Media Computing Project

Prof. Dr. Jan Borchers
M.Sc. Anke Brocker

INTRODUCTION

Media Computing Group

https://hci.rwth-aachen.de/mcp

Here you find all information regarding the lab

Team

Prof. Dr. Jan Borchers

Anke Brocker

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Please mail Anke for any questions

Start E-mail with **[MCP]** tag.

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Tangible Interfaces

Interactions in AR

Physical Computing

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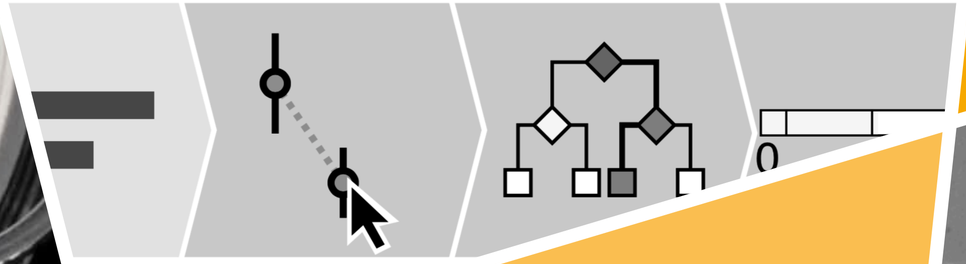
Statsplorer



Interactive Surfaces

Statistical Analysis in HCI

Audio/Video Interaction

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FabLab

Interactive Exhibits

Student Projects

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MENU
Monsters attack the city. Defend the headquarter!

SCHEDULE

Project Process

Brainstorming

Prototyping

Evaluation

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Presentation

Finalization

Development

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Lab Format

- 13 weekly meetings
  - **Mandatory attendance**
  - Wednesdays 13:30 until 15:30
  - Jan 8th & 15th **no lab**
- Final presentation Jan 29th
- ~ 13h work per week and per person
- **Registration** in RWTHonline starting Oct 10th
  - Access to RWTHmoodle
  - Last day for **dropout**: Oct 31st

Schedule

Date	Topic	Assignment for next week
9.10	Introduction, Groups	Brainstorming project idea
16.10	Basics	Storyboard
23.10	2D Design & Lasercutting	Project Pitch
30.10	3D Printing, Molding & Casting	Concept for instruments and central controller
6.11	3D Design	Gantt chart
13.11	Arduino & Electronics	First prototype
20.11	Embroidery with Bernina	Evaluation of prototype
27.11	PCB Design & Assembly	-
4.12	Work on Project	Single instruments functionality
11.12	Work on Project	Full system functionality
18.12	Work on Project	Packaging
8.01	Work on Project	-
15.01	Work on Project	Full documentation of project
22.01	Work on Project	Video-Trailer
29.01	**Final Presentation**	

INTRODUCTION

Project Topic

Personal Orchestra

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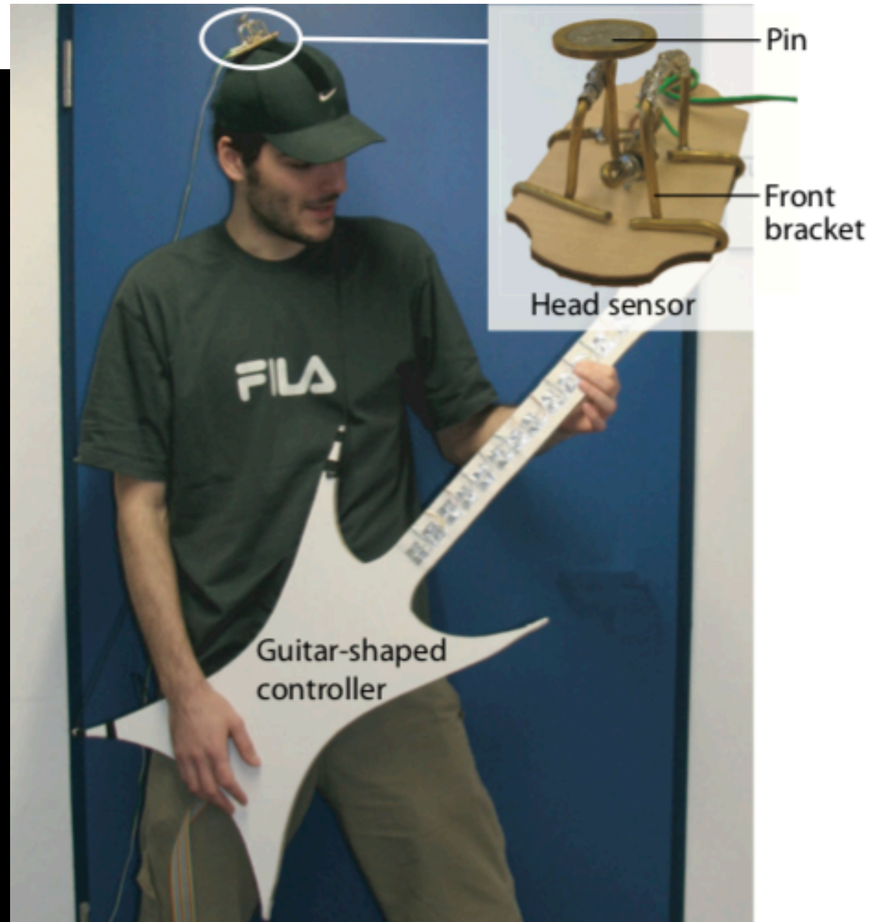

