
Storytelling Tools in Support of User Experience Design

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Abstract

Storytelling has been proposed as an intuitive way to support communication in user experience design. With story-based thinking, designers can gain a better understanding of the potential user experience, developing and discussing design ideas within an (imagined) context. This proposal introduces research through design into enhancing creative user experience design with the help of storytelling tools. The aim of the research is to develop and test tools that can support

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the co-construction of stories, i.e., that can promote collaboration and discussion between designers and other stakeholders in early UX design.

Author Keywords

User experience, Storytelling, Communication, Discussion

ACM Classification Keywords

H.5.2 User Interfaces—User-centered design

Introduction

Since early design for user experience is a creative process that both diverges, by creating alternative design ideas, and converges, by discussing and ultimately selecting specific ideas, it includes a range of activities such as framing the problem, identifying design opportunities, representing, communicating and discussing ideas and developing them into specific design concepts. The process not only involves designers themselves but also stakeholders such as engineers, managers and users that help in defining the relevance and feasibility of specific design proposals. Designers need to visualize, share and discuss their ideas with others. Marc Hassenzahl already proposed that an experience is a story that is worth sharing^[1], while Glebas^[2] goes as far as stating that “logic doesn’t convince, but stories do”, Our research group has



Figure 1: The selected storyboarding tools

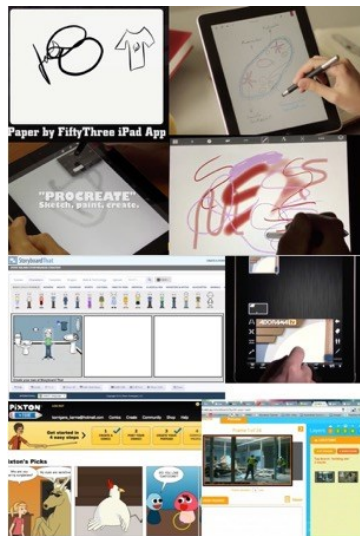


Figure 2: Introductory videos

therefore proposed that storytelling^[3] should become a core competency for designers interested in describing and modifying experiences. It is not only a good way to communicate stories themselves, but also to trigger discussions into the effect of psychological aspects of the characters in the stories and of physical characteristics of the context on the relevance of a proposed product or service concept. My research topic is more specifically to study and develop (storytelling) tools that designers would be willing and able to use when designing for user experiences. More specifically, such tools should not only support the co-construction of stories but also a constructive discussion and organization of efforts with a range of stakeholders.

Context and Motivation

The value of storytelling for experience design is easily recognized but not often practiced. In order for it to be adopted by designers, it is essential that it can be supported by appropriate tools. This need to get more insight into the relevance of existing tools and the need for new tools has been adopted as the starting point for further research. Existing storytelling tools mostly focus on how digital interaction technology can be used in visual storyboarding. They do not focus on the use of storytelling for communication, discussion and collaboration between people with diverse backgrounds. The aim of the proposed research is to explore the usefulness of existing storytelling tools, and to use the obtained insights as inspiration for designing or developing new tools.

Related work

Three specific areas of interest (or study) can be deduced from the above general problem definition:

Support for creativity

Literature shows that creativity can be stimulated by relieving the pressure on memory^[4,5] through visual representations. Thus storytelling tools should enable people to express themselves creatively^[6] and visually. Existing design principles for tools supporting creative thinking will be considered and applied. The understanding of the creative process is another key to supporting creativity; and storytelling techniques can be used to make such context and use more explicit (by exploring current ways of designing UX and imagining new ways).

Storytelling technology and methods

It's very important to visualize stories because this complement the spoken or written exchange of ideas. Bill Buxton identified two categories of storyboards, i.e., sketch-based and photo-based storyboards^[7]. However, other methods for storytelling visualization such as video, animation, etc should not be ignored. Another relevant aspect is how traditional media, and the use of physical space, can best be combined with the flexibility of digital media, and the fast access to world-wide (online) information.

