Workshop I
Future of Learning

Salu Ylirisku

15.11.2021

Schedule

09-> coffee available

.. Introduction

.. Teams get their Miro board

.. Sharing experiences of hybrid / remote learning

.. Solutions in the making (hybrid experiments)

.. IoT – and what resources you have

- Lunch

.. Choosing your user – spending time on the data

.. Envisioning learning goals (what is the ‘learning’ for your user)

.. Envisioning scenes – problems-solutions

14:00 – 14:30 Meeting the NEXPO´21 crew – Future of Learning

.. Sketching alternatives (any favourite techniques)

Learning Goals

1. Co-defining requirements based on an open-ended design challenge
2. Developing a prototyping mind-set
3. Understand aspects that influence the development of a good product (focus on technology and user experience)

Overview of the process

- **Week 1: Concept framing**
  - Generating ideas, iterating, and focusing
- **Week 2: Outlining key design requirements**
  - Elaboration and Research
- **Week 3: Validation of key design requirements**
  - Articulating testable sketches/mockups
- **Week 4: Making it shine**
  - Finalising an appearance - NEXPO´21

Getting your Miro board

- Select the project manager of your team's project
  - Acts as the contact point to your team
  - Can be the same person as the NEXPO´21 team member
- The project manager sends Salu an e-mail (salu.ylirisku@aalto.fi)
  - Requesting access to their board
  - Remember to mention your team's ID number

Teams

1. Utshav Bhattarai, Felix Gugler, Nikolas Kristovic, Lara Render, Titta Kanerva
2. Emmi Laine, Sofia Nissilä, Antti-Juho Nieminen, Marius Augustin
3. Milo Sillanpää, Arla Aalto, Aaro Vasama, Sofia Wasastjerna
4. Vilma Torkkeli, Antti-Mikael Kaljunen, Lucas Wasama, Laura Suomalainen
5. Klara Norri, Balder Eklöf Eira, Matias Rinne, Hieu Le
6. Thao Dang, Emilia Tognetty, Joel Oksanen, Milla Rusanen
7. Maria Uusitalo, Hazal Ustabas, Oula Airiola, Samvidh Ramanathan
8. Ia Ahl, Veera Kallio, Yujie Shen, Assi Kivistö, Matias Seppälä
9. Oskar Sasse, Mats Silen, Stanislav Malevich, Ulrika Ura
10. Jasmin Elkordy, Cedric Ehrnroot, Pauliina Alanen, Nicole Hussmann

Experiences of Hybrid / Remote

- Make observations into your team’s Miro

Your own experiences

- Discuss in teams 15 minutes
- What courses did you participate in?
  - Big, small, projects, teamwork, lectures, homework?
- What was intended to be learned?
- What do you see as the key problems?

George Atanassov

Salu’s experiences – Three challenges

- Hear well
- See well
- Be well

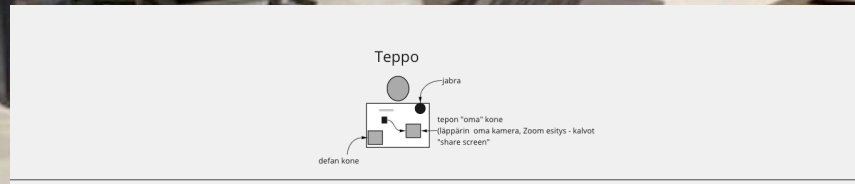
Hear well

- Experiments with Ville Eloranta
  - Development of hybrid teaching setups
  - Wireless mic setup


DEMO TALK
Real live recording of Zoom call


4K
SONY
th•mann


Tapio Koskinen
Teppo Vienamo
Heidi Paavilainen
Tytti Valtio
Edel O'Reilly
Pirjo Kääriäinen
Philippe Le Grassa
Antti Pirinen
Ilona Virtanen
Antti Salovaara
Markus Joutsela
Iiris Kauppila
Valeria Gryada
Nathalie Lauten...
Satu Kylävala
Iisuhonen
Eva Salmio
Antti Lehto
Matti Niinimäki
Sol Vilma
Nankyo Chun
paivihakia
Nina Sjölund
Hassan Hewidy
Rasmus Vuori
Tiina Pyhtinen
Jenna Hirvonen
Mari Ramstedtam