Bangarama:

Creating Music With Headbanging

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REXband:

A Multi-User Interactive Exhibit for Exploring Medieval Music

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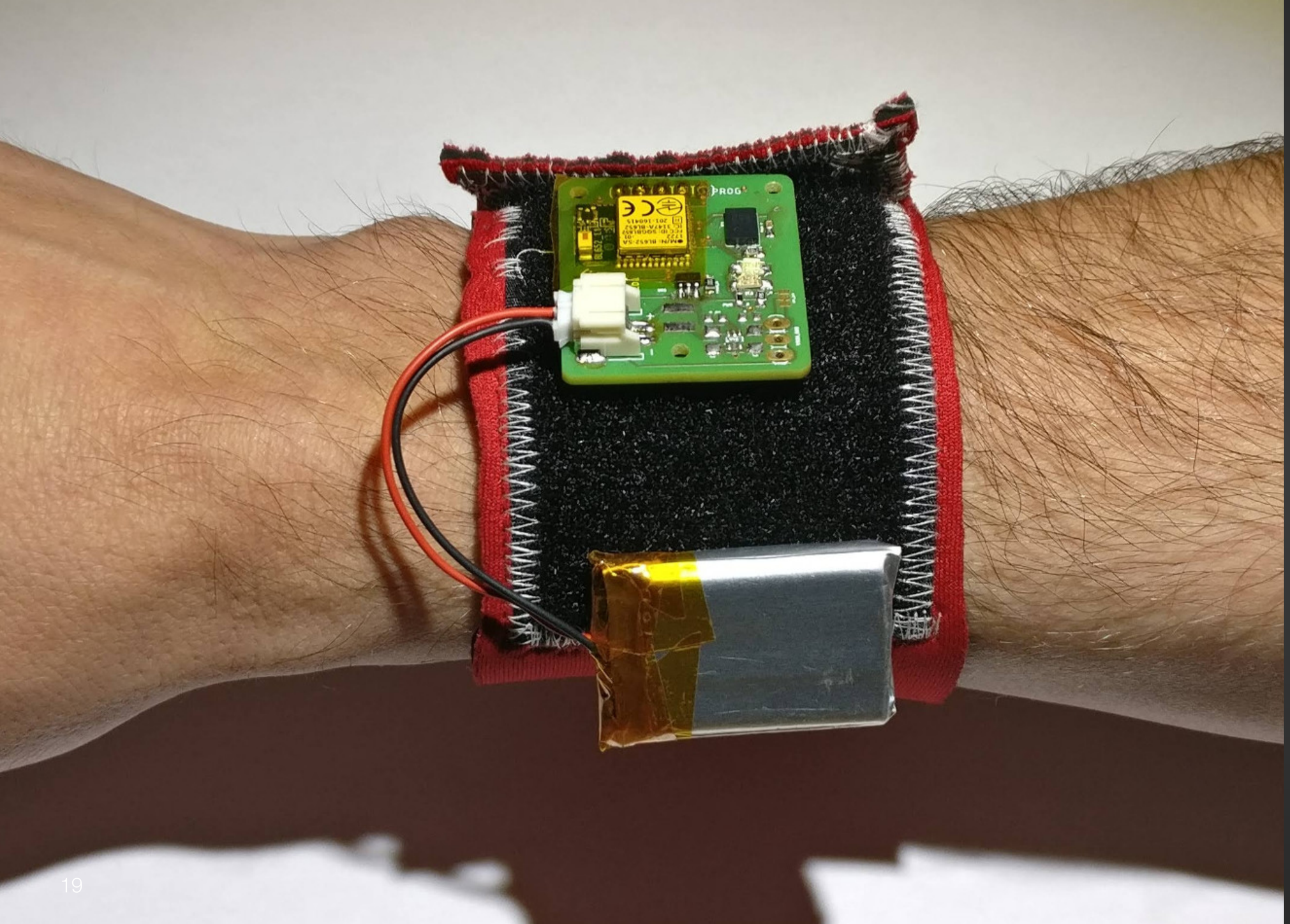

