

Visualisation Of Scientific Data At The Example Of PM10 Within An Interactive Video Installation

Anna Keune, June 2007

Media Production . Bachelor Project

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project context

- . air hygiene is a current affair: the quality of air has large impact on people's state of health, mind, and mood
- . visual research shows that accurate yet exciting visualisations are scarce in scientific data visualisation
- . ambient information translation may let people identify with information



you**ib**

motivation: fresh air for everyone

- . the “luftreinhalteplan rhein-main 2006/2007” states
“people should be informed about high pm10 values”
- . visual design to create generate awareness to the topic of pm10
- . to offer ambient and real time information access



you**ib**

project description: i breathe what you breathe

- . videos of a woman, dressed almost completely in white is projected against a white canvas. her behaviour changes based on the latest PM10 measurements taken by the city of darmstadt
- . when noone is standing in front of the projection, looking her way a video of the woman sleeping is projected. she awakes when someone glances at her.



visualised information

- . the visualisation illustrates the subjective effects of the current pm10 measurement on a person's body and mood
- . the woman enacts the amount of impact that the measurements could have on her, acting as translator of values
- . the latest information from the measuring station closest to the object is visualised



ambient information visualisation

- . a: visualizing the invisible, the effects of PM10 are not immediately noticable
- . b: visualizing the measurements in a way that only initiated people may be able to read.
- . c: the technology moves into the background



you**ib**

eight categories | three metaphors

- . the exposure bandwidth is depicted within different metaphorical video sequences
- . the value range is split into eight categories



you**ib**

eight categories | three analogies

category	rock	fabric	mood
1 st 0-5µg/m ³	1.mov	2.mov	3.mov
2 nd 5-10µg/m ³	1.mov	2.mov	3.mov
3 rd 10-15µg/m ³	1.mov	2.mov	3.mov
4 th 15-20µg/m ³	1.mov	2.mov	3.mov
5 th 20-30µg/m ³	1.mov	2.mov	3.mov
6 th 30-40µg/m ³	1.mov	2.mov	3.mov
7 th 40-50µg/m ³	1.mov	2.mov	3.mov
8 th + 50µg/m ³	1.mov	2.mov	3.mov



you**ib**

analogy: rock

- different sized rocks represents the weight that the amount of pm10 in the air puts onto the woman's body.



analogy: fabric

- . the change of fabric represents the different distress that is put onto the body when breathing the according amount of pm10



you b

analogy: mood

- . the character is going from a clearly positive emotion through the grey areas up to a tired distress



reading the ambient display

- . people can decide when to check the information
- . the information visualization differentiates form the environment through simple colours
- . the visualization blends into the surrounding because visual elements of the surroundings, such as size of projected person, people's movements were build on



sleeping mode

- . when someone is looking at the projection longer than two seconds the woman awakes and acts according to the measurement
- . when a film has finished playing and no one is looking at the projection she is going back to sleep



you**ib**

character

- . innocent, playful, and healthy behaving woman who may easily be trusted and cared for
- . an ordinary woman who anyone could be



