UX Research **methods**

observation

KP Ludwig John

Terms

User Experience - UX

Every aspect of the user's interaction
with a product, service, or company
that make up the user's perceptions of the whole.

User experience design as a discipline
is concerned with all the elements
that together make up that interface, including
layout, visual design, text, brand, sound, and interaction.

Reference: http://www.usabilitybok.org/glossary

Terms

User Experience - UX

Usability (benutzbar) **:**
How **easy & pleasant** these features are to use.

Utility (zweckmäßig) **:**
Whether it provides the **features you need**.

Useful (nützlich) **= usability** + **utility**

Goal

to coordinate these elements
to allow for the **best possible interaction by users**.

Reference: https://www.nngroup.com/articles/usability-101-introduction-to-usability/

User Experience - UX

How to improve?

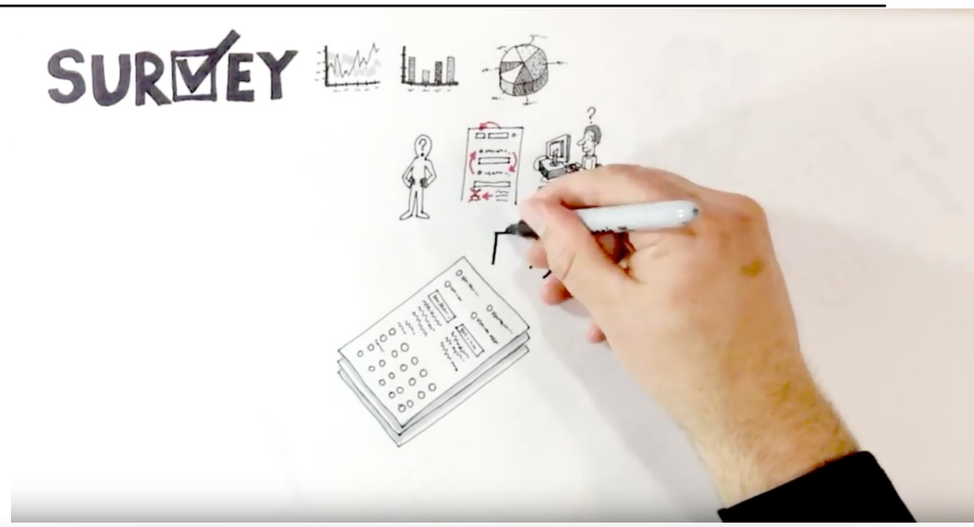
Research methods

Two **Approaches**

to **ask**	to **observe**
the user	the user
about	**while interacting**
Habits, Motivations, Interests,	with an application
Needs, Preferences	or prototype
Questioning	**Observing**

When to use Surveys?

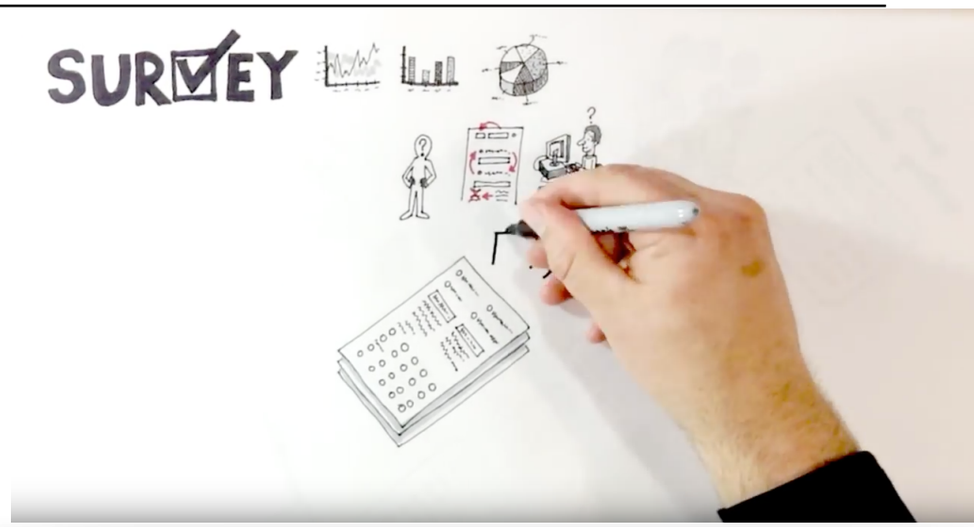
in UX context



- **Gathering feedback**
  on a live product or during a pilot
- Exploring the **reasons** people visit a website and **assessing** their **experience** of that visit