Teppo
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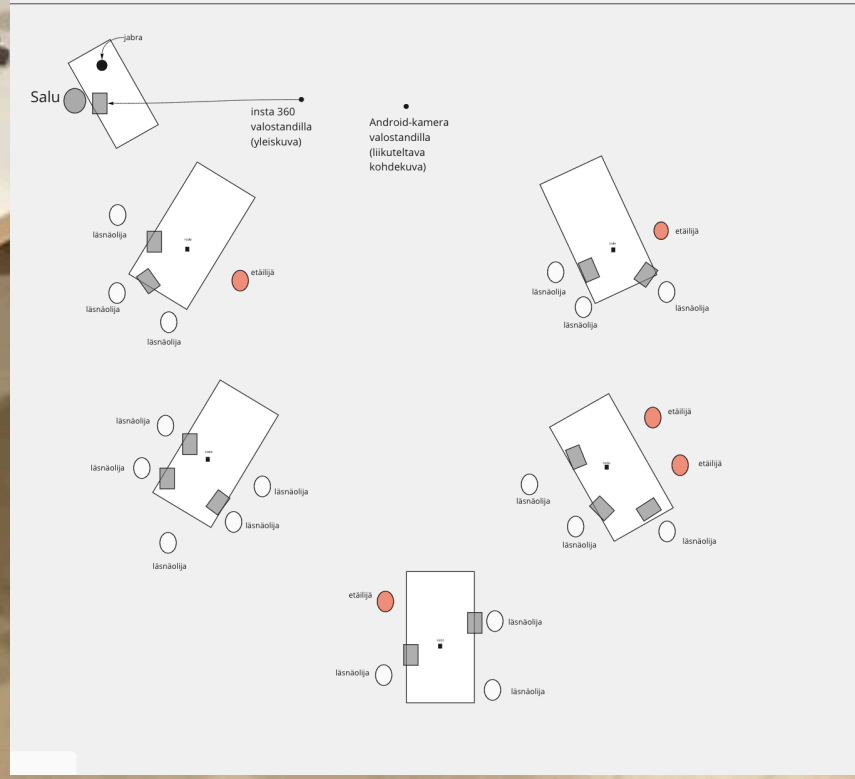
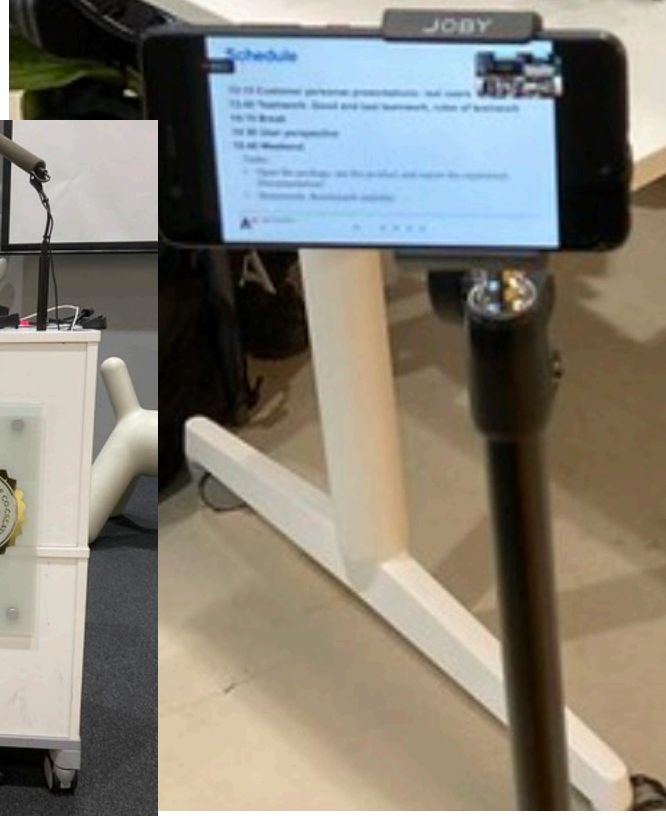
(läppärin oma kamera, Zoom esitys - kalvot
"share screen")
defan kone


Salu
jabra
insta 360
valostandilla
(yleiskuva)
Android-kamera
valostandilla
(liikuteltava
kohdekuva)
läsnäolija
etäilijä


STAGE
Zoom at Design Factory
RØDE


A
Aalto University
Design Factory


JOBY
Schedule

Hybrid can be DARN tricky! But..

