

Design Thinking and Advanced Prototyping

ELEC-C9821 – Users and Technology



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School of Electrical
Engineering

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Today's agenda

09:15 - 10 Lecture

1. Interpreting (and Ideating)
2. Checking the Teams (final tweaks)

10:15 - 12 Workshop

3. Teamwork: Interview exercise
4. Discussion: Documenting the user studies



Learning goals

- Learn why ideation is not enough
- Learn how to generate user study results for design through different types of interpretation

Why ideation is not enough

The Aim

To have a Great Idea!

Generating the Idea

A typical 'method' in design process is called 'brainstorming'

But it sucks alone

Principles of Brainstorming

Safe Space

All ideas are good

Build on each other's ideas

Quantity over Quality

Defer judgment etc..

Recently a lot of criticism

Does not necessarily result in relevant ideas

What is this relevance, and how can we achieve it?

Interpretation

Interpretation vs. analysis

Interpretation is subjective, i.e. relative to the agent

- **You are interested in what your observations mean to you & to your project**
- **It is about empathy, reflection, relevance**

Analysis is objective

- **It is about hard facts, amounts, statistics, validity**

Three types of interpretation

Direct Interpretation

Bottom-up Clustering

Using Templates

Direct Interpretation

Direct interpretation

You observe something, and take it as it is.

For example, you observe that a user says “It must be small”. You take their suggestion as is.

Bottom-up Clustering

Bottom-up Clustering



Using Templates (Schemes, Models)

Interpretation Templates

Interpretation templates are tools to help to structure your observations according to what has worked previously in different kinds of design projects.

Different kinds of design projects:

- Professional information systems design
- Personal digital instrument design

Professional Information Systems Design

Professional information systems design

- **Roles**
- **Tasks**
- **Information entities**
- **Information flows**
- **Management structures**

