



# Arcade

# Input Devices for Games

Adrian Wagner



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# Which of the following is an input device for games?









































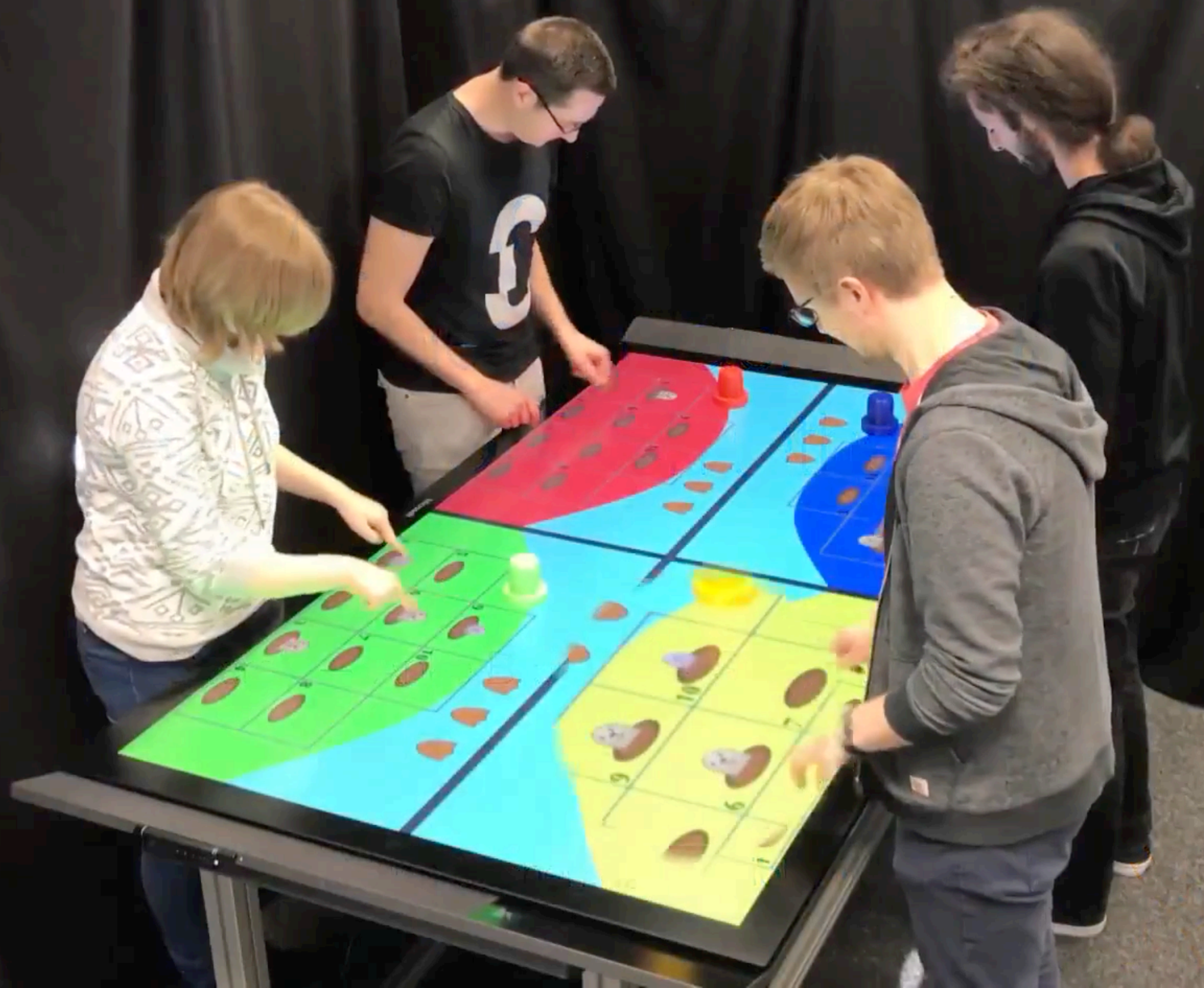






# Why are you talking about gaming in an HCI lecture?









low-fi





01%







**We have built a 'Fab Terrarium'.**

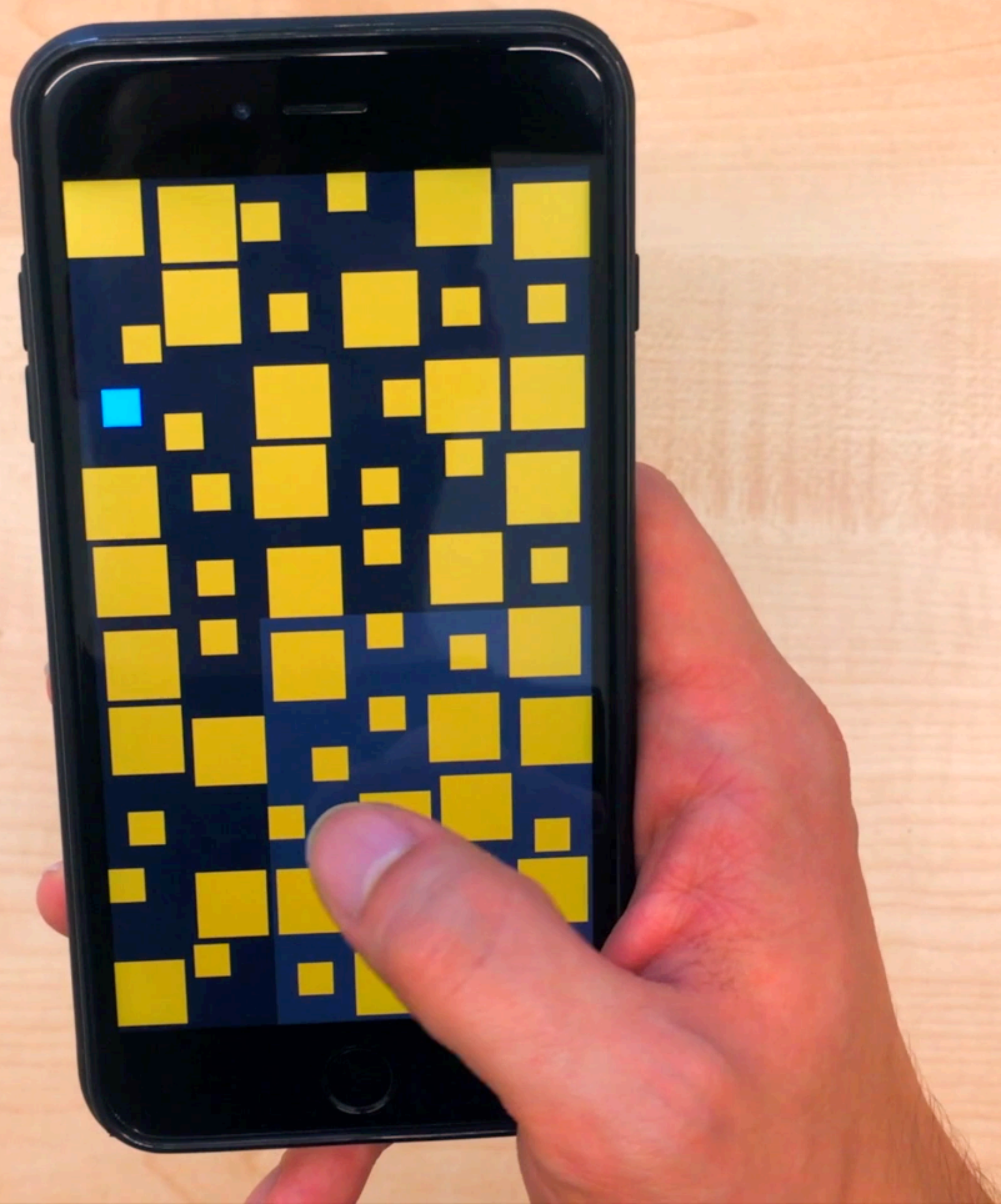















# Why are we using games in user studies?





# **ExerCube vs. Personal Trainer: Evaluating a Holistic, Immersive and Adaptive Fitness Game Setup**

**Anna Lisa Martin-Niedecken<sup>1</sup>, Katja Rogers<sup>2</sup>, Laia Turmo Vidal<sup>3</sup>, Elisa D. Mekler<sup>4</sup>, Elena Márquez Segura<sup>3</sup>**

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# Group Interactions in Location-Based Gaming: A Case Study of Raiding in Pokémon GO

Bhattacharya et al.  
University of Washington



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# Using commercial video games in studies

- Advantages:
  - enables the researcher to find a population familiar with the involved interaction (ecological validity)
  - reduces the risk of the researcher influencing the study with implementation details
  - aids reproducibility (software is available to everyone)

**MacMahan et al.: Considerations for the use of commercial video games in controlled experiments**



# Using commercial video games in studies

- Disadvantages:
  - games can not be changed by the researcher
    - confounding variables might be introduced
    - features or conditions might be missing
    - there might be no game appropriate to the task
  - consumer grade input devices vs. professional devices