INSERTA:

Interactive Sensor Feedback Dance Performance

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Interactive Sensor Feedback Dance Performance

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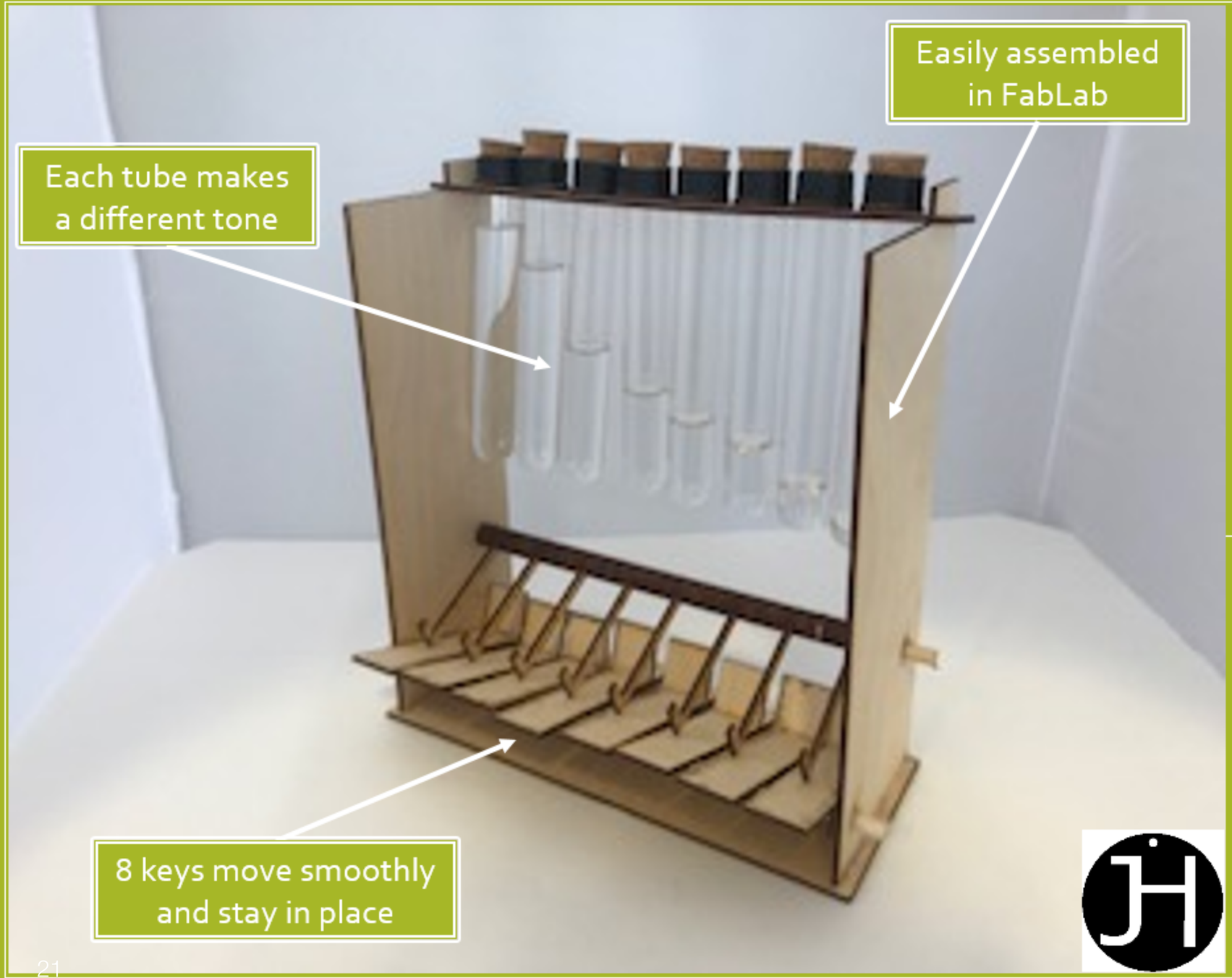

WATER TUBE PIANO

Jackson Helm

2017

- Made from glass tubes, water, tape, and laser cut wood, the glass tube piano is an instrument that is fun to play and easy to create.
- Play the keys like you would a piano, and the hammers will swing upwards and strike the tubes filled with varying levels of water, making different noises and cool chords. All 8 keys in a row plays a scale.
- Bring the gift of music to anyone!

