

Analysis, Redesign and Evaluation with Teasing Apart, Piecing Together

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ABSTRACT

This tutorial will introduce participants to Teasing Apart, Piecing Together (TAPT), a two-phase design method for understanding and redesigning user experiences in new contexts (e.g. moving from the web to mobile). TAPT was developed to address a gap in the field for methods oriented around *experiences*, particularly with respect to understanding their social and emotional facets. Addressing such facets helps us build better designs for people from ‘non-standard’ backgrounds (e.g. those who are currently offline). TAPT has been successfully used in both industry and academia, and this workshop will draw on the tutor’s experiences in the field.

Categories and Subject Descriptors

H.5.2 [Information Interfaces and Presentation]: User Interfaces – *evaluation/methodology, user-centred design.*

General Terms

Design, Human Factors.

Keywords

TAPT, UX, understanding, analysis, design, evaluation.

1. INTRODUCTION

TAPT is a systematic process of experience deconstruction, capable of improving the critical analysis of user experiences. In the context of software development, TAPT better scaffolds the initial design process and evaluation of user experiences compared to existing methods [5].

TAPT’s development was motivated by a desire to give people who are offline – whether for reasons of poverty, disability, infrastructure or cultural background – the access to social technologies that is currently provided via the web, letting them access the online content and communication facilities that so many of us take for granted.

There exist simple technologically-oriented approaches to this

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problem, such as identifying functional requirements and prototyping tools. This focus on technology, however, comes at a cost of neglecting the experiential aspects that motivate the work, and can result in systems that are functional but unappealing to (or even unusable by) their target audiences.

Traditional approaches to eliciting user opinion (such as interviews and focus groups) draw out surface-level explicit knowledge rather than latent experiential knowledge. Alternatives range from cultural probes [4] through role-play [1] to video-based techniques [6], but no method provides constructs for redesigning experiences in new contexts, and methods often omit constructs for understanding social or emotional facets. Dix’s experience deconstruction and reconstruction [3] aims to support experience redesign: it is presented, however, as a description of its application rather than as a step-by-step process, and again does not address social and emotional elements.

Software Engineering lacks methods for understanding and replicating user experience: in response to this issue, the author developed Teasing Apart, Piecing Together (TAPT).

2. TEASING APART, PIECING TOGETHER

TAPT concerns understanding and re-providing experiences in new contexts. For example, it has been used to facilitate the design of real-world versions of experiences that were initially situated on the web (such as microblogging and wiki usage). TAPT’s development was motivated by issues of accessibility: for example, people who do not use the web cannot access the benefits of web-based social tools [5].

TAPT falls into two phases:

‘Teasing Apart’ involves analysing an existing experience on various levels. Practitioners examine an experience’s ‘surface elements’ (design aspects / physical components) and ‘experienced effects’ (literal and abstract outcomes). The final stage of Teasing Apart is to review the elements and effects to identify what is essential to the experience, and write a description of the ‘distilled experience’ based on that. The distilled description does not refer to the original modality of the experience.

In ‘Piecing Together’ practitioners take the distilled experience description and use it as a springboard for creatively redesigning the initial experience in the new context, which may be physical or digital.

A sample TAPT artefact can be seen in Figure 1.

TAPT has been fully evaluated in both industrial and academic contexts: studies include a 43-participant comparative evaluation,

Teasing apart results				
Teasing apart				
Experience (1)	Surface elements (2)	Experienced effects (3 & 4)		Distilled experience (5)
		Literal (3.1)	Abstract (3.2)	
Wikipedia allows us to search and find pages about this topic, read the + pictures, follow links for more detail and modify pages and review how and why change made	View Text + pictures Follow links between pages, see change log, + pictures, follow links for more detail and modify pages and review how and why change made	See text See pictures Slowly change with other people edit Had to search information Easy to make changes Finding related information Remember to note key effects!	Showing information Learning, exploring a topic I choose to find some like Usability of content related Change with accuracy or possible Alternative content Substitute adding / correcting information	Learning about I choose with suggestions to find more, wanted of accuracy and depth Ability to give others the benefit of my knowledge in semi-permanent way
Piecing together results				
Piecing together				
Distilled experience	Learning about a topic I choose with suggestions to find more Usability of accuracy and depth Ability to give others the benefit of my knowledge in semi-permanent way			
Context	Physical areas: museum, touch maps, video screens video camera + social records			
Description	Touch map to select user stories with locations. Touch time line to select when View / listen video reminiscences Re-record over other people / add new Voice recognition to get links - "see Brantsteggate"			

