Kinect project: Endless Runner

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Interaction Engineering

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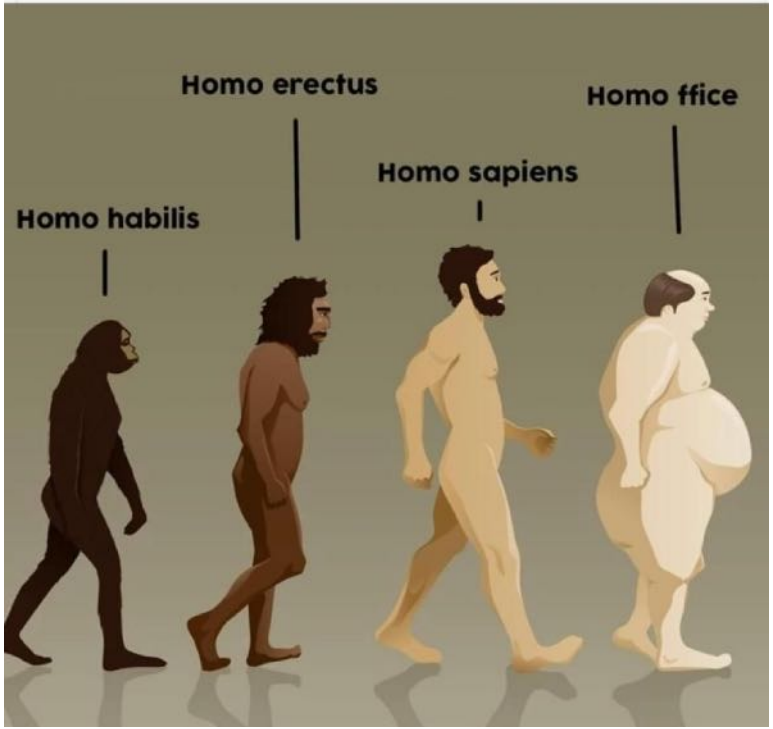
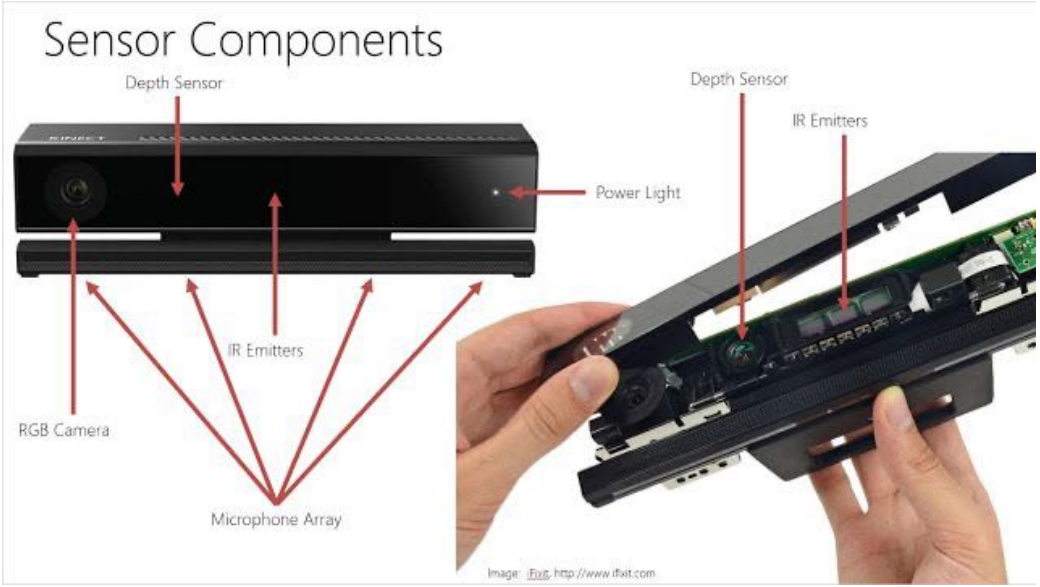
winter semester 2020/21

