Sketching
Interaction design SoSe 2016
Goals of Today

1. Register for the exam
2. Get started with your sketchbooks
3. Sketch 20 ideas and decide on one for your storyboard
Exam

- Mo 07/25/16, 16-18
- Location: Geschwister-Scholl-Platz 1
- Room: M 218
- Register via Uniworx until: Mo 07/18/2016, 10:00
- Closed-Book
Design Brief

• Room 016: #1 good Apps make good neighbours
• Room 118: #2 lost in the crowd
• Room 112: #3 share your story
• Room 120: #4 Garage Sale Helper
Task

- Given a three month project deadline, what process would you use to approach this design problem? Break this process down into a schedule with an overview of activities for each phase.

- Who do you need for your team? How many man-days?
The Interaction Design Process

- Key Data Collection
- User Research
- Data Analysis
- Design Concepts

Experience Prototypes

Evaluation Cycle
Sketchbook

• Bonus of 5% in exam possible if you hand in deliverable at the end

• deliverable: sketchbook with ideas inspired by lecture and documentation of project

• to be delivered at the end of the semester (at the last lecture)
Sketchbook examples
Idea variations
Source: Nicolai Marquardt sketchbook, with permission.

Four different versions of an idea
Sketchbook examples

Overviews
– flow over time
– relationships

Source: Nicolai Marquardt sketchbook, with permission.

Arrows indicate relationships and flow

1. CONTEXT VIEW (PERSONALIZED)
   - Focus on the device (or focus aspect)
   - Show possible associations, aggregates, or interactions that exist in this CONTEXT
   - Show how to combine devices

2. CLOSE
   - Focus on 3rd applications
   - Set private connections
   - "Pick and go"
Sketch examples
– storyboards
– overviews
– flow over time
– relationships

Source: Nicolai Marquardt sketchbook, with permission.

Storyboard
Sketchbook Examples

Scenarios – stories of envisaged uses

Source: Nicolai Marquardt sketchbook, with permission

Five envisaged scenarios of a technology in action
But: “I can’t draw...”
“Sketches do not have to be pretty, beautiful, or even immediately understandable by others. However, you should be able to explain your sketches and ideas when anyone asks about them.”

Saul Greenberg et al.
Sketching
USER EXPERIENCES

The Workbook

Saul Greenberg
Sheelagh Carpendale
Nicolai Marquardt
Bill Buxton
Introduction and warm-up activity
Introduce yourself to the person sitting next to you.

For 2 minutes, one of you is introducing yourself, the other person is creating a quick sketch about you while listening.

After 2 minutes you switch roles.
Meet Tom Lee

Traveled for 5 years

Visited all continents

Came back to the UK

Wants to work with older elderly people and UX

Tom studied philosophy, religion, and ethics

Worked in web development

One of jobs to fund the traveling
Kexin Li

Flags

Volleyball

Studying

Groups

Dungeons

K-pop

Korean drama soundtracks
Introduce yourself to the person sitting next to you.

For 2 minutes, one of you is introducing yourself, the other person is creating a quick sketch about you while listening.

After 2 minutes you switch roles.
Why is sketching useful?
Why is sketching useful?

- Early ideation
- Think through ideas
- Force you to visualize how things come together
- Communicate ideas to others to inspire new designs
- Active brainstorming
getting the design right vs.
getting the right design
getting the design right vs. getting the right design

(Bill Buxton)
Buxton - getting the design right
Buxton - getting the design right

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Buxton - getting the design right

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Buxton - local versus global maxima

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Problem: Local Hill Climbing

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Instead: Getting the right design

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Design is Choice

there are two places where there is room for creativity:

1. the creativity that you bring to enumerating meaningfully distinct options from which to choose

2. the creativity that you bring to defining the criteria, or heuristics, according to which you make your choices.

Bill Buxton
Elaboration
opportunity seeking

Design Process

Reduction
decision-making

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Initial number of concepts

Initial number reduced

New ones added

Further addition

Further reduction

Further addition

Further reduction

Concept generation

Convergence

Convergence

Convergence

Concept selected

Iterative:

General overall concepts

Iteration 1

exploratory

Iteration 2

clarification

Iteration 3

resolution

Granularity:

General overall concepts

Coarse significant alternatives

Medium intermediate development

Fine detailed refinement

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Sketching Tips and Tricks
Sketching Tip 1:
Don’t use pencils but pens and markers instead
Sketching Tip 2: Keep your mistakes, just keep going
Sketching Tip 3: Imitate sketching styles you like
Sketching Tip 4:
Sketch with fast and long strokes
(needs some practice)
Sketching Tip 5:
Sketch *analog* (pen and paper) before *digital* (tablet)
Sketching Tip 6: Sketch in 2D – three dimensions are not necessary (most of the time)
Drawing stick figures

Source: Ralf A. Faste Foundation
Drawing stick figures
Expressions
Expressions

don't know

panic

look, there!
Hands-on Sketching: Drawing people
Quickly sketch 10 different stick figures:

Share ideas about what to draw with your neighbor.