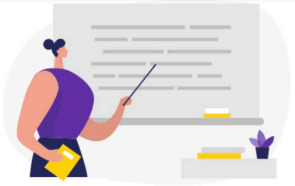
TRRS

TRS

Simplest solutions in ELECdigi

Hybrid Teaching

Tools and equipment for running successful hybrid sessions.



Make it simple

1) Take a Jabra Speak (see below) and connect it to a mobile phone with Bluetooth.

2) Get a camera stand for the mobile phone and place it into the classroom.

3) Join your Zoom/Teams call from the phone.

This gets 99% of your Hybrid needs covered (although there is the risk that you forget about the existence of the remote participants).

ELEC Takeout lends out the following wireless microphones:

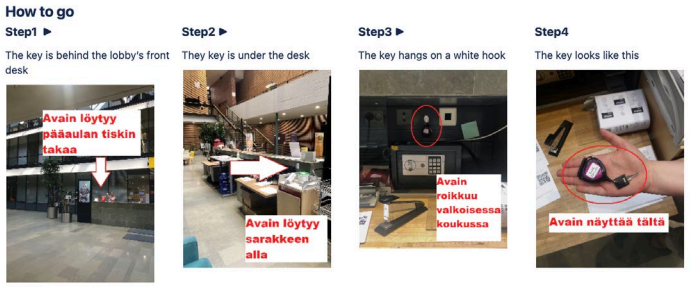
- Jabra Speak (a Bluetooth microphone and speaker)
- Røde Wireless GO (a wireless mic that can be easily attached to a shirt)

With a wireless microphone you do not have to worry about the online participants not hearing you well. The range of the wireless connection of Røde Wireless Go is around 70 meters. We also provide a setup that has up to 6 parallel wireless microphones to cover a larger space.

