

User-centred design

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**Core problem: how to create
usable affective interaction
applications?**

- > Design-process - methods?
 - > Scientific result: practical user-study methods providing input to design
- > Evaluation-process - do they really work?
 - > Scientific result: insights/knowledge of what works

For both design and evaluation

Two levels:

- > Sending/receiving the intended signals
- > Affective parts contribute to value of product



Value of application?

- > Recognising users' emotional states
 - > To compute relevant response
 - > To send info to surveillance system
 - > To create compelling games
 - > ...
- > Design for interactive emotional experience
 - > To sell more products (e-commerce)
 - > To enhance learning
 - > To create loyal relationship
 - > ...
- > Emotional expressions as a medium
 - > To express yourself, be creative
 - > To communicate with others
 - > To create art
 - > ...

Unique value of affect

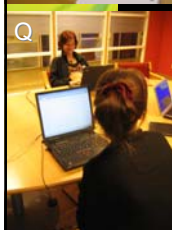
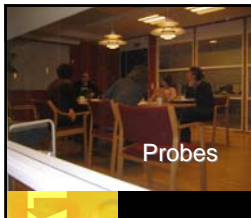
- > What is it?
- > How do we capture it in studies?
- > How do we know when we are breaking the illusion and thus we need to fix the system?

Produced by WP9: PHIPs

- > **Methods:**
 - > Sensual Evaluation Instrument (SEI)
 - > In Situ Informants
 - > WoZ-environment for ECAs
 - > Modified think-aloud method
 - > Special issue of IJHCS on Evaluating Affective Interfaces
 - > ..
- > **Evaluations:**
 - > In Situ Informants evaluation of eMoto
 - > Evaluation of Affective Diary
 - > Evaluation of interactive narrative
 - > Evaluation of ECAs
 - > ...

WP9: Objects of study

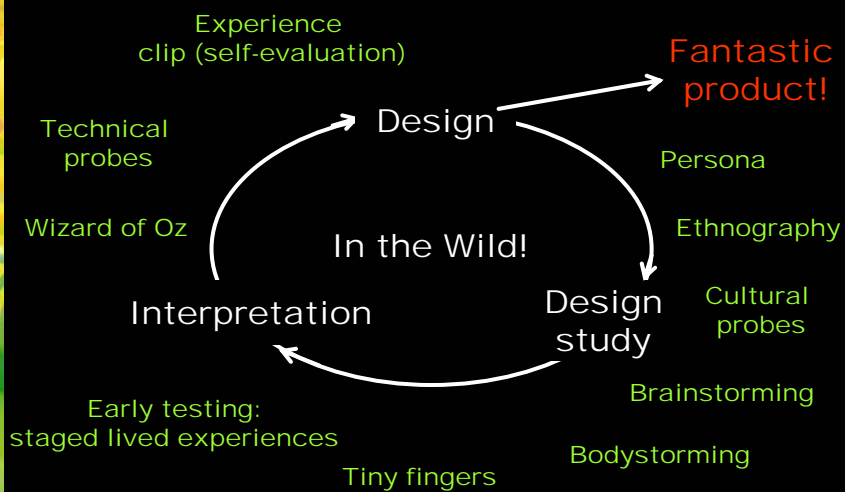
- > INESC I-Shadows
- > Paris 8 Greta
- > Imperial's rumour-based agent society
- > KTH interactive narrative scenario
- > KTH eMoto-system for affective SMS through gestures
- > KTH Affective Diary
- > .. and possibly others



Who did what last year?

Partner	Task	PMS
KTH	Study of eMoto Sensual method Bad-mouthing study CHI workshop	20
Univ of Bari	Modified WoZ Study of ECAs	7.5
OFAI	Modified WoZ	4
Imperial	Modified Think-aloud, meeting in Stockholm	0.5
Cantoche	Applying existing methods Working with user-centred methods	4
Paris 8	User-centred approach to ECAs Bad-mouthing study	3.5
T-systems	Focus group experiences Experiences of emotional phone-based systems, criteria	0.7
QUB	Logging method, meeting in Stockholm	0.2

Methods



Persona (Cooper 1999)

Persona and anti-persona



Sandra is a confident 29 year old woman who likes to spend time with her friends and family. She works as a trainee at a city planning office in Stockholm. Sandra does not care about how things work technically, but she likes new cool technological features and she is very happy with her new mobile phone that has a camera and MMS functionality.