**MacMahan et al.: Considerations for the use of commercial video games in controlled experiments**



# Research and gaming in symbiosis?





# CHI PLAY 2020







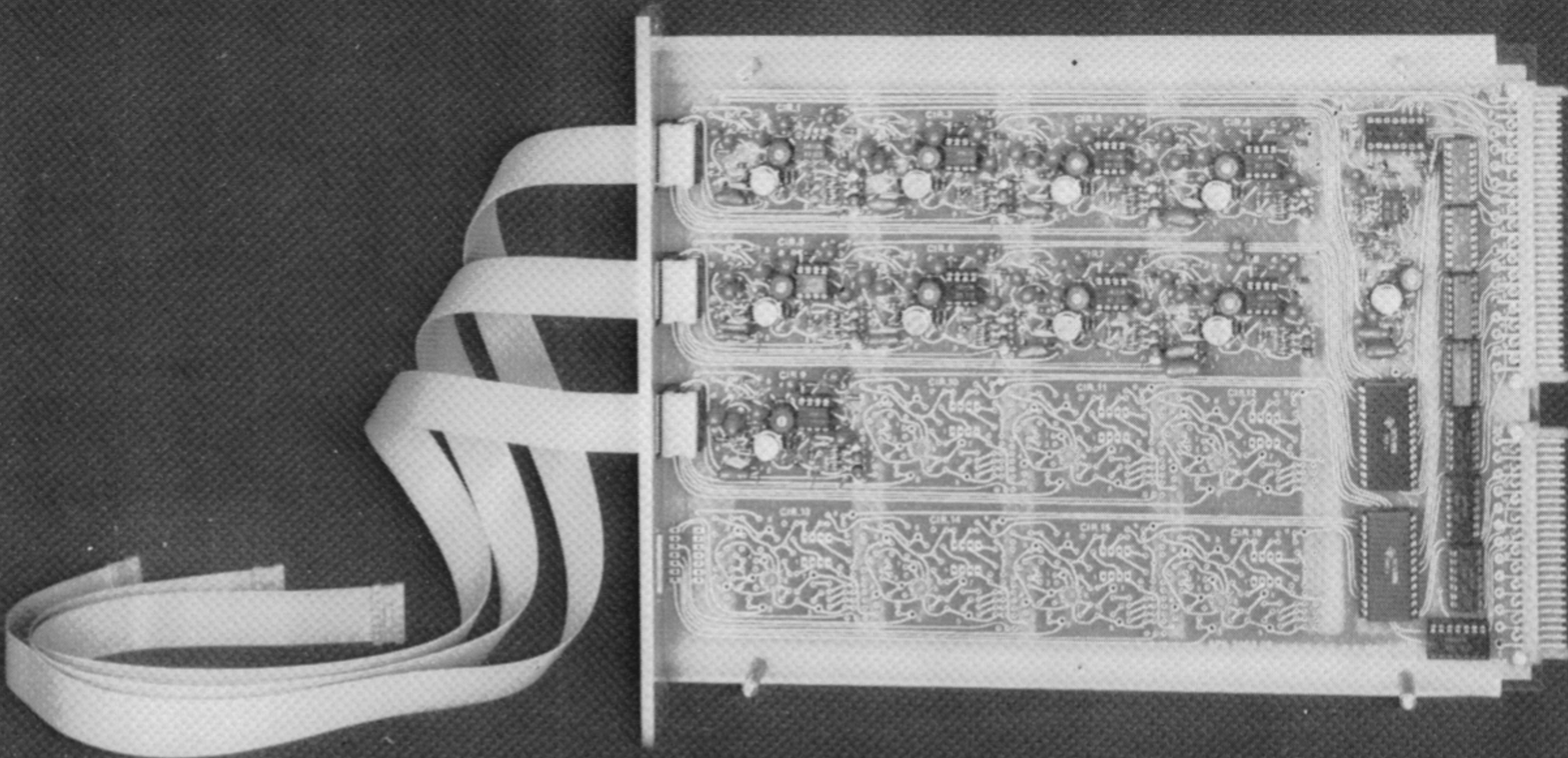


reactable







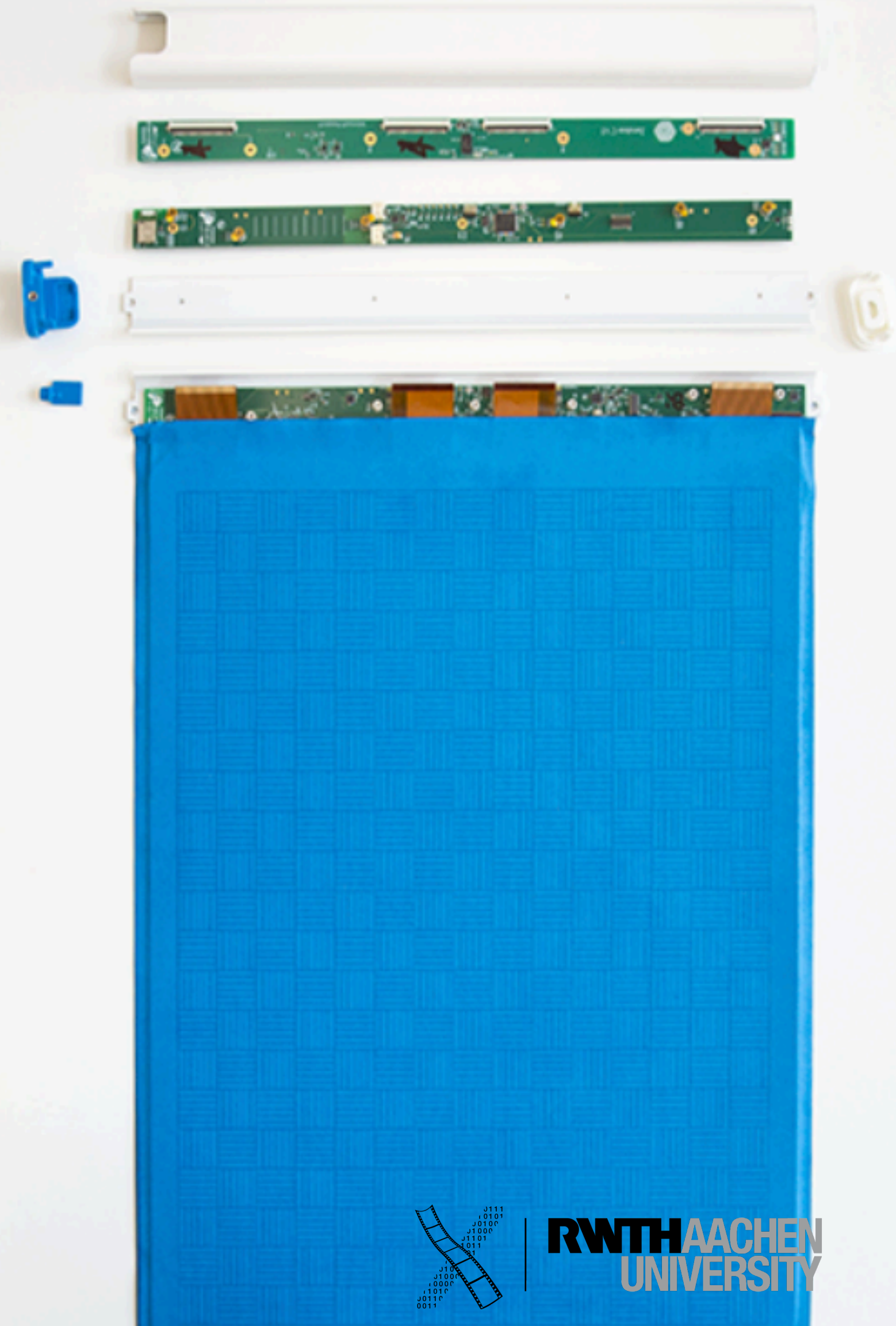
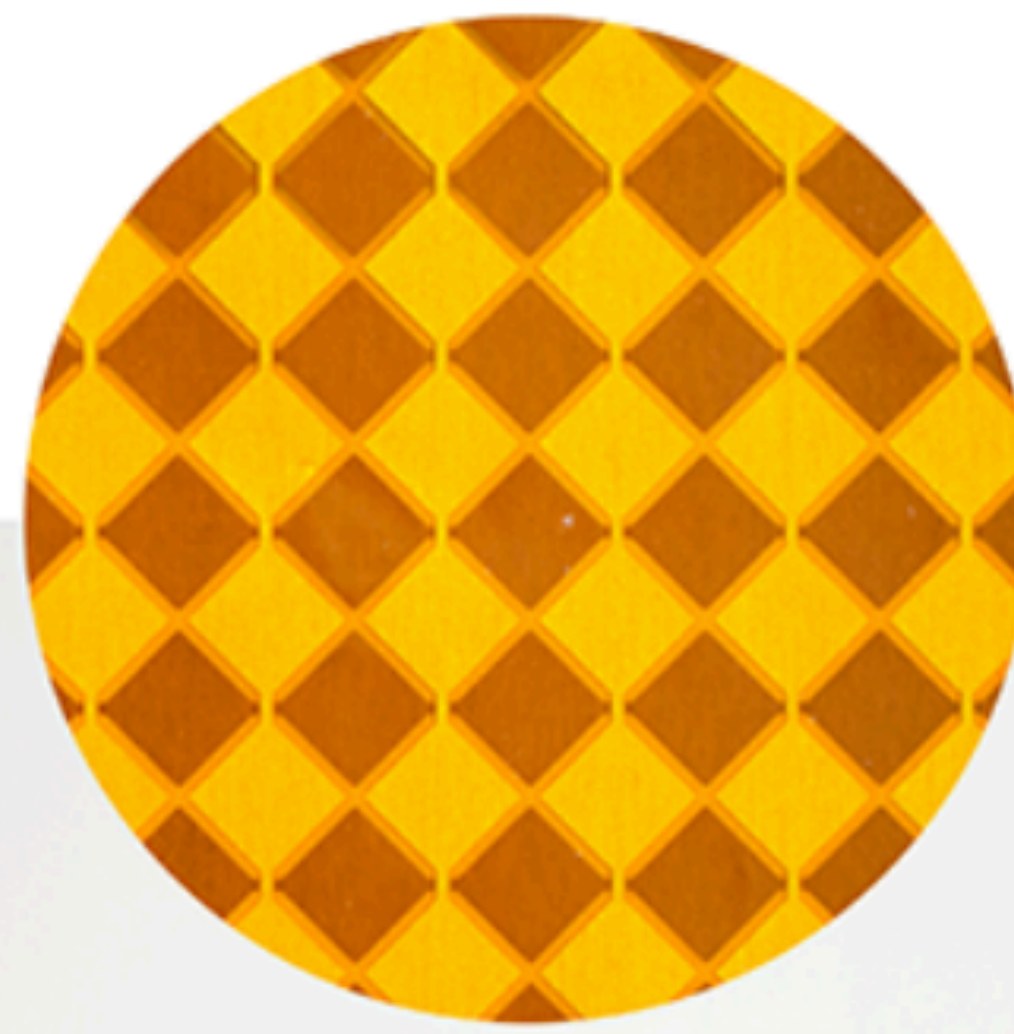
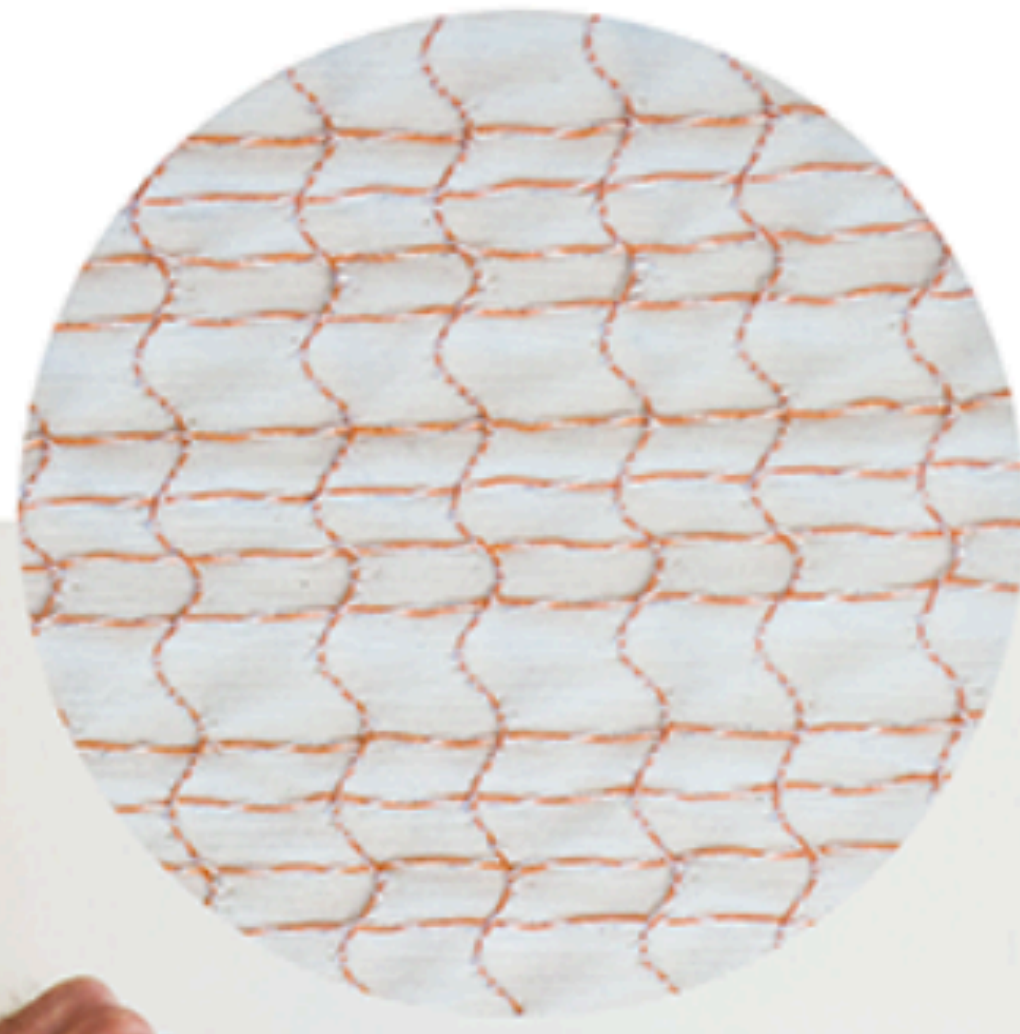