Aalto University
School of Electrical
Engineering

Equipment – ELEC TakeOut

https://takeout.aalto.fi



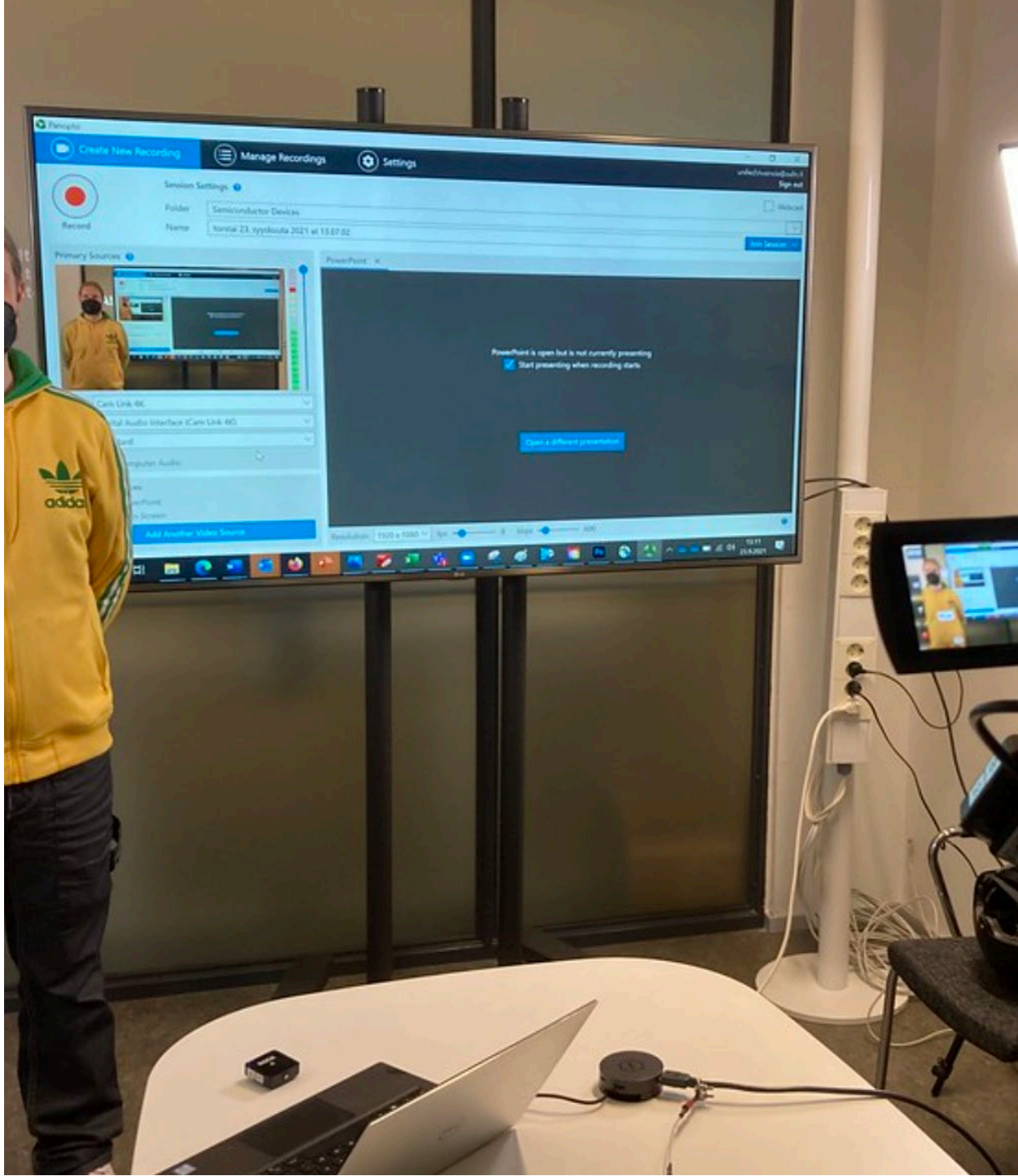
Launched on the 1st of September 2021 (at TUAS, Maarintie 8)