User experience in storytelling

Early design is characterized by a mix of research, analysis and idea generation^[8]. Storytelling is a stage of early user experience design in which these three aspects can potentially be integrated. Designers should gain context knowledge, collect information and feedback from potential users, perform collaborative discovery and come up with inspiring designs, and storytelling can provide a focus for this mix of activities.



Figure 3: storyboards making by the participants

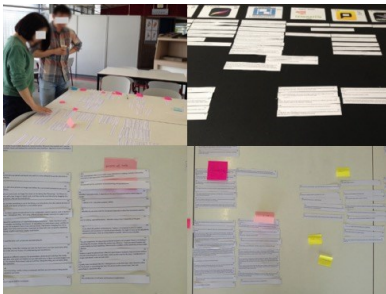


Figure 4: Analysis of the feedback of interview

Research Objectives and Method

The objective is to propose and evaluate guidelines for tools that can support storytelling in the context of conceptual design. Such tools should help to create opportunities for communication, discussion and collaboration. The current research plan envisions three studies with the following sub-objectives:

Study1: Exploring opportunities and limitations of existing storytelling tools

Study1 has the following objectives: (1) Comparing existing storytelling tools in order to identify the potential need for alternative tools or for an improved integration of existing tools? (2) Identifying specific features of storytelling tools that are essential for user adoption and user satisfaction?

Key operational steps: (1) Conducting a literature review of existing tools and related technology and understanding potential needs in the context of early UX design. (2) Investigating existing tools by various methods such as technology acceptance and comparison tests, storyboard workshops, as well as by means of a storyboard competition on a crowdsourcing platform (in order to reach a wide user group).

Description: Some representative storyboard tools such as StoryboardThat, Procreate ect. (Shown in Figure1) were selected for testing based on both available recommendations from literature and websites, and feedback in an online questionnaire into user acceptance of existing tools. A storyboard competition is currently being planned to test how suitable these tools actually are for storyboard creation.

Reflection: The results from a pilot study in the laboratory (Figure 4) indicate that the identified digital tools are considered relevant for storyboard. They also confirm our expected need to develop alternative tools for storytelling, as existing tools insufficiently support communication, discussion and collaboration. The study also helped to identify specific features that are appreciated in existing tools. Specific problems that are currently encountered while setting up the study on the crowdsourcing platform are: how to evaluate the quality of the produced storyboards and of the (qualitative) feedback provided by the storyboard designers.

Study2: Exploring the design of new storytelling tools
The main question in study2 is how to design improved storytelling tools that actually support the UX design process?

The method is research through design which means following the cyclical design process involving investigation, ideation and iteration^[9] of prototypes and gathering design-relevant knowledge through small user tests. Several rounds of iteration, identifying specific features, proving feasibility (through prototyping) and gathering feedback, we aim to create new support for storytelling within a context of creative collaboration. Storytelling itself will be used to capture the context and the needs of users, and to discuss how design proposals are intended to operate within such a context and to argue their potential value to the user.

Study3: Guidelines and Evaluation

Study3 covers 3 aspects: (1) Explicitly identifying guidelines for the design of storytelling tools that support creativity? (2) Extensive evaluation of the

usefulness, usability and pleasure of use of storytelling tools that abide by such guidelines. (3). Evaluating the effect of the tools being used on the quality of the outcomes, i.e., how well such outcomes support the user experience design process?

The methods include identifying relevant dimensions (in terms of quality of the outcome and support for the process), converting such dimensions into measurable variables, and conducting user testing in order to establish an empirical basis for the guidelines being offered and for making comparisons between alternative tools.

Dissertation Status and future work

In my first year, I focused on exploring the opportunities for storytelling in a creative design context by combining communication, discussion and collaboration. Berke Atasoy and Jean-Bernard Martens have proposed that learning how to incorporate storytelling and user experience into a design process is relevant for designers when they want to envision, discuss and influence user experience^[10]. I therefore tried to better understand the relationship between user experience design and storytelling, and explored opportunities for as well as obstacles against using storytelling tools in conceptual design. In my second year, I will continue with study1, implementing lessons learned from the pilot study in a follow-up study, and start study2. The results from study1 will also be used to identify preliminary guidelines for storytelling tools, which will be tested in Study3, using the prototype(s) developed in Study2.

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