Master Thesis:

Making Virtual Spaces Accessible for Blind People on Tactile Displays

ACCESS@KIT - Zentrum für digitale Barrierefreiheit und Assistive Technologien

Background: During the Corona pandemic, virtual spaces like Gather Town or Work Adventure were created to enable more natural group conversations online with dynamically changing participants and to give the conversations natural contexts, such as short conversations in the hallway or private conversations in the break room. Blind people were excluded. Even after the Corona pandemic, the use of this technology continues due to digitization. The Hyperbraille, a two-dimensional tactile display, offers the possibility to make this technology accessible to blind people as well.

Ziel der Arbeit: Development and evaluation of an innovative platform that allows both sighted and blind people to hold effective and inclusive group conversations. The platform should be able to represent the optical context also tactilely and audibly to be able to naturally transfer everyday conversation situations into the virtual space.

Tasks:

- Analysis of the requirements of a platform for virtual cooperation and meetings for sighted and blind people
- Implementation of a prototype of a new platform or extension of existing open-source platforms
- Design and execution of a usage study to validate the solution

Requirements:

- Programming experience
- Interest in Braille
- Interest in Accessibility, Gamification, Usability and UI/UX-Design
- Interest in the design and execution of usage studies

If you are interested or have any questions,
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