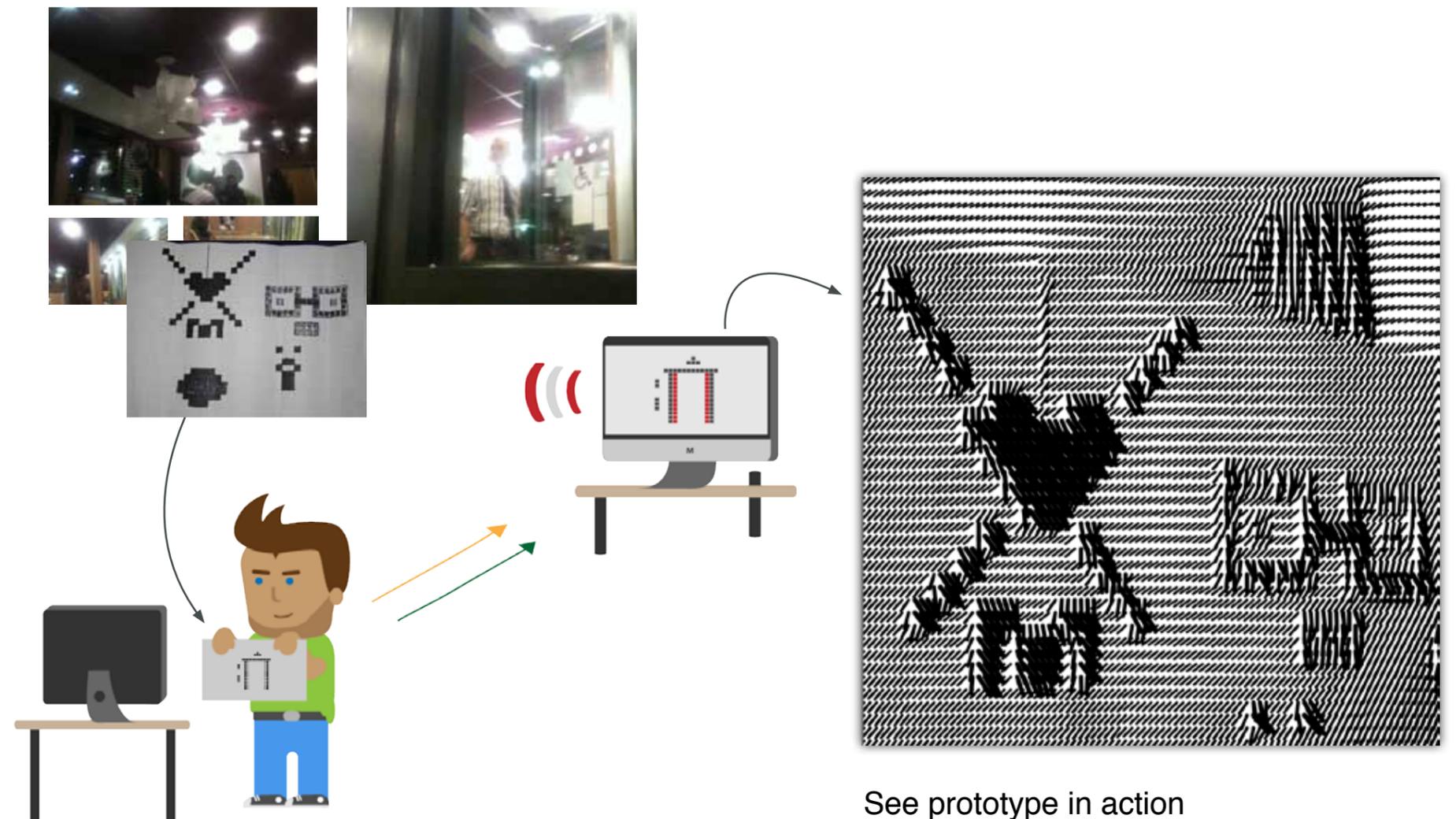


# Section 02: Projects

## Sensory Interaction

### THE DIGITAL MEDIATION

In the next step we were wondering what would happen if we added distortion also to the decoding process? A mechanical streetorgan that has a defect? Once you understand the defect, can you encode differently to mediate the message?



See prototype in action  
[Hand\\_In/Artefacts/01\\_Sensory Interaction/Video Prototype.mov](#)

Please note: in order to use the real prototype you need to change the folder links in the code

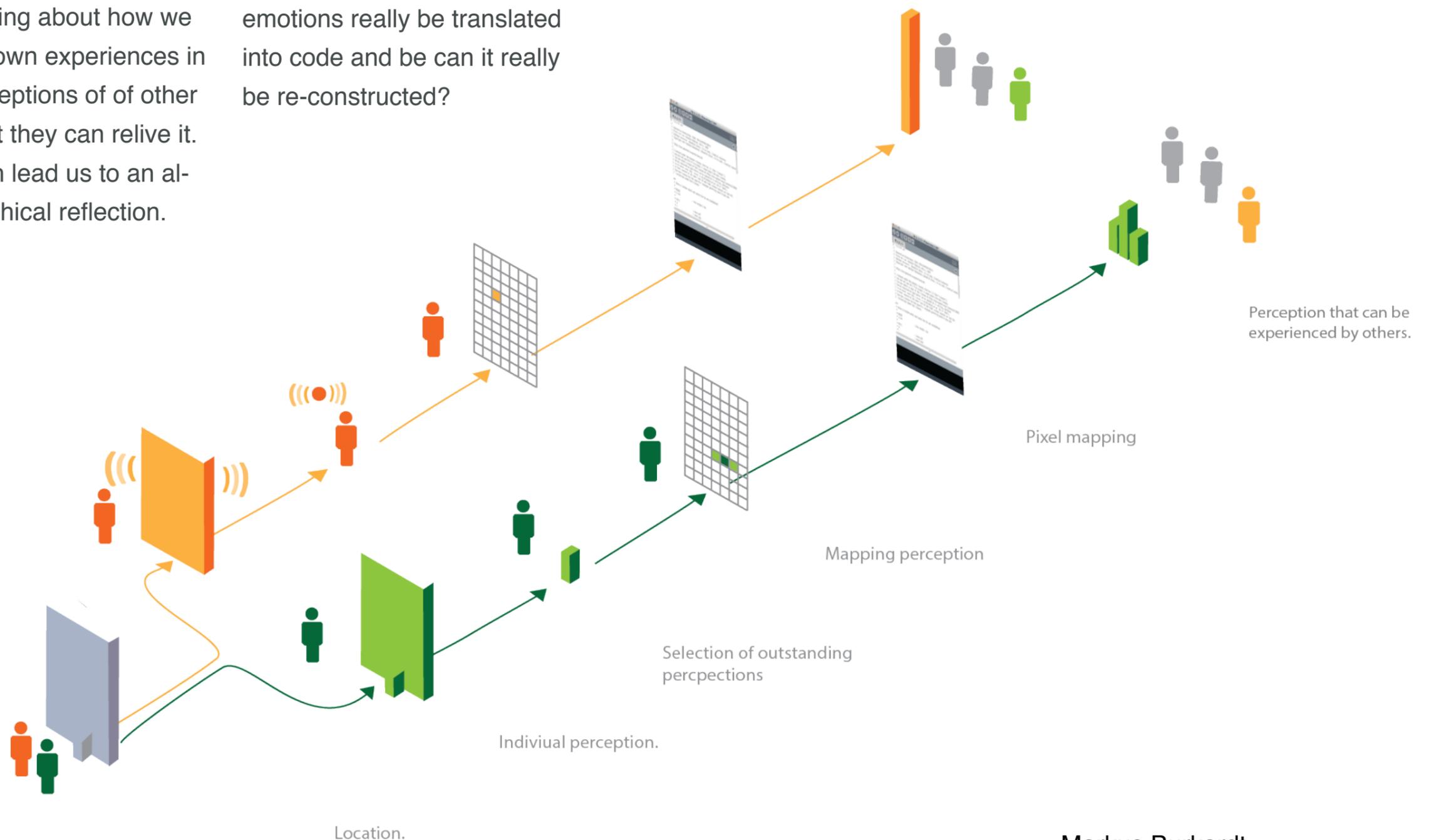
# Section 02: Projects

## Sensory Interaction

### REFLECTIONS

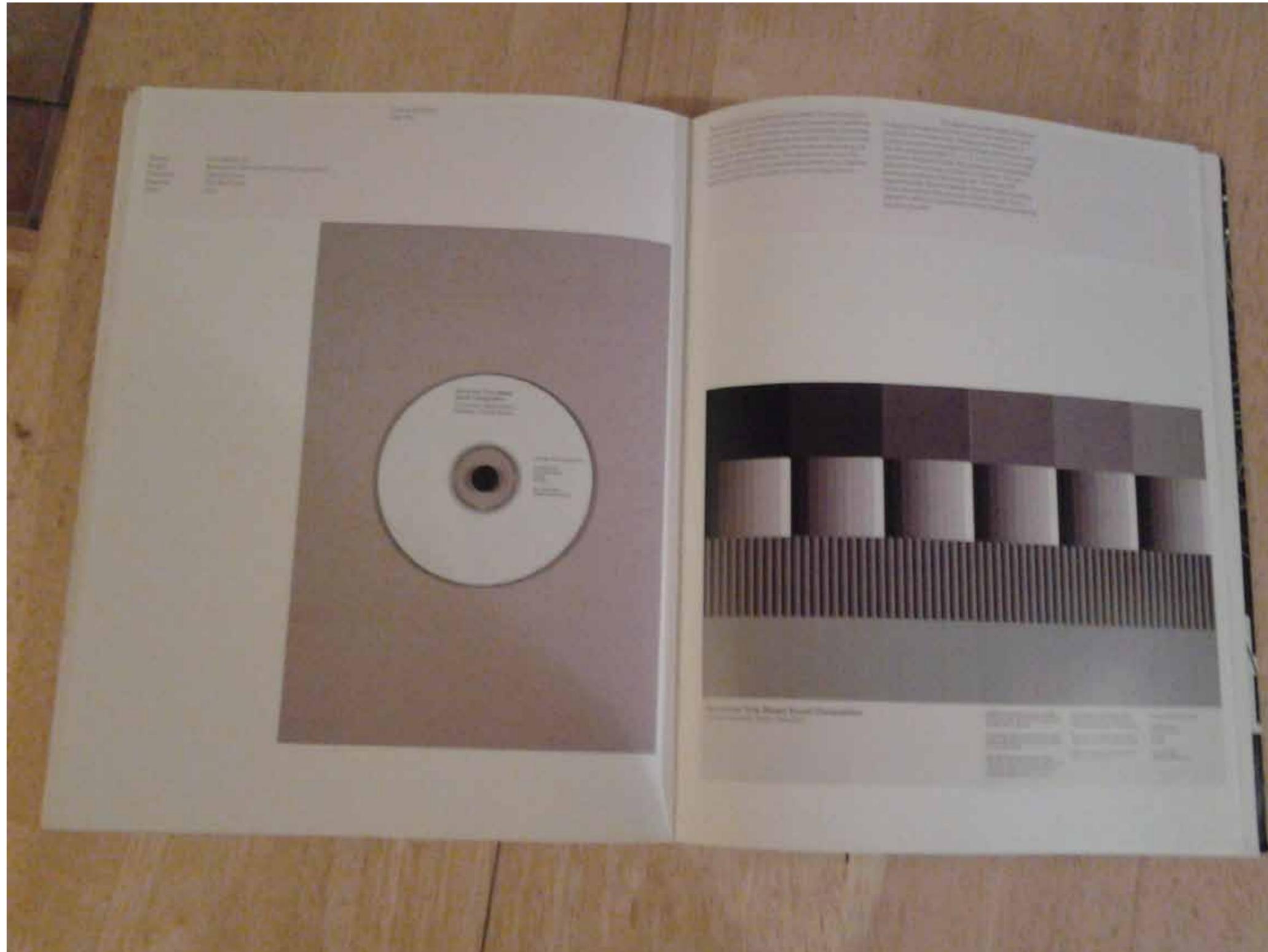
By understanding distortions we started reflecting about how we can map our own experiences in distorted perceptions of other people so that they can relive it. This approach lead us to an almost philosophical reflection.

Can an experiences including emotions really be translated into code and be can it really be re-constructed?



# Section 02: Projects

## Sensory Interaction



### RESEARCH

Visualising and encoding music in a graphic. Quite an old example but very aesthetic and interesting.

# Section 02: Projects

## Sensory Interaction

### RESEARCH

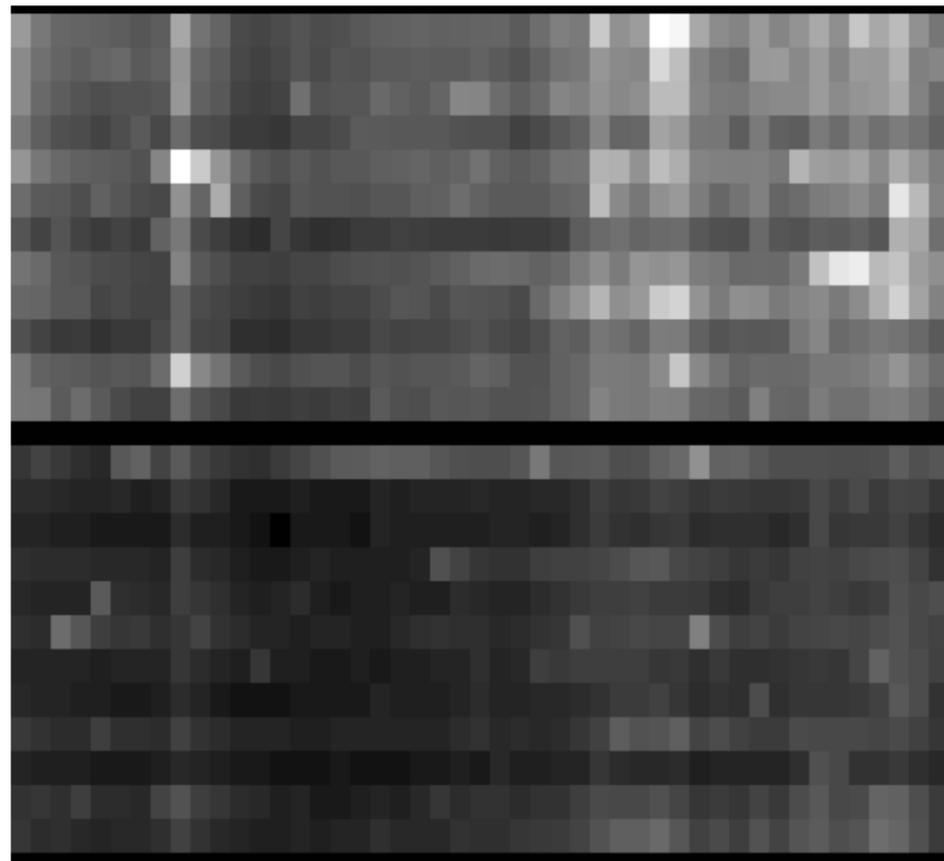


Image: <http://well-formed-data.net>

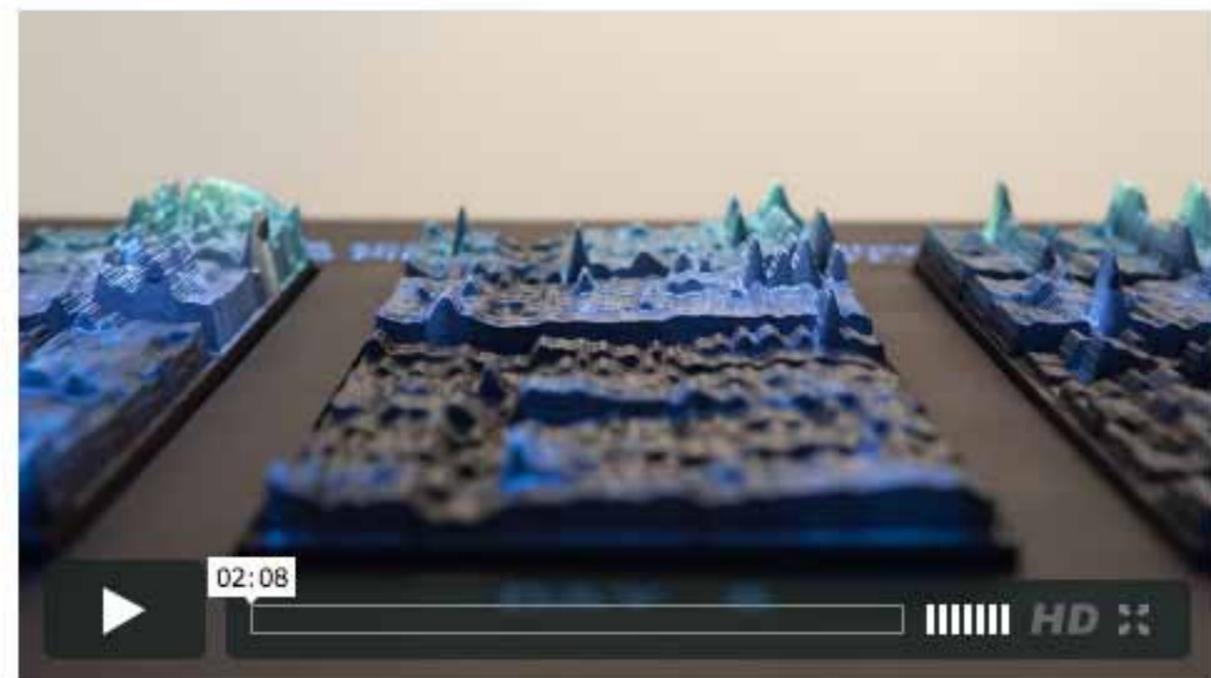
Emotions and Information saved in pixels which can be printed as tangible 3D models.