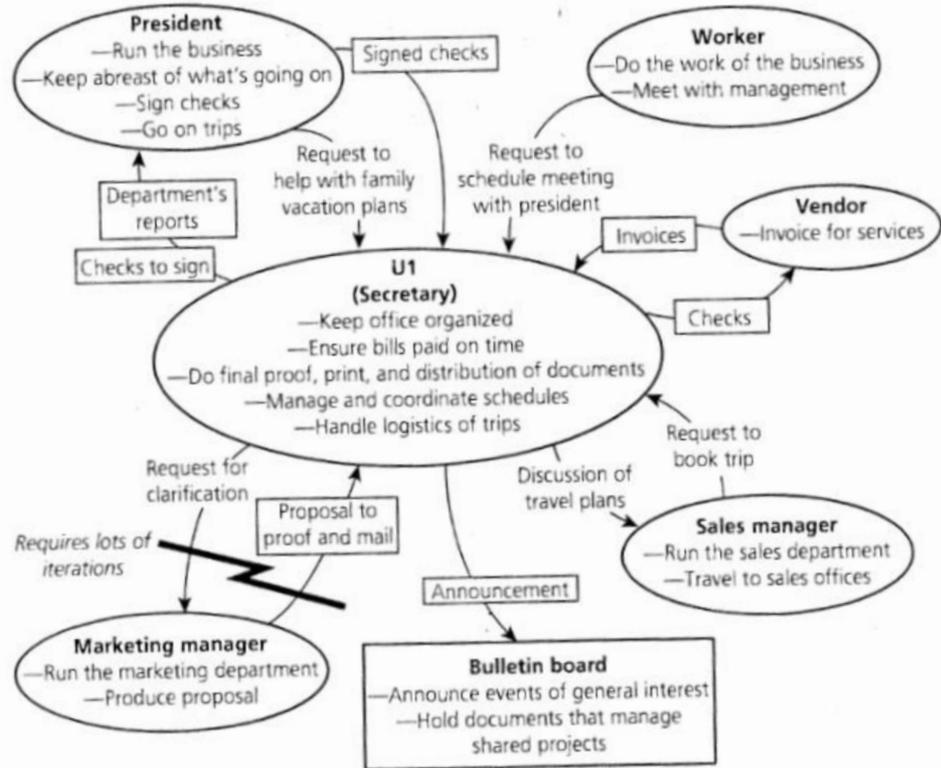
Flow model

Roles

Tasks

Information flows

Management



Sequence Model

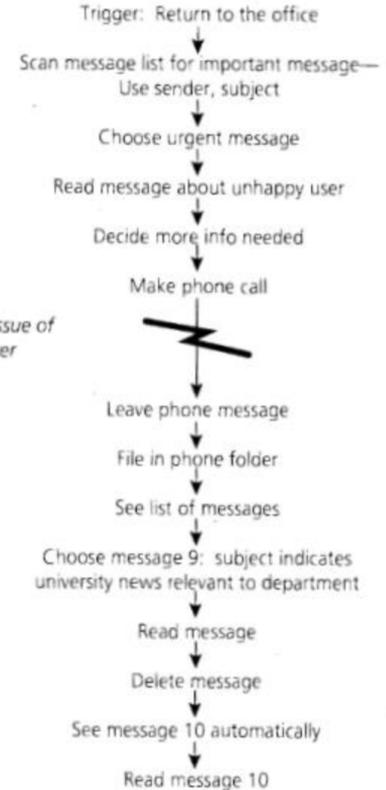
Tasks + 'issues'

Intent: Plug in

Intent: Handle emergencies

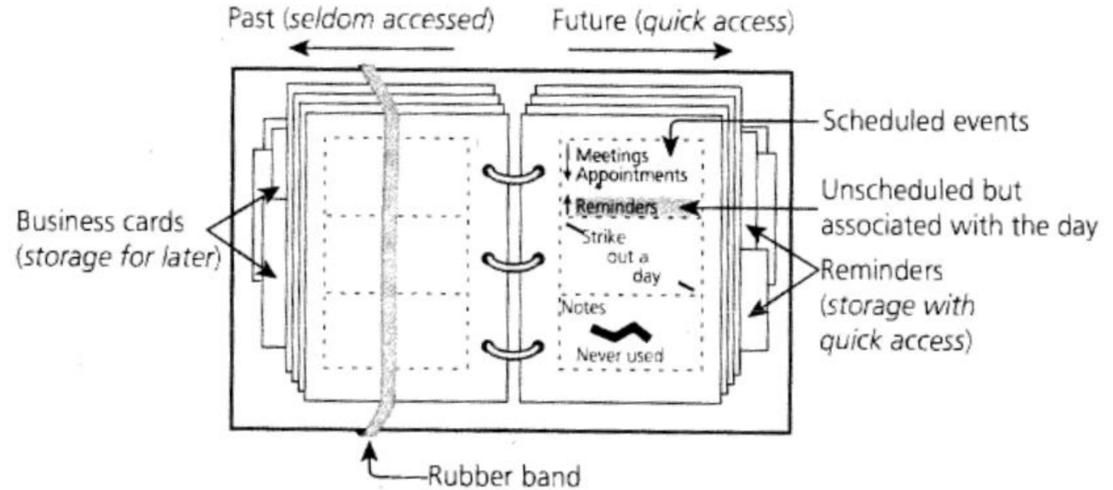
Intent: Get back to people easily

*Had to put off issue of
unhappy user*



Artefact Model

Information entities



Personal Digital Instruments Design

Personal Digital Instruments

- **Personas**
- **Goals, Values, Attitudes**
- **Style and Choices**
- **Activities, Rhythms**
- **Social Settings**

Personas

- **Artificial-but-concrete representations of users**
- **Many users can be combined into one Persona**
 - Based on relevant similarities
- **A Persona represents a user segment**



Name

Age

Style

Attitude towards tech

Outdoors style

With whom goes out

Some nasty details

Background

Especially looking for

Daily rhythm

Weekly rhythm

Annual rhythm

An interesting situation for this project

MenoMaps

Anna
23 years

Elmo
76 years

Irma
57 years

Esko
52 years

Antti
38 years

Kaisa
43 years

Tuomo
43 years

BACKGROUND I would like to live in a smaller town, closer to the nature, but my work keeps me to the city. I am a caterer in a trekking shop and I also organize and lead hikes. In the winter time my favourite hobby is snowshoeing.

Be your master!

Tuomo
43

STYLE I like to hike alone or with a good friend. I enjoy the time I spend in the nature. I consider myself a dreamer. I also like to take photos of plants on hikes. When I act as a trekking guide, my company consists mainly of middle aged women.

If I see loads of berries during a hike, I must stop to eat.

TECHNOLOGY AND GEAR I think no one could ever place a good old paper map. A GPS is a nice thing to have for just in case, but usually I don't keep it or have a black and white copy of the map on hand, the map is in the bag. I am not afraid of getting lost, actually think it's fun! I don't wear a watch, I would like to learn to prepare food on hikes. I would like to learn to prepare most necessary items on hikes. I keep a diary during hikes.

Tuomo, 43 years old, a salesman for trekking goods and a trekking guide

ACCESSIBILITY ISSUES I start to have problems with sight, I have a developing presbyopia. I don't have an internet connection at home.