Source: http://uxmastery.com/better-user-research-through-surveys/ by Chris Gray

When **not** to use Surveys?



Avoid asking about **behavior**!

For assessing the effectiveness of a public transport ticketing system,

observing people buying tickets and traveling throughout the network would yield **more accurate** and useful feedback

than asking people how they had used the system over the last week.

Because

Source: http://uxmastery.com/better-user-research-through-surveys/ by Chris Gray

Because

What users **say** and what they **do** are **different**

- Jacob Nielsen

The critical failing:
You're asking people to either **remember** past use **or speculate** on future use of a system.

Human memory is fallible.
People **can't remember** the details of how they used a website.

They tend **to make up stories** …

https://www.nngroup.com/articles/interviewing-users/

Because

What users **say** and what they **do** are **different**

- Jacob Nielsen

Users are pragmatic and concrete.

They typically **have no idea how they might use a new technology** based on a description alone.

This is why
Agile development and **paper prototyping** methods are valuable.

When users have **something concrete to interact with**, **it's** usually **obvious** when you're solving their problems … — and equally obvious when you're not.

https://www.nngroup.com/articles/interviewing-users/

User Experience - UX

How to improve?

There are many methods for studying usability.
The most basic and useful is **user observation**

Components

- Get hold of some **representative users**
- Ask the users to perform **representative tasks** with the design (**prototype**).
- **Observe** what the users do, where they succeed, and where they have difficulties with the user interface.

Reference: https://www.nngroup.com/articles/usability-101-introduction-to-usability/

Observation

What **observation methods** do you know?

Discuss and collect
2 minutes

KP Ludwig John

Observation

Examples

Remote

- Writing along
  (separate Screen window)
- Diary Studies

UX-Lab

- Thinking aloud
- Video observation
- Screen Recording
- Eye tracking

In all Cases:

A **Prototype** (or final product) is presented to test participants together with a **list of tasks** to perform.
The **test** process will be **recorded and** afterwards **evaluated**.

Observation

Diary studies

- Collects qualitative data
  about user behaviors, activities, and **experiences over time**
- participants keep a diary and log specific information
- paper or digital

What you get

- Better Understanding of user habits, attitudes, motivations and goals **in real context**
- Sometimes used to collect User comments / problem descriptions while interacting „in the field“

Disadvantage

- participants might have to be reminded to record data

https://www.nngroup.com/articles/diary-studies/

Observation

Thinking aloud - Lautes Denken

Test participants **verbalize their thoughts** (thinking out loud) as they move through the user interface.

Often complemented by video recording (or at least observer notes)

Advantage:

- **easy** to handle
- Users Thoughts while interacting become transparent

Disadvantage:

- **unnatural** situation
- hard for test participants to keep up the required monologue

https://www.nngroup.com/articles/thinking-aloud-the-1-usability-tool/

Observation

Test methods

Thinking aloud - Lautes Denken

HSA IA6 - 2017; Team LeuCare

Observation

Test methods

Thinking aloud - Lautes Denken

Hand written
note taking

HSA IMS - 2011; Software development for Waste water treatment plant

Video observation

Records User behavior during test situation

Two Stages:

1. Participant works on test tasks while being video recorded.

2. **Discussion** with the participant
   - Helps to better understand and identify problems
   - common search for possible solutions

Advantages:

- Participants can help identifying problems
- improvement of design can be immediately discussed

Disadvantage:

- Result depends strongly on test persons personality
- Video recording might provoke change in behavior