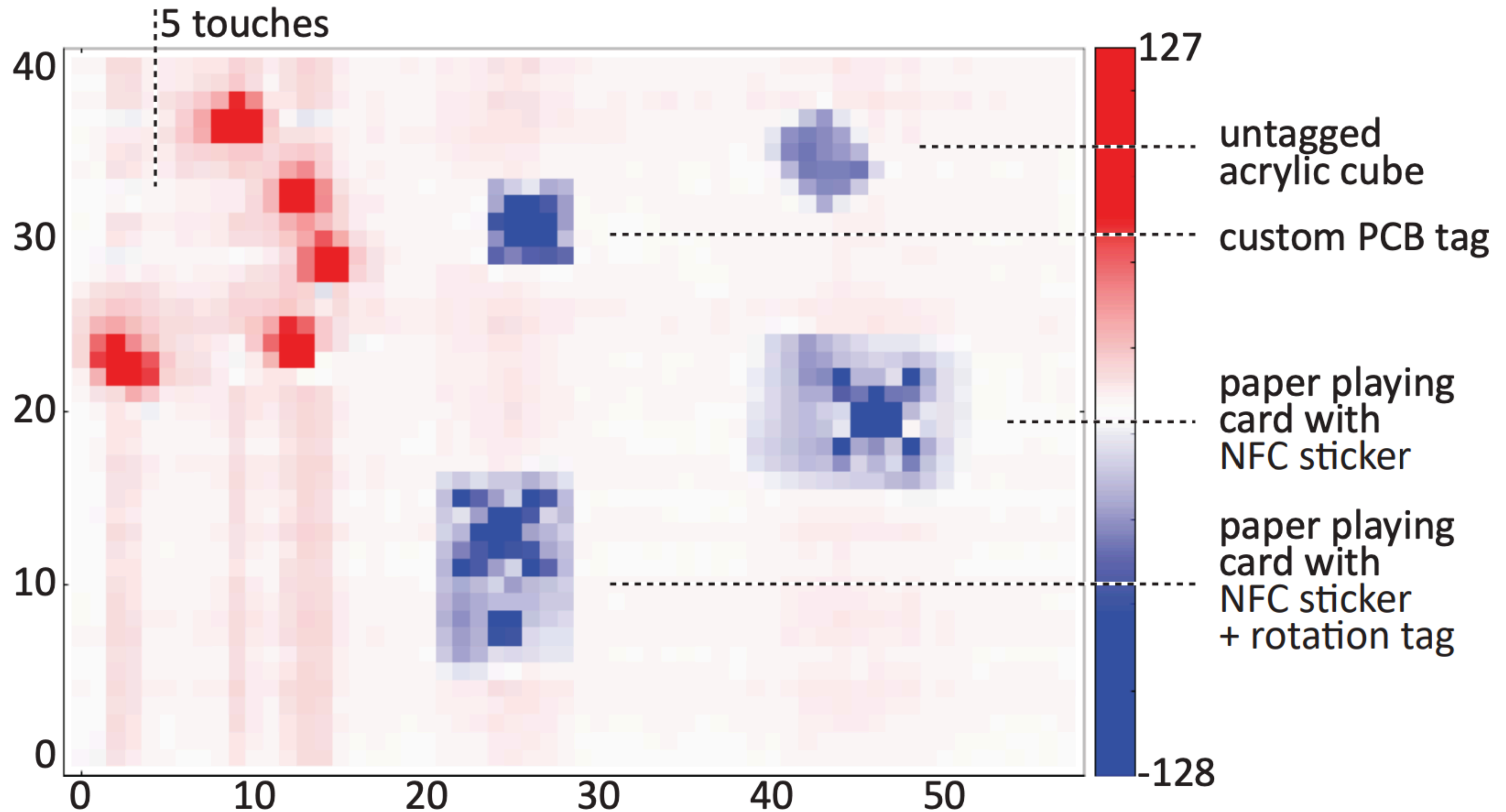
# Project Zanzibar

Microsoft Research