For example, draw a person pointing, running, picking up an object, …
Star People

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Star People

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Star People

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Star People
Sketch 10 star people:

Different positions, actions, movements, size, ...
Changing view/perspective
Pamin / Contamin

Active / approval

Active / Infection
Sketching Faces and Emotions
Eyebrows

Mouth
Eyebrows

Mouth

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
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Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Sketching motion (1)

Arrows

Motion path

Motion lines
Sketching motion (2)

Wiggle lines

Ghosting
Hands-on Sketching: Drawing people, actions, emotions
Sketch 2 situations involving **people** (use stick figures or star people, emotions, objects, actions).

**Pair activity:** you tell your neighbor what situation to draw, then switch, then switch again, ...
Sketching Devices and Objects
Characteristics of Sketches
Clear vocabulary
Plentiful
Suggest and explore rather than confirm
Quick and inexpensive
Timely, when needed
Disposable
Minimal detail and distinct gesture
Ambiguous
Appropriate degree of refinement
Toru Iwatani | Designer
Clear vocabulary
Plentiful
Suggest and explore rather than confirm
Quick and inexpensive
Timely, when needed
Disposable
Minimal detail and distinct gesture
Ambiguous
Appropriate degree of refinement
“The best way to have a good idea is to have lots of ideas.”

Linus Pauling
Carl Liu | Interaction Designer
Quick, inexpensive and disposable
Technique: 10 plus 10

1) State the design challenge

2) **Generate 10 different designs** – as creative and diverse as possible

3) Reduce the number of design concepts

4) Choose the most promising designs as a starting point

5) **Sketch 10 details and/or variations of design concepts**

6) Present ideas to a group

7) As your ideas change, sketch them out

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Technique: 10 plus 10 - Example

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Technique: 10 plus 10 - Example

Both people type a word chosen by them.

Rotate in a pattern where other person has to mimic it (accelerometer) within 5 seconds.
Synchronous gesture
Trace a line across both side by side devices as a single stroke

Connect

Microphones pick up spoken command at similar volume
LED Strobe pattern captured by camera

Bump! Accelerometer matches bump vibrations

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Faint musical sound played on one device picked up by the other device.

Ambient light sensor. Touch surfaces together in a pattern; both detect same light/dark pattern.
3 simultaneous taps on both phones
Mutual
Video/photos captures
identifying
images such as tags via camera

I see you
Technique: 10 plus 10

Then: Choose & Refine Sketches:

Choose the most promising designs as a starting point

Sketch 10 **details and/or variations** of design concepts

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011
Another example of 10+10
PERSON-TO-LARGE DIGITAL SURFACE
Continuous measurement to discrete particle zones

DEVICE-TO-LARGE DIGITAL SURFACE
Dynamic zones around large digital objects; greater attention on portable digital devices.

PERSON-TO-DOMESTIC ROBOT
Proximate same environment, same space, different-time (asynchronous)

DEVICE-TO-DEVICES (MULTIPLE LARGE SCALES)
Orientation and physical distance set focus for device selection

INFORMATION APPLIANCES

ADATA \ DIALOGUE TEXT \ OUTPUT \ CITY DATA
Technique: 10 plus 10

1) State the design challenge

2) Generate 10 different designs – as creative and diverse as possible

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#1 good Apps make good neighbours

• Strong communities are built one relationship at a time, and research has shown that personal well-being is improved when people build connections in their immediate local area. But these connections can be difficult to form for a variety of reasons -- rental occupants may change regularly, individual lives have different schedules, and the population may reflect a variety of cultures, ages, and family sizes. Design a digital experience that a person can use to build relationships with their neighbours.
#2 lost in the crowd

- During a crisis, many people turn immediately to their mobile devices for assistance and information. One such situation occurs when parents lose track of a young child at a crowded theme park. Assume an application about that park would be installed on devices of a large number of guests and workers. Design a feature of that application that could help quickly reunite parents with their children, without requiring their children to wear or carry a device.
#3 share your story

- Most newly-arrived immigrants in Germany have a lot of questions, and are keen to establish contacts with people in their new area. At the same time many Germans don’t know much about the immigrants’ backgrounds and stories. Design an application that fosters mutual understanding by allowing both immigrants and Germans to share their stories and questions.
#4 Garage Sale Helper

- Garage sales can offer big rewards for sellers and buyers. Unfortunately preparing your own sale is often a daunting task. It’s also difficult for potential buyers to discover your merchandise. Design an experience that would help either sellers or buyers to get more from their garage sales.
From single sketch to storyboard

The interface only at a single moment in time

Source: Sketching User Experiences: The Workbook, Morgan Kaufmann, 2011