
Sketching User Experiences: Hands-on Course of Sketching Techniques for HCI Research

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Abstract

When designing novel user experiences, paper-pencil sketches can support the design thinking process and are valuable for communicating design ideas to others. This hands-on course will demonstrate how to integrate sketching into researchers' and interaction designers' everyday practice – with a focus on applying the techniques to the design of novel user experiences. Participants will learn fundamental sketching strategies, apply these in practice during many hands-on exercises, and learn the various ways of using sketches as a tool when designing interactive systems.

Introduction

Creating hand drawn paper-pencil sketches [1] can be a valuable tool for *finding the right design*; before later refining the work and *getting the design right* [2]. Sketches are lightweight and easy to create, and by varying the fidelity of sketches they can be an integral part during all stages of interaction design and HCI research. This hands-on course will demonstrate how to integrate sketching into the everyday practice of HCI researchers, interaction designers, and computer scientists. Everyone can join, and no previous sketching experience is required. Participants will learn essential sketching strategies, apply these in practice during various hands-on exercises, and learn the various ways of using sketches as a powerful tool when doing research and design of interactive systems.

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Detailed Course Structure

The course will run over two 80-minute sessions. We will guide participants through selected sketching techniques and strategies. These techniques are partially based on the Sketching User Experiences Workbook [3], but also include other techniques and examples going beyond the content of the book. Live sketching demonstrations and step-by-step instructions will illustrate a basic toolset for getting started sketching when working on HCI research projects. In particular, the demonstrated techniques include the following topics and hands-on activities (also see examples shown in Figure 1 and [3]):

- **Sketching vocabulary:** learning to quickly draw objects, people, their emotions, and their activities.
→ *Hands-on Activity 1:* rapid sketching of people
→ *Hands-on Activity 2:* emotions, facial expressions
- **Rapid sketching gestures, devices and objects:** learning sketching shortcuts and strategies to

rapidly draw common parts of sketches in HCI.

→ *Hands-on Activity 3:* pair activity for sketching devices and show and tell session. 3x3 grid.

- **10 plus 10 design funnel:** rapid sketching of 10 different ideas and refinements of selected ideas.
→ *Hands-on Activity 4:* 5x2 group activity with sketching template for trying out 10+10 activity.
→ *Hands-on Activity 5:* Wireframing sketching.
- **Photo tracing and hybrid sketches:** creating collections of outlines as templates.
→ *Hands-on Activity 6:* Photo tracing with black markers and transparent film. + Show and Tell.
- **Storyboards for interaction sequences:** creating visual illustrations of interactions over time.
→ *Hands-on Activity 7:* Storyboard sketching.
- **Sketch boards:** sharing and discussing sketches with others; running critiques.
→ *Hands-on Activity 8:* Design critique session.

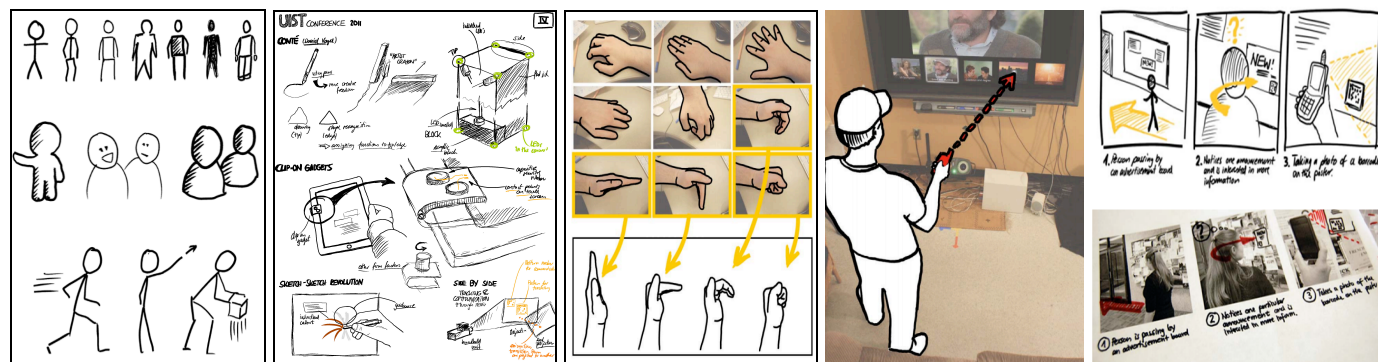


Figure 1. Sketching techniques covered in the workshop (from left to right): sketching 101 and sketching vocabulary, rapid sketching, photo tracing and templates, hybrid sketches, and storyboards.



Figure 2. Activities from previous Sketching User Experiences workshops (from left to right): live sketching demonstrations, learning photo tracing, rapidly sketching wireframes, participant's sketch of interactive system, and sharing and discussing participants' sketches.

With the included eight hands-on exercises during the tutorial and different provided templates, the participants of the tutorial can directly apply the learned techniques in practice (see activities in Figure 2). We will demonstrate many best practices and sketching shortcuts, and involve all participants in joint sharing and discussion sessions of the sketches created during the different hands-on activities. We will demonstrate how we used sketching techniques in many of our recent projects when designing interactive systems, and highlight how to apply the learned sketching techniques during all stages of the design process. We end the tutorial with an overview of additional resources and books about sketching, and software and hardware for digital sketching.

Course Instructors Bio

Nicolai Marquardt is Senior Lecturer (Associate Professor) in Physical Computing at University College London. At the UCL Interaction Centre he is working in the research areas of ubiquitous computing, physical user interfaces, sketching techniques and tools,

proxemic interactions, and interactive surfaces. He is co-author (with Saul Greenberg, Sheelagh Carpendale and Bill Buxton) of 'Sketching User Experiences: The Workbook' (Morgan-Kaufmann 2012). Nicolai organized previous Sketching Workshops at academic conferences (CHI 15, ITS '12 and '13) and different universities and companies.

References

1. Baskinger, M. Pencils before pixels: a primer in hand-generated sketching. *interactions* 15, 2 (2008), 28-36.
2. Buxton, B. *Sketching User Experiences: Getting the Design Right and the Right Design*. Morgan Kaufmann, 2007.
3. Greenberg, S., Carpendale, S., Marquardt, N., and Buxton, B. *Sketching User Experiences: The Workbook*. Morgan Kaufmann, 2011.