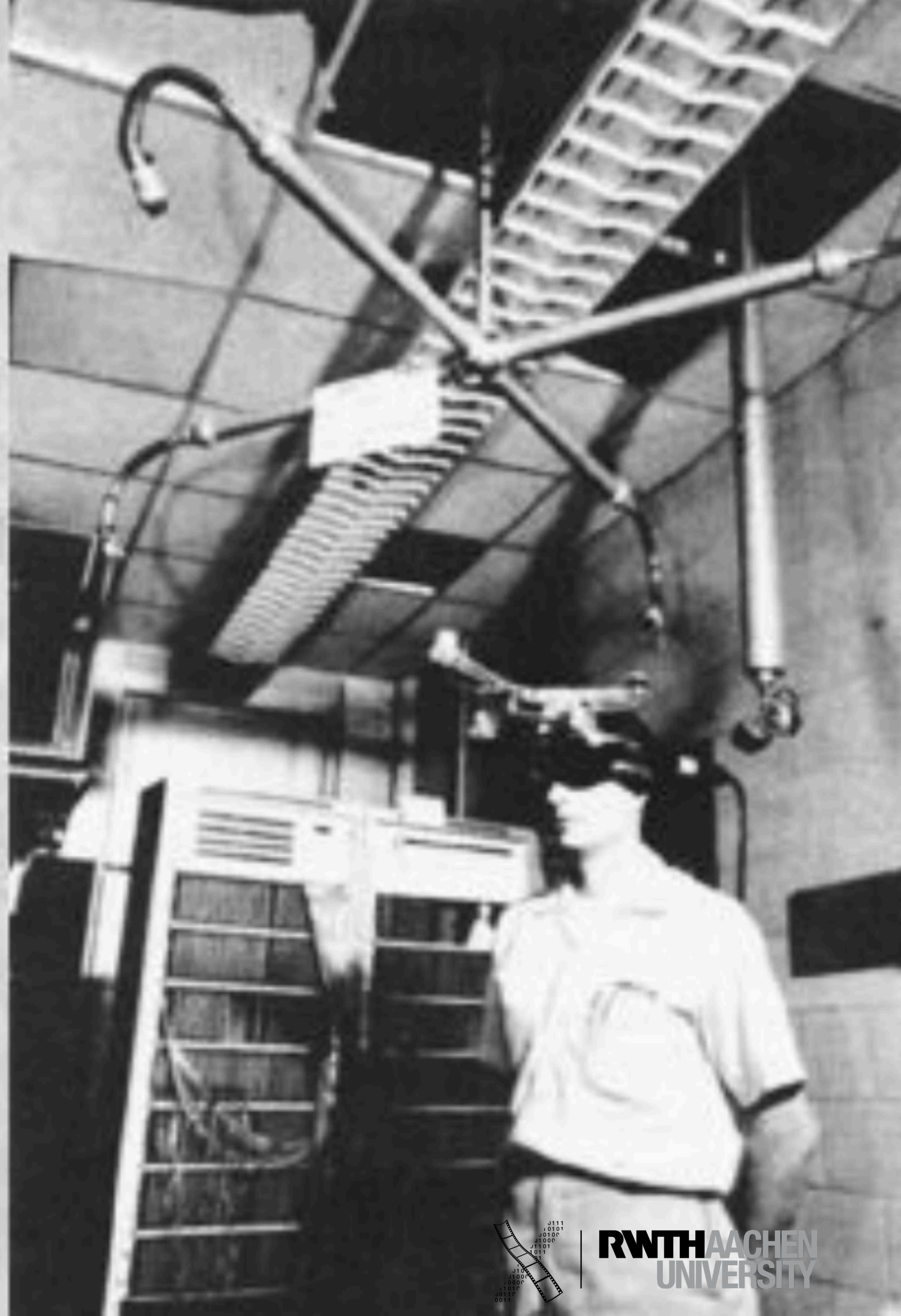
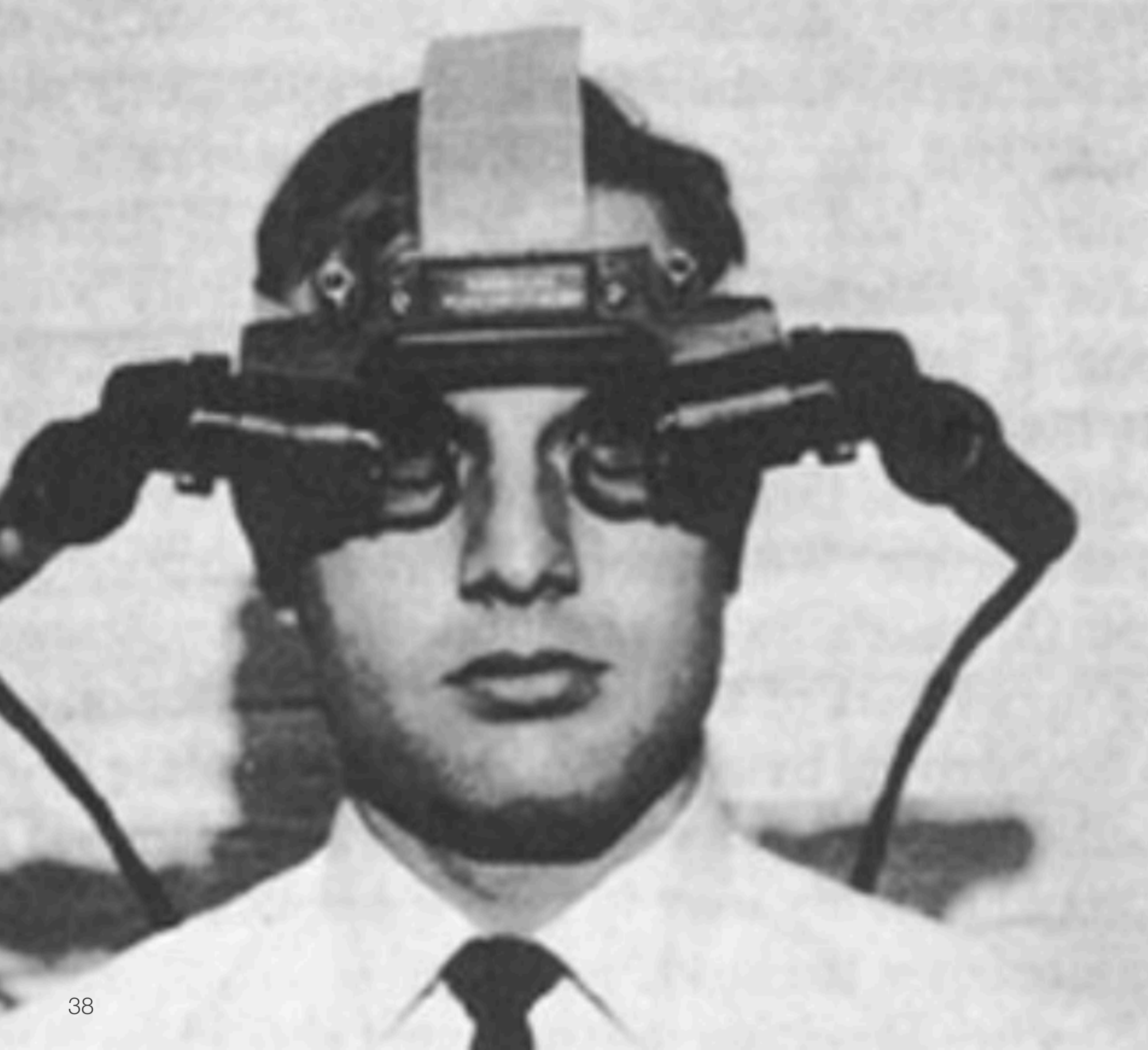