Jam Box

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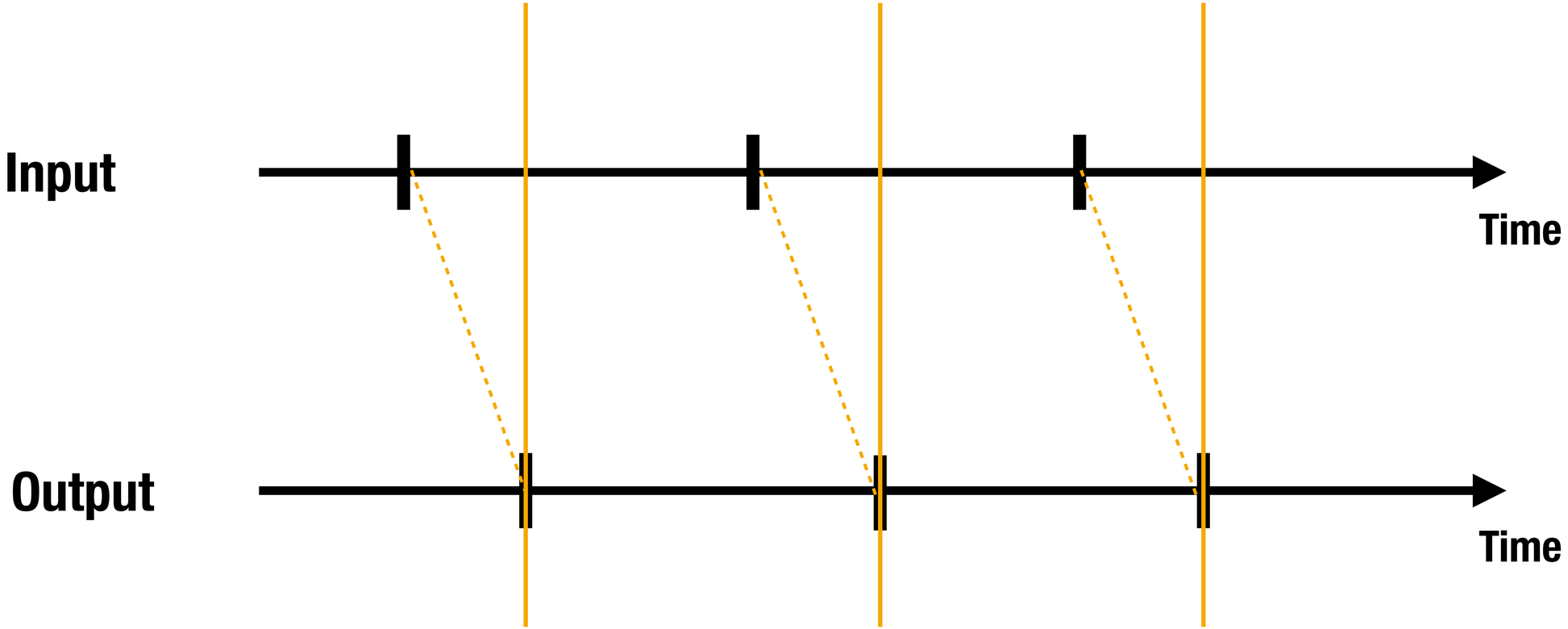
Instruments and HCI

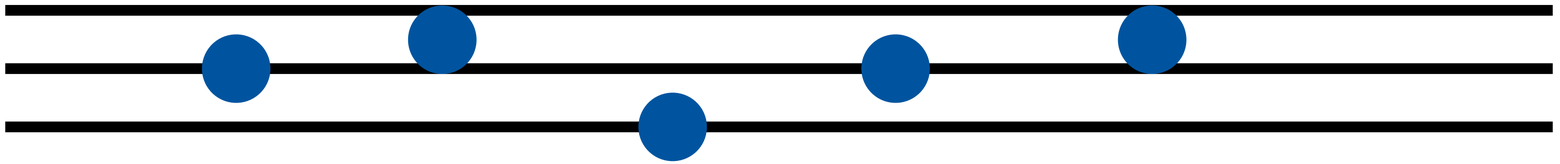
- Richness of interface
  - Allowing mastery/virtuosity
- Latency is easy to recognise
- Interaction with the instrument can be adaptable
  - … to other players
  - … to accompaniment

