Study information, data protection information and statement of agreement

1) General information
The following study is a part of the research work within the Master thesis "*Lazy-Walk: gesture-based seated/lying down VR locomotion with terrain feedback*" at Saarland University, Department of Computer Science.

Study: "Evaluate a tapping gesture-driven locomotion interface for seated and lying-down postures in a virtual reality(VR) environment "

Purpose of the study:
We aim to evaluate a tapping gesture-driven locomotion interface for seated and lying-down postures in a virtual reality(VR) environment. The locomotion interface is crafted to minimize physical requirements from users, alleviate fatigue from prolonged standing, prioritize safety, and demand minimal space. It has been shown that body-based input, as in gestural input, provides a more immersive and self-movement-aware locomotion experience compared to basic button inputs on hand controllers. The extra haptic vibration feedback is designed to partially compensate for the loss of ground feedback due to differences in posture and actual walking movements.

Form of participation :
In this experiment, you need to experience a VR locomotion interface under the following 8 scenes:

1. **Practice scene: keyboard/Locomotion interface with/out fixed vibration frequency feedback with visual reference**
2. **Test scene: 10x10 square room without visual reference**
3. **Keyboard interface without vibration feedback without visual reference (in rooms 4x4, 8x8, and 20x20)**
4. **Locomotion interface without vibration feedback without visual reference (in rooms 4x4, 8x8, and 20x20)**
5. **Locomotion interface with fixed vibration frequency feedback without visual reference(4x4, 8x8, and 20x20)**
6. **Locomotion interface with dynamic vibration frequency vibration feedback without visual reference(14x4, 8x8, and 20x20)**
7. **Locomotion interface with vibration feedback in different start times without visual reference (4x4, 8x8, and 20x20)**
8. **Practice scene keyboard/ Locomotion interface test with/out vibration feedback in the lying down position**

To avoid being strongly affected by simulator sickness, you need to have previous experience with VR, without any serious physical illnesses or psychological issues that prevent you from using VR

Uses and risks of participation :

Your participation will help to test and evaluate the gesture-based locomotion interface in seated and lying-down postures. You will collect some experience with gesture-based locomotion interfaces in VR and compare it with normal locomotion interfaces, like using a keyboard or controller.

The experiments will be in the Human-Computer Interaction (HCI) Lab at Saarland University. You might have some motion sickness because of experiencing the VR environment. You can stop/pause at any time during the experiments.

2) Voluntary participation and freely given consent
Participation in the study is voluntary. Consent to participate in this study can be revoked at any time and without giving reasons until the end of the data collection by informing the person conducting the study, or by ending the survey (removing the VR headset or oral informing). All incomplete data records will be deleted by us. After the end of data collection, the legal rights of revocation, disclosure, rectification, blocking, and erasure of anonymous data, as described in Section 3, can no longer be applied because the data can no longer be assigned to a concerned person. However, your legal rights of revocation, disclosure, rectification, blocking, and erasure of non-anonymous data, as described in Section 4, still apply and remain unaffected.

3)*What data do we collect and process in anonymous form*:
Once you have consented to the collection of data, the following data will be gathered and stored anonymously(as described in Section 5):

- Demographic data (age, gender, previous experience with VR, height)
- Answers to the survey questions
- Virtual Avatar movement and foot angle data
- Interview Answers

4)Do we collect any data in non-anonymized form?
No, we do not collect any audio/video recordings.

5) Anonymization of the data

For the duration of the experiment, The persons responsible for this study will store all data collected during the experiment. The data mentioned in Section 3 will be made anonymous, making it impossible to assign the collected data to a person, as long as no personal data is entered in free text fields.
Therefore, after the end of the experiment, it will be impossible to link the log data to a specific person, as long as no personal data was entered together with the ID number while answering the survey.

6) What do we use the collected data for?
The results and collected data can be processed and published in anonymous form in this Master thesis and used for other research purposes (e.g., writing scientific papers) at the Human-Computer Interaction Lab at Saarland University(HCI).

7) Contacts
If you have any questions that are not answered by this privacy policy or if you would like further information on data protection, please contact us: s9jiwuuu@stud.uni-saarland.de

8) Right of appeal
The study is conducted in Germany and in accordance with German law. You have the right of appeal to a supervisory authority if you believe that the processing of your personal data violates legal data protection regulations.

● I have read and understood the information on data protection and participation information and I agree that my data may be used for research purposes as described above and as specified by me in Section 4.
● I have understood the form and purpose of my participation in this project.
● I have been provided with answers to all my questions about the study.
● I voluntarily agree to participate in this study.

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Date, signature of the participant