"(...) In the emoto project, we use 2D matrices to store how many tweets (brightness) fall in which sentiment category (vertical) over time (horizontal)..

(...)

This is not exciting per se, but the trick here is that we use this as an elevation map for the 3D models we produce for the data sculpture. So the images are only a "messenger" between two processing steps — data analysis and the 3D modelling tool. Yet, in this form, it is much more easy to detect gaps, and get a glimpse of the data structure immediately. Also, think about it this way — if your database is an image, you can apply image transformation techniques to modify your data! (Think enhance contrast, minimum/maximum, slicing, blurring,...) What can be very difficult numeric operations if only working with numbers, can be very simple operations in Photoshop, and, again, the result is immediately inspectable. The catch is, when working with grey scale, you have only 256 steps available — but in our case, that was enough." (Stefaner, well-formed-data).

(Stefaner, M. 2012. )



<http://vimeo.com/49679699#at=5>

# Section 02: Projects

## Sensory Interaction



Image from the book Visual Storytelling, p.:110

### RESEARCH

When looking at decoding techniques this work caught my attention. In the book Visual Storytelling the author Klanten refers to the work <http://www.pattern-matters.com/>.(Klanten, 2012, p:110)

A collection of alternative, analogue displays. This collection is curated by Liam Siang Ching and was a work handed in at the Lasalle College of the Arts.

# Section 02: Projects

## Sensory Interaction

### STEPS IN THE DEVELOPMENT PROCESS

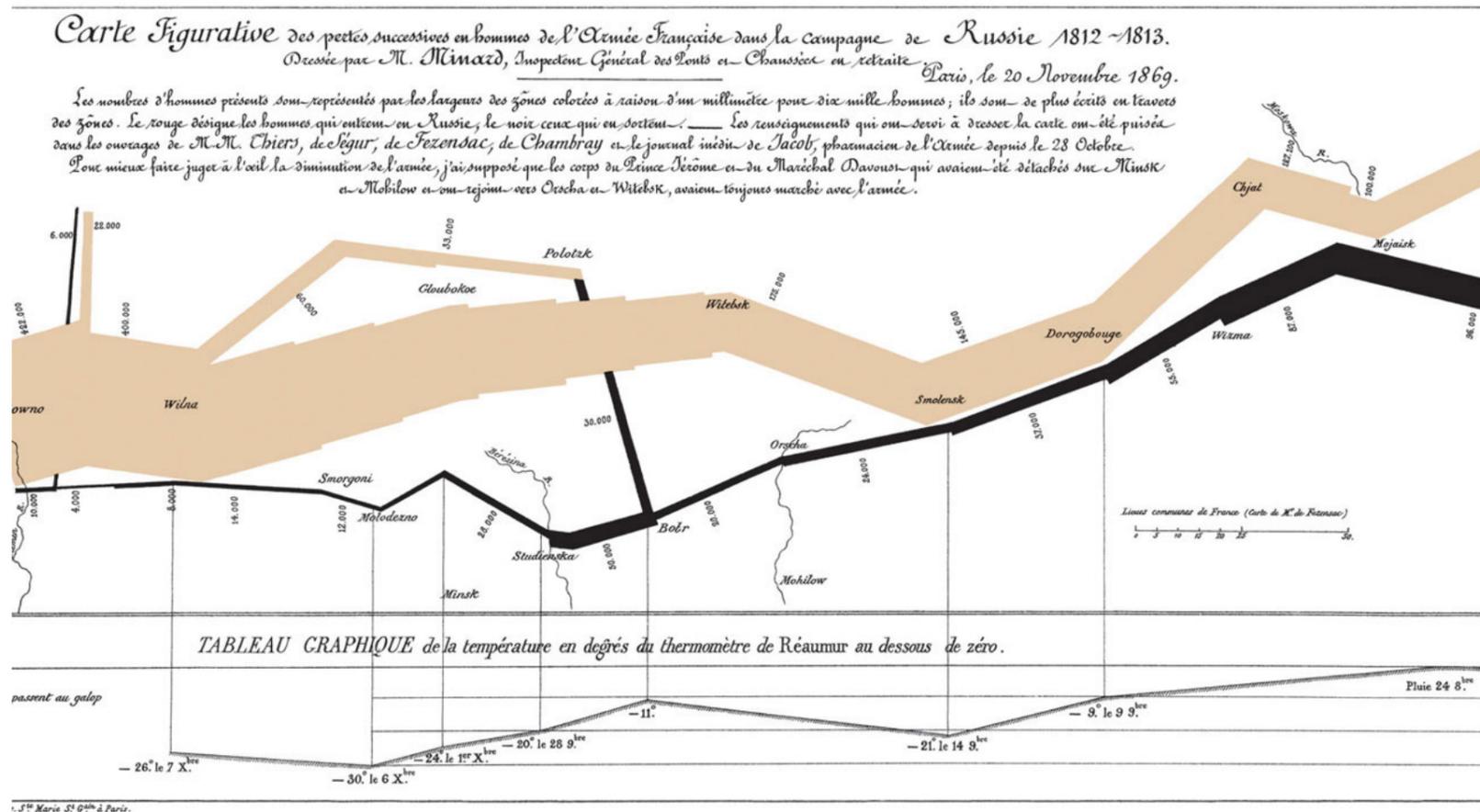
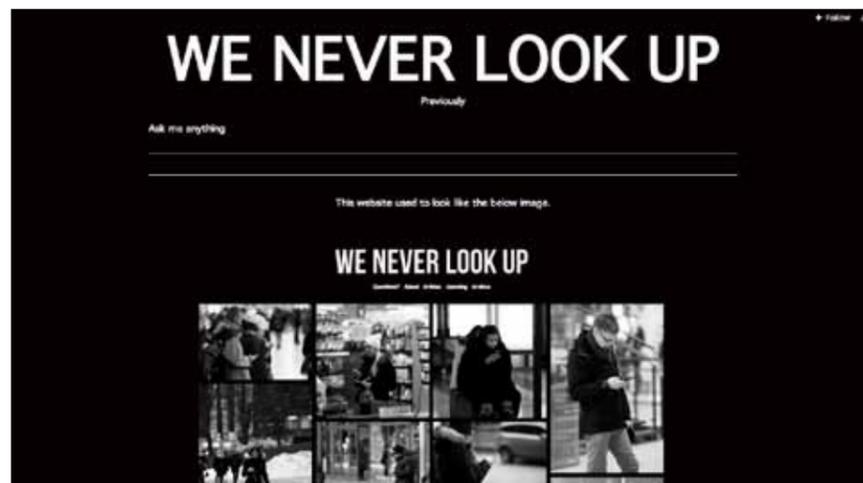
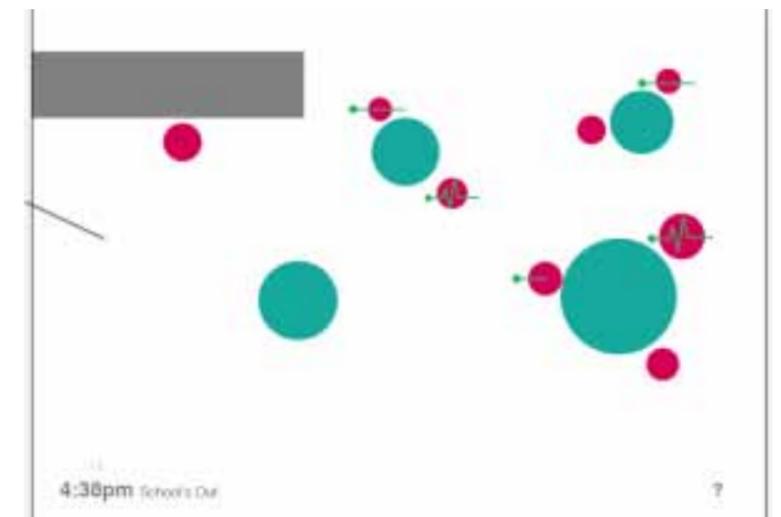


Image: <http://upload.wikimedia.org/wikipedia/commons/2/29/Minard.png>

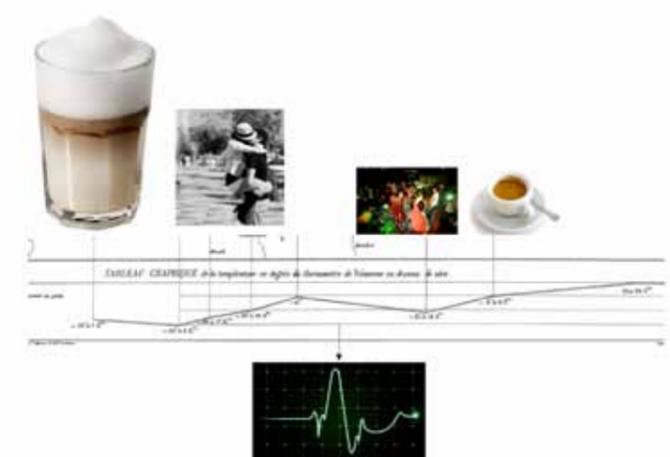
## RECORDING PEOPLE OVER TIME

Inspired by the classic napoleon map of Minard, we wanted to develop a concept which allows to observe people over time.

The idea of recording people was later on taken further to watching and recording whole sceneries instead of single types of behaviour.



Screenshots: <http://weneverlookup.tumblr.com/>



# Section 02: Projects

## Sensory Interaction



### FIRST EXPERIMENTS WITH PIXELS

Inspired by low-res-images (see top) we started to capture scenes with a very fine grid (see right).



### RESEACRH

Water Pixels

[http://cache.kotaku.com/assets/images/9/2011/01/pixel\\_water.jpg](http://cache.kotaku.com/assets/images/9/2011/01/pixel_water.jpg)

# Section 02: Projects

## Sensory Interaction

### SUMMARY

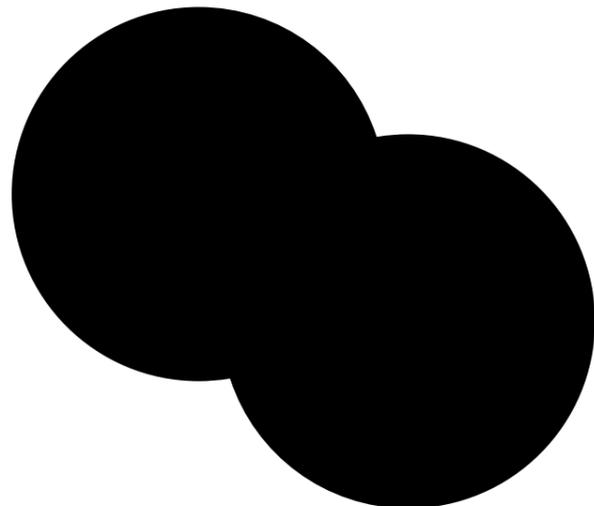
Grid Paper = Input

Code as Material = Output

Idea: Distortion could stand as a model for human communication, While we usually tend to perceive senses in a similar way, people with a distortion, for example based on synaesthesia, perceive things differently and we have to adjust.

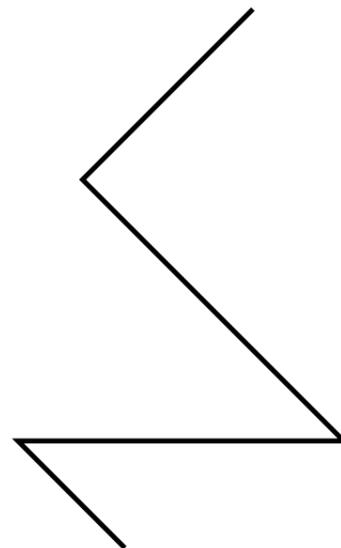
Booba?

Kiki?



Booba?

Kiki?



Without that I have to explain what is Booba and what is Kiki usually people understand immediately which of the two signs on this page stand for Booba and which one for Kiki. When communicating with people who have a distorted perception than things are however not so clear at all. (see also: Ramachandran, S., 2006, )

### FINAL REFLECTIONS

This topic gave us a lot of input and thoughts which might be further explored.

Especially the question if Emotion can be put into code is of interest in this context.

Already Otl Aicher realized which influence encoded information have in society (see Rathgeb, M., 2008, p:114) and connected his School, the HfG in Ulm with the discipline of social science. But this was at a time when multimodal media experiences did not exist yet in the current form. This new mediation goes further and yet deals with old questions. How is behaviour and action shaped by mediated communication?

## Section 02: Projects

### Transformation



Picture taken in Brighton, 23 March

# Section 02: Projects

## Transformation

### THE GRASS HOPPER APP

Nature is a continuous trial-and-error process which, based on modern theories, evolves the best organisms to survive and adapt to their environment. Biomimicry describes the discipline which analyses organism in order to learn from them and to implement such learnings in engineering and design for surfaces, products and also digital media concepts.

Digital Media overwhelms us with data so I analyzed the grasshopper and its ability to escape overwhelming situations by jumping away. This also implies negative associations (unsteadiness, grasshopper mind) and inspired me for a critically designed User Interface collecting my data nearby and jumping away if they are uninteresting or overwhelming, in order to make our interconnected life more meaningful.



Image: Created by the author



Image: <http://www.stepbystep.com/how-to-survive-a-locust-attack-26663/>

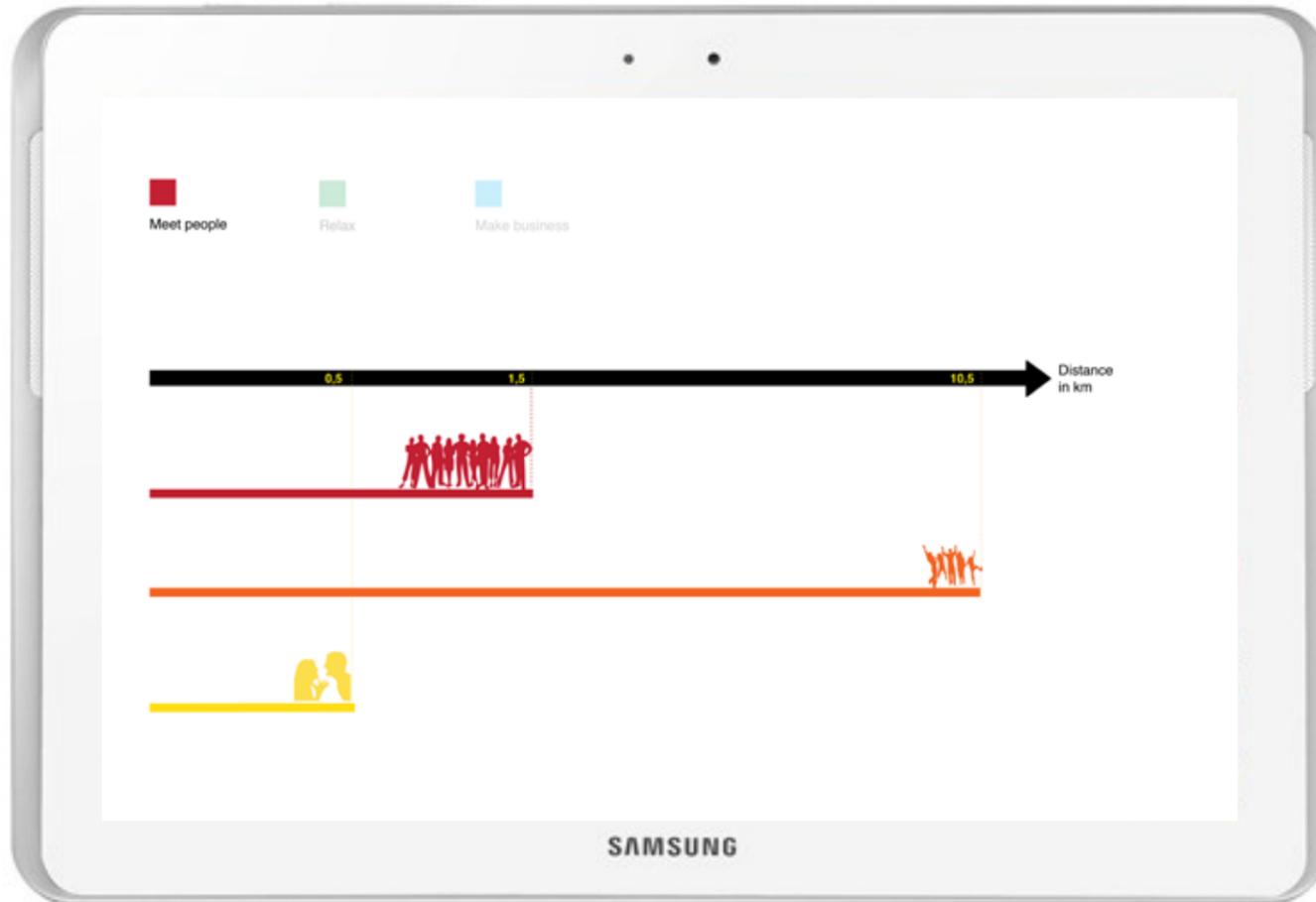
*“we let ourselves be convinced by those in our social network, often by those going in the opposite direction.” - (Zschaler, G. 🐛)*



Image: <http://www.dezeen.com/2008/02/10/work-in-progress-at-the-royal-college-of-art>

# Section 02: Projects

## Transformation



The grasshopper and its swarm behaviour inspired me to design a data interface which displays the most interesting place to be, based on an analysis of my own data, including my social network.