03.02.2021

Augsburg University of Applied Sciences

motivation


Homo habilis
Homo erectus
Homo sapiens
Homo ffice


Sensor Components
Depth Sensor
Power Light
IR Emitters
RGB Camera
Microphone Array
Depth Sensor
IR Emitters
Image: iFixit, http://www.ifixit.com

Webcams with Autofocus


MOVE
MIRROR

related work

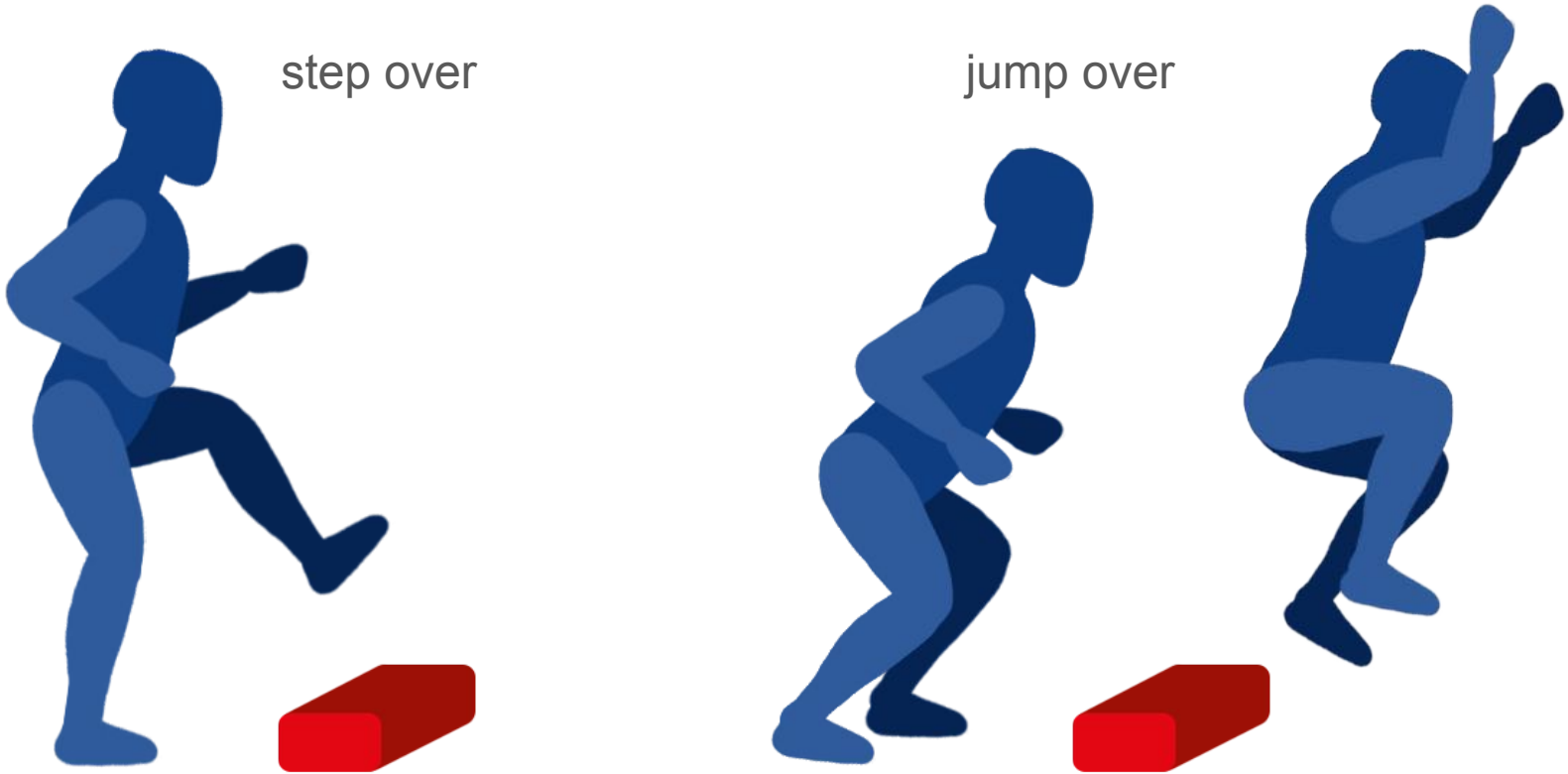
Google implements skeleton tracking to standard webcams by enabling an AI

