

# **Questionnaire: Can arm movements be detected onto controllers to simulate drawing as an interaction trigger and is this understandable and enjoyable?**

Critical Practice and Exploration - Magic Brush

This questionnaire is about VR controllers detect player's arm movements to simulate drawing as an interaction trigger and its playability in the virtual space. Questions may involve some privacy of the person filling in the form. (This part needs to be improved. Please give us any suggestions if you don't mind.)

## **I. Background**

1. respondent's age:

---

2. respondent's gender (can be passed):

---

3. Do you/your family/your college/your company have a VR headset? (if don't, please go to question 6)

---

4. How often do you use a VR headset?

---

5. Have you played with Google Tiltbrush© before?

---

6. Have you used any digital drawing software before?

---

7. Do you have any knowledge of how VR interactions work?

---

8. Do you have any knowledge of how to use VR controllers?

---

9. Do you have a disability? (not sure about this question)

---

II. Contents Design (Questions are answered by 1-5 scale, 1- mostly agree, 2 - agree, 3 - not agree or disagree, 4 - disagree, 5 - mostly disagree. Please allowed us to ask a reason if you choose 4 or 5.)

1. The interaction of drawing as a trigger is essential in this *Magic Brush* and helps the player to understand the story as well as adding to the playability.
2. The interaction of drawing has to be as flexible as possible in terms of motion capture.
3. The 'trajectory' I draw during the interaction should be visually obvious in the contrast with the visual space around you.
4. Visual/audio/haptic prompts are required for the start, failure, and success of the interaction.
5. Visual/audio/haptic prompts are required for the valid range of the interaction.
6. Operating instruction of the interaction should always be displayed in the player's sight.
7. The appearance of the player's hand model in the virtual space is necessary to increase immersion and enjoyment. The brush model gives the player a more immersive feel.
8. Simple patterns (e.g. letters) improve the efficiency as a trigger in the interaction compared to complex patterns with lots of detail.
9. The pattern is drawn in a very simple shape (e.g. a circle) it will make the whole process less enjoyable.