This behaviour is similar to the ones of birds. Compared to birds however, the grasshopper isn't flying all the time and it doesn't always follow the swarm.

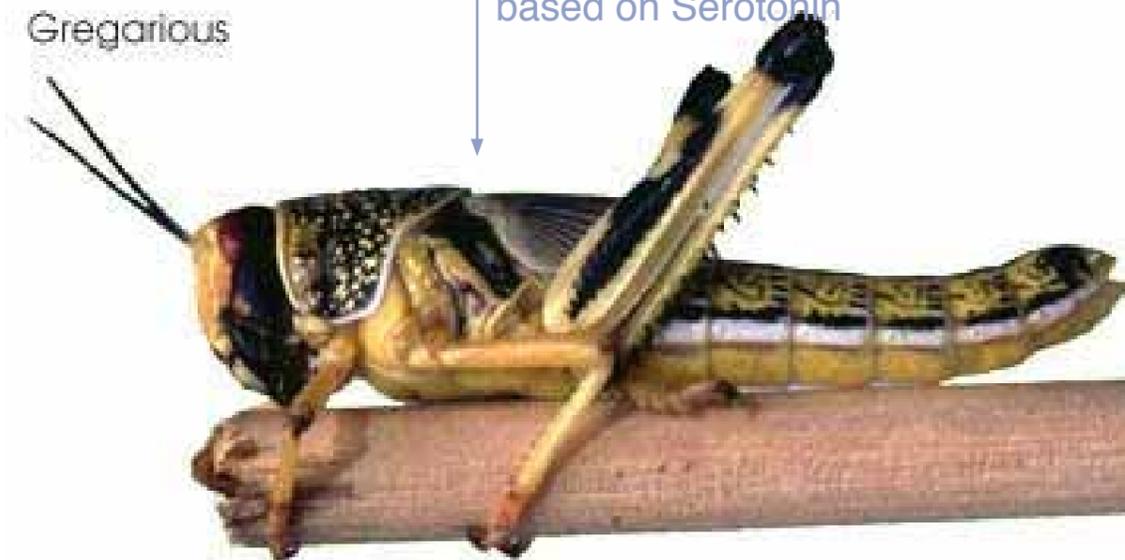
Grasshoppers show this behaviour only if they get too close to each other. "Swarming behavior is a response to overcrowding. Increased tactile stimulation of the hind legs causes an increase in levels of serotonin" (Wikipedia: Locust).

Solitary



Methaphorical Process based on Serotonin

Gregarious



# Section 02: Projects

## Transformation



Image: <http://www.stepbystep.com/wp-content/uploads/2013/01/How-to-Survive-a-Locust-Attack1.jpg>

A transformative process begins and the locusts start to feel attracted to other locusts and they start to follow each other.

Aren't we humans a little bit similar to this?

Don't we start as well to get nervous as soon as we look at facebook and see what all our friends do?

But once we are on holidays, away from all these channels, it is no problem to relax.

Recent research on the Max-Planck Institute in Germany has shown, that humans behave in similar ways like these swarms...

*"We concluded that the mechanism through which locusts agree on a direction to move together (sometimes with devastating consequences, such as locust plagues) is the same we sometimes use to decide where to live or where to go out: we let ourselves be convinced by those in our social network, often by those going in the opposite direction(...) We don't necessarily pay more attention to those doing the same as us, but many times [we pay more attention] to those doing something different."*(Zschaler, G. 📄)

# Section 02: Projects

## Transformation

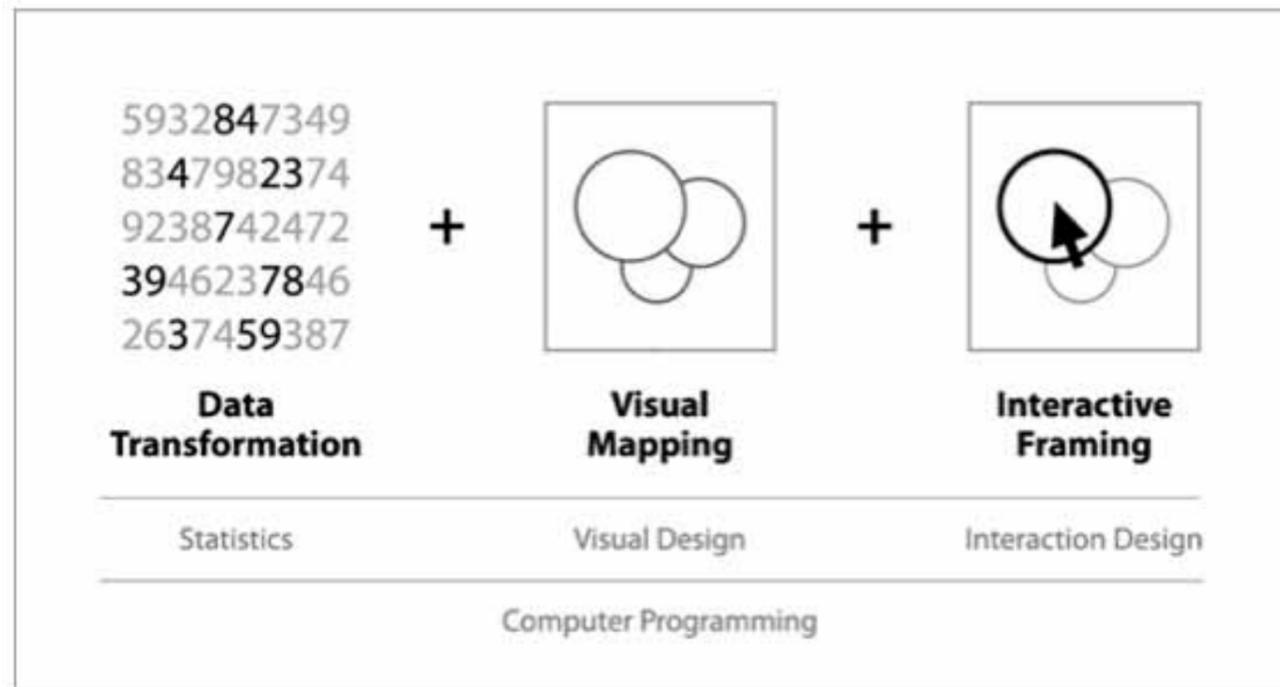


Image: <http://www.visualcomplexity.com/vc/blog/?p=1076>

## RESEARCH

Manuel Limas Framework for Data Transformation was a very helpful guidance for me. Easy and similar to Ben Shneidermans Information Seeking Mantra.

# Section 02: Projects

## Transformation

### RESEARCH

All these apps told me:  
We are already grasshoppers. We already transformed in unsteady humans and we already follow the swarm of events, mediated by digital media. The problem however is that we are not aware of this behaviour or can not really control this behaviour mindfully nor understand it while big corporations sometimes are able to predict ourselves very well.



<http://anti-social.cc.s3.amazonaws.com/img/anti-social3.png>

Simple web app, which blocks certain websites.



[http://www.everythingicafe.com/wp-content/uploads/2012/05/best-meditation-apps-iphone.](http://www.everythingicafe.com/wp-content/uploads/2012/05/best-meditation-apps-iphone.jpg)

.jpg



Image: <http://www.uncom-mongoods.com/product/phonekerchief>

Tissue which blocks the phone, as a gift for a date. By enrolling the phone in the tissue it is blocked and doesn't receive any more calls.

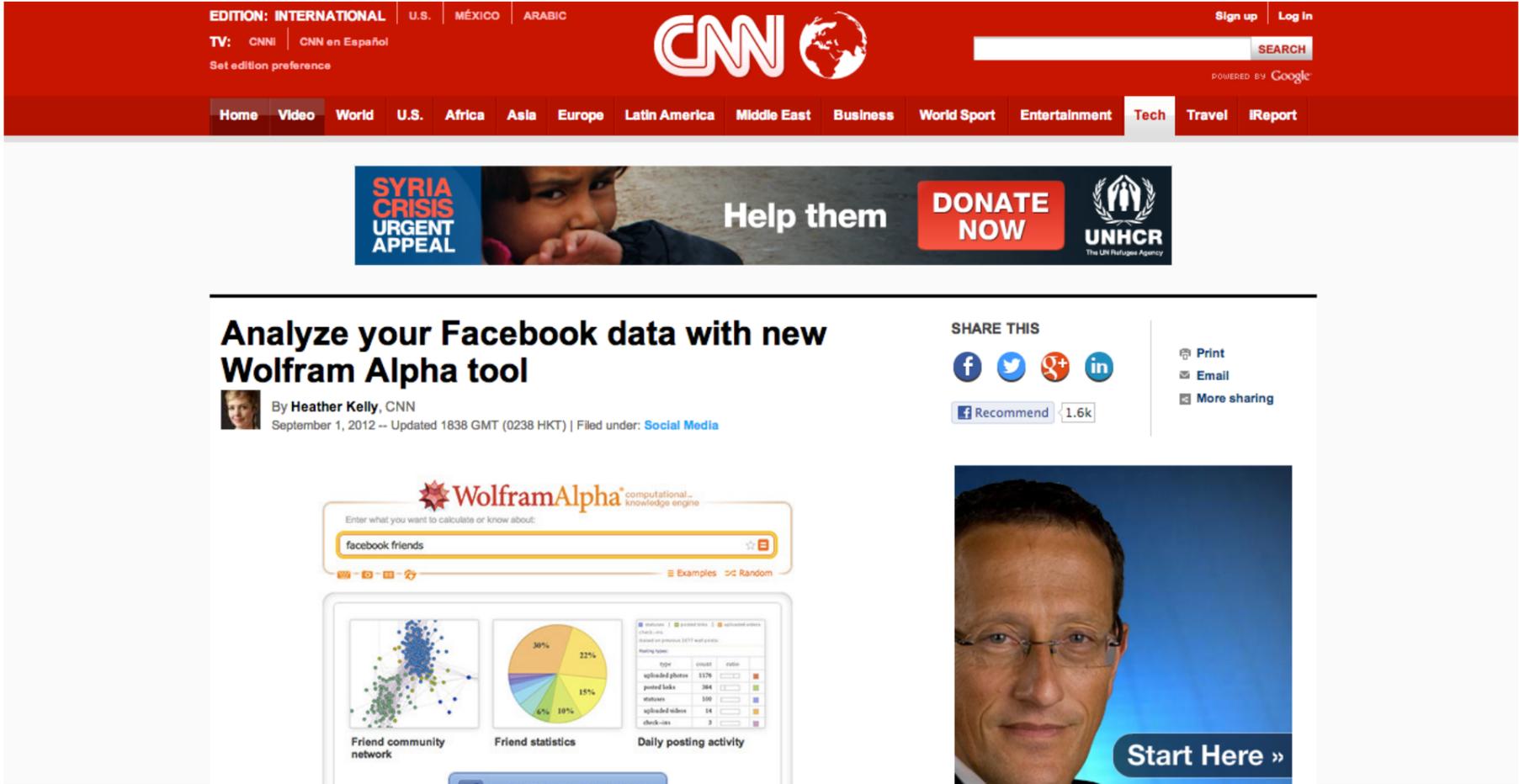
### RÉSUMÉ

There is a big market for apps which shall help to stop data floating and so we can assume we are already grasshoppers.

# Section 02: Projects

## Transformation

RESEARCH



Screenshot taken from <http://edition.cnn.com/2012/08/31/tech/social-media/wolfram-alpha-facebook-tool>

Wolfram Alpha analyses data generated with your facebook account and can tell you more about yourself than you might think.

# Section 02: Projects Transformation

## RESEARCH

Location tools showing interesting aspects and points of interests which we might find interesting.



# Section 02: Projects

## Transformation

### RESEARCH

As I couldn't really find appropriate solutions I started to develop my own field research.

As following the swarm is connected to making short notice plans I asked people I lived with in Portsmouth *"How do you make short-notice plans?"*.

This first research indicates that we all follow rather people we know nearby than pure editorial information and this is also backed-up by research which was done in 2011:

*"we let ourselves be convinced by those in our social network, often by those going in the opposite direction. (Zschaler, 2011, )*

Zschaler found out that the behaviour of humans and locusts behaviour is very similar.

*"I look up on google for things to do nearby, cinemas, etc...I stay in touch with my friends on facebook. "*



Anonymous grasshopper

Doesn't want to be recognized

*"I always call somebody. I never go out all by myself. I would never go out just alone"*



Tiffany, 24, France

*"I always come in the living room and if nobody is there I write in the "Hester Road" ... Group on Facebook"*



Brian, 25, Spain

*"I get messaged all day. There is always something going on. "*



Fernando, 23, Mexico

# Section 02: Projects

## Transformation

### RESEARCH

Once I realized that there is no point in creating concepts to prevent us from becoming grasshoppers—cause we already are and I don't know how to stopp this data flood which turns us into grasshoppers—I started to reasearch and to see if there are already people who invented concepts to make our grasshopper life easier. In this case I found an ant concept. It stretches the idea of learning from the behaviour of insects to a very extreme point. However it doesn't really addres the swarm behaviour, which I fell so much in love with.