interesting for us:

our project uses the Kinect skeleton tracking capabilities

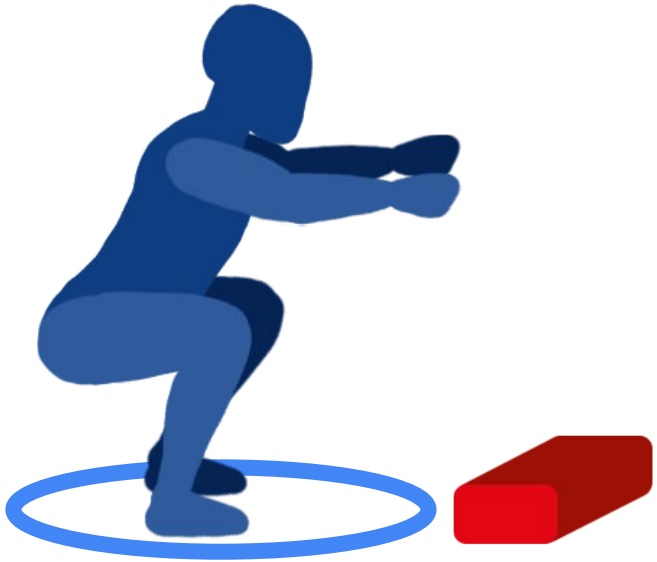
a combination of both might be possible in the future

