Exploring Collaboration for Data Analysis in Augmented Reality for Multiple Devices

Judith Friedl-Knirsch
judith.friedl-knirsch@fh-ooe.at

Christian Stach
christian.stach@fh-ooe.at

Christoph Anthes
christoph.anthes@fh-ooe.at

University of Applied Sciences Upper Austria, Hagenberg Campus, Austria
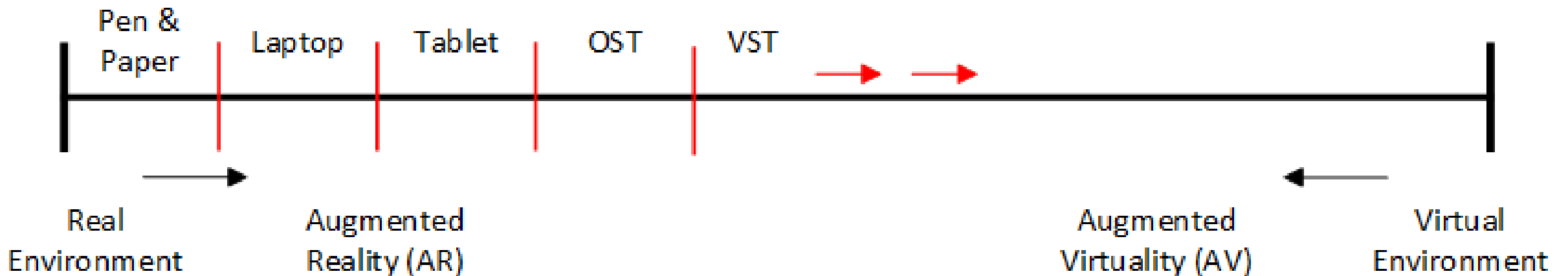
Differences between AR device types