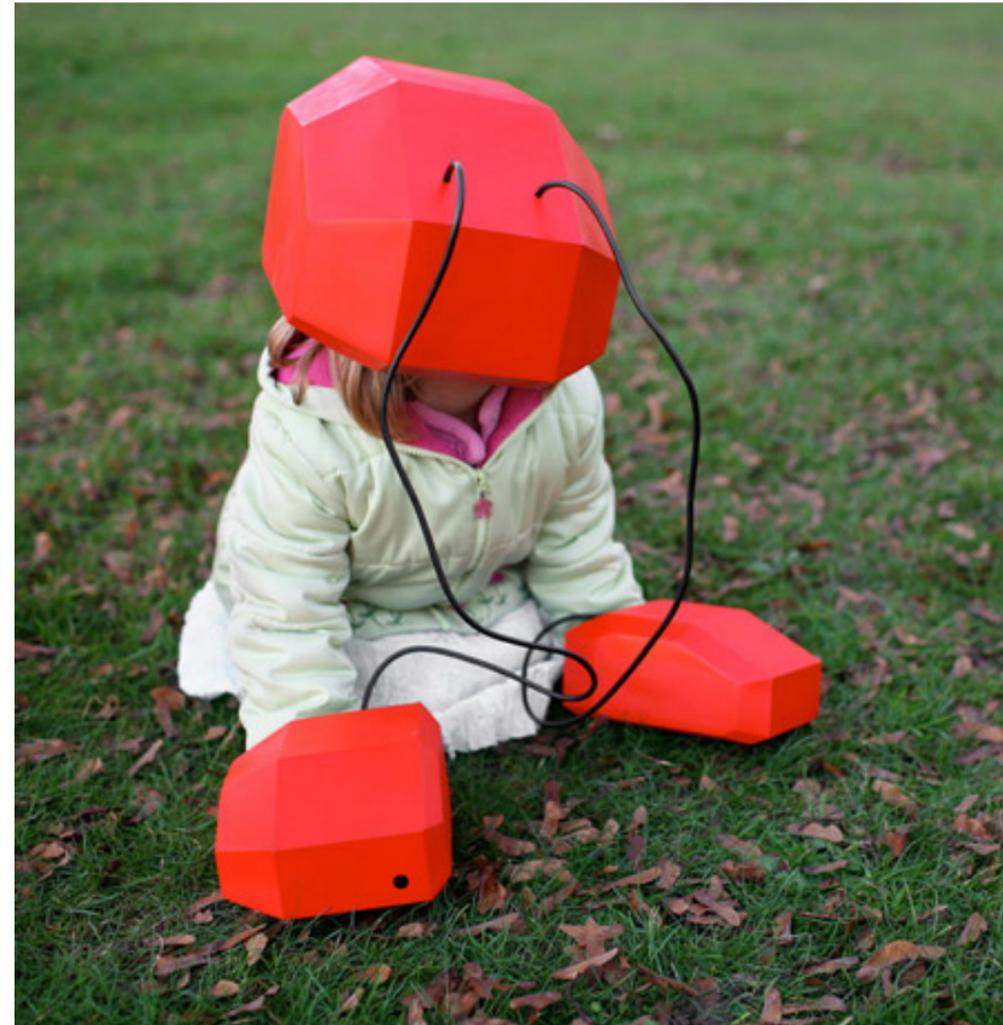
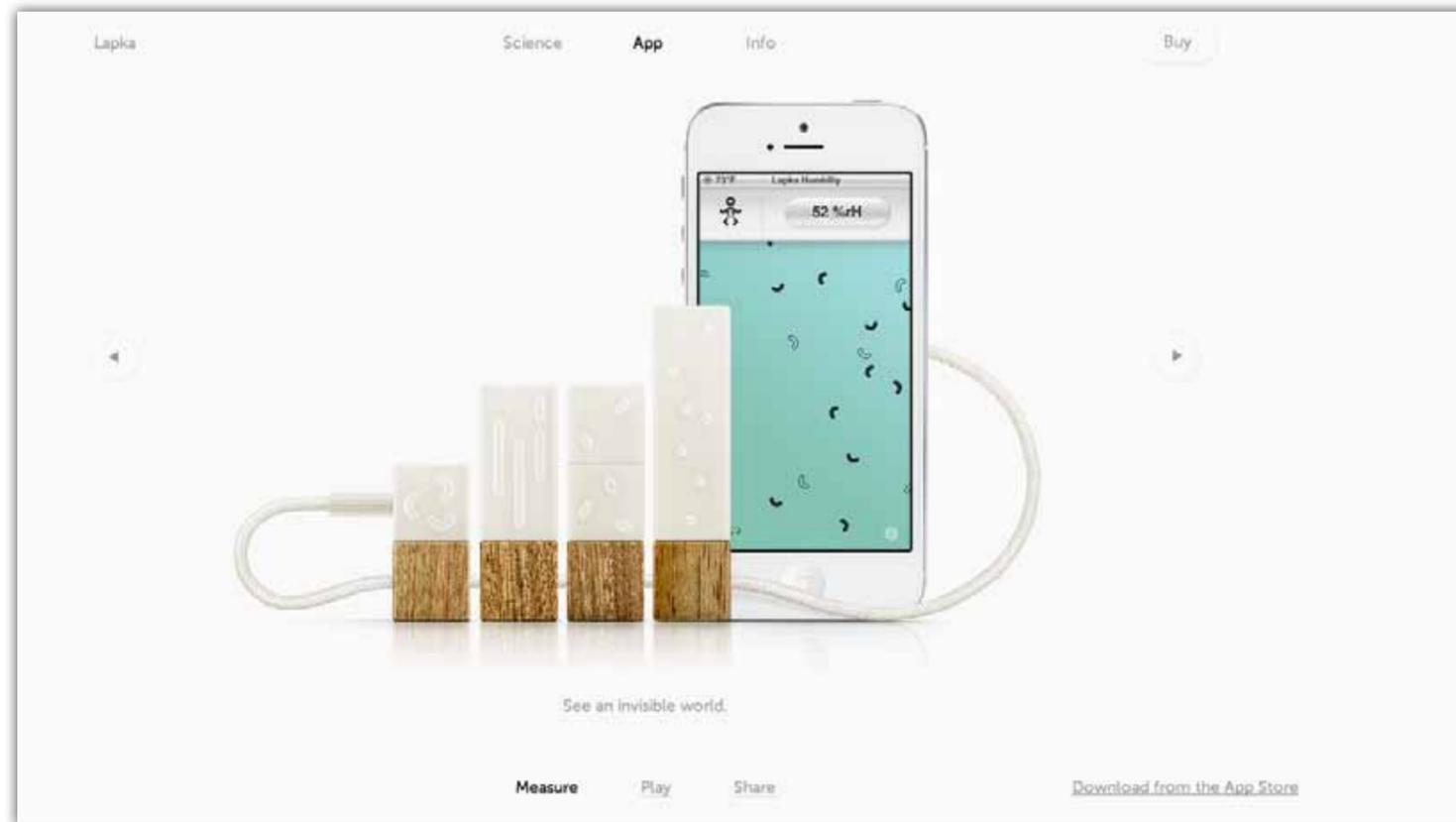


Image: <http://www.dezeen.com/2008/02/10/work-in-progress-at-the-royal-college-of-art/><

# Section 02: Projects

## Transformation

RESEARCH



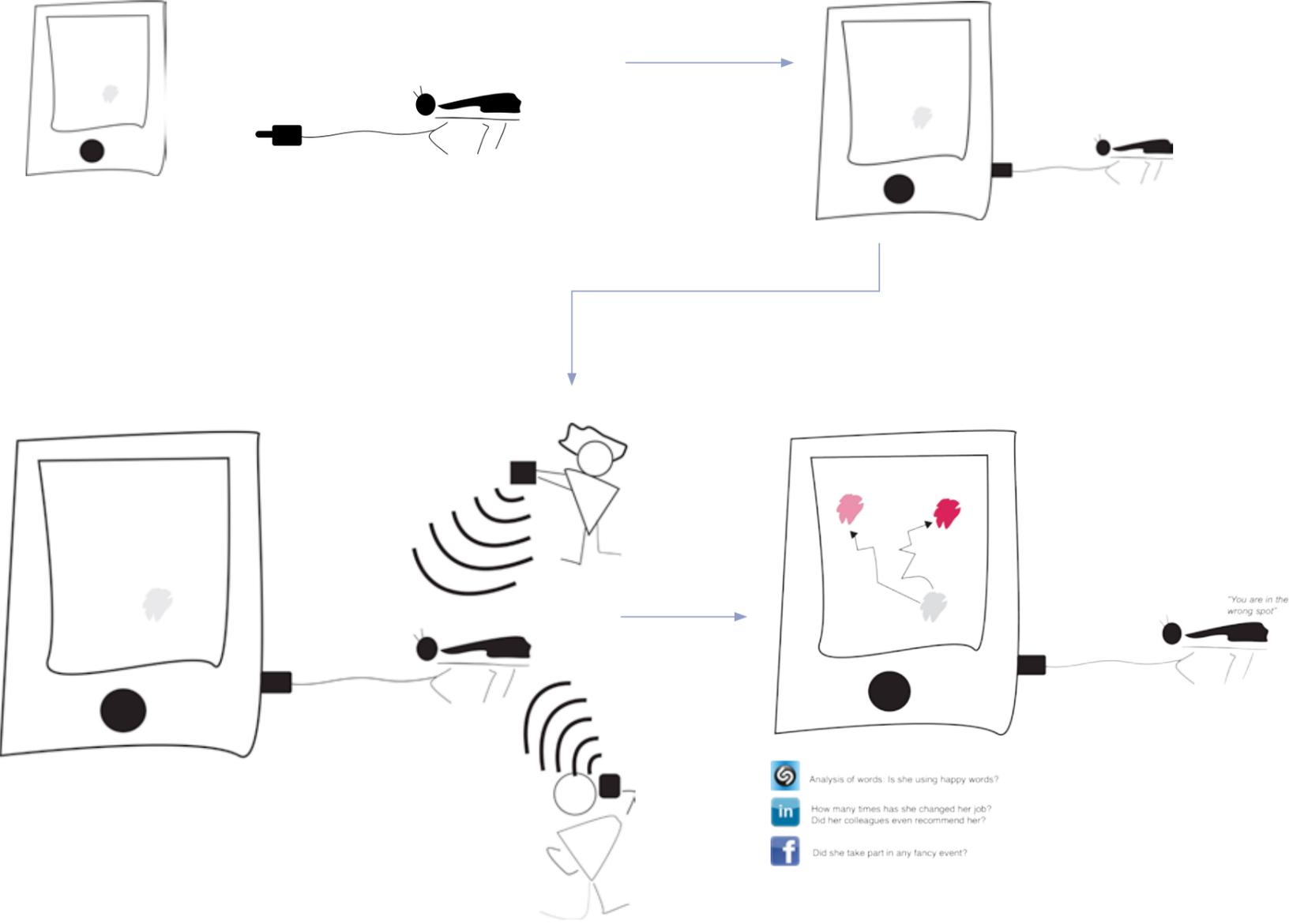
<https://mylapka.com/>



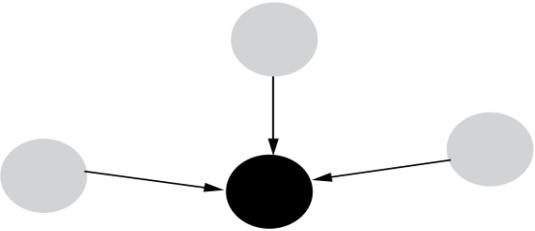
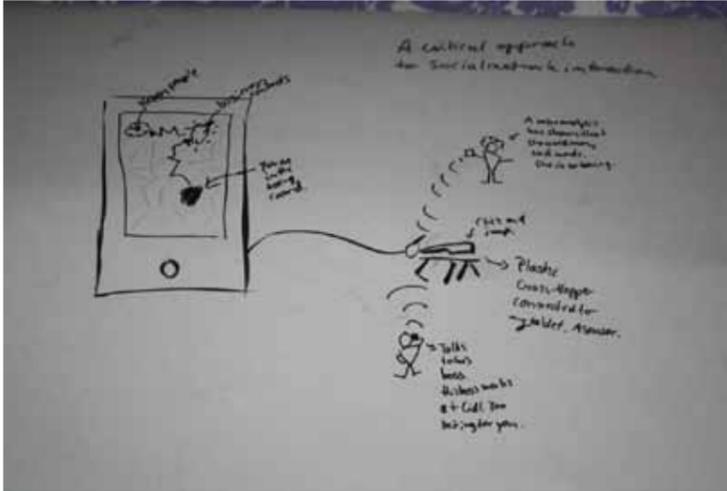
"My Lapka" is a tool which can transform an iPhone into a device measuring radioactivity, moisture, etc." It inspired my first idea (see next slide).

# Section 02: Projects

## Transformation



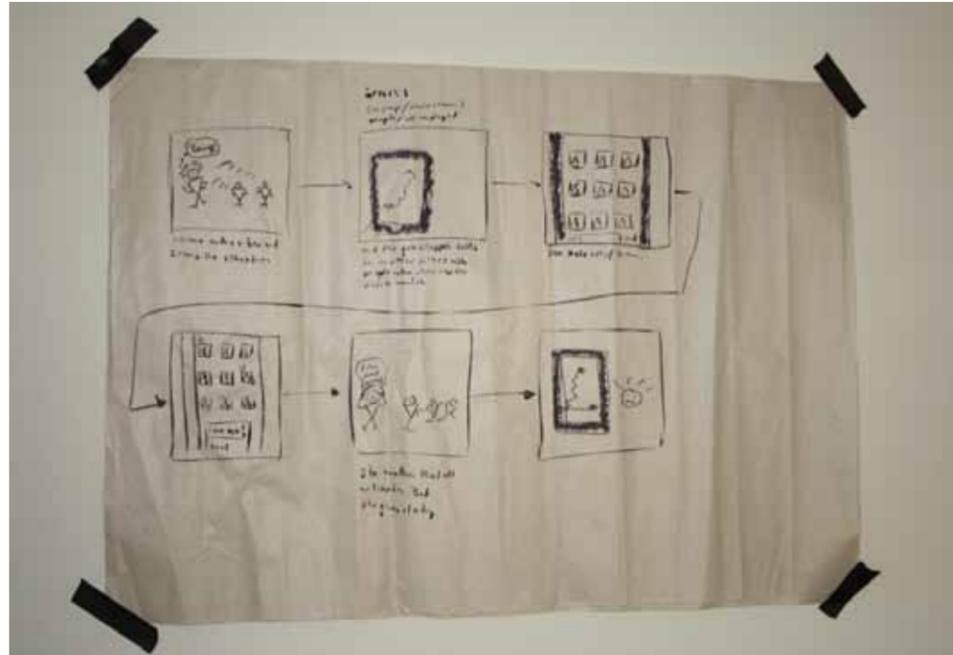
First sketches



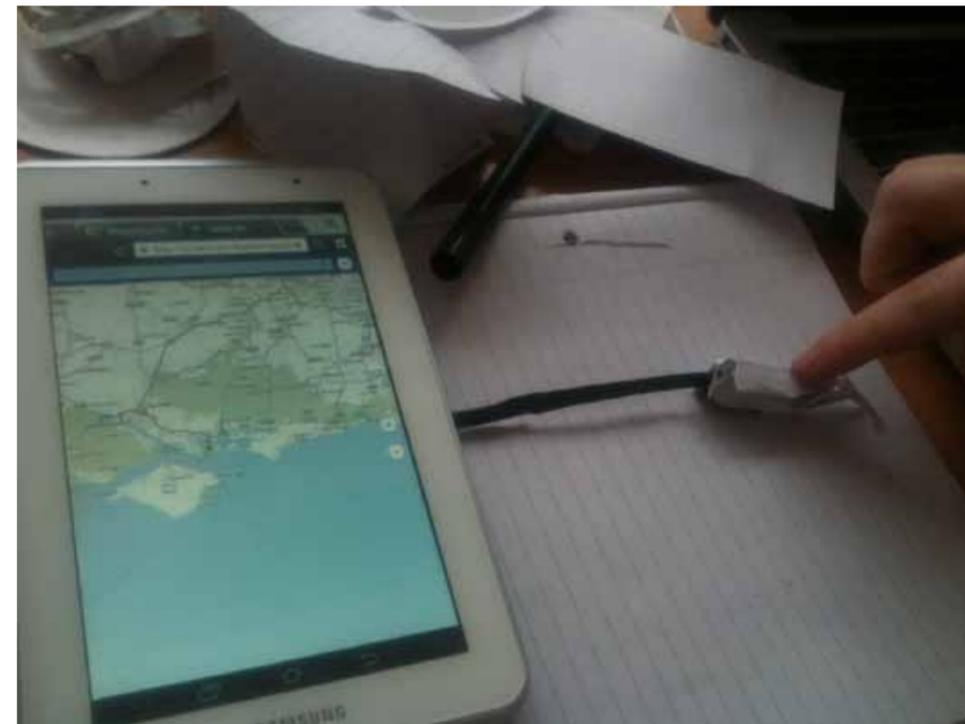
Quote by Aristotle:  
The whole is greater than the sum of its parts.

# Section 02: Projects

## Transformation

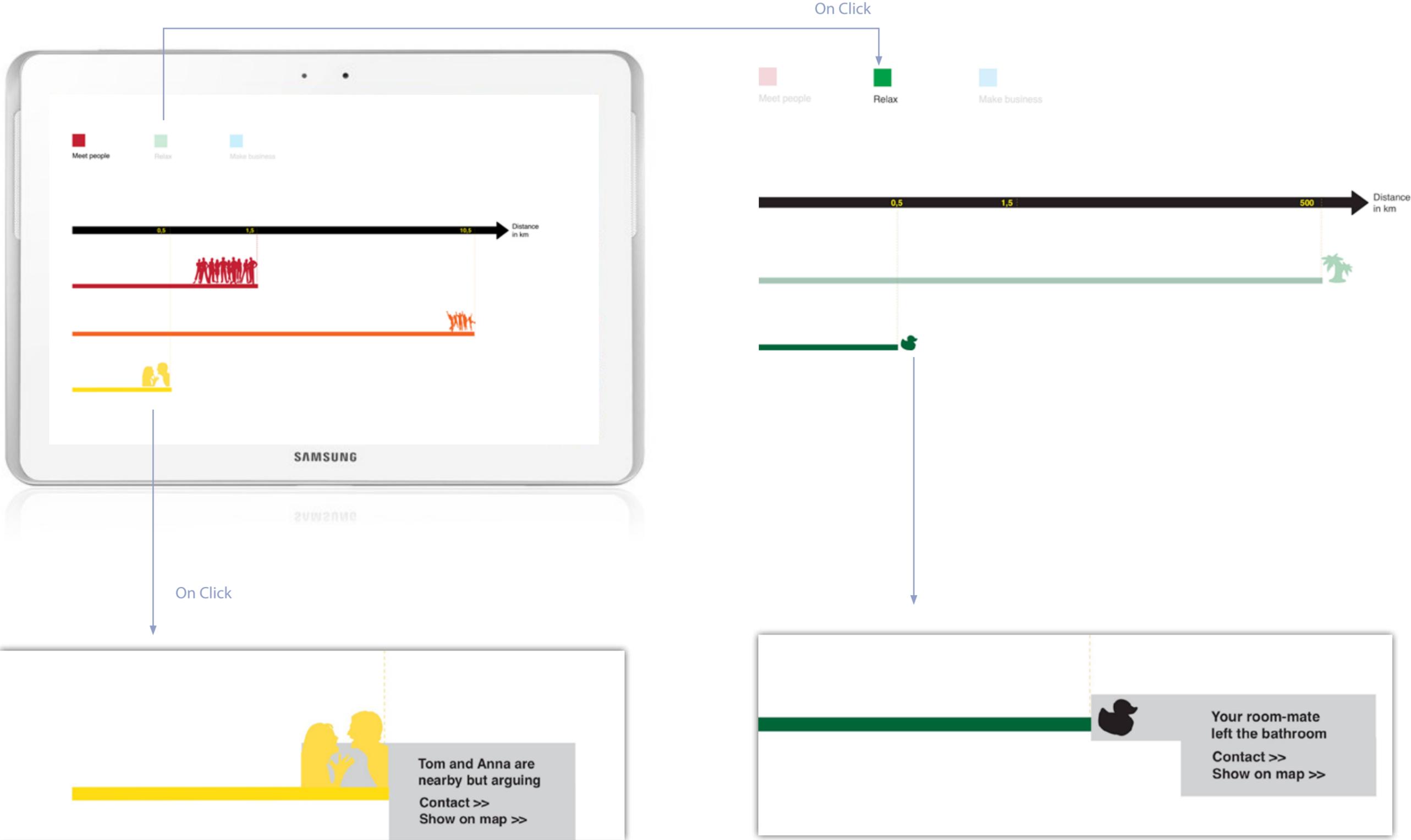


Check out the  
Flash-Prototype:  
[Hand\\_In/Artefacts/02\\_Transformation/Prototype.swf](#)



# Section 02: Projects

## Transformation



Same idea of the grasshopper app, but different execution.