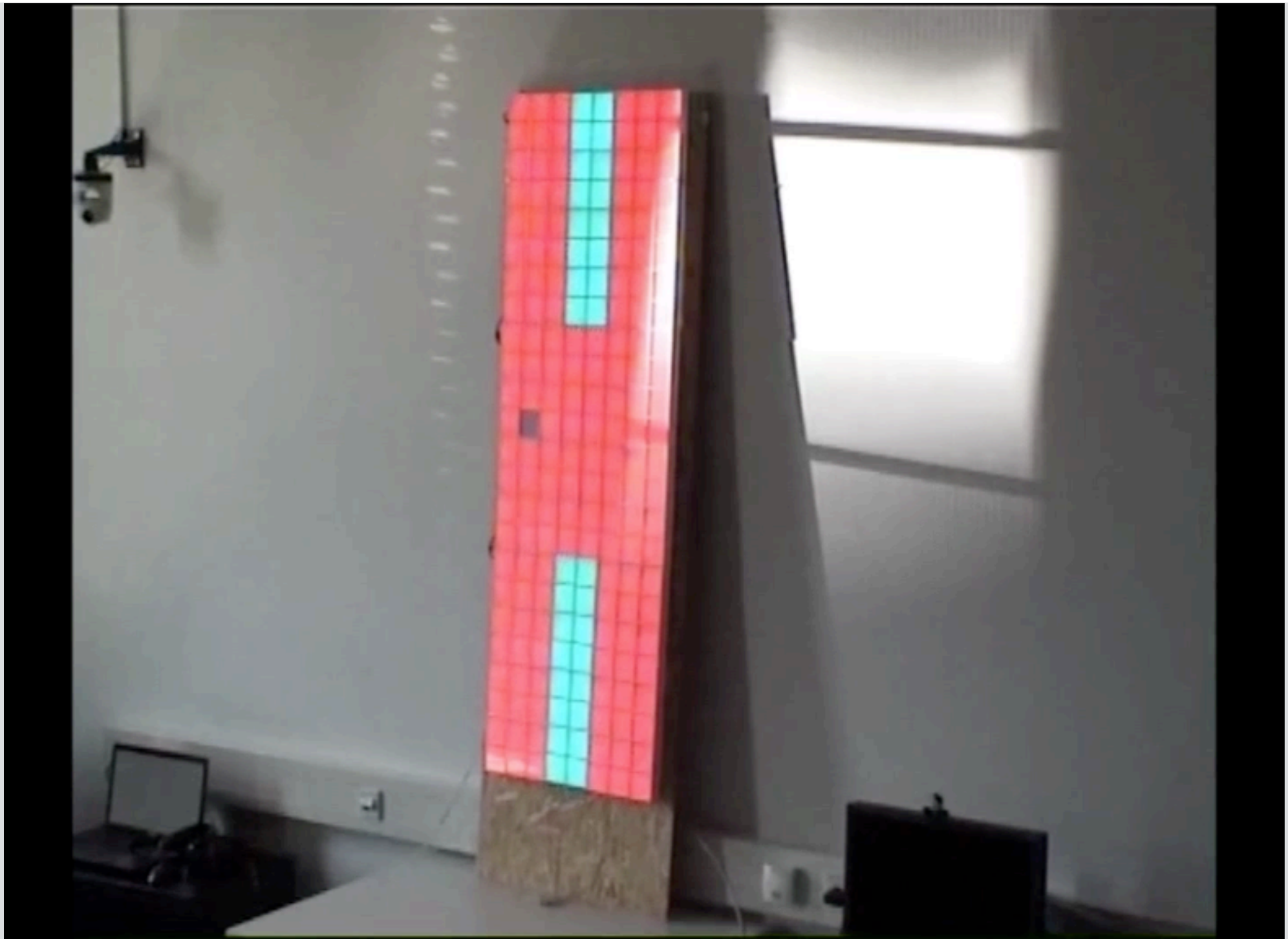
Observation

Test methods

Video observation

HSA IA6 - 2013; Installation Lumenaer

Retrospective Thinking aloud
Test persons comment on
video recording of own test



Observation

Test methods

Video observation

HSA IA6 - 2014; Techniker App

2 synchronized video channels
paper based prototype
Thinking aloud

Paperbased Test

IAM 6 - Medienprojekt
Eine Applikation für Techniker

Observation

Screen recording

- Software Records
  Screen **display, Audio and Interaction** (mouse clicks)
  into a video file