interaction technique: EVADE

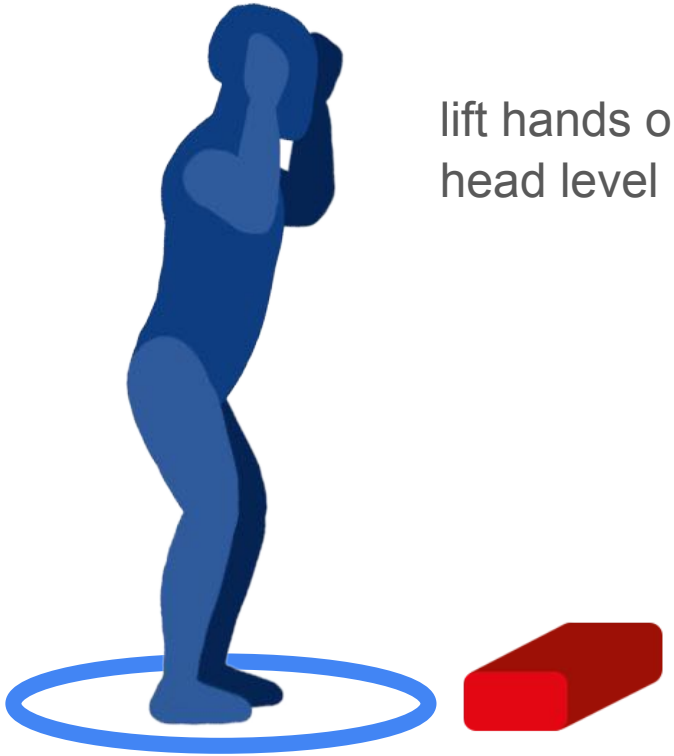


interaction technique: BLOCK

do a squat



lift hands on
head level

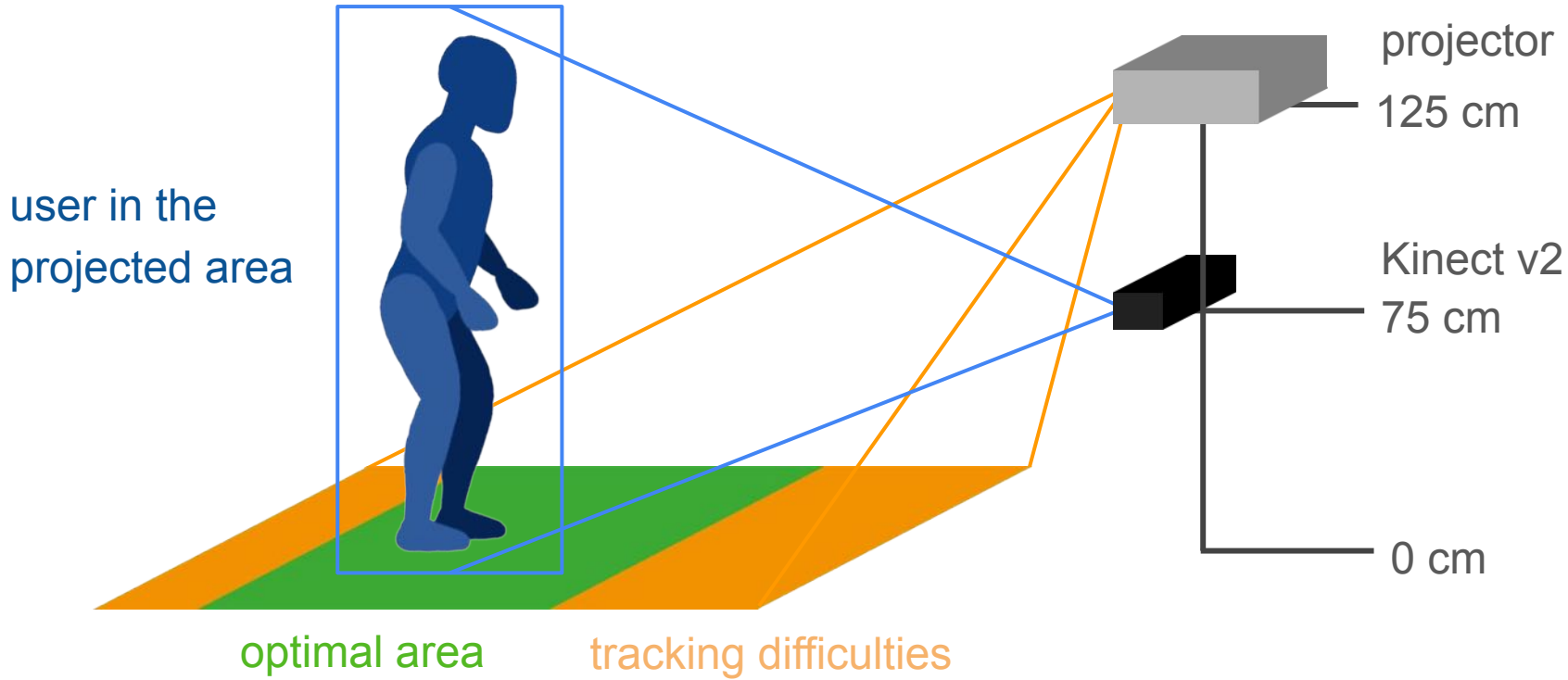


interaction technique: ATTACK

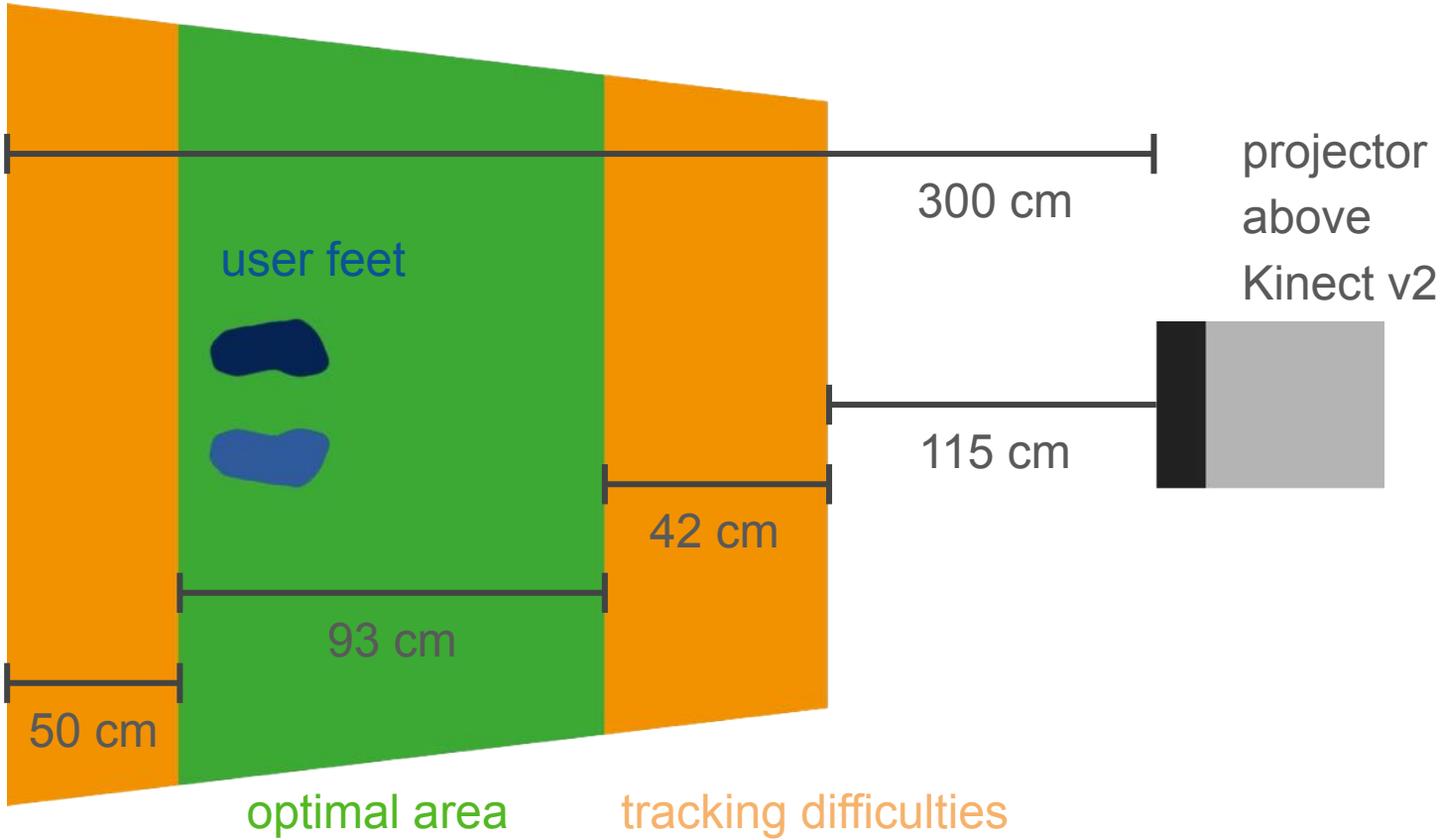
punch an obstacle

kick an obstacle

technical setup



technical setup: TOP DOWN



user tests

comparison test	A	B
Evade	jump over	step over
Block	squat	lift hands
Attack	kick	punch

user tests

4 participants in total, within-subject test with comparison of A and B

A	preference of the interaction techniques:		B
jump over	2	2	step over
squat	0	4	lift hands
kick	1	3	punch

live demo

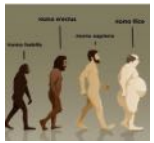
of the project

Kinect Endless Runner

glossary

Boom.png

https://photobooth-props.co.uk/media/catalog/product/cache/1/thumbnail/600x600/9df78eab33525d08d6e5fb8d27136e95/b/o/boom_pop_art_coloured_photo_booth_prop_1.jpg



Homo office

João Paulo Rieg, https://jpreliquias.blogspot.com/2020/08/homo-office.html

Kinect v2

https://de.wikipedia.org/wiki/Kinect#/media/Datei:Xbox-One-Kinect.jpg

Kinect v2 technical

https://www.physio-pedia.com/File:Microsoft_Kinect.png

webcams

https://www.reviewgeek.com/p/uploads/2018/07/3a7c7f43.jpg

Move Mirror video

https://winfuture.de/videos/Internet/Move-Mirror-Google-baut-Kinect-Funktion-einfach-ueber-Webcam-nach-19378.html