# Section 02: Projects

## Transformation

### RESEARCH

A weblog collecting many data transformation projects. For me however this is rather a source of aesthetical inspiration. In the context of this project however it was much more important to transform data into a usable application, rather than a nice visualisation.

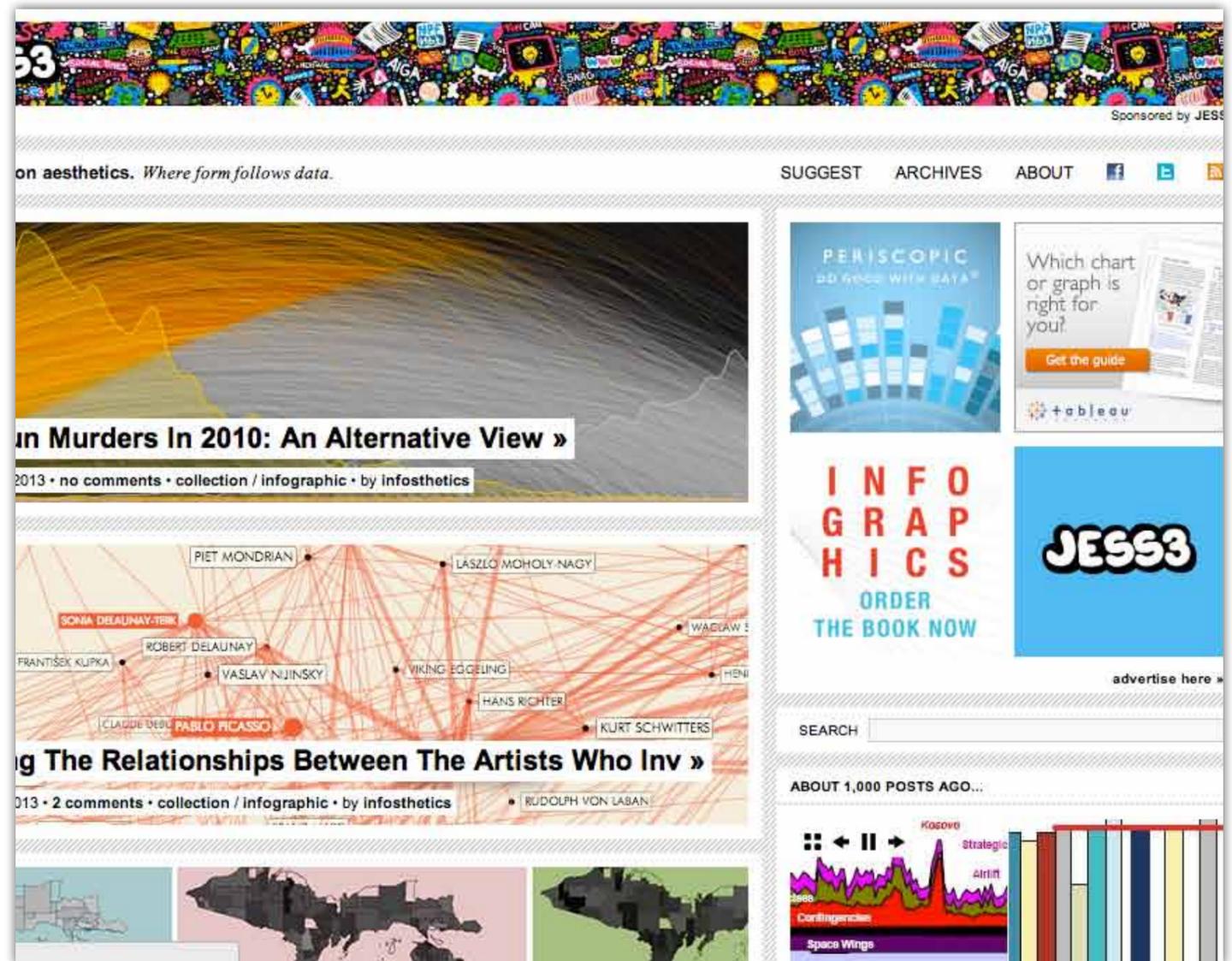


Image: <http://infosthetics.com>

# Section 02: Projects

## Transformation

### RESEARCH

5 years of infosthetics transforms all the infosthetic blog posts in a single UI Interface.

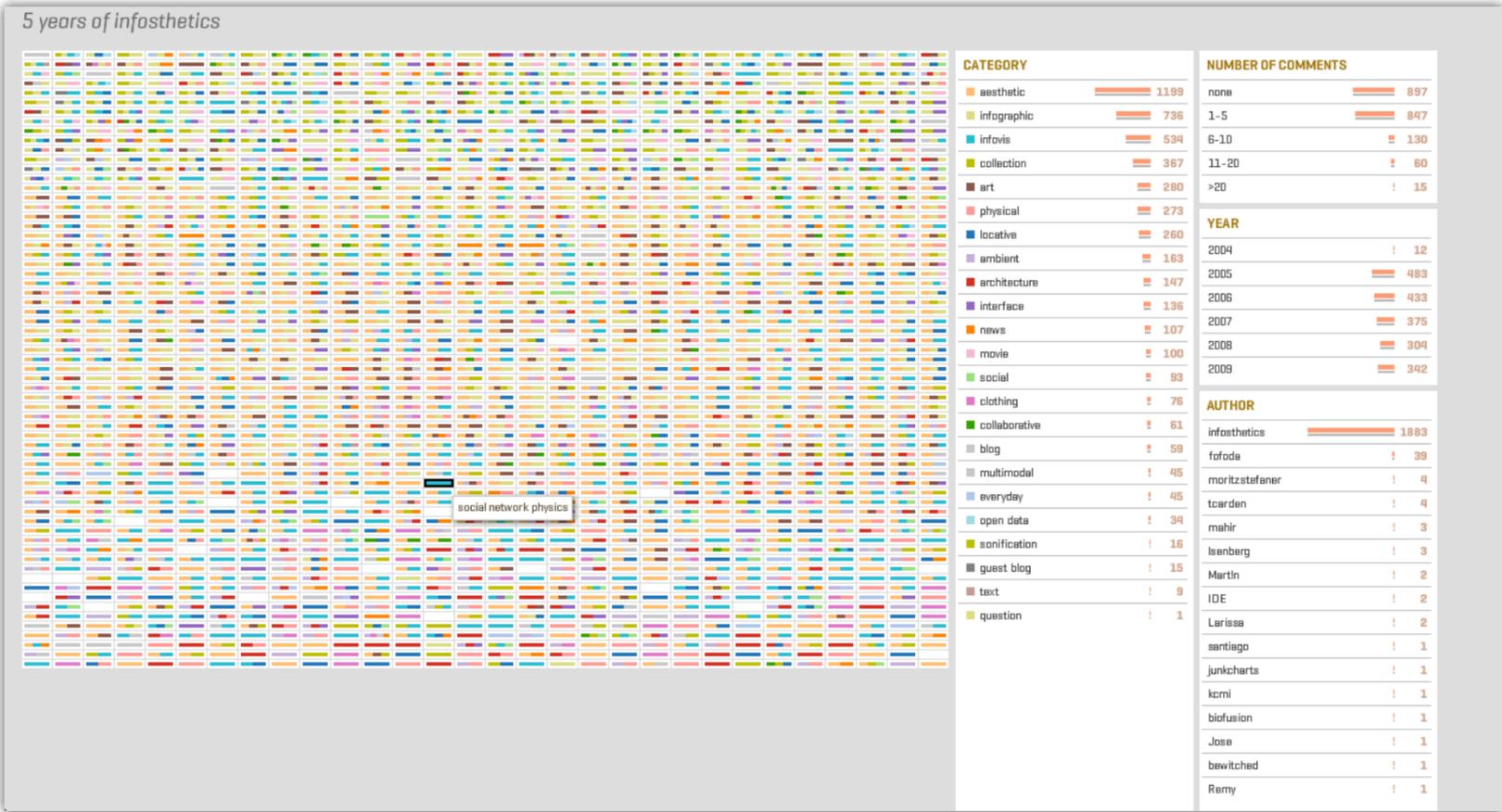


Image: <http://moritz.stefaner.eu/projects/5yrs-infosthetics/>

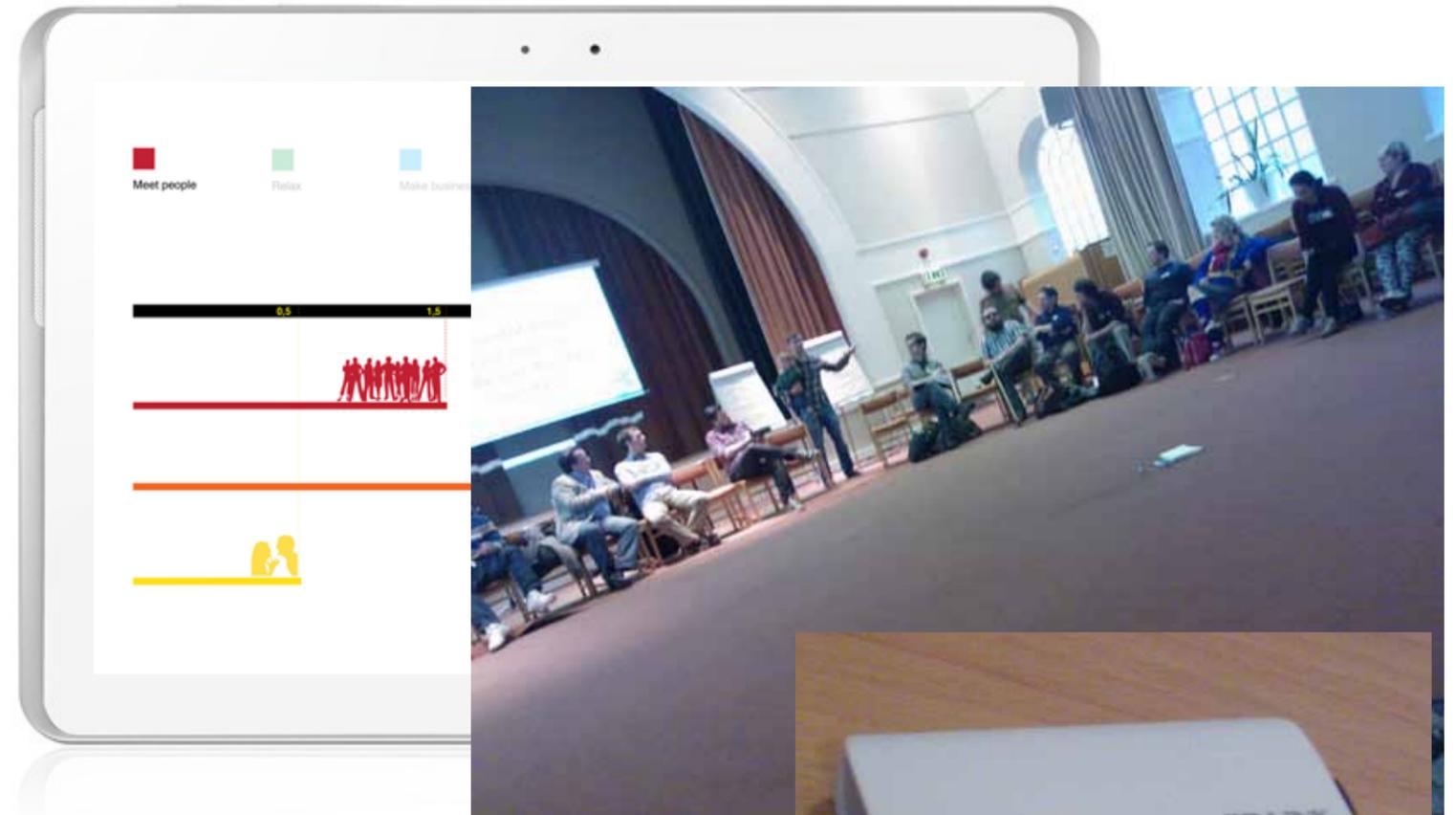
# Section 02: Projects

## Transformation

### PROBLEMATIC ASPECTS OF MY DESIGN CONCEPT AND THE CITY CAMP IN BRIGHTON

Is my design, so the idea of the grasshopper app, really critical?  
Is it really a human need to see all my data accumulated? Doesn't it mean that at the same time someone else can see these data?

Overseeing and understanding ones own data is certainly the first step towards more sovereignty over the data we produce. But as said initially in my introduction when referring to Dunne and Raby, it is about challenging conventional values instead of simply implementing them.  
During the City Camp in Brighton which was held in March 2013 an interesting approach caught my attention.

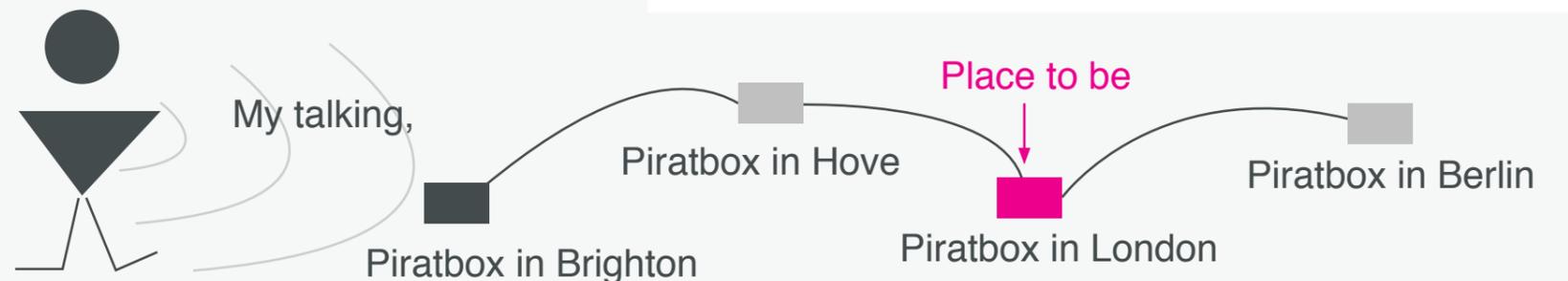


The discussion of PiratBoxes, to create an offline network amongst people being local at a place.



Piratbox, original can be seen on [http://wiki.daviddarts.com/PirateBox\\_DIY](http://wiki.daviddarts.com/PirateBox_DIY)

#### Piratbox & Grasshopper combined

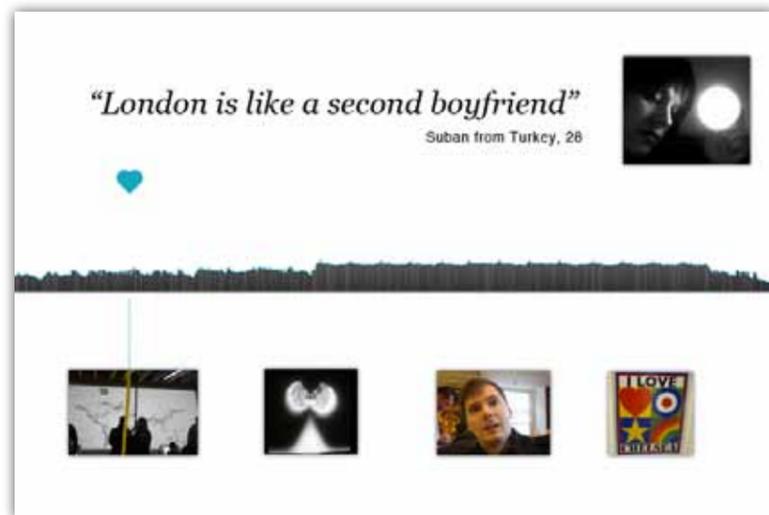


Piratboxes are simple offline Wifi-networks

But the grasshopper idea makes it interesting: Only generated values like "in party mood" pass the web. Calculated offline in the offline pirat boxes (here in Brighton) and compared with other boxes who can offer "party mood". What this exactly is remains a surprise in the end (thats life !).