Change music



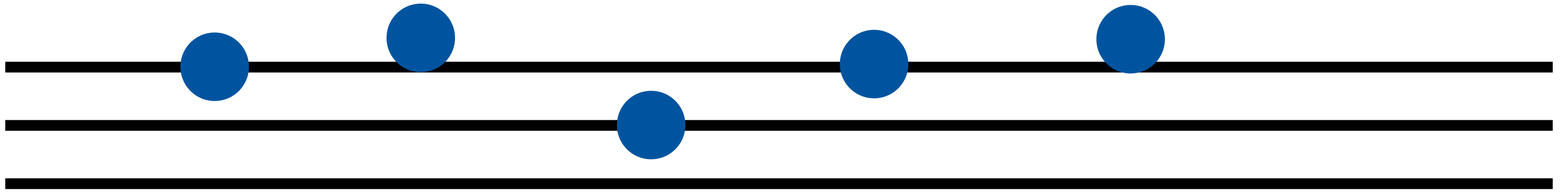
Change music

Input



Note adjust

Output



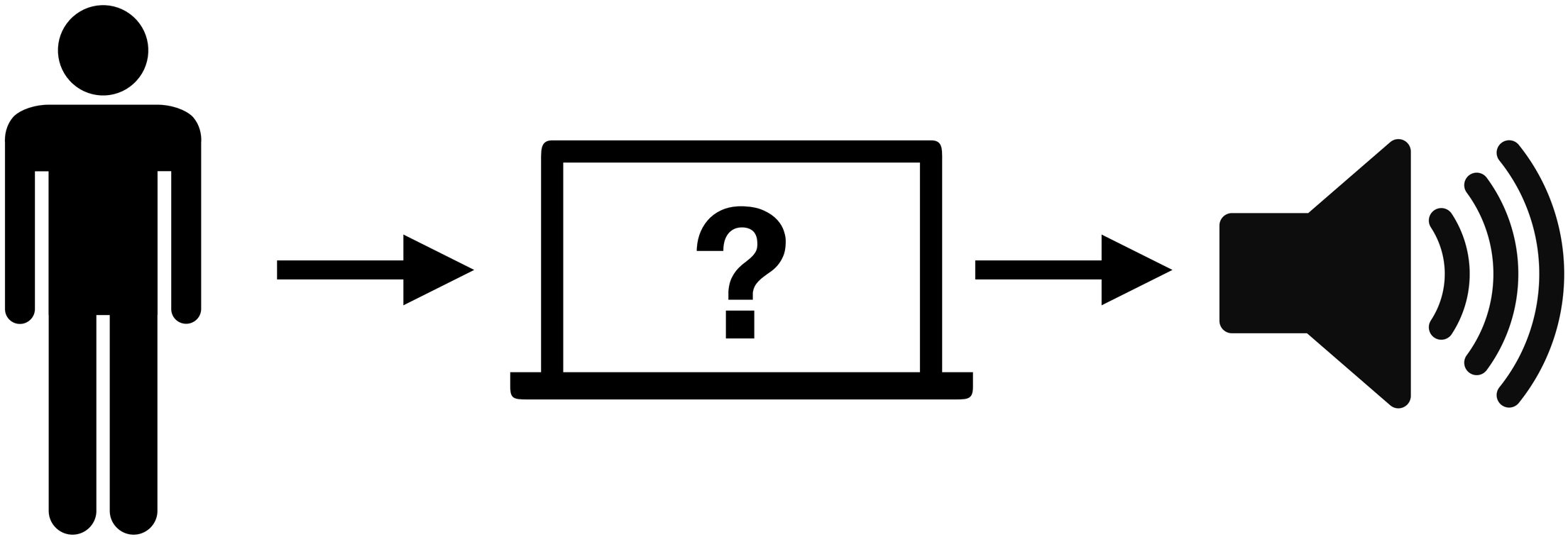
Fab Band

- Three groups develop one instrument
- One group for central controller
- Important:
  - User input
  - User interaction
  - User experience
- In the end all instruments can work together
- **Presentation**: Individual group presentation & final band presentation

