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WP 9: Users and Usability

A story by Kristina Höök, KTH
told and modified by Ana Paiva, INESC-ID

Plenary meeting, 24th–27th May 2005, Newcastle
WP9: Challenge

Usability traditionally focuses on goals such as effectiveness, efficiency, safety, utility, learnability, and memorability.

Affective interaction focus on user experience goals – subjective qualities such as being fun, rewarding, motivating, satisfying, enjoyable, and helpful.
WP9: Challenge

How do we design for user experiences – and make sure that it works?

“Rather than experience as something to be poured into passive users, we argue that users actively and individually construct meaningful human experiences around technology. They do so through a complex process of interpretation, in which users make sense of the system in the full context of their everyday experience.”

(Sengers et al)
WP9: Criteria

Two levels:

- Sending/receiving the intended signals

- Affective parts contribute to *value* of product

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WP9: 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
  - To provide enjoyable experiences
  - ...

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WP9: Objectives

 Ends:
  - Determining qualities and criteria that demark emotional systems as usable and evoking the desired experiences for users

 Means:
  - Forging process—design methods, project goals and evaluation strategies — that will steer a project towards producing a ‘successful’ affective application
Design – study – redesign

Evaluation

In the Wild!

Design

Interpretation

Design study
Design – study – redesign
A Framework for Design and Evaluation of Usable Affective Interaction Applications:

1. Criteria for usable affective interaction systems
2. Evaluation metrics for criteria
3. Existing user-centred methods for design and evaluation
4. New methods for design and evaluation
WP9: Criteria

Main problem:
do users get involved in the way the designer intended?

Involvement can be:
- Empathy
- Friendship
- Physical, bodily involvement
- Flow
- “Neutral”, contentment
- Gameplay
- …
WP9: Practical design-methods

1. Modified WoZ-method for ECAs (Bari, OFAI)
2. Modified WoZ-method for physically grounded affective interactions combined with storyboards (INESC-ID)
3. Modified Think-aloud method (Imperial)
4. New “sensual” feedback method based on colours and shapes (KTH)
5. Combination of the above (all)

In addition:

hammerhead Try out set of user-centred methods for brainstorming, early evaluation, focus groups, paper prototyping, … (T-systems)
WP9: Modified WoZ-method for ECAs

Univ of Bari

OFAI

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**WP9:** Modified WoZ-method for physically grounded affective interactions

**Idea**

Design characters

**Design Study:** in the wild

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WP9: How to get relevant & quick feedback?

- Questionnaires?
- Talk-aloud?
- …?

**Ratings Key:**
- Excellent
- Very Good
- Good
- Below Average
- Don’t Bother

0: No Hurt
1: Hurts Little Bit
2: Hurts Little More
3: Hurts Even More
4: Hurts Whole Lot
5: Hurts Worst

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WP9: Sensual method?
(Affective evaluation instrument)
WP9: Objects of study

- INESC I-Shadows
- Paris 8 Greta Music
- Imperial’s rumour-based agent society
- KTH interactive narrative scenario
- KTH eMoto-system for affective SMS through gestures
- T-systems emotional phone-based system
- .. and possibly others

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### WP9: Who did what?

<table>
<thead>
<tr>
<th>Partner</th>
<th>Task</th>
<th>PMs</th>
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<tbody>
<tr>
<td>KTH</td>
<td>Study of eMoto&lt;br&gt;Sensual method&lt;br&gt;Bad-mouthing study&lt;br&gt;CHI workshop</td>
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<td>Modified Think-aloud, meeting in Stockholm</td>
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<td>Paris 8</td>
<td>User-centred approach to ECAs&lt;br&gt;Bad-mouthing study</td>
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<td>T-systems</td>
<td>Focus group experiences&lt;br&gt;Experiences of emotional phone-based systems, criteria</td>
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<td>Logging method, meeting in Stockholm</td>
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WP9: Reaching out

Several one-to-one meetings in Stockholm, Vienna, planned brainstorming together (probably 3 days in August), etc.

Organised workshop at ACM SIGCHI conference Computer-Human Interaction, CHI’2005:
http://www.sics.se/~kia/evaluating_affective_interfaces/

Upcoming deliverable in May 2005 – draft on portal!

Workshop January 2006 (?)

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WP9: collaboration

- "Objects” of study (WP6, WP8)
- Theoretical underpinnings for evaluation methods (especially in capturing user experience while interacting) (WP3)
- An understanding of how DB can be used in the design process – preferably all the way through the process (WP5)
- Labelling schemes: for evaluation process but also for tools supporting methods (WP5, WP6)
- Criteria and understanding of what works (WP4, WP6, WP8)
WP9: Problems

- User studies are expensive: scarce resources
- Clash between different views:
  - User-centred, design-oriented perspective
  - Scientific, evaluation-oriented, theoretically-driven perspective
- First WS late in project
- Ambitions vs realism