- Discussed by Milgram et al. [1] and Rolland et al. [2]
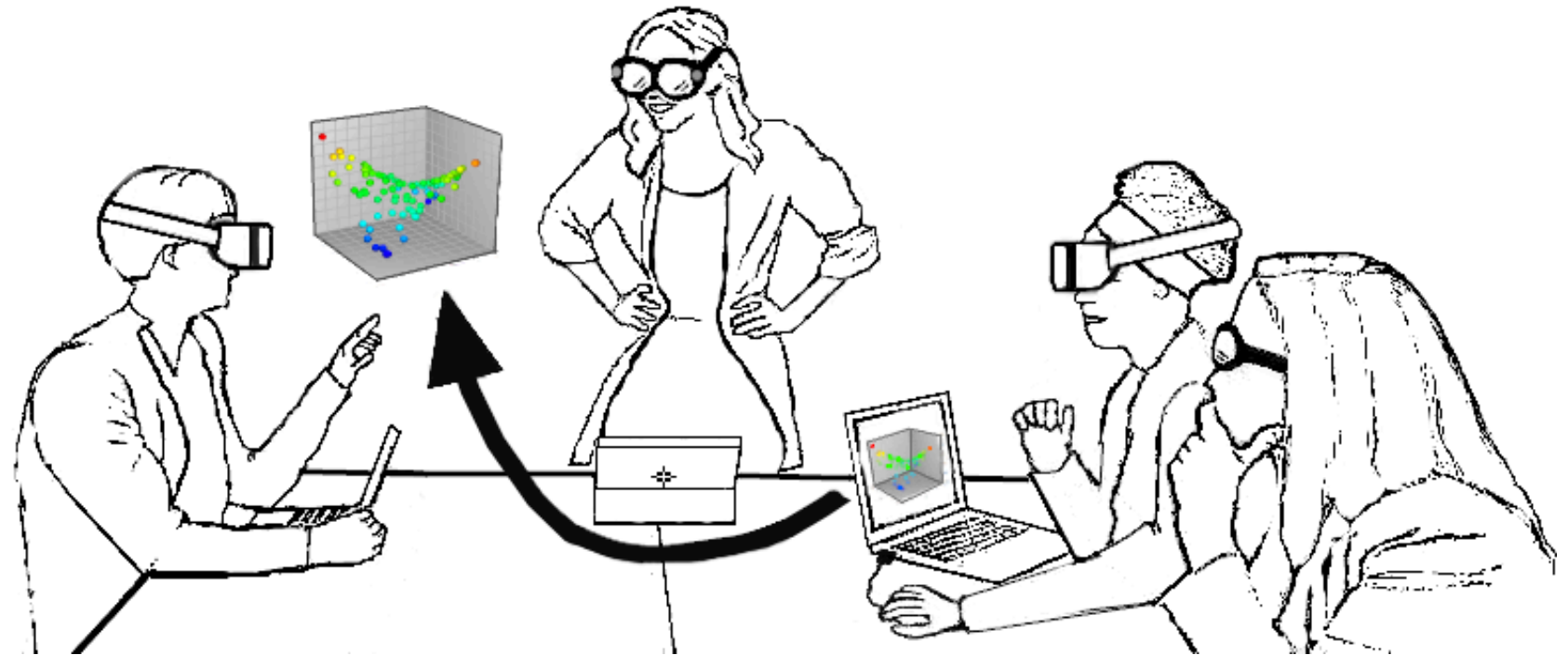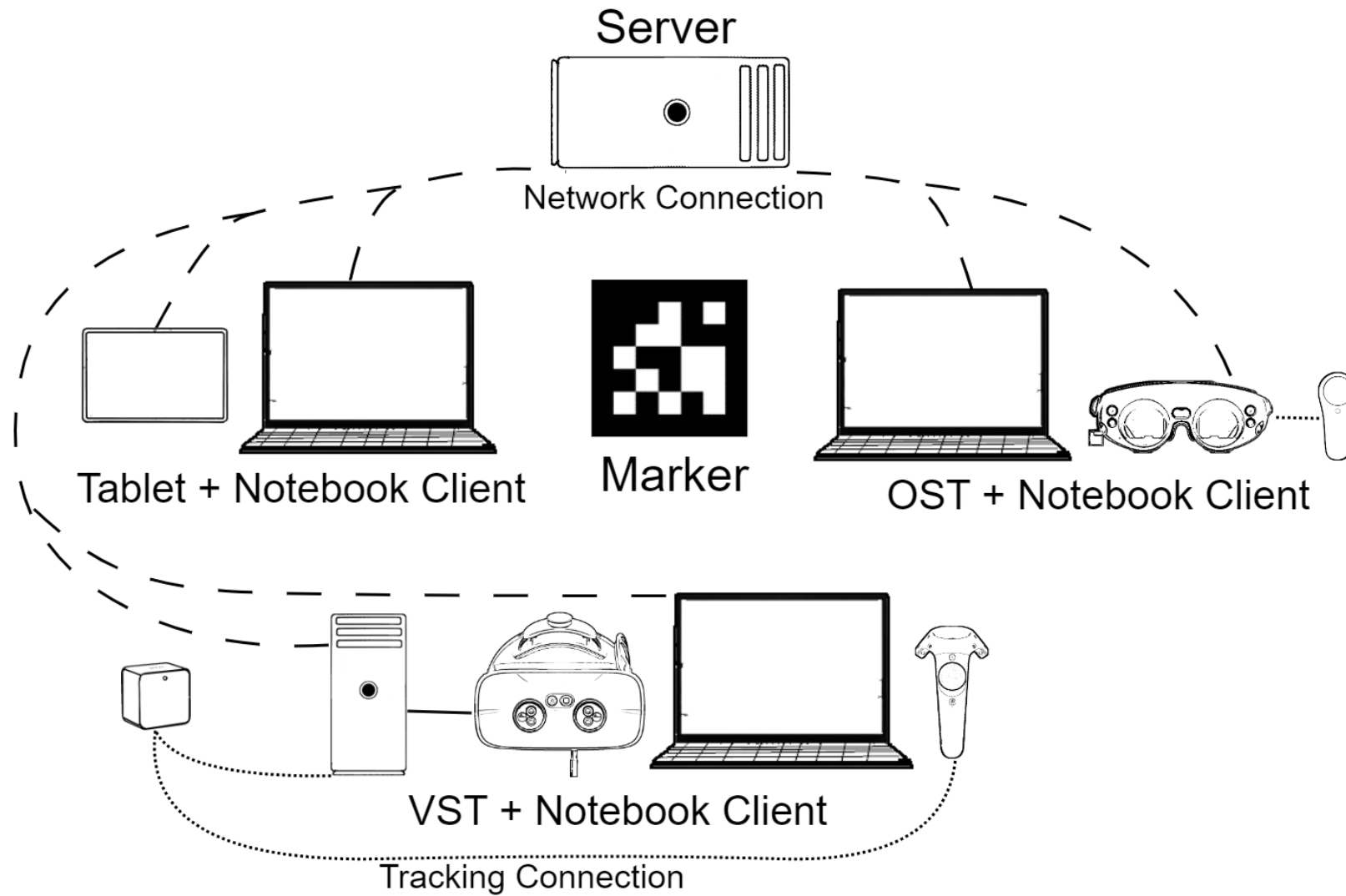
Reality-Virtuality Continuum