# Section 02: Projects

## Layers



*"The essence of metaphor is understanding and experiencing one kind of thing in terms of another"*

*(Lakoff & Johnson, 1980, p. 5)*

### WHAT IS LONDON...?

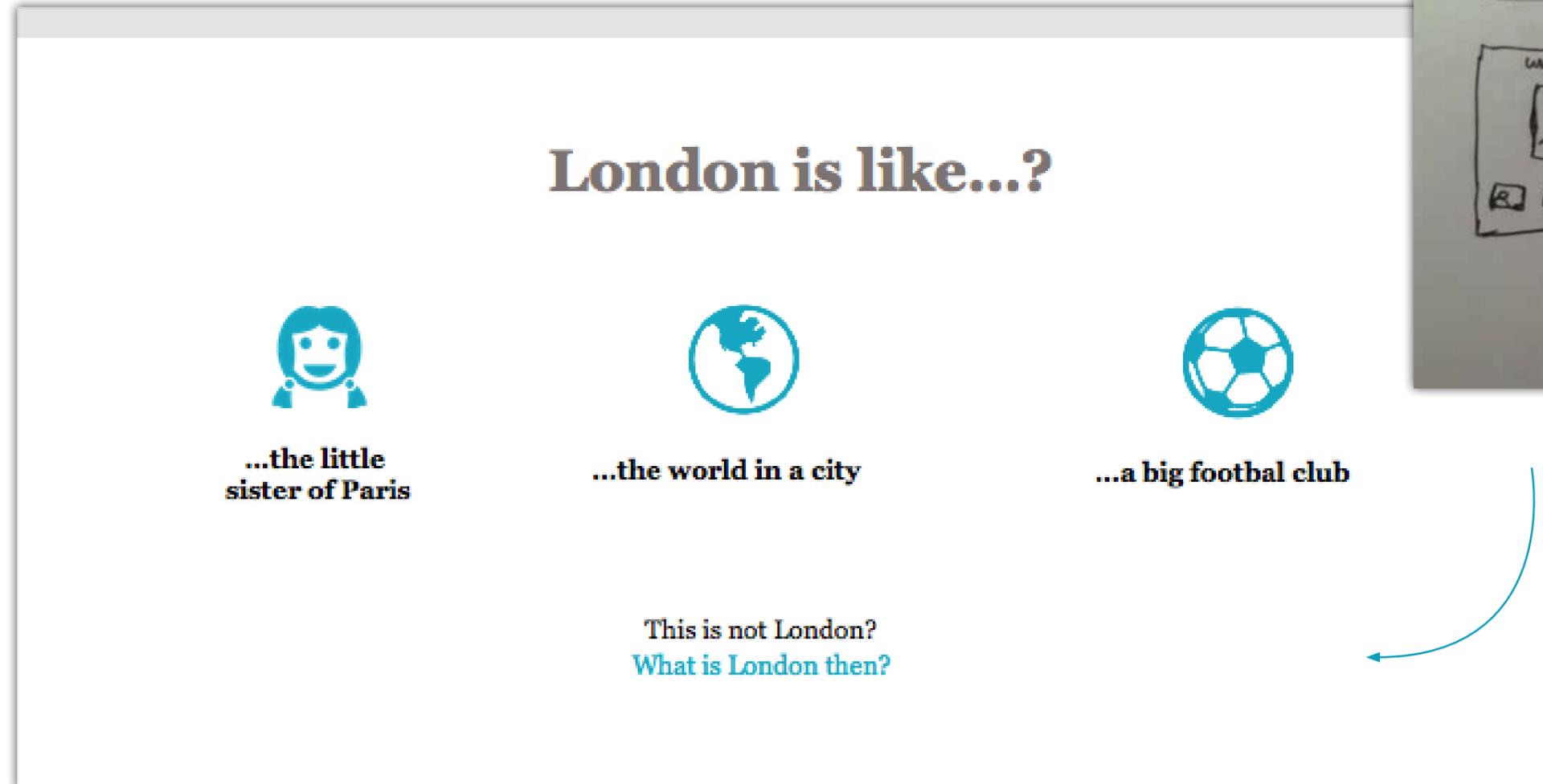
"What is London...?" is a conceptual prototype, considering learnings from semiotical, metaphorical and affordance research. It analyses how different layers of meaning shape an experience. Metaphors can be considered as a complexity-reducing-layer to the natural human need to make complex concepts tangible. However communicating such a metaphor might be distorted, e.g., by cultural constraints. "What is London..?" shall help to demonstrate and analyse these types of constraints.



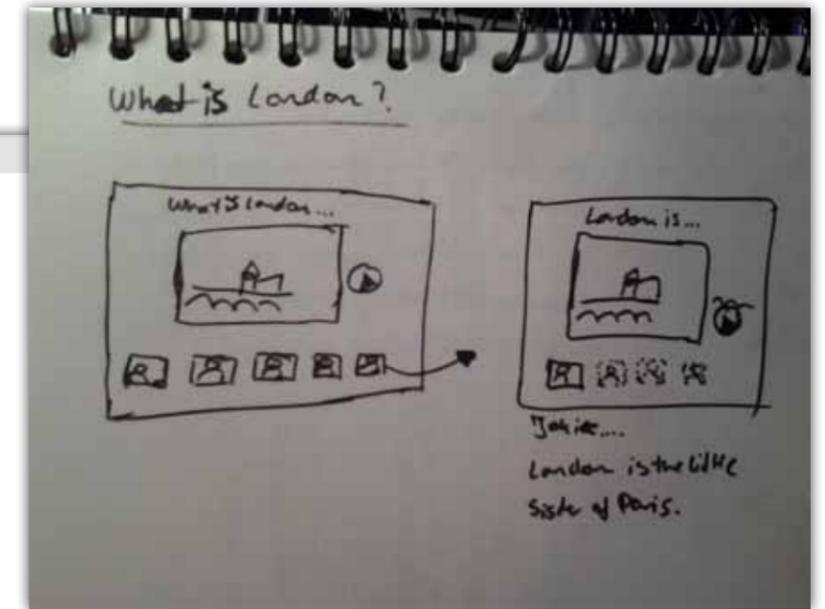
# Section 02: Projects

## Layers

CONCEPTUAL DRAFT OF "WHAT IS LONDON...?".



First sketches



The idea of this project is to demonstrate individual perceptions offered by big cities, like London and translating such complex concepts in other cultural spaces so that they can be understood.

The idea of this project was to analyze the role which metaphors can play to communicate perceptions in multicultural environments. While I didn't find a clear answer to this question I want to propose a way to analyze it further.

### THE APPLICATION

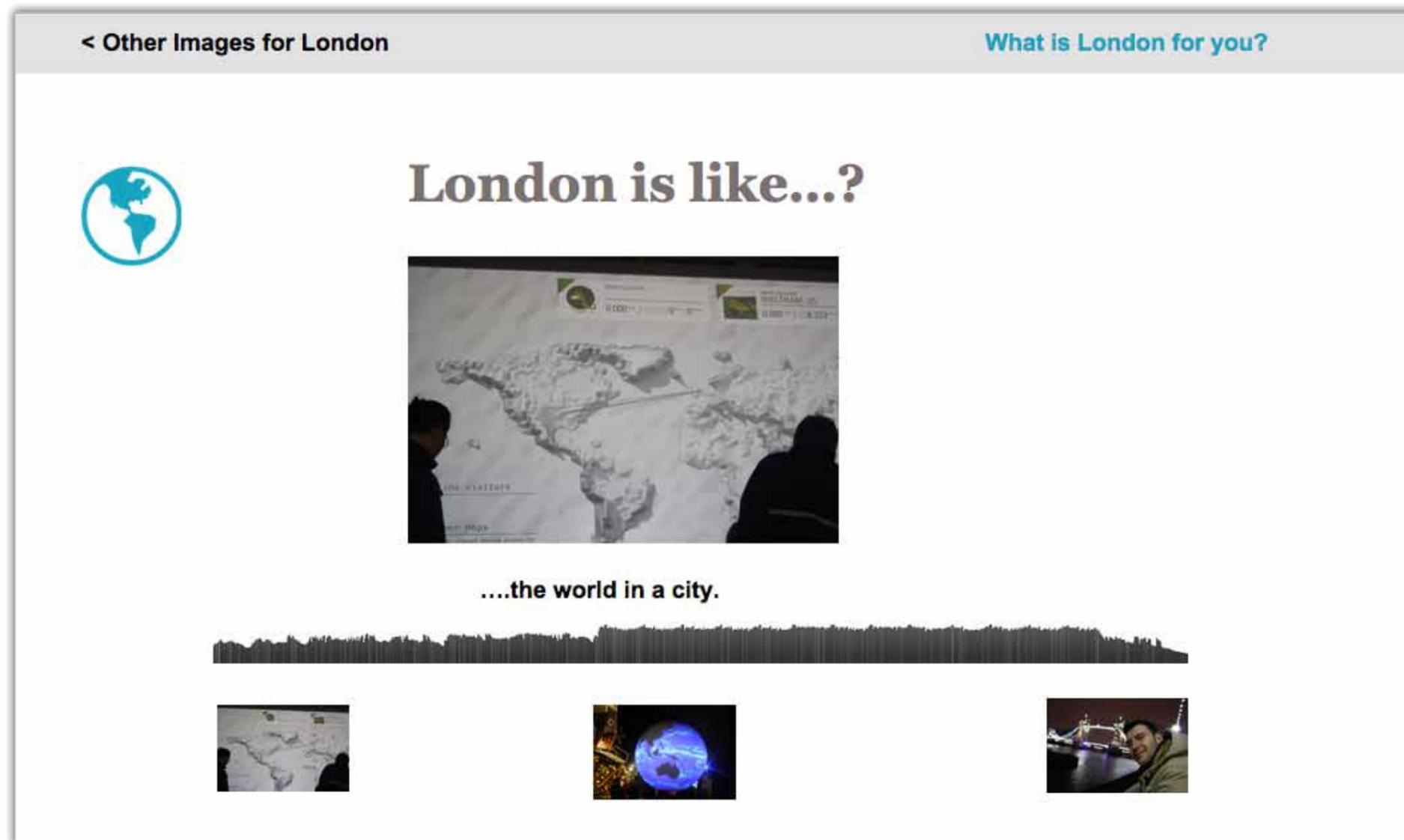
The screenshot above shows the first draft of the startscreen of the initial prototype for the application "What is London...?". Users can explain in 10 seconds what Lon-

don is like for them and tag this description with a pictogram from [thenounproject.com](http://thenounproject.com)

# Section 02: Projects

## Layers

CONCEPTUAL DRAFT OF "WHAT IS LONDON...?".



See protopye in attached folder  
[Hand\\_In/Artefacts/03\\_Layers/Prototypes/Flash/Prototype.swf](#)

# Section 02: Projects

## Layers

 **Markus Burkardt**  
vor 22 Stunden 🌐

I need your help...what is a good metaphor for London?

London is...

Gefällt mir · Kommentieren · Hervorheben · Teilen

-  **Markus Burkardt** ...a jungle?  
vor 22 Stunden · Gefällt mir · 🔄 1
-  **Markus Burkardt** ...like Disneyland?  
vor 22 Stunden · Gefällt mir
-  **Markus Burkardt** ... like heaven ?  
vor 22 Stunden · Gefällt mir
-  **Rob Stephenson** the world in a city  
vor 22 Stunden · Gefällt mir nicht mehr · 🔄 1
-  **Jackiee Brown** ...the name of a city.  
vor 22 Stunden via Handy · Gefällt mir
-  **Arno Wolter** ...quite british  
vor 22 Stunden · Gefällt mir nicht mehr · 🔄 1
-  **Arno Wolter** ...big  
vor 22 Stunden · Gefällt mir
-  **Arno Wolter** ...full of football clubs  
vor 22 Stunden · Gefällt mir nicht mehr · 🔄 1
-  **Jackiee Brown** ...die mudda von GB  
vor 22 Stunden via Handy · Gefällt mir nicht mehr · 🔄 2
-  **Jackiee Brown** The little sister of Paris  
vor 21 Stunden via Handy · Gefällt mir nicht mehr · 🔄 1
-  **Jackiee Brown** Haha die kleine Schwester von Paris is die mudda von GB...  
vor 21 Stunden via Handy · Gefällt mir
-  **Markus Burkardt** und die tante von Istanbul !  
vor 21 Stunden · Bearbeitet · Gefällt mir · 🔄 1
-  **Martin Van De Loo** not Essen.  
vor 20 Stunden · Gefällt mir
-  **Markus Burkardt** na, was isses denn dann? 😊  
vor 19 Stunden · Gefällt mir
-  **Jackiee Brown** Na trinken 😊  
vor 19 Stunden via Handy · Gefällt mir
-  **Markus Burkardt** das is ja sowas von geistreich hier 😊 !  
vor 19 Stunden · Gefällt mir
-  **Javier Santiago** the city im going to visit on april  
vor 18 Stunden via Handy · Gefällt mir

 Schreibe einen Kommentar ...

## RESEARCH

The idea of "What is London...?" was born out of a little survey among my personal network, analyzing the various metaphors people use to describe complex concepts like "London".

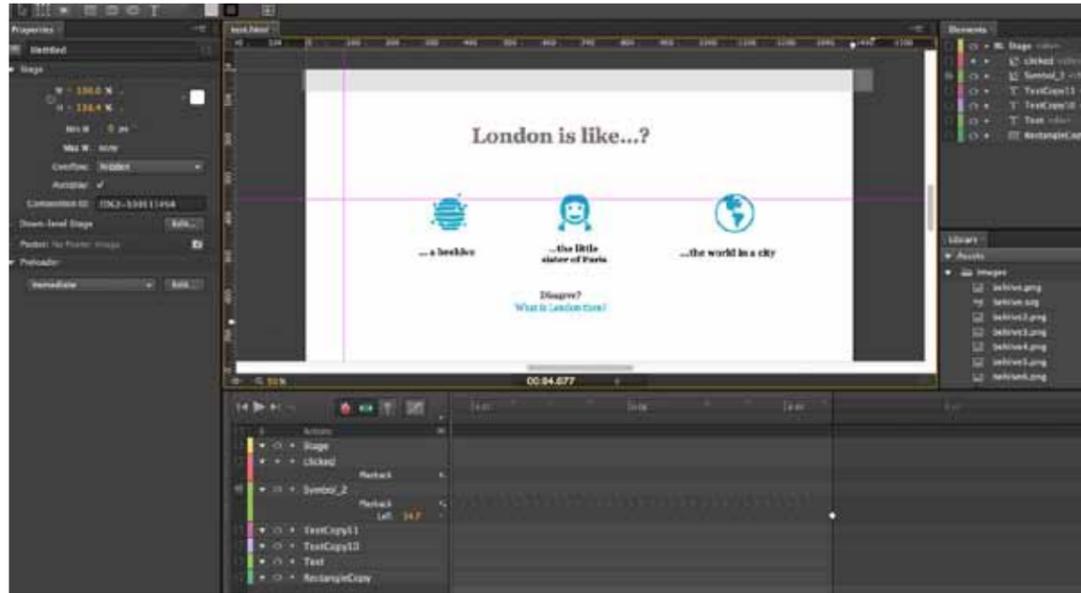
On the next slides I will talk initially a bit about some technical aspects and than dive further into conceptual aspects.



# Section 02: Projects

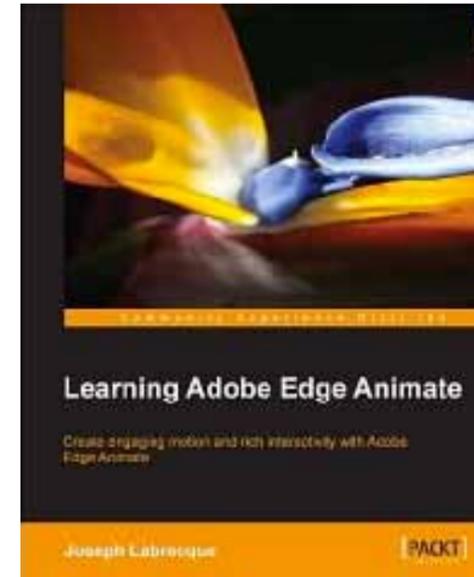
## Layers

### PROCESS & TOOLS



I started to work with Adobe Edge Animate as it is a professional tool specifically designed for Motion and Interaction Design projects. It works similar like Flash but it produces HTML5/ CSS/ Java Script Code instead of Action Script animations. This means it can run on any device (Tablets, Phones) while the use of Flash is often restricted.

I learned a lot about how to create click-dummies with this tool. The key-concepts in order to understand this tool are so called "Markers, Display Keyframes", and the creation of "Java Script based Symbols". With a very simple setting it is possible to switch from exact pixel settings to relative settings and so the design is automatically responsive. This simply means it can adapt automatically to the size of any screen and so can be used as a cross-platform design.



Learning Adobe Edge Animate [Kindle Edition]

I mostly worked with the book "Learning Adobe Edge Animate". While I am really happy I took this challenge it also went somehow on the cost of the artifact produced. I saw my chance not in producing a top level visually designed artefact but rather expanding my skillset.

In order to communicate my concept, in the end, however I had to switch back Adobe Flash and rebuild my prototype as Adobe Edge doesn't support sound. Sound however is a key aspect of the "What is London...?" Idea and so crucial to communicate the concept. You can find the unfinished prototype in:

➔ [Hand\\_In/Artefacts/03\\_Layers/ Prototypes/Edge](#)

# Section 02: Projects

## Layers

### STRUCTURING LAYERS OF COMPLEXITY

We can consider metaphors as complexity reducing layers and apply Ben Shneiderman's Information Seeking-Mantra.