- Can be **combined with facial video**
  of the user while interacting from webcam

- Remote or local

Usability-Test der Seite
www.enpress.de

Screen recording

HSA IA5 - 2009; Usability Test Website Enpress

Screen **recording software**
with **insert video** of test user

Observation

Screen recording

Camtasia Studio
easy to handle
many editing functions

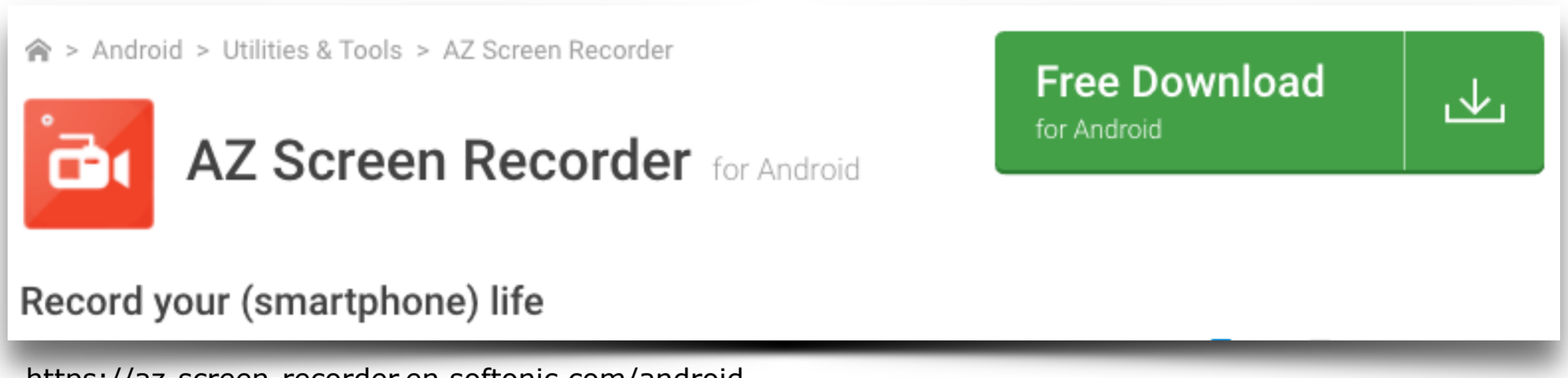
installed at UX-Lab

or get **30 days test version** at:
http://www.chip.de/downloads/

Observation

Screen recording smart phone

http://www.chip.de/downloads/Mobizen-Android-App_109164345.html



https://az-screen-recorder.en.softonic.com/android

Observation

Eye Tracking

Following the trail of
where a person is looking

Recording of eye position (point of gaze)
and **movement** on a 2D screen or in 3D environments

based on the **optical tracking of corneal** (Hornhaut) **reflections**
to assess visual attention.

UX LAB
HS Augsburg

Equipment

EyeTracking System **Tobii X60**

UX LAB
HS Augsburg

Eye Tracking

EyeTracking System **Tobii X60**

Following the trail of **where a person is looking**

Gaze plot

HSA IMS.UX - 2018; Long Dragon

KP Ludwig John

GazePlot
Media: GOEvent-V1_Page_1.png
Time: 00:00:00,000 - 00:01:59,341
Participant filter: All Participants
Number of participants included: 1/8 (12%)

GO-EVENT!
Auf dem Nol 34
86179 Augsburg
www.go-event.net

ÜBER UNS.

Spezialagentur für Events. Mit Sitz im bayerischen Augsburg zählt sie zu den größten Eventagenturen in der Region und gilt als Pionier der modernen Livekommunikation. Die Kernkompetenz ist die professionelle Durchführung von Firmenevents, Team-Buildings, Konferenzen, gehobenen Privat-Veranstaltungen und Erlebnissen mit WOW-Effekt. Als Full-Service-Eventagentur beherrscht GO-Event! von der Planung

BEWERTUNGSKRITERIEN.