Aalto University
School of Electrical
Engineering

Pop-up studio

In room 2140

Recording of lecture videos

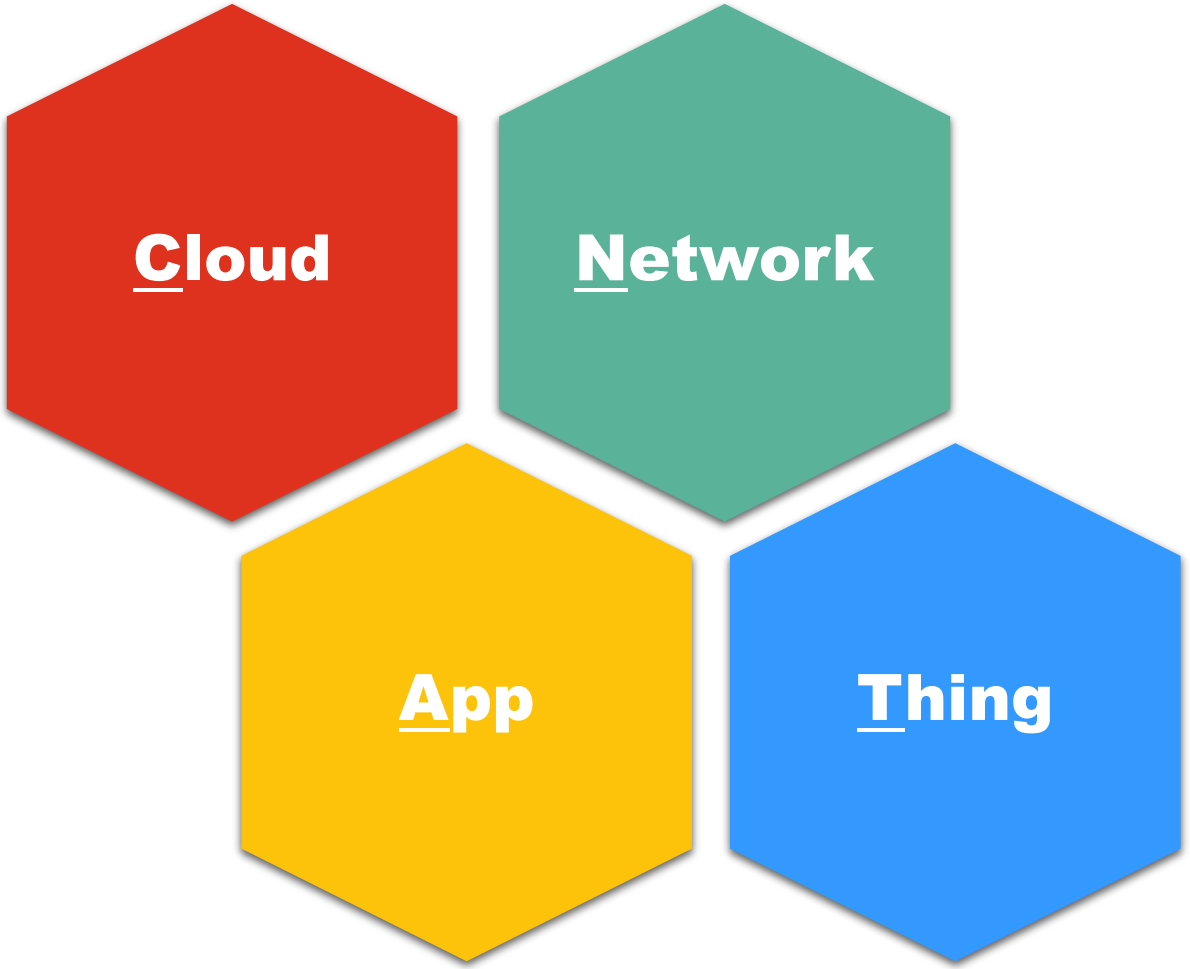


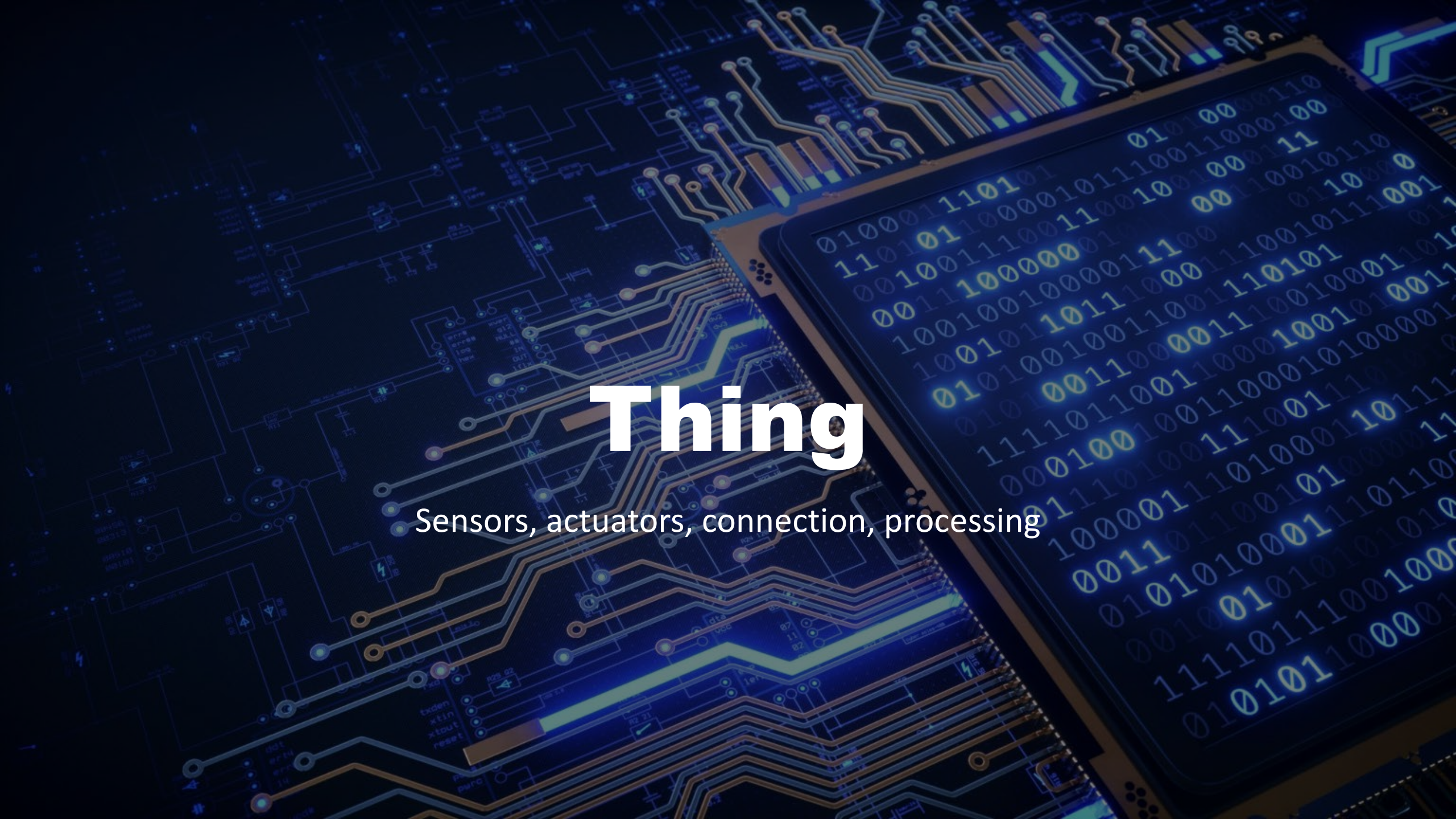
Aalto University
School of Electrical
Engineering