*Overview First, Zoom and Filter,  
Details on Demand*  
(Shneiderman, 1996, p:1)

Overview

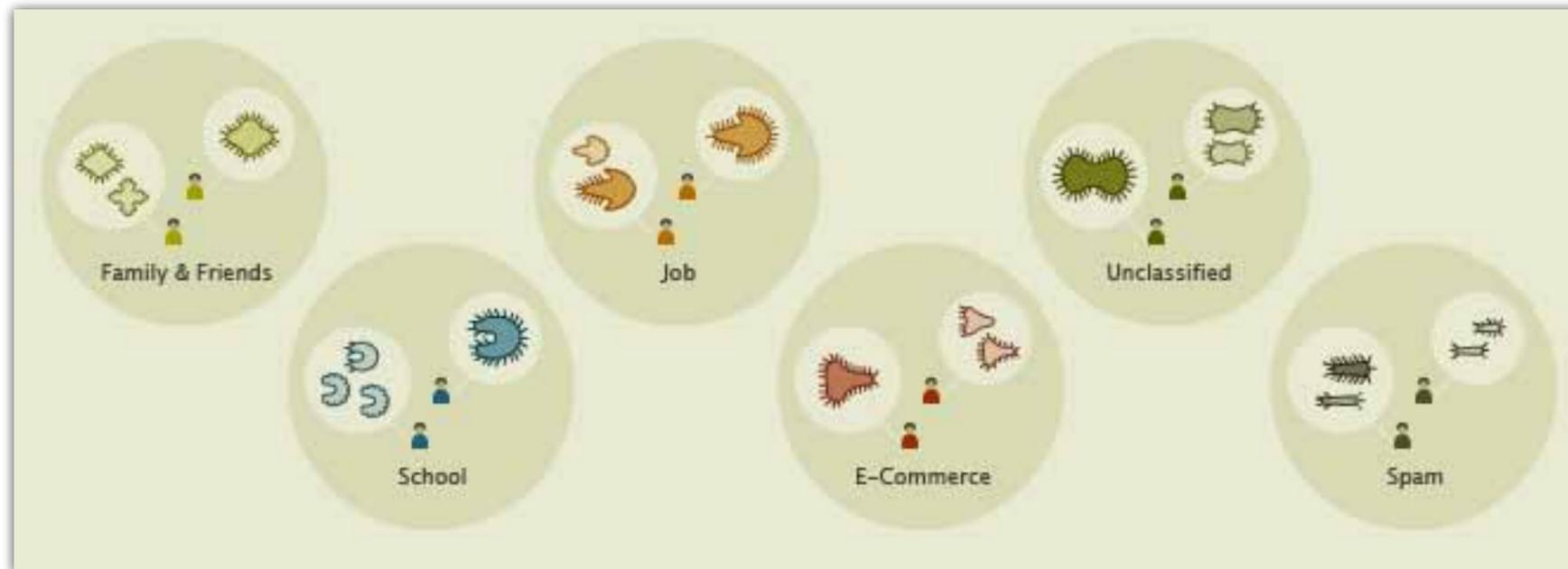
Zoom-in and filter by specifying

Details on demand

# Section 02: Projects

## Layers

Ben Shneidermans Mantra in Interactive Media combined with Normans Affordance research



This is an excellent theoretical work combined with a great example how the principle of Ben Shneidermans law of information structuring can be used to reduce the layer of complexity and combine it with the idea of affordances.

<http://carohorn.de/anymails/>

Anymails simplify access to emails.

Example: Family & Friends	new	.....	old		
unread <i>hairy, fast motion</i>					
read <i>less hair, medium motion</i>					
responded <i>hairless, very slow motion</i>					

# Section 02: Projects

## Layers

Affordances explained



Don Norman, a psychologist who writes researched affordances. Signs which trigger us to do a certain action.



Imitated natural light (left) for example makes us click on a button and identify a drawing as such in a digital environment.



Sometimes the mapping however doesn't work well, as in this example of a phone. We learned how to use it...but the design, which forces us to pick up and dial a number and wait for a call is not very natural but technically speaking the best way to do it at that time.



This on the other hand is a great example for affordance as it maps to naturals (open the door, going inside).

# Section 02: Projects

## Layers

Personification can be used to reduce complexity of systems, e.g. as a layer to reduce complex political systems or the IKEA Anna as a human face to a complex online catalogue.

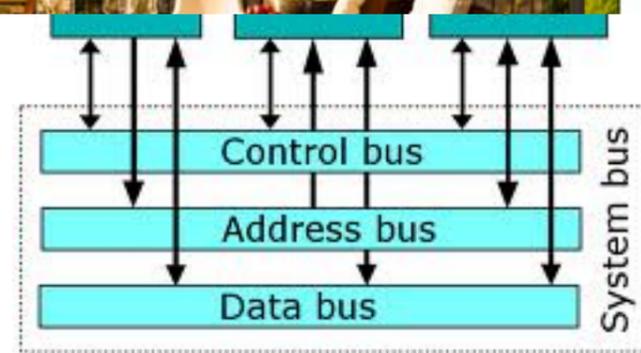
"In each of these cases we see something non-human as human" (Lakoff, Johnson, p.33).

This might as well explain why we sometimes show irrational behaviour as e.g. talking to our computer when it doesn't work. An entirely irrational behaviour as it is a machine, yet we make a person out of which we start talking to.

Ikea Anna as an Interface to a complex computer system



<http://www.ikea.com/gb/en/>

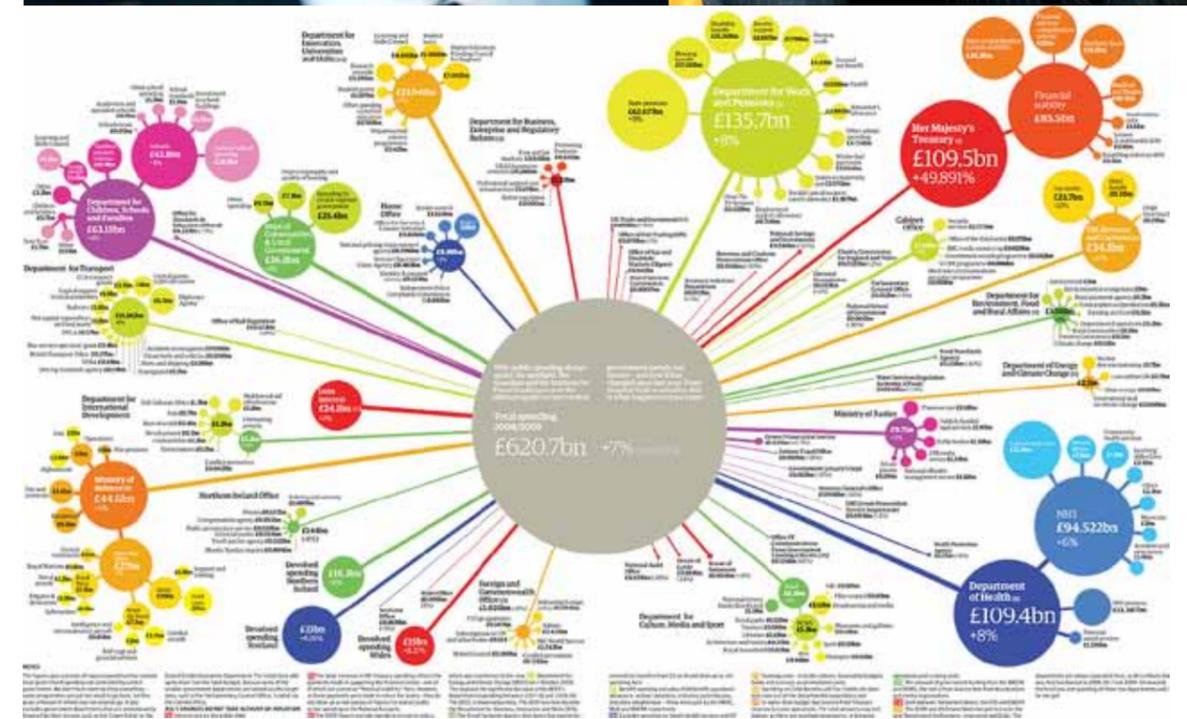


[https://upload.wikimedia.org/wikipedia/commons/6/68/Computer\\_system\\_bus.svg](https://upload.wikimedia.org/wikipedia/commons/6/68/Computer_system_bus.svg)

Berlusconi and Merkel as Interfaces to two nations.

[http://www.goolfm.net/wp-content/uploads/2012/10/Silvio-Berlusconi-007\\_1200x720.jpg](http://www.goolfm.net/wp-content/uploads/2012/10/Silvio-Berlusconi-007_1200x720.jpg)

<http://awesomepeople.com.ua/wp-content/uploads/2013/01/Angela-Merkel.jpg>



# Section 02: Projects

## Layers



And it even works for complex concepts like cities. Cities are interpreted differently by everybody. Especially people from inside describe cities completely differently as people from outside or visitors. Even though we don't always create persons out of cities we still consider them as entities. Creating entities is a very important concept, according to Lakoff and Johnson, as they describe in their book *Metaphors we live by*, to share experiences.

*"Once, we identify our experiences as entities or substances, we can refer to them, categorize them, group them, and quantify them—and by this means, reason about them."  
(Lakoff, Johnson: p.25).*

# Section 02: Projects

## Layers



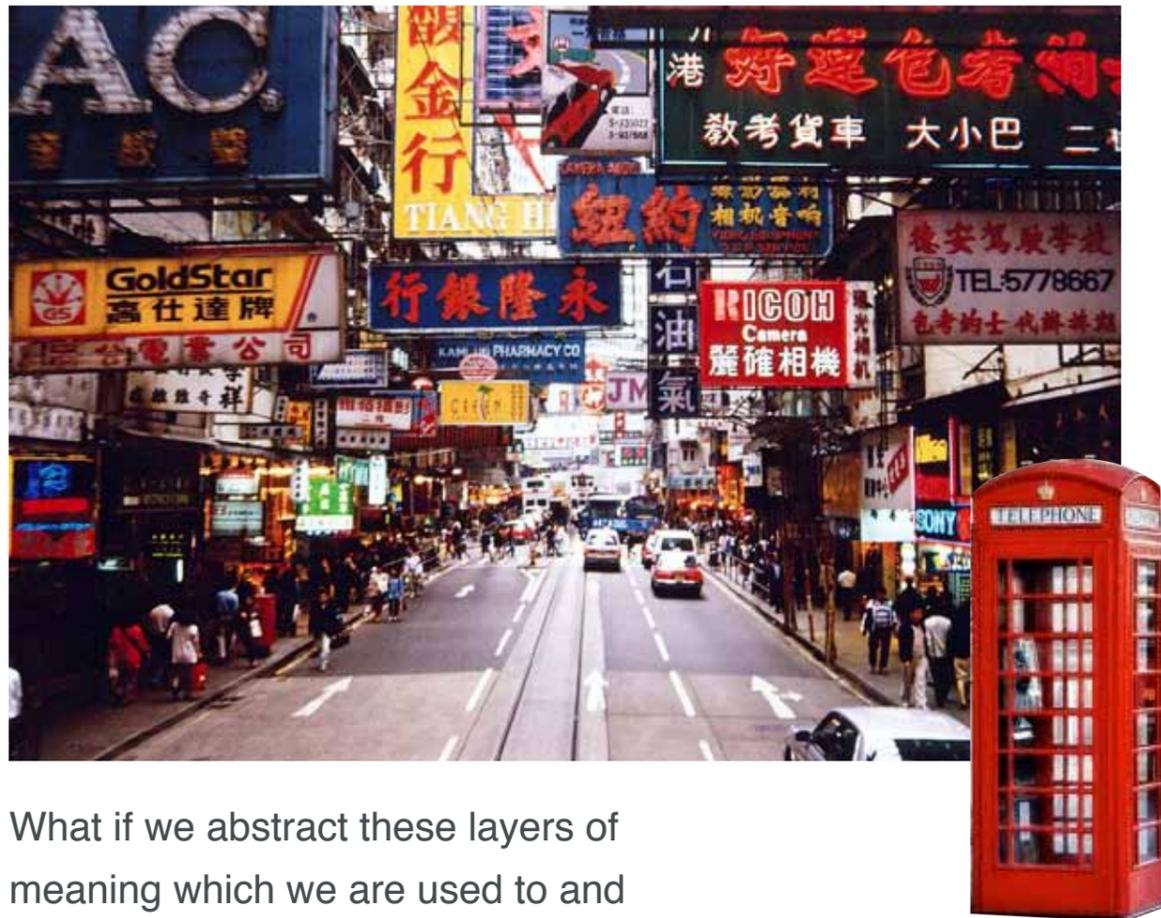
My personal ontological methaphor for London is that I describe the city like an Ipad.. It is modern and every little corner seems to have been designed by someone. The buses, the tube, the policemen, all the churches, the traffic lights, the mail boxes, the telephone boxes, interrail signs....



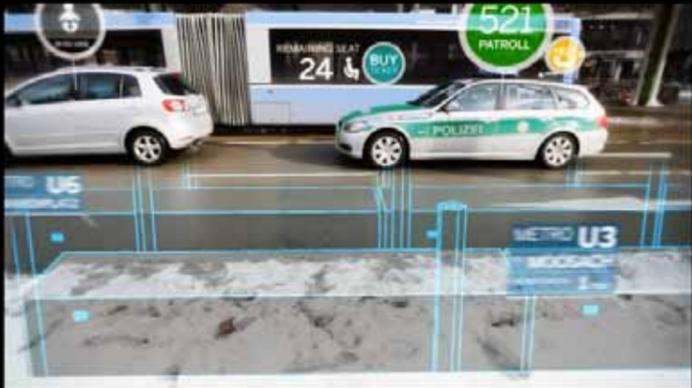
Exhibition on signs which define the british national identiy.

# Section 02: Projects

## Layers



What if we abstract these layers of meaning which we are used to and put them in new contexts?



**Sketches of the Meta-City**  
from frog PLN 8 months ago NOT REFINED

The modern city is becoming a pointer system, the new URL, for tomorrow's hybrid digital physical environment. Explosive innovation and adoption of computing, mobile devices, and rich sources of data are changing the cities in which we live, work, and play. A digital landscape overlays our physical world and is expanding to offer over-richer experiences that complement, and in emerging cases, replace the physical experience.

[Follow](#) [Add to...](#) [Stats](#) [Switch to HTML5 Player](#)

# Section 02: Projects

## Layers



What if I could create perceptions and share them with my friends?

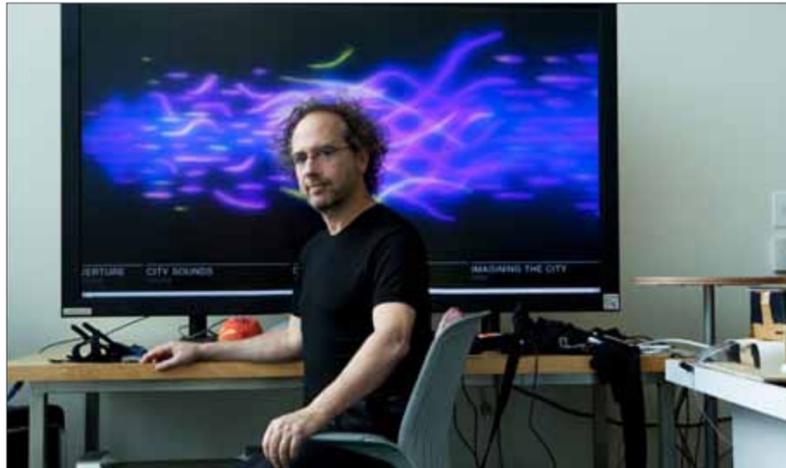


Could we in the end communicate simply by words and emotions, layered over our reality?

# Section 02: Projects

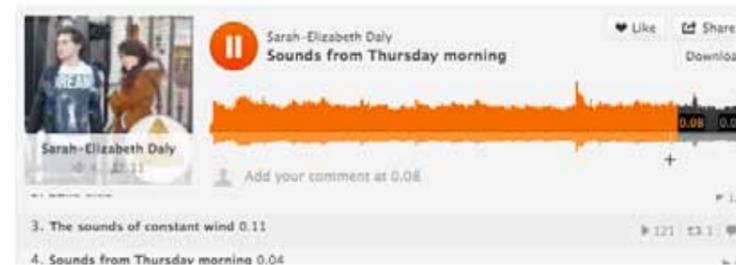
## Layers

### SHARING LAYERS OF PERCEPTION

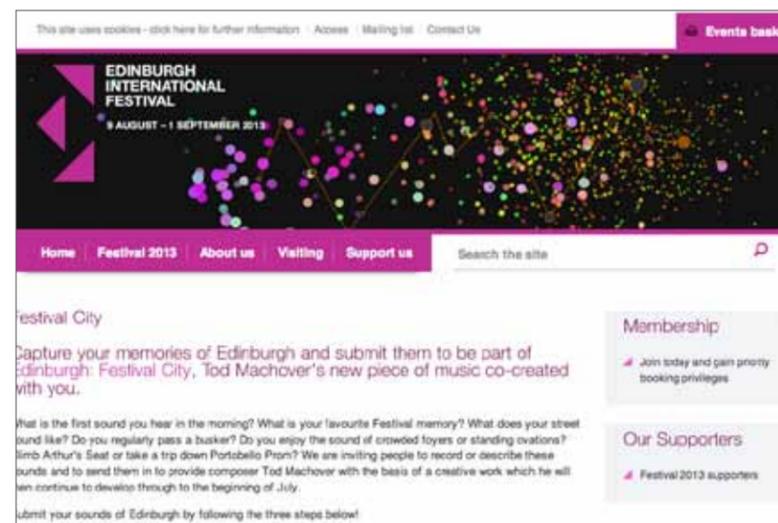


<http://www.guardian.co.uk/music/2013/mar/19/tod-machover-how-to-crowdsource-symphony>

In an article of the guardian Machov, who works at the MIT researches on a crowd sourced symphony and is inspired by the question if it is "possible to hear music through another person's ears" (Machov, Website: ...)? For this project he will collect sounds from the Edingbourg Festival and



*"Imagine listening to a piece you know well through the perception of another person. If you did it the right way, it would be one of the most powerful experiences you could have of artificial empathy."*



# Section 02: Projects

## Layers

RELIVE THE OLD SOHO



Image source: [http://www.tagesschau.de/videoblog/london\\_calling/soho100.html](http://www.tagesschau.de/videoblog/london_calling/soho100.html)  
(you can find also a video ,in german, about the app on this site)

A more traditional but yet still very interesting example to transform perceptions from the past in today's context is the Soho Story application. A location based service which lets you walk through London Soho while media is played and displayed according to your location. Basically a free multimedia travel guide.

