

Design Thinking and Electronic Prototyping

Week 4



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Project Presentations

Today (22.9.):

User-involvement in idea definition

In 2 weeks (13.10.):

Project Plan

In 9 weeks (1.12.):

Project Results with Prototype Demo

User-involvement in idea definition

- **Who are the users of your design?**
- **What are their defining characteristics?**
 - E.g. age, values, occupation, way of living, activity, etc.
- **What are they trying to achieve with your design?**
 - Be concrete
- **What is their expected availability to your study?**
 - You need to *actually* involve the potential users!
 - Min. 2 users/each team member

First Contact

Contacting people

- **Contact personally!**
 - Anonymous e-mail lists do not work for this purpose
 - Focussed discussion forums may work
 - Social media may also work
 - People in organisations may be contacted in two ways:
 - Through boss
 - Through your personal contacts
 - Ask people for further contacts



People's motivation to participate

- **Why do you think someone would agree to contribute to your project without a compensation?**

Notes on contact channels #1/

- **Face-to-face**
 - PROs:
 - Can get strangers that you would not find otherwise
 - You get a fuller picture of the person right a way
 - Immediate feedback – also for physical mock-ups
 - CONS
 - Place-specific – you only meet who happens to be there
 - COVID-19

Notes on contact channels #2/

- **Phone call**
 - PROs:
 - Very effective for getting people involved
 - You can do the interview right away, if the person is willing to
 - Typically this is just for getting people to take the next step -> later interview
 - Quick, you may get response immediately
 - CONs
 - People get too many sales calls, generally annoying

Notes on contact channels #3/

- **E-mailing**
 - PROs:
 - You can send the same message to many people – just change the names
 - You can add links and attachments to be specific
 - CONs
 - An e-mail invitation is very easy to ignore - a follow-up maybe needed
 - Slowness, it often takes a day for a question-answer cycle

Communicating your idea

Communicating a Design Idea

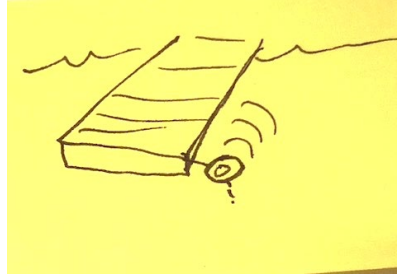
Why? (at this stage)

- **To get feedback!**
 - Is this needed
 - Do they find it useful for themselves?
 - Desirable
 - Would they want it? Or even buy one – for what price?
- **To improve your idea**
 - What seems not practical?
 - What could be better?

Story



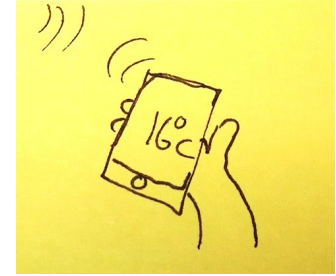
The owner of a summer cabin at a lake, Petra, wants to go swimming. She wants to know, before leaving home, how cold the water is.



She has a wireless thermometer attached to her dock that measures water temperature.



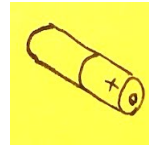
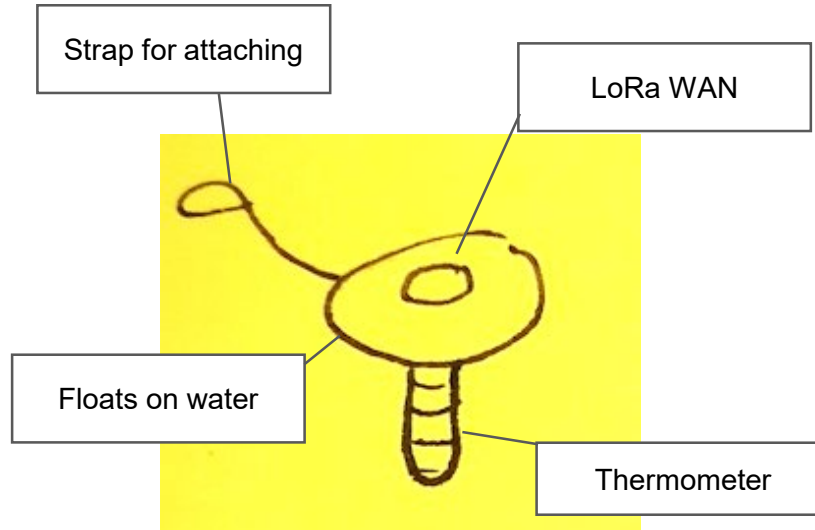
The wireless thermometer sends the temperature data to internet service once a day.



