

A User Study On A Social Bike-Based Exergame For Isolated Inpatients

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Abstract

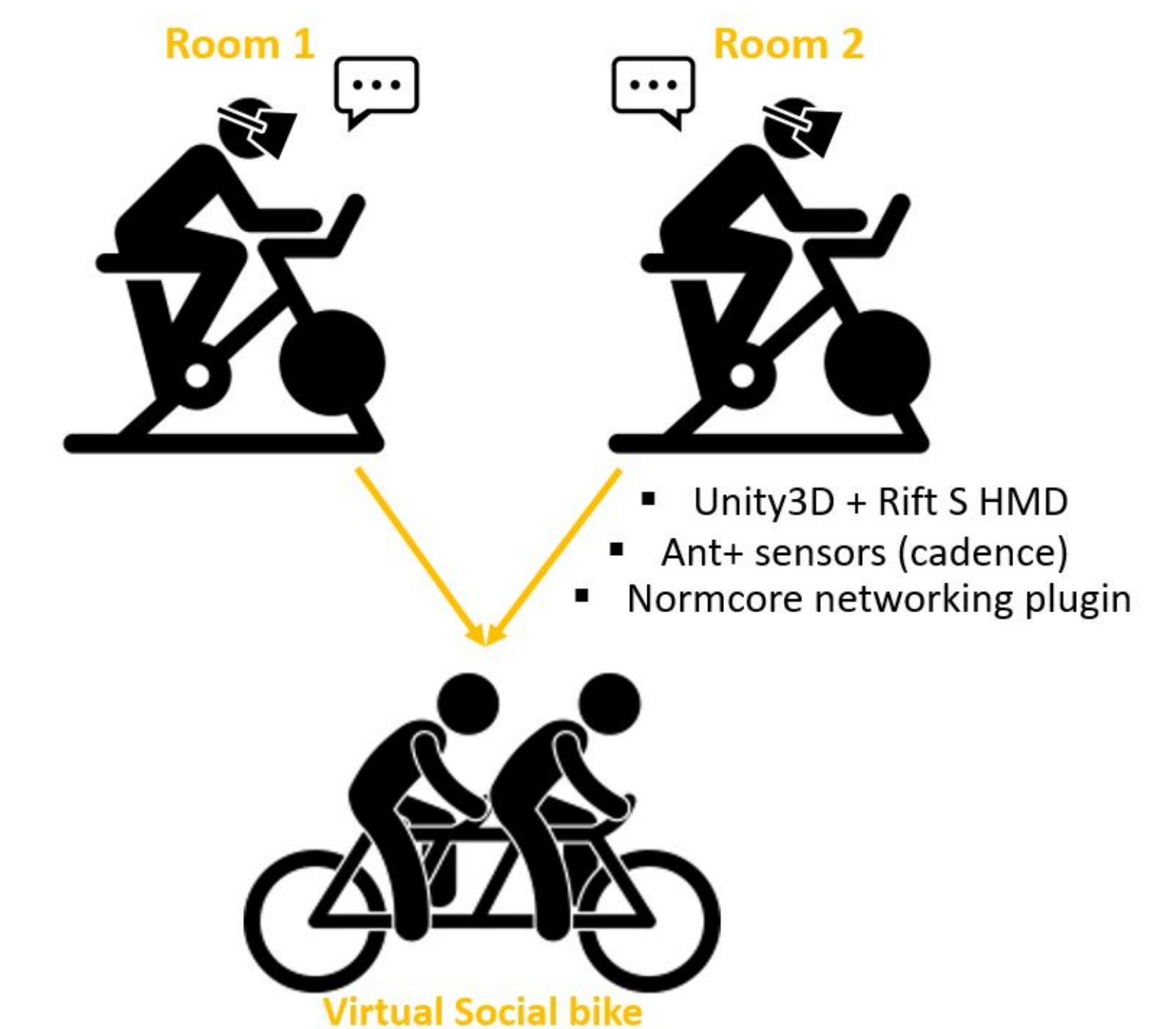
Physical activity decreases with age, and sedentary behavior is often observed in inpatients. During the COVID-19 pandemic, this behavior is reinforced by a lack of access to exercise equipment, reduced social interaction and low motivation. Virtual Reality (VR) exergames have previously been used to encourage exercise adherence in inpatients, and specifically social collaborative experiences may be preferred for the elderly. However, COVID-19 related isolation inhibits co-located social exergaming, therefore this study investigates how a collaborative biking exergame may be used to encourage both physical activity as well as fulfill the psychological need for social relatedness. Preliminary results indicate that the two modes (single player and collaboration) can encourage physical activity.