INFORMATIONSGEHALT.	
Kontaktmöglichkeiten	5 / 5
Vorstellung der Unternehmensgeschichte	5 / 5
Vorstellung des Sortiments/der Dienstleistung	5 / 5
Stellenangebote	5 / 5
Standorte	4 / 5
STRUKTUR.	
Navigation	4 / 5
Gliederung	4 / 5
Roter Faden	5 / 5
DESIGN.	
Farbschema	4 / 5
Logo	4 / 5
Schriftart/Schriftwahl	4 / 5
Alleinstellungsmerkmal	4 / 5
Responsive Webdesign	3 / 5
MEDIA.	
Angemessener Einsatz von Bilder/Videos	4 / 5
Professionalität	4 / 5
VERLINKUNGEN.	
Social Media (Facebook)	4 / 5
Google Ranking	5 / 5
GESAMTPUNKTZAHL IN %	83

BEWERTUNGSRASTER 1 BIS 5 PUNKTE, DURCHGEFÜHRT DURCH DIE ACADEMICA AUGSBURG E.V.

GO-EVENT! EVENTAGENTUR & LIVEKOMMUNIKATION

PERSÖNLICHER EINDRUCK.

Unternehmens sofort widerspiegelt."

Julian Helmschrott
Mitglied der Academica Augsburg e.V.

UNSERE EMPFEHLUNG.

beispielsweise früheren Events hochzuladen. Dafür, dass die Verlinkung zu Facebook einem schnell ins Auge sticht, ist die Facebookseite leider zu sehr veraltet. Unser Tip: Facebook sollte immer auf dem aktuellsten Stand sein."

EINSTIEGSMÖGLICHKEITEN.
Traineeprogramm, Ausbildung

UNTERNEHMENSGRÖSSE.
1 Standorte, 37 Mitarbeiter

INTERESSANT FÜR.
Betriebswirtschaft

HIER KÖNNTE IHRE WERBUNG STEHEN.