I enjoy the feeling of being on mercies of the nature.

Sometimes I plan the hikes by themes, like a hike for plant searching. Then it is important to know what type of soil it is in the area.

I am not afraid of getting lost. In Finland, you only need to walk for two days and you will find people.

It is safest to hike alone.

The best hikes are the ones without any plans.

Intuition plays a big role in navigating.

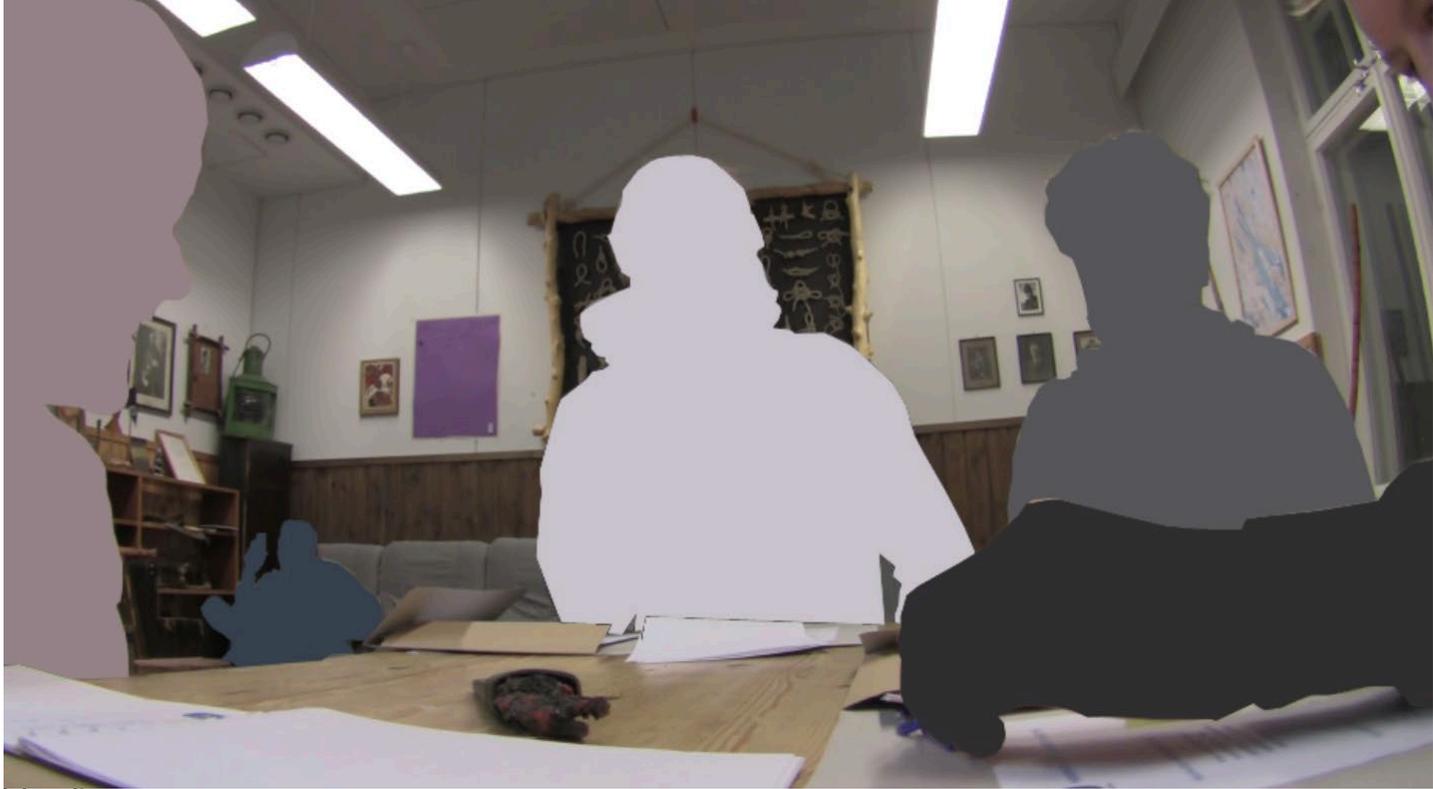
The making of your own traces gives you the greatest feeling.

I only make short, 10 km hikes daily.

There are 7 seasons in Lapland.

Once a year I must go to Lapland. Otherwise I don't feel like living.