Lunch


IoT

Key parts of IoT system




Thing
Sensors, actuators, connection, processing

Thing - Sensors

- Buttons, switches, knobs
- Motion (acceleration, gyro, IR)
- Proximity
- Magnet
- Bending
- RFID
- Microphone
- Camera
- Your mobile device
- Other devices, such as tablets, joysticks, …

Thing - actuators

- Lights
  - LEDs
- Sounds
  - Speakers
- Motion
  - Buzzers
  - Servos
  - Steppers
- Your device (mobile / desktop)

Thing - connection

- Wireless
  - WiFi
  - Bluetooth
- Wired
  - USB

Thing - Processing

- Simple algorithms possible
  - Focus on the triggering of messages
    - e.g., if this button is pushed then send this message to server

- Of course, on a computer you can have more complex processing
  - If smile is detected, then…
  - If a correct X if detected, then…

The App

- Graphical user interface
  - Webflow (https://webflow.com/)
  - Animations: (https://rive.app/)

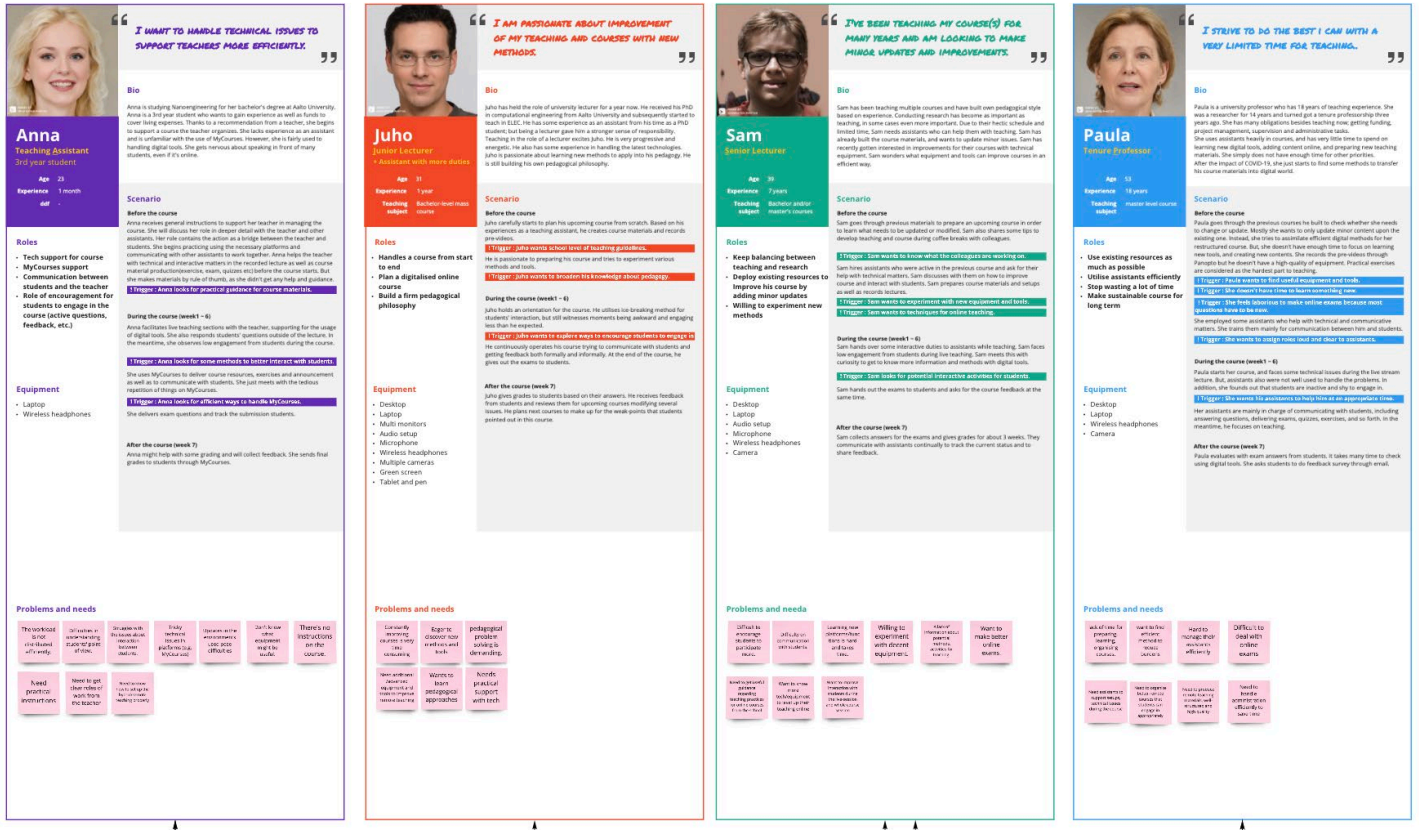
- Prototyping
  - Figma (Interaction design, GUI)

Cloud

- Node-RED (Connecting things with APIs) – our ‘cloud’
- Also a Linux server possible

Data / Experiences

- https://miro.com/app/board/o9J_llsJHnk=/



Choosing Your User

- Student
- Teaching Assistant
- Junior Lecturer
- Senior Lecturer
- Professor

NEXPO´21 Meeting – 14:00-14:30

- What needs to be planned?
  - Define the scope – basic stands, or grand stuff?
  - Invitations – schools, communications, partners, A!Ole?
  - Hybrid participation? Event website? How to best exhibit the design concepts (Dubai 2020)?

- How do you break down the work – and groups?

NEXPO´21 Minimum Requirements

- Each team needs to have their own stand
- Theme of ‘Future of Learning’ needs to be present
- Visitors’ and exhibitors’ feedback gathering

NEXPO´21 Meeting – 14:00-14:30

- Engaging the audience
  - Users
  - Others (investors / stakeholders)
- Common theme – visual
- Entertaining?

- Miro board for designing the event?

[Budget 500 €]

Friday

- Morning – working on the ideas, quick feedback
- Focusing on one, quick iteration and presentation

Key

.. Envisioning learning goals (what is the ‘learning’ for your user)

.. Envisioning scenes – problems-solutions

Focusing on Scenes

- What are relevant scenes?
  - Scene = situation, in a particular environment, …
    - Who is doing what
    - What