TEASING APART AND PIECING TOGETHER: TOWARDS UNDERSTANDING WEB-BASED INTERACTIONS

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AGENDA

- Motivation
- What TAPT is
- What TAPT looks like
- Experimental results
- Future work
Why TAPT?

- Goal: broader access to social networking sites (SNS)
- SNS provide fun and emotional support
- What about offline people?
- Re-provide SNS with familiar technologies (TVs) or accessible technologies (digital photo frames)
- Technologically fine
- What about subjective, emotional aspects? How do we understand and re-provide experience?
WHAT IS TAPT?

- Teasing Apart, Piecing Together (TAPT): a method to understand experiences and translate them into new contexts
- It makes explicit the process of re-providing experience
HOW DOES IT WORK?

- TAPT makes explicit the process of re-providing experience
  1) **Teasing Apart**: understand the experience
     • analyse the experience on various levels
     • design and experiential aspects
  2) ‘Piecing Together’: generate ideas
     • a creative tool: take the output of ‘Teasing Apart’ to re-provide it in a new context
     • brainstorming, building scenarios, checking
What is it for?

- **Understanding**
  - Teasing Apart phase: physical or digital, from microblogging to picnics to wikis

- **Designing**
  - Rebuilding any of the above in a new context

- **Evaluating**
  - Check equivalence of experience: e.g. the ‘normal’ Twitter experience and that of a blind person
  - Check changes to a product have the desired effect
**TAPT Output (1)**

Redesigning a wiki for use in a museum

Numbers indicate the step of the process relevant to each text box.

<table>
<thead>
<tr>
<th>Experience (1)</th>
<th>Surface elements (2)</th>
<th>Experienced effects (3 &amp; 4)</th>
<th>Distilled experience (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>Text + picture</td>
<td>See text</td>
<td>Learning about</td>
</tr>
<tr>
<td></td>
<td>arrow links between</td>
<td>see pictures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>search and find</td>
<td>change log</td>
<td></td>
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<tr>
<td></td>
<td>pages, see</td>
<td>uncontrolled</td>
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<td>change log</td>
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<td>add and modify</td>
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<td>pages and</td>
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<td></td>
<td>remember how</td>
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<td></td>
<td>Wikipedia</td>
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</tbody>
</table>

Remember to note key effects!

A prompt to underline key effects

Each group using TAPT was given an A4 page for recording output.
Use of a physical form guided participants on how much detail is expected in each stage, encouraging clarity.

At the end of the process the form acts as a design artefact, recording observations and decisions, and providing a simple audit trail of the creative process.
IS IT ANY GOOD? (EXPERIMENT)

- We held a comparative evaluation
- 43 software engineers worked in small groups on design exercises.
- We included three approaches (TAPT, Scenarios, No Method) and three tasks (rebuilding picnicking, microblogging, wikis)
- Output: designs, questionnaire responses, group discussion
IS IT ANY GOOD (DESIGNS)

- 16 designs produced with TAPT
- Picnic websites (some delivering food, some shops, some virtual areas)
- Microblog systems (handheld, TV-based, web-based, tablet-based, voice-based)
- Wiki-inspired museum wings (interactive walls, touchscreens, whiteboards)
- Generally similar analyses, but different visions
- Analyses did appear to inform designs
IS IT ANY GOOD? (COMMENTS)

- TAPT rated best at improving understanding
  - Lots of comments on its analytical qualities
- TAPT rated less well at replicating experience
  - Surprising result! Why?
  - Reimagining reduces superficial resemblance to the original (comments about the nature of the original experiences)
  - Deep analysis may mean TAPT users especially aware of what isn’t replicated
IS IT ANY GOOD? (COMPARISON)

- Easiest: No Method (fast, unconstrained). TAPT and Scenarios were rated equally easy.
- Useful results: TAPT best, then Scenarios, then No Method.
- Replicating experiences: TAPT, then Scenarios, then No Method.
- Disparity re: replication. Possibly due to changing perceptions over the study.
# Strengths and Weaknesses of TAPT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Builds understanding</td>
<td>• Lacks user focus</td>
</tr>
<tr>
<td>• Good at replicating experiences</td>
<td>• Learning curve</td>
</tr>
<tr>
<td>• Can foster creativity</td>
<td>• Structure/process can distract</td>
</tr>
<tr>
<td>• Output suited to workplace</td>
<td>• Takes some time</td>
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<tr>
<td>• Thorough, structured, logical</td>
<td>• Hard choices</td>
</tr>
<tr>
<td>• Documentation</td>
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</table>
FUTURE WORK

- Blind review of designs
  - As participants’ experience using TAPT may have affected their value-judgements about these
- Case studies: TAPT in domains such as e-learning, pervasive computing and social technologies
THANK YOU

- TAPT helps us thoroughly explore experiences, including aspects that might otherwise be overlooked.
- It supports implementation of rich, accessible interactions inspired by these experiences – particularly, using novel, accessible mechanisms.