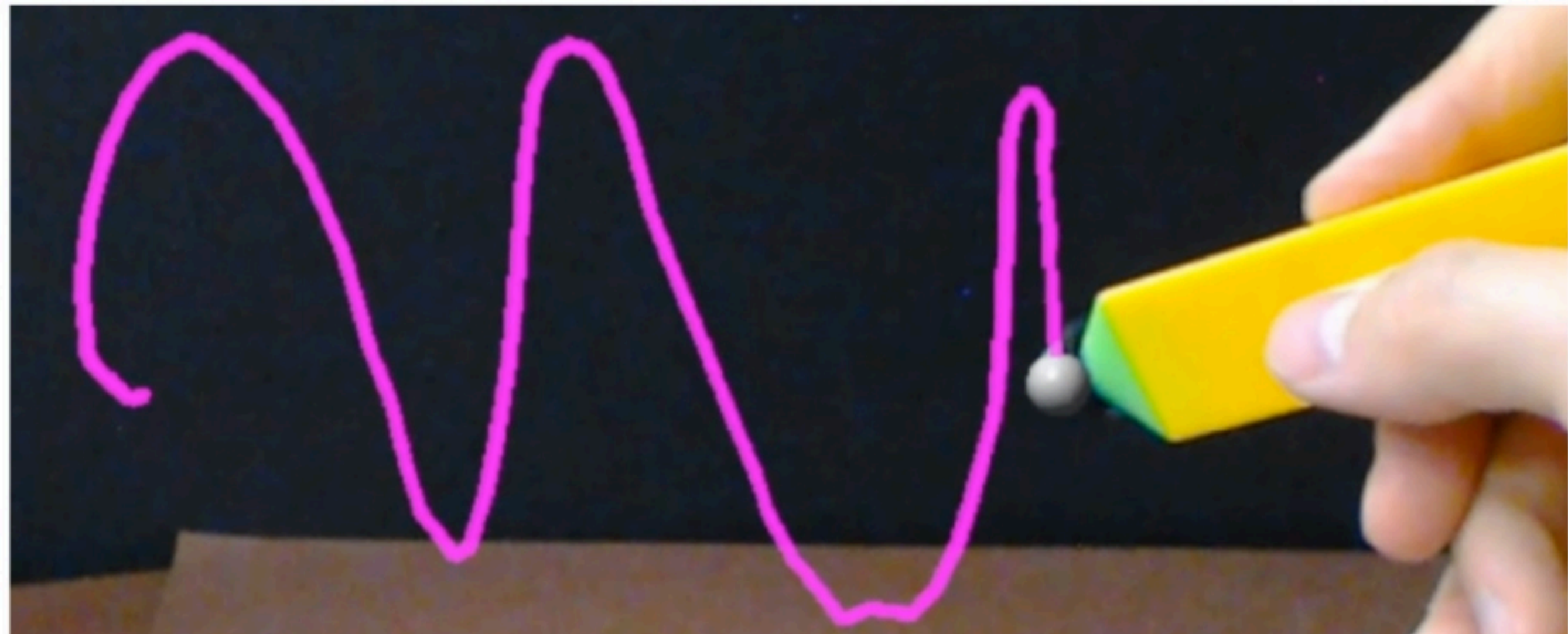
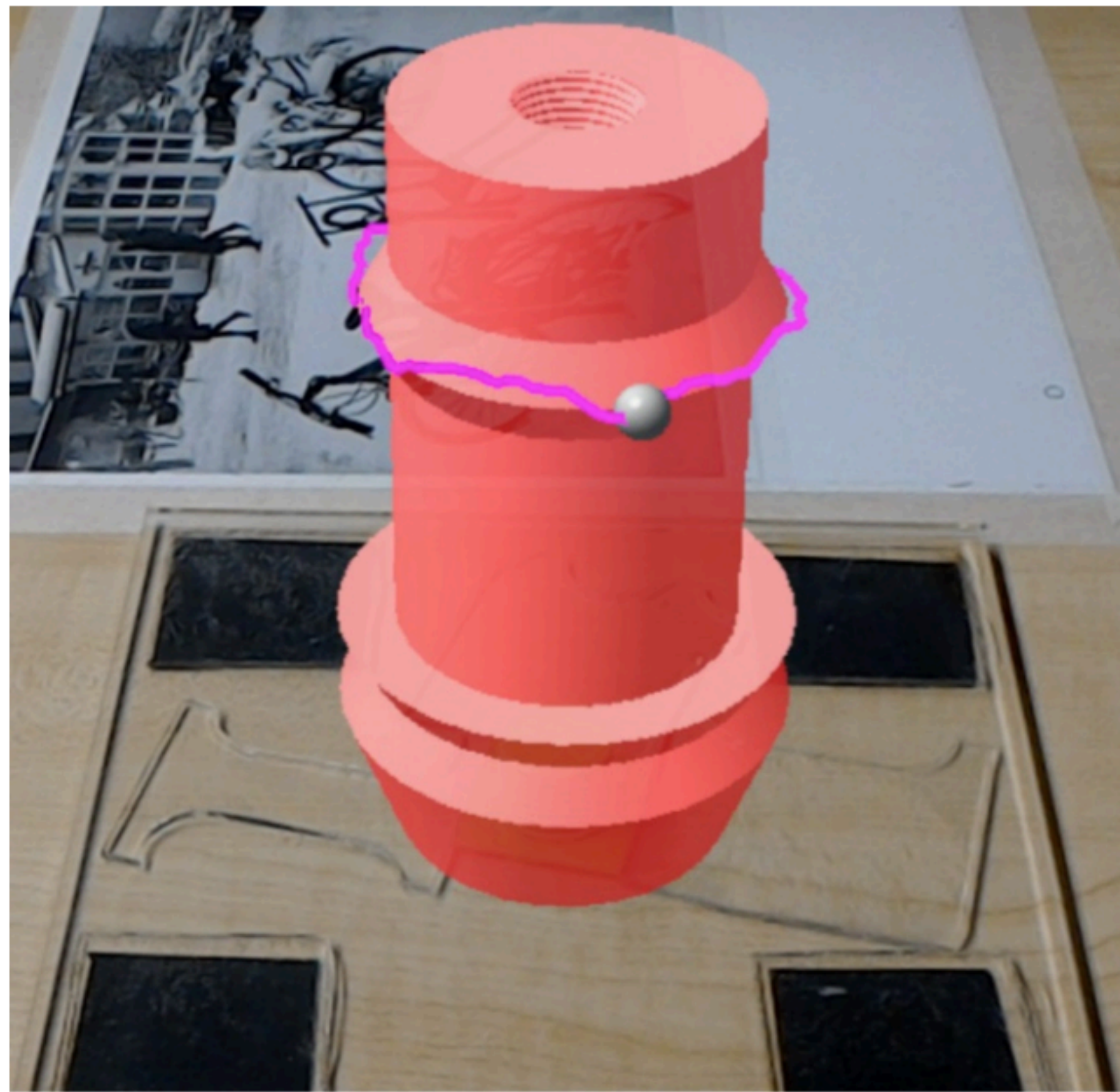