Figure 1: TAPT used to translate wiki usage to a museum context

expert review of the outputs of that evaluation, and four case studies of TAPT's use grounded in industrial and academic practice. These studies showed that TAPT provides a structure for thoroughly exploring all the facets of an experience, particularly emotional and social aspects. Its primary weakness is not being deeply user-focused, sometimes leading to less accessible designs: as will be demonstrated in the tutorial, this can be mitigated by using TAPT in conjunction with Scenarios and Personas [2]. TAPT helps practitioners understand experience in technology-neutral terms, which supports them in the redesign process.

3. THE TUTORIAL

The first half of the tutorial covers the basics of TAPT, demonstrating how it can be used to solve design problems. This session will draw on information from a 43-participant trial of TAPT conducted across industry and academia.

The second half of the tutorial concerns agile uses of the method. Participants will learn how TAPT has been used in the field for analysis and evaluation as well as for design, and about different modes of usage: with end users or practitioners, and by groups or individuals. This section of the day will draw on knowledge gained from fieldwork, specifically case studies of TAPT's

successful usage in academia (in the UK and Norway) and industry (by IBM UK and IBM India).

This tutorial combines formal presentations with group exercises and feedback sessions. Participants will be asked to work in groups to respond to design tasks, and to briefly present their results from those tasks to one another. Participants will be encouraged to provide feedback to one another (within and between groups), as well as to engage with the tutor.

Learning outcomes:

- how to analyse design problems with TAPT
- how to use TAPT for redesign
- how to evaluate TAPT-built designs
- how to design TAPT workshops, considering aspects such as available resources, number and background of participants, and workshop format

Audience: Design practitioners, HCI researchers and practitioners, students, other professionals in the field.

Prior knowledge required: None.

4. SUMMARY

TAPT is a tool for critically analysing user experiences, and can be used to facilitate the design and evaluation of systems. Technological social systems are continuing to rise in prominence: TAPT is a highly suitable tool for facilitating the design of such systems in broader contexts, and for supporting the design of interfaces for pervasive technologies. Tools such as TAPT help us understand the world around us in an increasingly holistic manner, and support the design of the next generation of digital tools.

5. REFERENCES

- [1] Buchenau, M. AND Suri, J.F. 2000 Experience Prototyping. In *Proceedings of DIS*, Brooklyn, New York. ACM Press, 424 - 433.
- [2] Cooper, A., Reimann, R., Cronin, D. 2007. The Foundations of Design: Scenarios and Requirements. In: *About Face 3: The Essentials of Interaction Design*. Wiley.
- [3] Dix, A. 2003. Deconstructing Experience - Pulling Crackers Apart. In *Funology: From Usability to Enjoyment*. Blythe, M., Monk, A., Overbeeke, K., Wright, P. (Eds.) Kluwer, Dordrecht, the Netherlands, 165 - 178.
- [4] Gaver, B., Dunne, T. Pascenti, E. 1999. Design: Cultural probes. *Interactions* 6, 21- 29.
- [5] Hooper, C. J. (2011) Towards Designing More Effective Systems by Understanding User Experiences. PhD thesis, University of Southampton.
- [6] Little, L., Briggs, P. and Coventry, L.. Videotaped Activity Scenarios and the Elicitation of Social Rules for Public Interactions. In *Proceedings of British HCI Conference*, Leeds, UK.