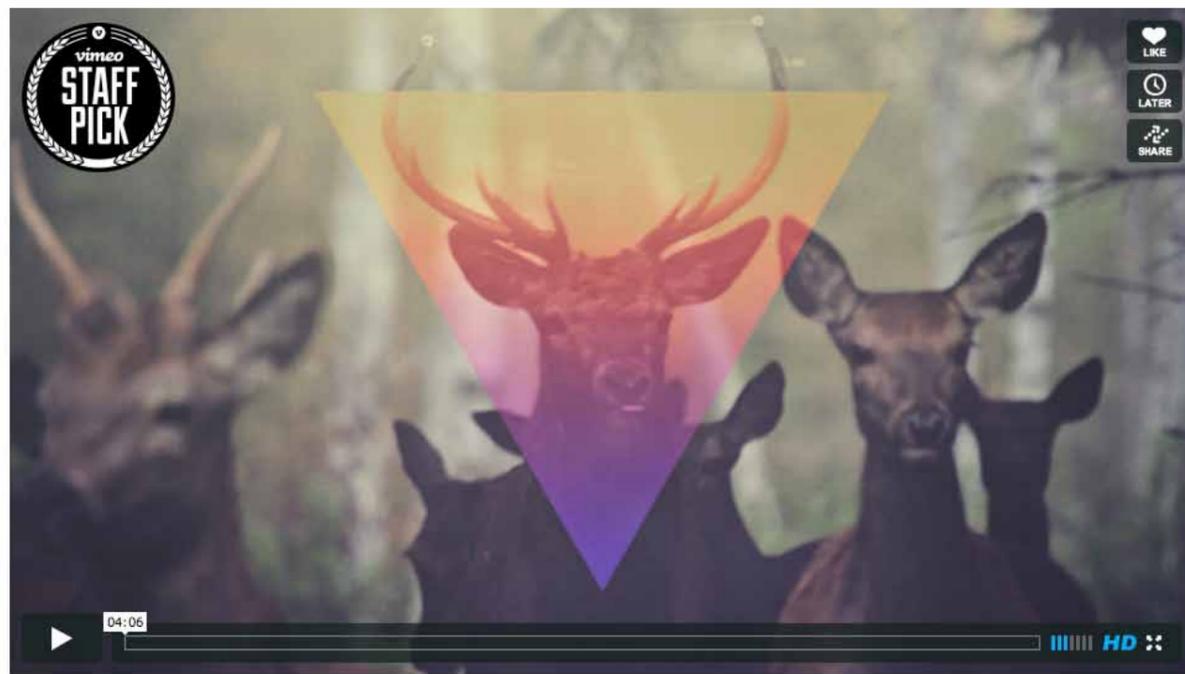


# Section 02: Projects

## Layers



DISSONANT LAYERS OF MEANING  
CREATING INTERESTING TENSION



*"(...) based on the idea of humanizing deer, using their pure majestic expression accompanied by human perceptions of nature in the form of infographics and statistics."*

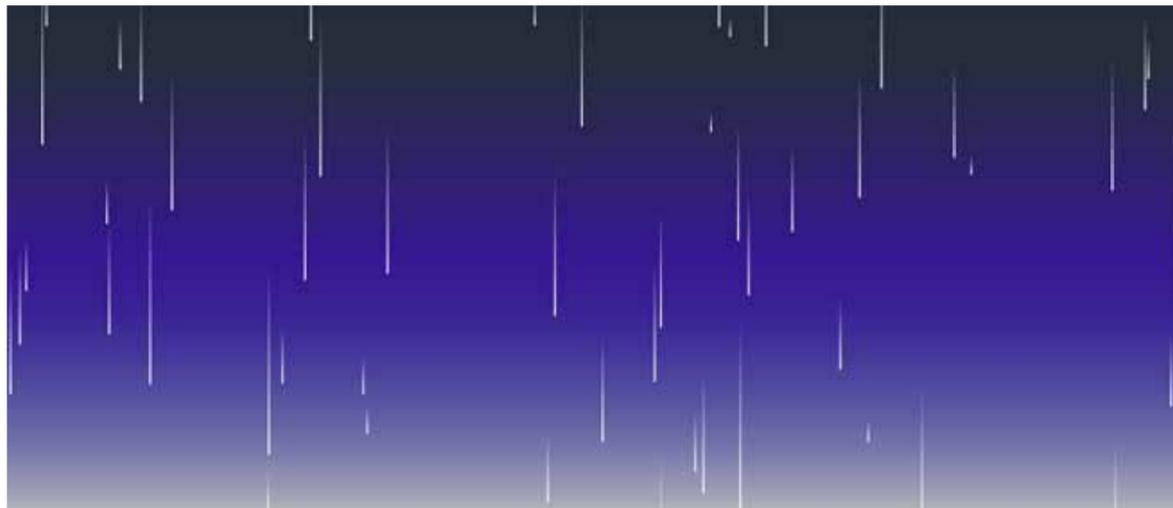
(Finke, Manger, 2012. p:36)

Video available on <http://vimeo.com/20800127>

# Section 02: Projects

## Layers

Metaphors we live by...



Screenshots taken from <http://www.lookingatsomething.com>  
move the mouse up: good wheather, down: bad wheather

As already mentioned we can understand metaphors as complexity reducing layers. But they can also be incorporated in the interaction as such.

Lakoff for example talks in his book about the up and down metaphor which in our world is associated as up being good and down being bad.

The hypothesis of my work is that some metaphors can be used to communicate perceptions as they map experiences in a space which we all humans on this planet have in common.

But I also want to show also that in this there lies a danger as not every culture judges a space in the same way.

While up is good and down is bad in western cultures it might be the other way around in asian or african cultures.

The website <http://www.lookingatsomething.com> has implemented this metaphor in its key interaction: Good wheather: up, bad wheather: down.

# Section 02: Projects

## Layers



### RESEARCH

Under this aspect I want to analyze the initial research I did on facebook and look at the metaphors I got through the eyes of Lakoff and Johnson.

London is...

...the world in a city

London as a container from which the diversity of world is coming out.

...die mudda von GB

(German="Mother of Great Britian")

London as a container from which the british Nation has evolved.

"Human purposes typically require us to impose artificial boundaries that make physical phenomena discrete just as we are: entities bounded by a surface" (Lakoff, Johnson, 1980, p.25)

...The little sister of Paris

"more is up, less is down" (Lakoff, Johnson, P.15).

London is little and Paris is more, taller...being the older one but both having the same roots, coming out of the same container, same family, same entity.

... a Beehive

All Londoners live again (see citation above) in one container, the beehive. With a clear hierarchy with people being up (is good) and people being down (is bad). Some of these people have to leave the tribe sometimes (being out/ bad) and some can stay inside (being in/ good).

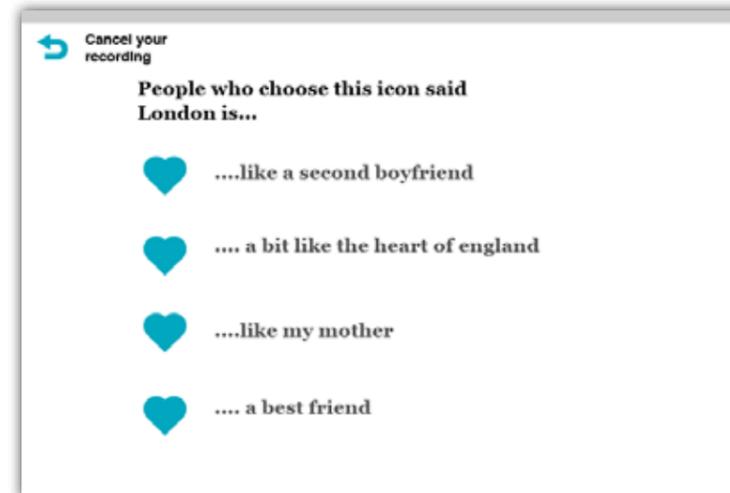
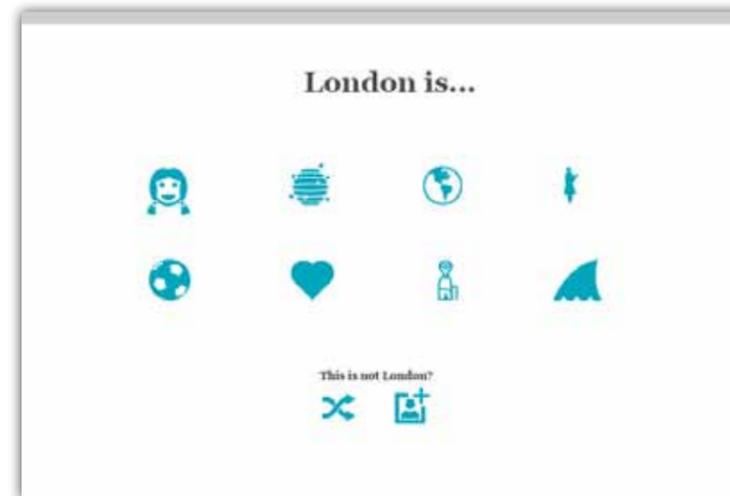
# Section 02: Projects

## Layers

### RESEARCH

Simmel speaks in his book "The Metropolis and the Mental Life" about the demanding character of a city and as a consequence we stop feeling but using our most flexible layer of perception, the rational brain as it doesn't require as much intensive change of inner state to react on the environment. He thinks that this is *"...the resistance of the individual to being levelled, swallowed up in the social technological mechanism"*. (Simmel, 2012, p:84)

Following Simmel's thought here consequently we would assume that people living in London would have a very different London image as visitors...and exchanging this image might even be impossible as the inner state of these two mindsets is so different. Metaphors could in this case be a way to map a person's London image into a visitor's perception.



Check out the prototype  
[Hand\\_In/Artefacts/02\\_Layers/Prototypes/Flash/London.swf](Hand_In/Artefacts/02_Layers/Prototypes/Flash/London.swf)

# Section 02: Projects

## Layers

### RESEARCH

A data base on emotions communicated via gesture and language and sound.

An emotion mode can be layered over videos and change the percpetion.

**The Untranslatable Words Database**  
Project Homepage

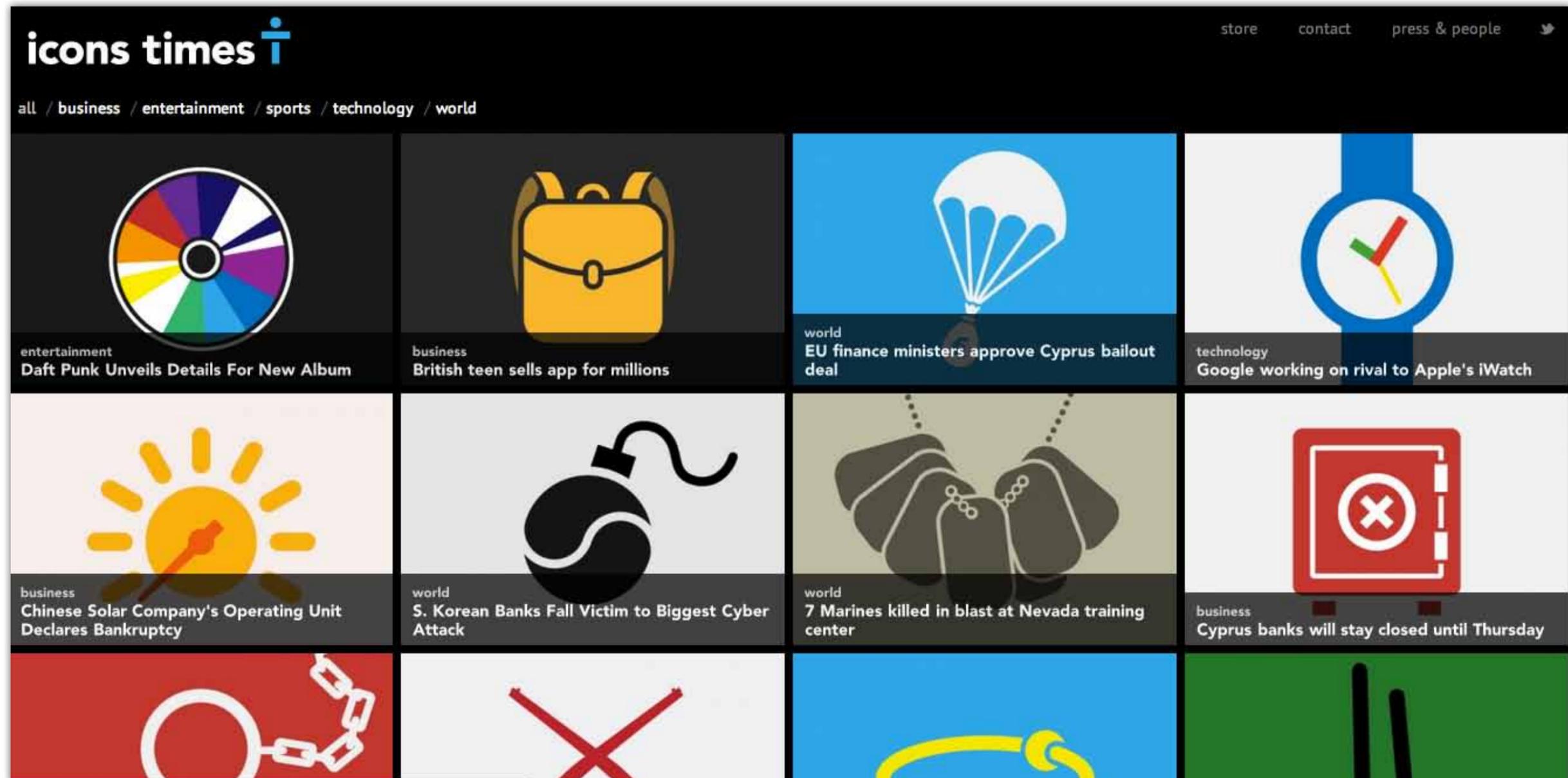
Lygge Language Mode | **Emotion Mode**

- No Video Data
- Video Data Available

Word	Language	Video Data Available	Description
Hiraeth	(Welsh)	No	Homesickness tinged with grief or sadness over the lost or departed and the earnest desire for the Wales of the past.
Tocka	(Russian)	Yes	Great spiritual anguish, often without any specific cause. Ache of soul, a longing with nothing to long for.
豁達	(Chinese)	No	A rather relaxed emotion and attitude towards everything, accept all the facts instead of worrying about it.
忐忑	(Chinese)	Yes	A mixture of uneasiness and worry, as if you can feel your own heart beat.
糾結	(Chinese)	Yes	Worried, feeling uneasy, don't know what to do.
Gezelligheid	(Dutch)	Yes	Comfort and coziness of being at home, with friends, with loved ones, or general togetherness.
Hygge	(Danish)	Yes	Comfort and coziness. The feeling of enjoying food and drink with friends and family.
Saudade	(Portuguese)	No	A somewhat melancholic feeling of incompleteness. Longing for something that might never return. Yearning.
אני חולה עליך	(Hebrew)	Yes	Literally means "I'm sick on you". It describes the feeling of obsession with someone or something.
כואב לי הלב	(Hebrew)	Yes	Identifying other's suffering so much that the heart hurts.
心疼	(Chinese)	No	The feeling somewhere between sympathy and empathy, to feel the suffering of loved ones
撒嬌	(Chinese)	Yes	A way of play cute or sweetness to closed ones to get warm, loving attention.
加油	(Chinese)	Yes	A form of encouragement as if you are fighting along with the person, backing them up.
Lykke	(Danish)	Yes	The Danish Happiness, ultimate happiness, the perfect state of happiness. the feeling of everything is perfect in life.

# Section 02: Projects

## Layers



### RESEARCH

News, tagged with items. A summarizing layer of meaning on top of news. Do we really understand what is behind each icon? Is everybody having the same concept of

a bomb, for example? A nice, beautiful but also risky project which without text wouldn't work. In everyday software, when we have the chance to learn an icon, we can leave the

text away. In this context however I believe the icons turned rather into decoratio

# Section 03: References

## Books, E-Books, Websites, etc...

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