TanyA

Touch ANYthing Appliance

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Christian Rauschen   **Sabrina Kowarsch**   **Hanna Porcika**

5 February 2014

RWTH Aachen

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Our Team

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Matthias

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Our product: TanyA

1. Who are the users?
   - → mainly female
   - → aged 30 to about 60
   - → no time to waste on buying clothes

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Our product: TanyA

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2. What do they want to do with the system?
   - → access haptic information of textiles
   - → virtual wardrobe

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Our product: TanyA

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3. What is the context?
   - → online shopping
   - → shopping in stores

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Brainstorming

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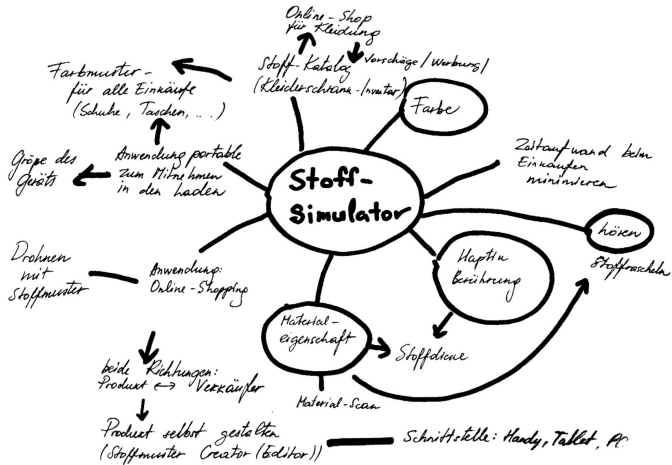
Interviews

- all interviewees buy at least a part of their clothing on the internet
  - → no temporal limits like opening hours
- difference between descriptions and photographs of offered products and the real things
  - → colour
  - → size
  - → cut
- most important senses for choosing clothes
  - → sight
  - → touch

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Persona

name	Tanja
gender	female
age	35
lives	in Mönchengladbach
family	two kids
work	personnel department
other	ex-husband pays for the children's keep: that's why Tanja has some money to spend for clothing

has a smartphone

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Storyboard

Buying clothes online **without** the Textile Simulator

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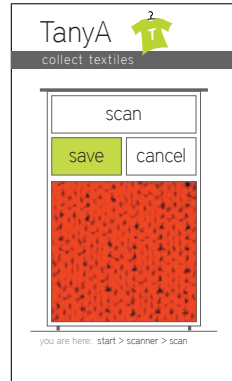
Storyboard

Buying clothes online **with** the Textile Simulator

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Hardware Prototype

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Software Prototype: start

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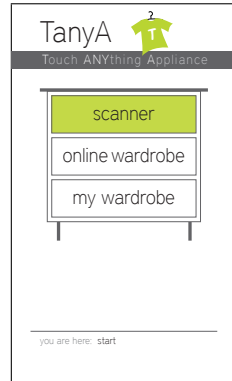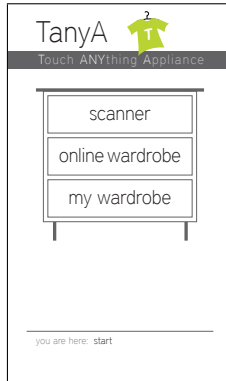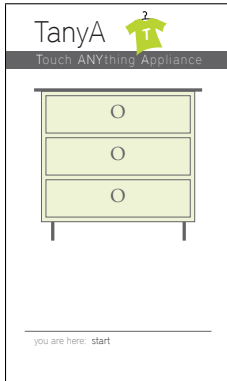
Software Prototype: scanner

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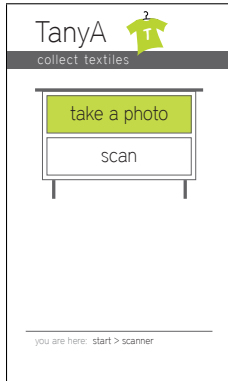
Software Prototype: simulator

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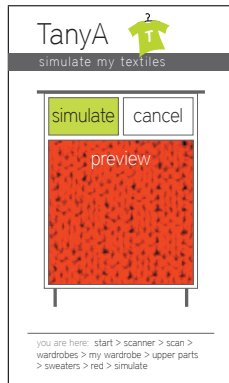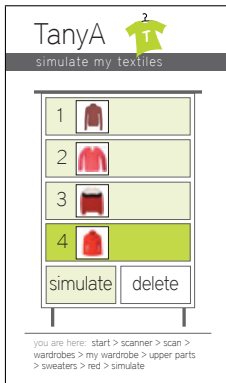
Storyboard Video Version

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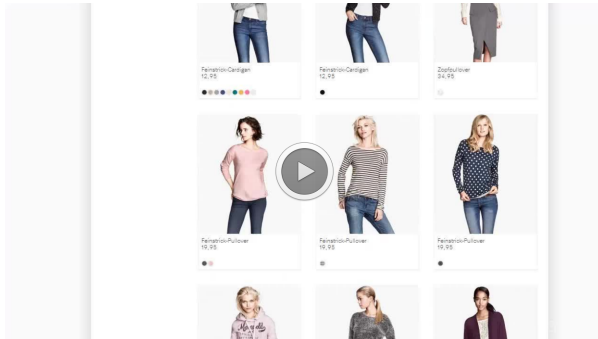
Electro-tactile device for texture simulation

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Abstract — **The research goal is material texture simulation by means of electro-tactile stimuli. This paper presents a novel tactile display, the procedure adopted to generate the stimulating signals, and the experimental testing. The tactile system elaborates data from scans of real material samples and generates electrical stimuli to reproduce roughness and texture coarseness sensations. It also adds a coherent sound feedback to improve the realism of the simulation. The research defines an experimental protocol to carry out system calibration and tests with users in order to validate the proposed tactile system as a new tool for material simulation. Experimentations have been carried out to measure the users' response to different material classes (wood, paper, rubber, textile fabric). Experimental results concern how good the adopted simulation approach is and the**

The present research work aims is research gap by developing an innovative tactile display, implementing a novel stimulation strategy to efficiently reproduce tactile sensing and material texture and finally by assessing user response to the perceived stimuli in terms of signals discrimination and recognition. The proposed simulation strategy exploits a selective stimulation approach and generates electro-tactile stimuli on the basis of real materials characteristics. Users can appreciate the simulation by touching the developed tactile pad and feeling the provided signals. The main proposed challenge regards the nature of the stimulating signals, which derive from real material properties processing and reactive frequency thresholds that are selected according to the response

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