UX LAB
HS Augsburg

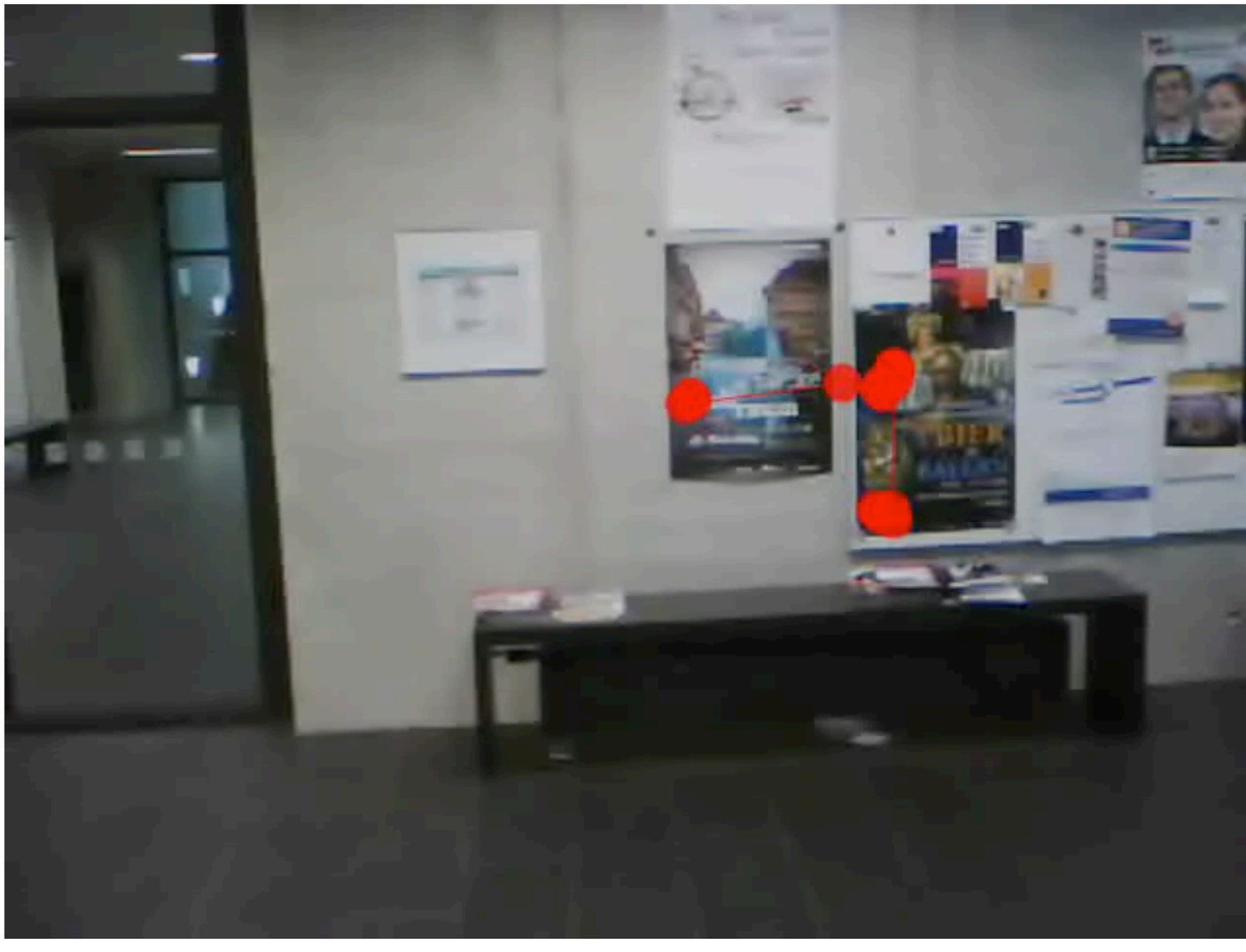
Equipment

Mobile EyeTracking System
Tobii Glasses

Eye Tracking

Mobile EyeTracking System

Tobii Glasses



Gaze replay

Observation

Eye Tracking

What you get

- **Where the user is looking at** (and where not at all)
- Which visual elements attract attention, which are overlooked
- **time spans** (Attention spans, search times)

Disadvantage

- **complicate** to set up
- **time intense interpretation** of collected date

Practice

Practice

Apply and Compare
these **two observation methods**

Thinking aloud
with note taking

Eye Tracking
stationary or mobile

Practice

Apply and Compare
these **two observation methods**

Thinking aloud
with note taking

Eye Tracking
stationary or mobile

Conduct two test in parallel
applying the two test methods to the same research questions

Compare
Effort (time, equipment) to conduct and evaluate the tests
Found results (amount and quality)

Practice

Conduct two test in parallel
applying the two test methods to the same research questions

Compare
Effort (time, equipment) to conduct and evaluate the tests
Found results (amount and quality)

Thinking aloud
with note taking

Eye Tracking
stationary or mobile

Choose a topic
such as your own group project or any other

Define Test goals
What do you want to learn (by testing)?
What are **your questions** regarding the test?

Topic Suggestion

Topic Suggestion

Jonas Jetzig

Practice

Conduct two test in parallel
applying the two test methods to the same research questions

Compare
Effort (time, equipment) to conduct and evaluate the tests
Found results (amount and quality)

Thinking aloud
with note taking

Eye Tracking
stationary or mobile

Choose a topic
such as your own group project or any other

Define Test goals
What do you want to learn (by testing)?
What are **your questions** regarding the test?

Come together
in groups
Discuss and collect

20 minutes

Practice

Next week

Group Consultations

What do you want to learn (by testing)?

What are **your questions** regarding the test?

Which parts of your application has to be covered by the test?

What kind of Prototype do you need
to represent that functionality?
How can you build it?

Demo Eye tracking (UX-Lab)

Detailed time slots and script: