ELECTRONIC SKETCHING: USING IDEMOBITS AS TOOLS FOR SYNTHESIS IN DESIGN RESEARCH

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ABSTRACT

Throughout the process of design research, synthesis is an important aspect for bringing together past and current knowledge to facilitate new ideas.

In this workshop participants will be challenged to explicitly explore their ideas using IdemoBits. IdemoBits are a tangible tool to be used during the process of design research enabling the designer to explore ideas immediately using electronic materials.

This is a very hands-on, active workshop where attendees are expected to participate, contribute, and play; exploring the IdemoBits as tools, and reflecting on the process of synthesis, in order to contribute to a model of ideation.

INTRODUCTION

Similar to industrial designers who use sketching and models to try their ideas, IdemoLab makes use of physical, functional, interactive Electronic Sketches. Buxton explains, “sketches dominate the early ideation stages, whereas prototypes are more concentrated at the later stages where things are converging within the design funnel”. (Buxton, 2007). Electronic Sketching provides the opportunity to test a specific experience or functionality quickly and independent of a polished technological solution. Testing ideas gives insight and inspiration; and using Electronic Sketching, it’s possible to create a proof of concept in minutes.

Electronic Sketching is sketching using electronics; an expression of an idea, thrown together quickly, tested, adapted, and tested again.

IdemoLab takes it further, elaborating on the idea of sketching by including electronics, yet maintaining the essential elements of sketching. One tool IdemoLab uses to facilitate Sketching is IdemoBits: small sensors and output devices which require no programming knowledge, but are customizable by the inquisitive user. As explained by Thackara, in In the bubble, designing in a complex world, “We need to develop “an understanding and sensitivity to the morphology of systems, their dynamics, their “intelligence” - how they work and what stimulates them.” (Thackara, 2005) IdemoBits can help to develop this by exploring how they work through active enactment of situations and stimulations.

Figure 1: IdemoBits with sensors and outputs

Throughout the process of design research, synthesis is an important aspect to bringing together past and current knowledge to facilitate new ideas. Kolko explains: “Because synthesis is frequently relegated to an informal step in the overall process, it is practiced implicitly; a single designer forges connections in the privacy of her own thoughts, and performs only rudimentary sensemaking.” (Kolko, 2010). IdemoBits address this implication; making visual the magic behind synthesis, allowing designers to explore ideas not only in their heads (“what would it be like if it lit up? What if we used bluetooth, oh it would be like that”); and instead of simply imagining possible scenarios which then are analysed, some discarded and some selected to be tested more formally; designers can potentially explore all scenarios. This workshop aims to explore synthesis as a part of the design research

process, and find ways to make parts of synthesis more visible, using IdemoBits as tools for idea exploration.

Kolko concludes by saying that “inferential leaps can systematically drive innovation” and we postulate that IdemoBits fuel these inferential leaps by providing tangible aids - beyond paper and pen - to formulate ideas. (Kolko, 2010).

PURPOSE

The purpose of this workshop is to challenge participants to explicitly explore their ideas using electronics to quickly achieve a proof of concept, and in doing so, evaluate the experience from a design research standpoint. Furthermore, it is hoped that an evaluation could be done on the matter of synthesis, and how IdemoBits help to create ‘inferential leaps’; bypassing the need for imagined technology, and allowing participants to try out their ideas immediately.

In this workshop, participants will explore their ideas using IdemoBits, small sensors and outputs which provide a simple way to bring responsiveness / intelligence and interactivity to ideas. Thackara explains, “interactions are difficult to describe to someone not present” (Thackara, 2005) and it is the hope that participants in the workshop can use IdemoBits to clarify potential interactions by removing the need for excessive explanation.

The organizers of this workshop would like to work with participants to explore the potential interactions, activities, processes, and design research methods, with a specific focus on synthesis, that may arise from the use of IdemoBits, and work together to create an ideation model.

TENTATIVE PROGRAM

30 MINUTES

The workshop begins with an introduction to Electronic Sketching and IdemoBits, and an outline of the workshop, including goals and expected outcomes.

1 HOUR:

Small groups formed

Brainstorming warm-up exercises

Brainstorm about synthesis (mind map on poster paper)

Group discussion about Synthesis Brainstorm - introduction of main thoughts and points.

2 HOURS:

In small groups and pick a topic from a pre-determined set of design problems.

Brainstorm, and develop a concept for this problem - using IdemoBits.

During this process - assign a person to be the ‘documenter’ who takes photos, and notes regarding the happenings of the brainstorm. Rotate person every 15 minutes to make sure everyone is included in the brainstorm.

30 MINUTES

Break

1 HOUR:

Prepare, and present, in groups, the outcome of the brainstorm.

Focus specifically on the topic of synthesis - how did the group synthesize? Did they do in group, or individually? Was there quiet time, or mainly group discussion?

How did the IdemoBits facilitate the ideation process?

How did the IdemoBits affect the synthesis process?

1 HOUR:

Full group discussion on outcomes (presentations).

What is synthesis in terms of the ideation process?

How is it affected by the use of IdemoBits?

How could IdemoBits be used by design researchers in their processes?

Develop an ideation model based on the day’s activities.

/END

VENUE REQUIREMENTS

IdemoLab, DELTA is familiar with the venue and requests the use of:

I. a room large enough for 10 - 15 people;

II. long tables and benches or chairs to work on; and,

III. a projector and wall or screen to project on.

IV. Electricity, power bars and cables

V. Access to the internet

IdemoLab, DELTA will provide IdemoBits, posters, paper, writing utensils and paper prototyping materials.

ATTENDEE SELECTION

Attendees will be selected on the basis of a short, half page written document, indicating what they hope to gain from the workshop, and their experience and interest with synthesis in the design research process.

A total of 15 attendees can join the workshop, though the ideal number would be 12.

Attendees should be design researchers, and familiar with the concept of synthesis.

REFERENCES

Buxton, B. (2007), 'Sketching User Experiences: Getting the Design Right and the Right Design', Morgan Kaufmann.

Kolko, J. (2010), 'Abductive Thinking and Sensemaking: The Drivers of Design Synthesis', *MIT's Design Issues*, Volume 26, Number 1, Winter 2010.

Thackara, J. (2005), 'In the Bubble, Designing in a Complex World', MIT Press.