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## **Pain Studies Laboratory**

### **Informed Consent By Participants in “Usability Comparisons of the Oculus Rift Head-Mounted Display and the Firsthand 3D-Stereoscopic Display in Virtual Meditative Walk”**

**Principal Investigators** Xin Tong ([tongxint@sfu.ca](mailto:tongxint@sfu.ca)), ~~Dimple Gupta~~ ([dimple@sfu.ca](mailto:dimple@sfu.ca))  
**Project Leader** Diane Gromala ([gromala@sfu.ca](mailto:gromala@sfu.ca))  
**Faculty Supervisor** Chris Shaw ([shaw@sfu.ca](mailto:shaw@sfu.ca))  
**Research Personnel** ~~Dimple Gupta~~ ([dimple@sfu.ca](mailto:dimple@sfu.ca))

Any information that is obtained during this study will be kept confidential to the extent permitted by the law. Data will be retained for two years, and will be maintained in secure locations such as locked cabinets and/or on password-protected storage devices stored in locked cabinets. ~~Knowledge of your identity is not required.~~ Writing your name or any other identifying information on research materials is optional. ~~If you would love to write your name or any identifying information, we will code the identifying information with code. Otherwise, all the information we collect will be anonymous. "No identifying information will appear in publications or presentations of this study"~~

Your signature on this form will signify that you have read and understood this document which also describes the procedures, possible risks, and benefits of this research study; that you are ~~between 20 to 55~~ 19 years of age and older; that you have received an adequate opportunity to consider the information in the section describing the study and that you voluntarily agree to participate in the study.

The University and those conducting this research study subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of participants. This research is being conducted under permission of the Simon Fraser Research Ethics Board (ethics application number ~~2013s0480~~ 2014s0439). If you have any concerns or complaints with respect to participation in this research study as a research participant, please direct them to ~~Dr. Jeffrey Toward, Director, Office of Research Ethics at~~ [jtoward@sfu.ca](mailto:jtoward@sfu.ca) or ~~778-782-6593~~. Xin Tong ([ongxint@sfu.ca](mailto:ongxint@sfu.ca)) or Dr. Chris Shaw ([shaw@sfu.ca](mailto:shaw@sfu.ca)), researchers of this study.

You will be given a copy of this consent form for your records. ~~You also will be paid \$20 dollars in cash upon completion of a 40-minute study.~~ All participants regardless of whether you complete the 40-minute study or withdraw early will receive \$20 compensation. This study has been funded by GRAND-NCE(Canada's Digital Media Research Network).

**Title:** Usability Comparisons of the Oculus Rift Head-Mounted Display and the Firsthand 3D-Stereoscopic Display in Virtual Meditative Walk

**Corresponding Investigators' Names:** Xin Tong, ~~Dimple Gupta~~

Email of principal investigator where you can obtain research results once the study is finished: [tongxint@sfu.ca](mailto:tongxint@sfu.ca), [dimplekgupta@gmail.com](mailto:dimplekgupta@gmail.com)

**Investigator Department:** School of Interactive Arts and Technology (SIAT),  
<http://www.siat.sfu.ca/>

Below is a description of what you will be asked to do in this study. Please do not hesitate to ask if anything should remain unclear:

**Purpose and potential benefits of this study**

This study is intended to identify the differences of physical discomfort level and motion sickness of two Virtual Reality (VR) displays in virtual meditation environment: the *Oculus Rift* Head-mounted Display (HMD) and *Firsthand* 3D desktop display. It is going to be tested in a 3D virtual environment named Virtual Meditative Walk (VMW). Potential benefit for participants is that they can develop skills to become aware of their inner senses, learn to correct their biological rhythms, learn how to better live with the chronic pain, and decrease its impact on physical as well as mental health. For researchers, the differences and similarities between those two commonly used VR displays could be found after the study. Then the researchers could make further advanced adjustments to make the devices more comfortable for users.

**What you will be asked to do**

You will answer three questionnaires about your experience in using VR displays (HMD and Firsthand 3D Display) during the test. You will wear one kind of VR display and then watch a VMW demo (10 minutes) sitting in a chair. After a 3-minute short rest, you will use another VR display to watch the demo again. The type of VR display you are going to use first is assigned randomly; either the *Oculus Rift* HMD or *Firsthand* 3D Display.

**Potential risks for you, for third parties or society**

As potential risks, if you are not used to virtual environments, your real movement might not be synced with your movement inside the virtual environment, and because of that you may experience mild nausea during the study. However, we have done our best to decrease the chance of this phenomenon happening by slowing down the movement in virtual environment as much as we could. If you experience the onset of any adverse symptoms, you are asked to immediately notify the experimenter, and the experiments will be stopped right away. There will be no consequences at all for withdrawing early from the experiment.

**Acceptance of this form**

You understand that you may withdraw your participation at any time without penalties. You also understand that you may register any complaint with the Director of the Office of Research Ethics or the researcher named above or with the Chair, Director, or Dean of the Department, School or Faculty as shown below. You have been informed that the research will be confidential. You understand the risks and benefits of your participation in this study and agree to participate:

Participant first name: \_\_\_\_\_ Participant last name: \_\_\_\_\_

Participant email: \_\_\_\_\_@\_\_\_\_\_

Date (yyyy/mm/dd): \_\_\_\_\_

Participant signature: \_\_\_\_\_

Should you wish to obtain information about your rights as a participant in research, or about the responsibilities of researchers, or if you have any questions, concerns, or complaints about the manner in which you were treated in this study, please contact Dr. Jeff Toward, Director, Office of Research Ethics at [jtoward@sfu.ca](mailto:jtoward@sfu.ca) or 778-782-6593.