[1] P. Milgram, H. Takemura, A. Utsumi, and F. Kishino. Augmented reality: a class of displays on the reality-virtuality continuum. pp. 282–292. Boston, MA, Dec. 1995
[2] J. P. Rolland, R. L. Holloway, and H. Fuchs. Comparison of optical and video see-through, head-mounted displays. pp. 293–307. Boston, MA, Dec. 1995
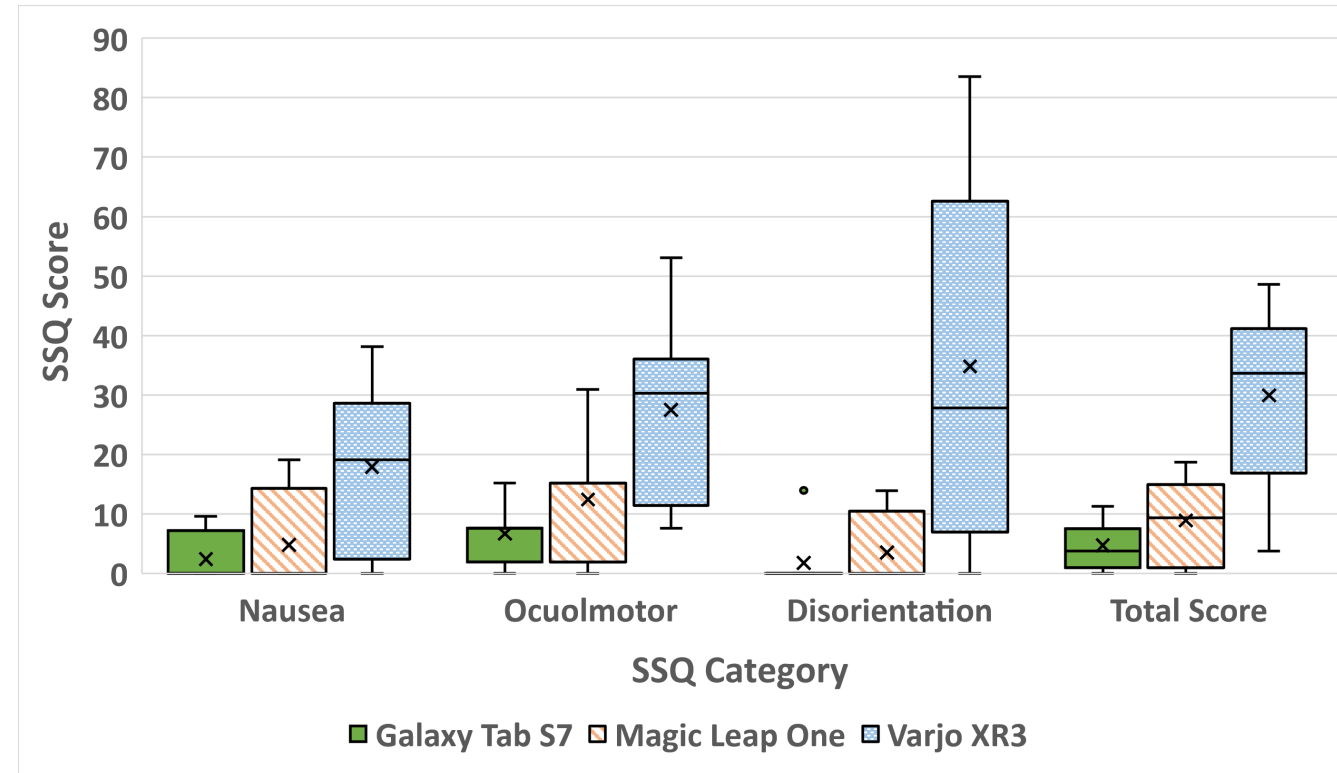
Collaborative Pilot Study

- Two groups of three participants
- Mixed-methods study design
- Within-subjects

Server

Network Connection

Tablet + Notebook Client

Marker

OST + Notebook Client

VST + Notebook Client

Tracking Connection

Results

- VST best for data analysis in AR space
- OST best for using Laptop
- Tablet best for taking notes
- VST and Tablet uncomfortable
- Higher Simulator Sickness with VST
- Not as engaged in collaboration with VST

Acknowledgement

judith.friedl-knirsch@fh-ooe.at