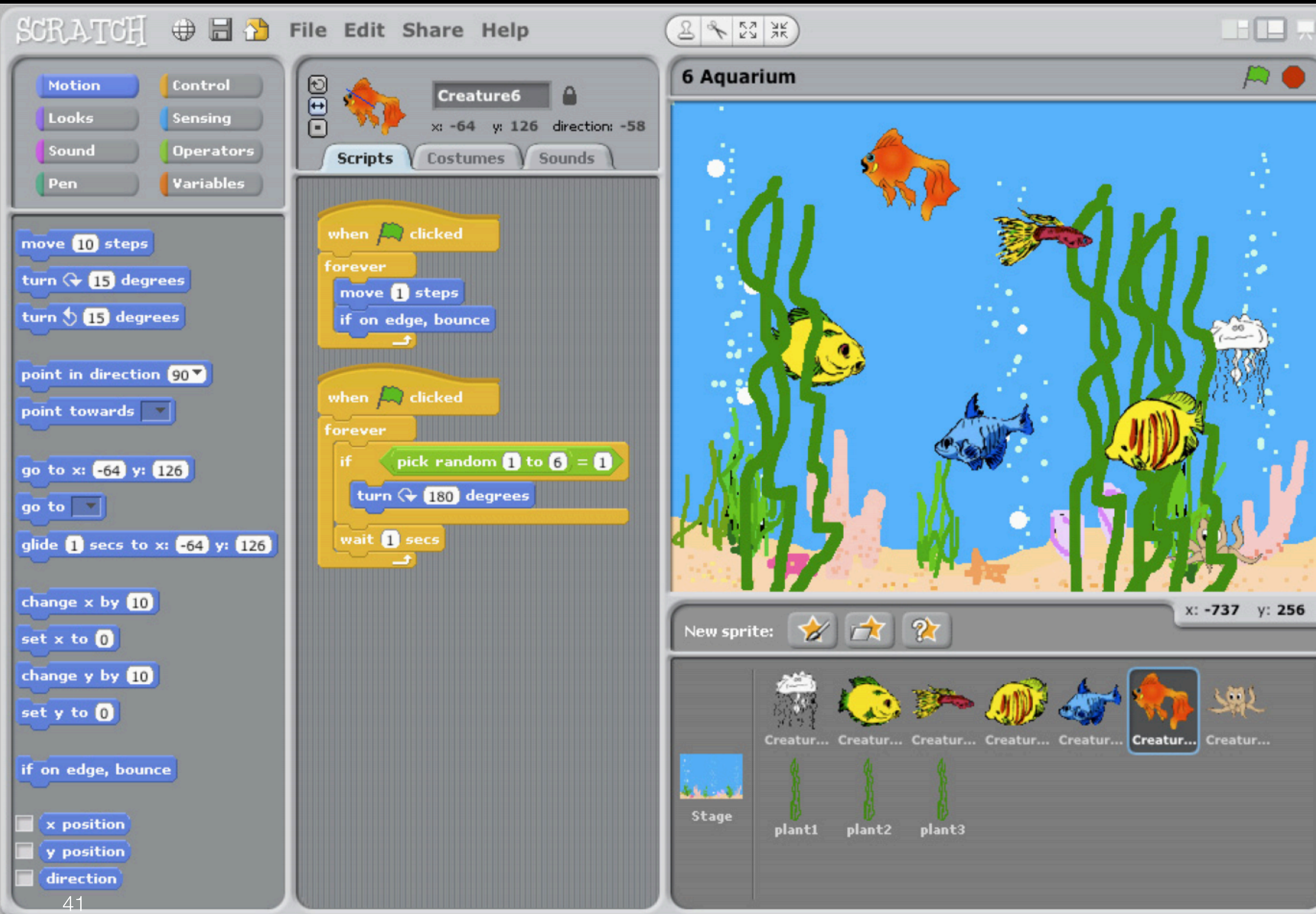












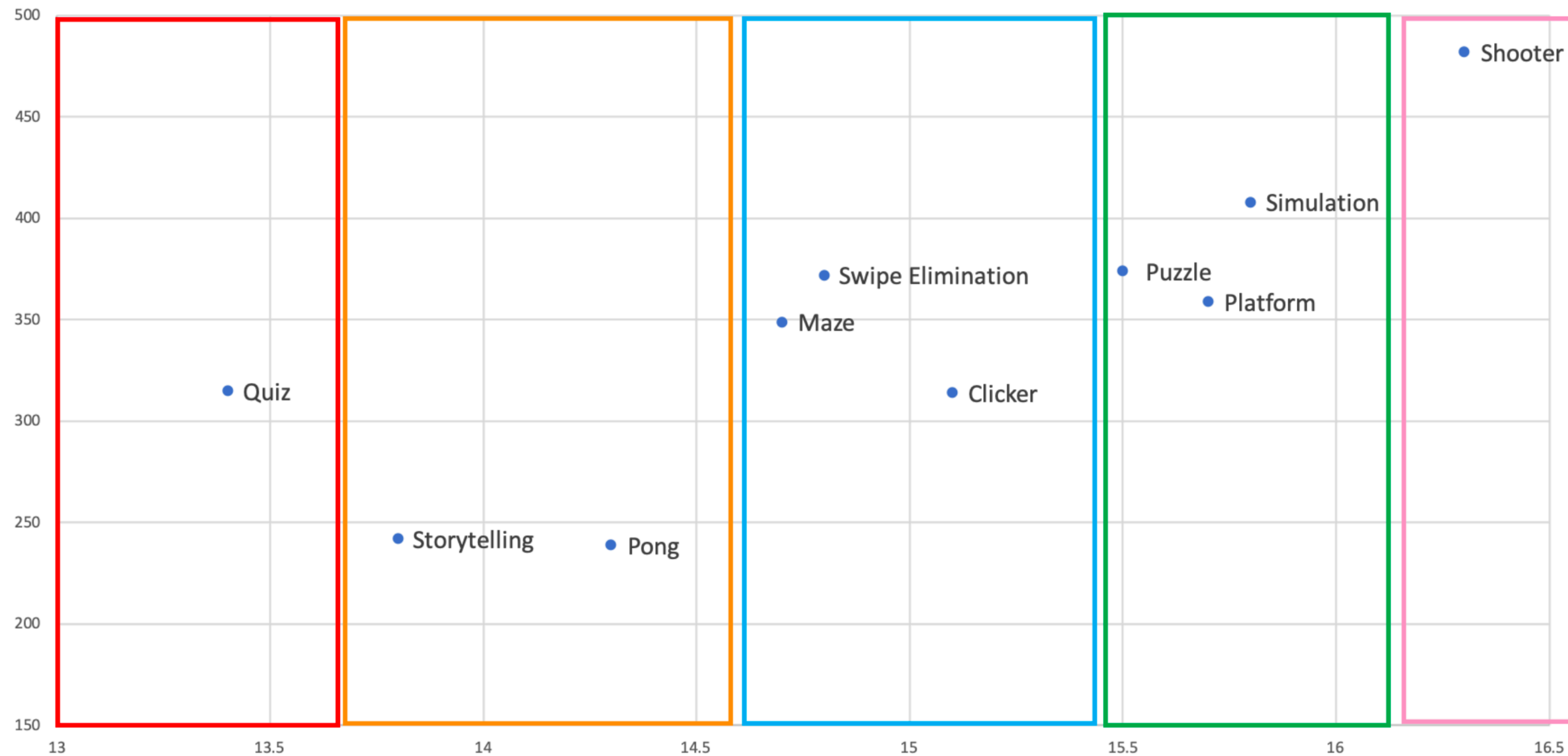
# The Scratch Programming Language and Environment

Maloney et al.  
Massachusetts Institute of Technology



# Using video games in teaching

- Dr. Scratch score depending on the genre



**Troiano et al.: Exploring How Game Genre in Student-Designed Games Influences Computational Thinking Development**



Teaching

Technology  
Introduction

User Studies



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