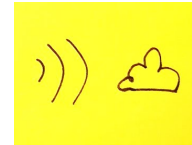
Petra can see the lake temperature on her mobile phone.

Poster

Wireless Remote Water Thermometer



Safe to use
2 x AA battery
Batterylife up to
3 years



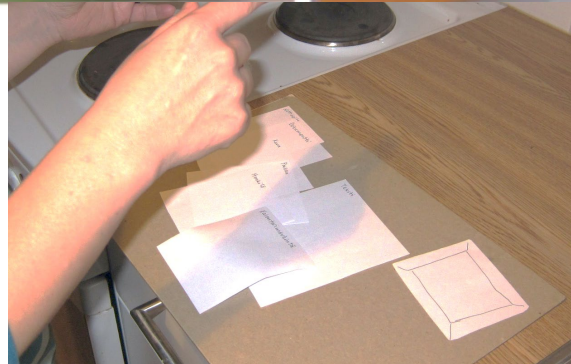
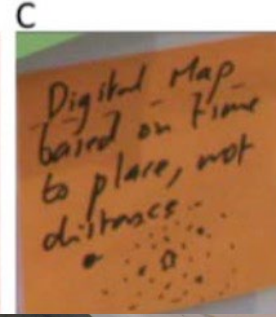
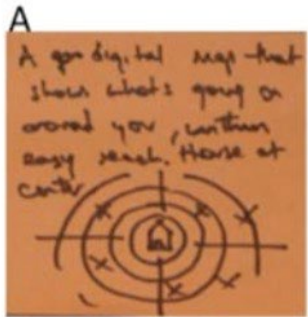
Cloud service
(0.99 €/month)



Free Mobile App

How to communicate an idea?

- The style and detail should match the maturity of your idea
 - Rough/early ideas => Sketchy style



How to communicate an idea?

- **Focus on what you want feedback on**
 - Fit to users' environment
 - Where they would put your design?
 - What other stuff there is that 'interacts' with your design?
 - Fit to users' activities
 - Journeys / repeated happenings
 - Task structure
 - Fit to user's social/collaboration setting
 - With whom the users interact?
 - Is it about getting things done, or about being together/presence?
 - Fit to user's values, preferences & style
 - Eco-friendly, efficiency, minimalism, colourfulness, ...
 - Fit to users' body

Not all points are always relevant!

Animations based on projects

Design Method Animations

The animations explain 12 user-centred design methods through concrete case examples.



Design Method: Observati...

Aalto University

This animated video explains an example of conducting an observation study for a design...



Design Method: Interviews

Aalto University

This animated video explains an example of conducting an interview study for a design...



Design Method: Design P...

Aalto University

This animated video explains an example of conducting a design probes study for a design...

<https://elecdesign.org.aalto.fi/anim>

Project planning

1. Goal

1. What are you trying to create

2. Tasks

1. Which activities are necessary to get to your result
2. Which parts you need to create
3. Remember – time is needed for exploring, integrating and testing!

3. Resources

1. Who is available, for how many hours, and when

4. Schedule

1. Add key milestones (internal project goals)

This week's tasks

1. **Diary – Deadline on Monday at 10 AM**
2. **Reading: Chapter 2 – rest**
 - The Psychology of Everyday Actions
 - Blaming the Wrong Things
 - Falsely Blaming Yourself
 - The Seven Stages of Action: Seven Fundamental Design Principles
3. **Exercises**
 05. 3D modelling
4. **Project**
 - Contact potential users, communicate your idea, and get feedback