Ethnography (quick and dirty)



Cultural probe (Gaver et al. 1999)



Bodystorming (Oulasvirta et al 2003)



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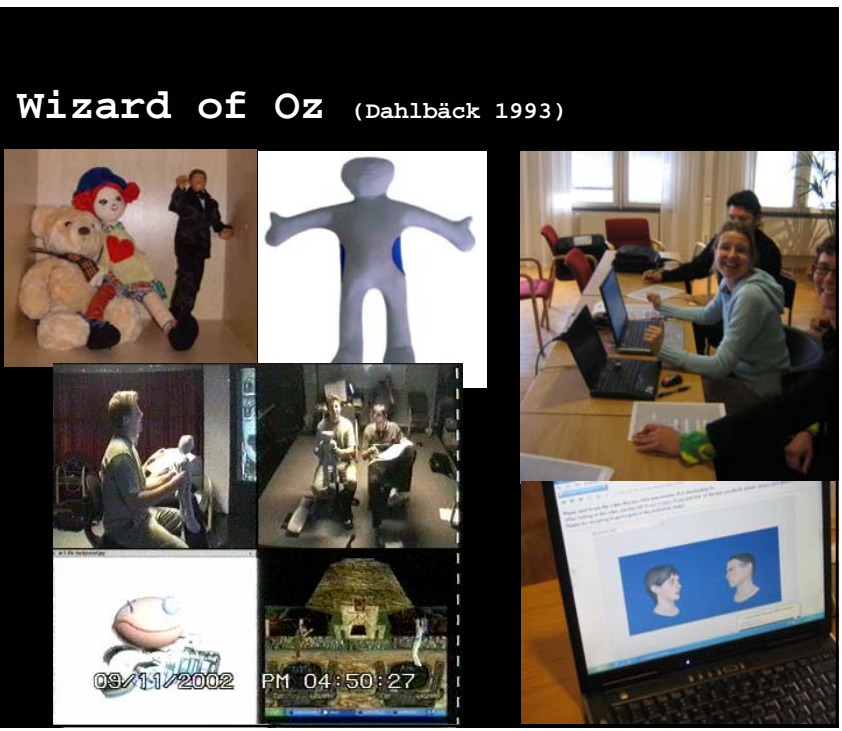
Tiny fingers (Rettig, 1994)

All in ONE DAY!



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Wizard of Oz (Dahlbäck 1993)

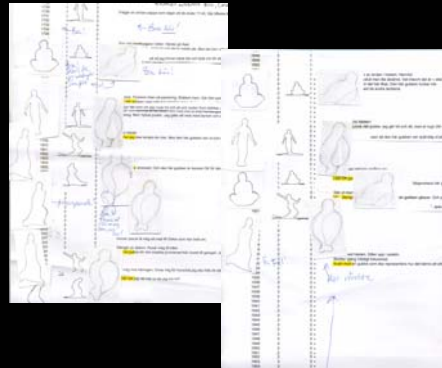
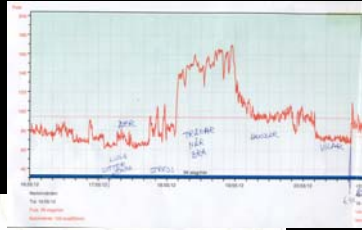


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Staged lived experiences (Iaccuci and Kuutti)

From Affective Diary:

- > Carrying sensors
- > Getting feedback



Experience clip (self evaluation (Isomursu, 2004))



In Situ Informations evaluation

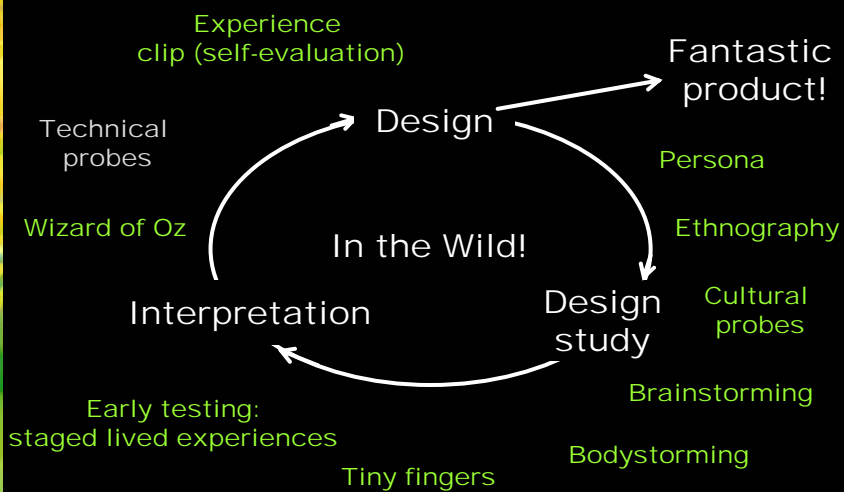


To subjects



To partner

Methods



WP9: The real controversies

- > Not qualitative vs quantitative
- > Not scientific vs design-/arty-oriented

WP9: The real controversies

How to do research:

- > theory-driven
- > application-, context-, social and bodily practice-driven

IN THE WILD!

WP9: The real controversies

Emotion theory and theory of interaction:

> informational view:

emotion as an internal, individual, and delineable phenomenon, which operates in concert with and in the context of traditional cognitive behavior

> interactional view:

emotions as culturally grounded, dynamically experienced, and to some degree constructed in action and interaction



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