you**ib**

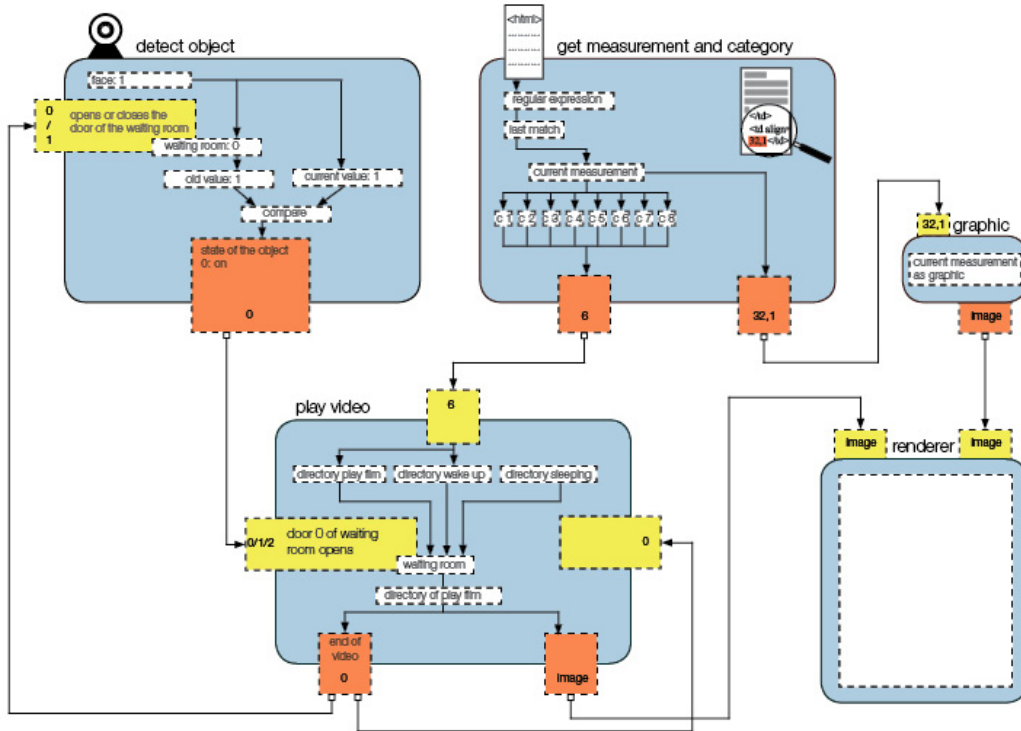
non-space

- . the uniform colour code establishes a non-space
- . the stress is layed on the subjective emotional distress of the woman
- . the installation may be applied on international premises



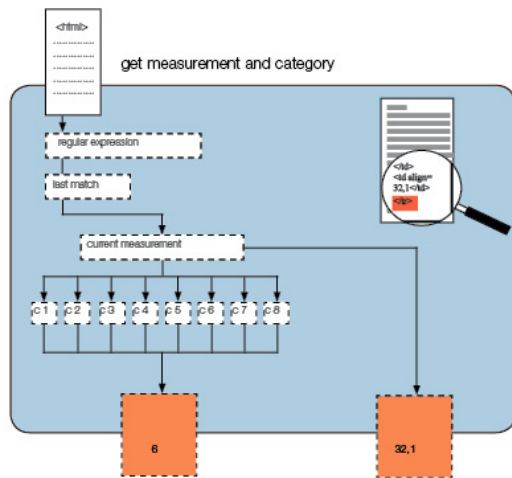
youjb

programming: linking of the modules

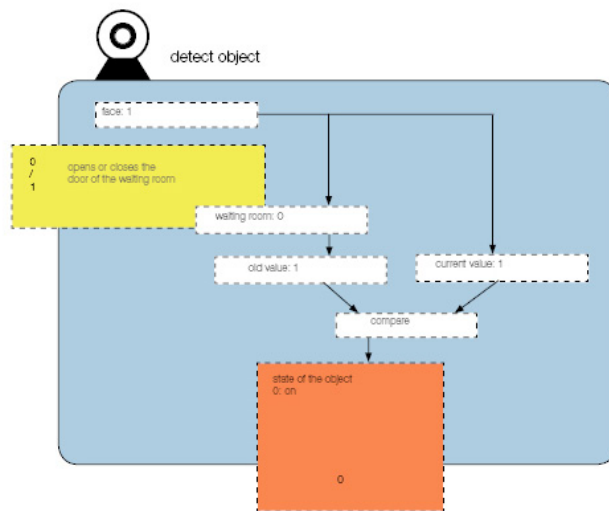


you b

get number and category

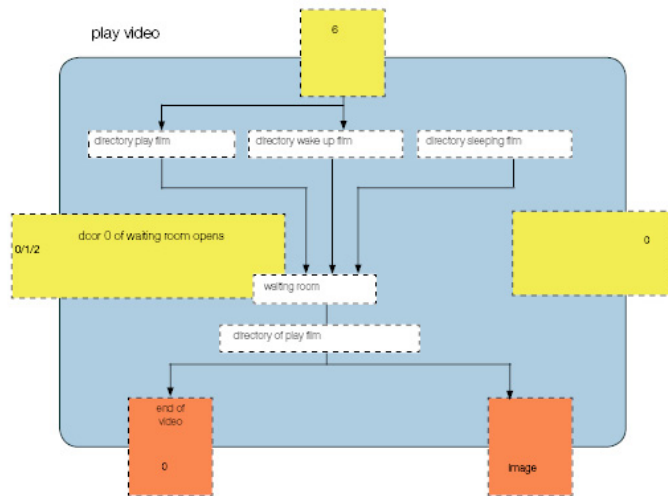


detect object



you**ib**

play video



you**b**

what you breathe

. thank you for your attention



you**ib**