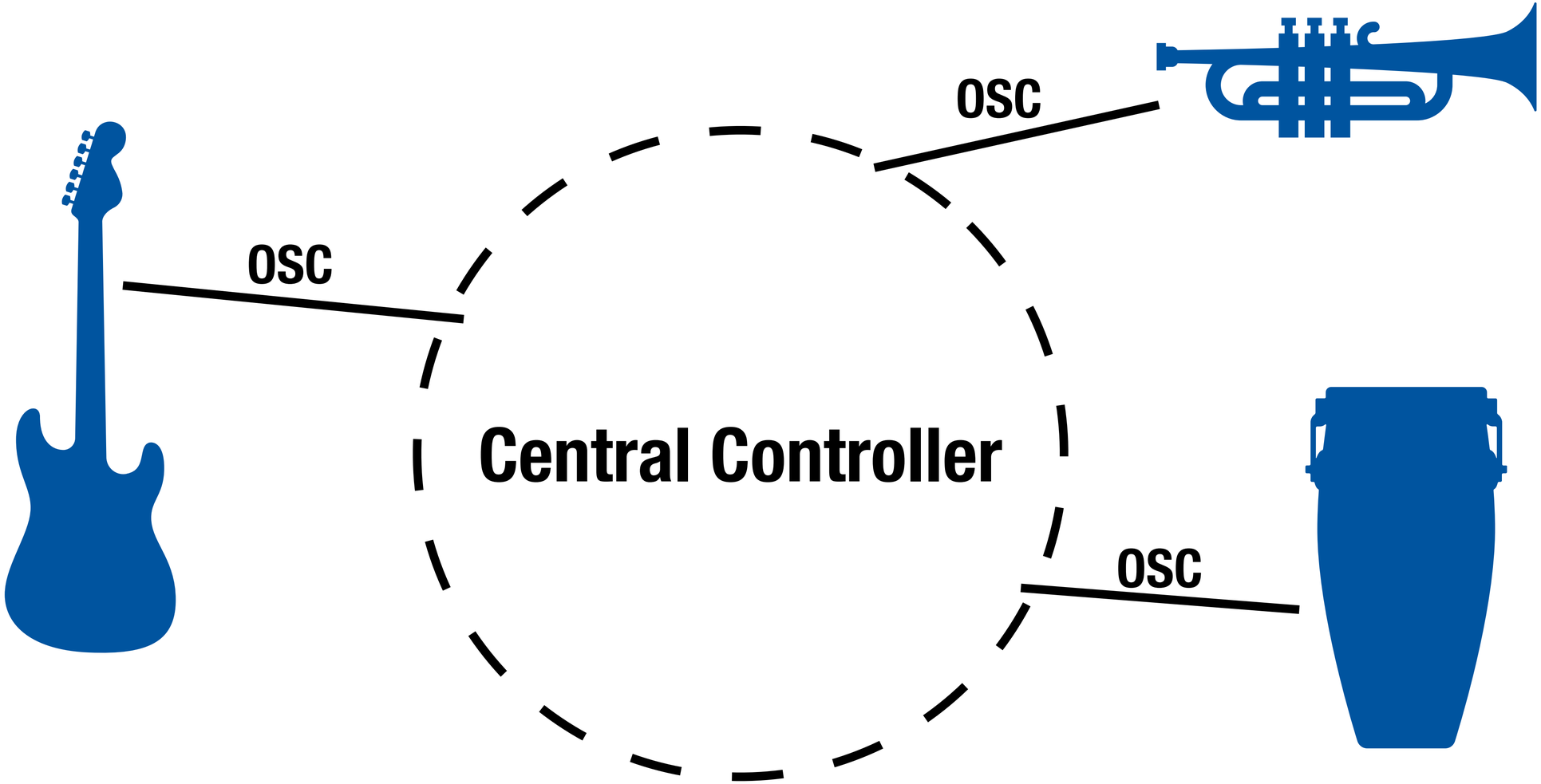
Instrument Concepts

- Ideas
  - No classical instrument
  - Combine types
  - Audio output can be generated in various ways
  - Light
  - Instruments for more than one user
  - Dependencies between instruments

Task



Task



TEAMS

Form Groups

Groups

2 x 4

2 x 5

TOUR

FabLab

ASSIGNMENT

Tasks for next week

Tasks for next week

- **Register** in RWTHonline
- **Form Groups** over RWTHmoodle
- **Brainstorm** for project ideas