Can Virtual Reality help satisfy basic psychological needs for isolated inpatients?

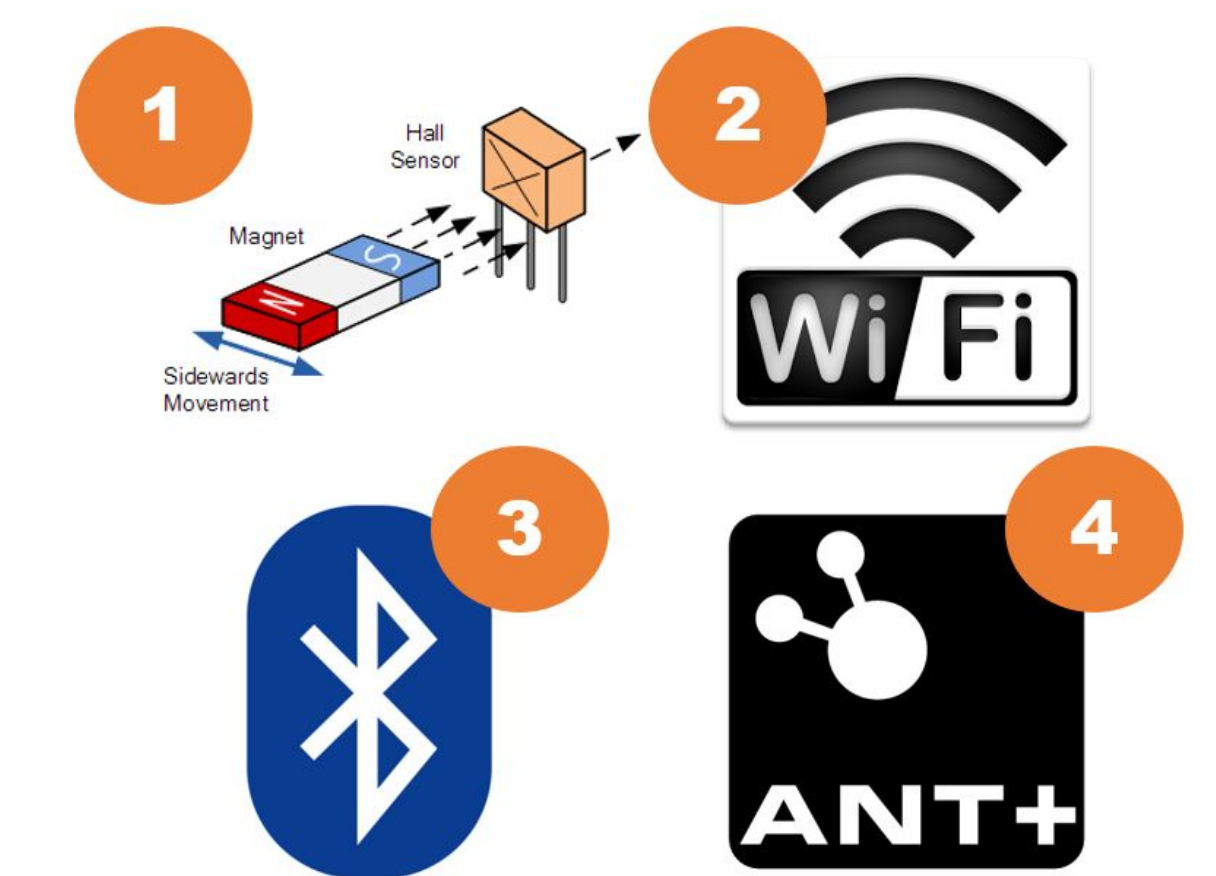
Scan QR-code to view YouTube video.



1. Setup



2. Bike sensor evolution



3. Hygienic requirements

To conduct safe testing during the pandemic a hygienic protocol was developed and approved by an infection control nurse.



Photo by NATDIS Apps

1. Alcohol-based wet wipes for the HMD's surface
2. WipeClean Alco-free disinfectant on lenses
3. UV-C light exposure (UV-C box).