Anonymizing



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Freeride – Values & Attitudes



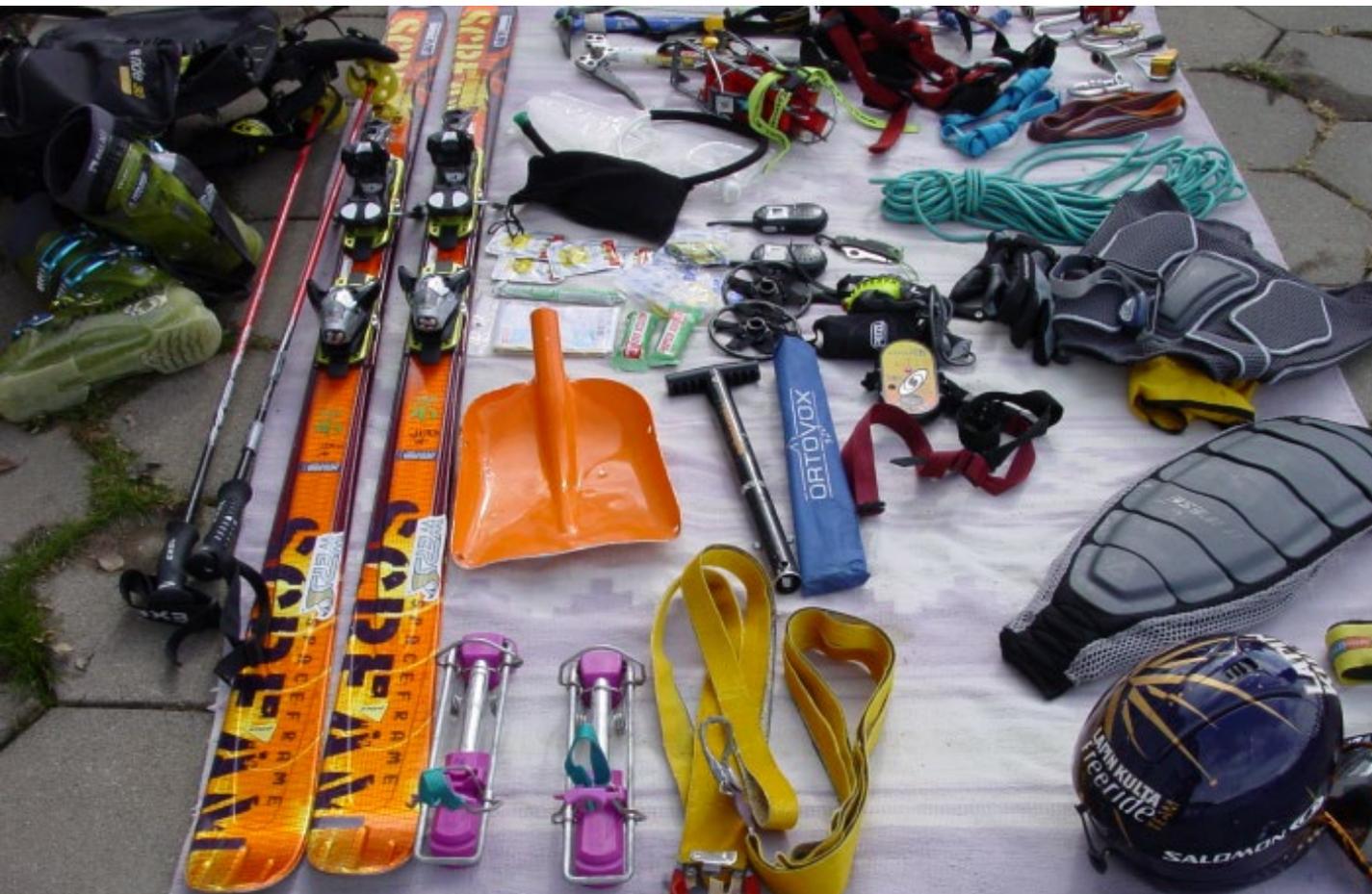
Photographer

Hedonist

Safety-Freak

Authority

Style and Choices



Goals and Activities



Social settings



A practical 2-2-2 model

-- Presence Check --

Finalizing Teams

Workshop Interview

Workshop – Test your interview

Imagine that you have gotten someone to participate in your study.

Act out the interview in the following manner:

- Introductions – how do you start?
- First question
- Thanks and follow-up

2 of your team members goes to interview another team members
– 1-1 interviews (some of you may observe and make notes)

Reflection

This week's tasks

Proceeding with your user study

Diary-keeping

User study reporting – what is the status (by next Tue)

Exercise 3