

bionic tracking: eye tracking for cell tracking in VR

Please make sure you have understood and signed both the *Declaration of Consent* and the *Declaration of Consent for the Storage of Personal Data for Research Purposes* before filling out this form.

About you

1. Age _____
2. Gender _____
3. Dominant Hand
 - ☐ Left
 - ☐ Right
4. Do you require any optical aid?
 - ☐ No
 - ☐ Yes, _____
5. Are you wearing any right now?
 - ☐ No
 - ☐ Yes, _____
6. Do you have any impairment in color vision?
 - ☐ No
 - ☐ Yes, _____
7. Do you have any impairment in spatial perception?
 - ☐ No
 - ☐ Yes, _____
8. Do you have any motor impairment?
 - ☐ No
 - ☐ Yes, _____

Pre-study questions

- 9a. Do you have any prior experience with VR applications or games?

None ☐—☐—☐—☐—☐ Daily use
- 9b. Have you used computer-based VR headsets before? *Examples for such devices are Oculus Rift, HTC Vive, etc.*

Never ☐—☐—☐—☐—☐ Daily use
- 9c. Did you enjoy the experience?

Not at all ☐—☐—☐—☐—☐ Very much
- 9d. Have you used smartphone-based VR headsets before? *Examples for such devices are Samsung Gear VR, Zeiss VR ONE Plus, etc.*

Never ☐—☐—☐—☐—☐ Daily use
- 9e. Did you enjoy the experience?

Not at all ☐—☐—☐—☐—☐ Very much
- 9f. Have you used standalone VR headsets before? *Examples for such devices are Oculus Go, or the Lenovo Mirage Solo.*

Never ☐—☐—☐—☐—☐ Daily use
- 9g. Did you enjoy the experience?

Not at all ☐—☐—☐—☐—☐ Very much

9h. Did you ever use an eye tracking-based user interface?

Never ☐—☐—☐—☐—☐ Daily use

9i. Do you have any prior experience with cell tracking?

None ☐—☐—☐—☐—☐ Daily use

Condition before the study

10a. How tired do you feel?

Not at all ☐—☐—☐—☐—☐ Very

10b. How concentrated are you?

Not at all ☐—☐—☐—☐—☐ Very

10c. How motivated are you?

Not at all ☐—☐—☐—☐—☐ Very

10d. Do you have a headache?

Not at all ☐—☐—☐—☐—☐ Very

10e. Do you have dry or aching eyes?

Not at all ☐—☐—☐—☐—☐ Very

10f. Do you feel nauseous?

Not at all ☐—☐—☐—☐—☐ Very

Post-study questions

Please read the questions carefully, some are formulated in a affirmative way, some are not.

Condition after the study

11a. How tired do you feel?

Not at all ☐—☐—☐—☐—☐ Very

11b. How concentrated are you?

Not at all ☐—☐—☐—☐—☐ Very

11c. How motivated are you?

Not at all ☐—☐—☐—☐—☐ Very

11d. Do you have a headache?

Not at all ☐—☐—☐—☐—☐ Very

11e. Do you have dry or aching eyes?

Not at all ☐—☐—☐—☐—☐ Very

11f. Do you feel nauseous?

Not at all ☐—☐—☐—☐—☐ Very

General Questions

12a. The software felt responsive to my inputs.

Not at all ☐—☐—☐—☐—☐ Very

12b. Being in an isolated VR environment irritated me.

Not at all ☐—☐—☐—☐—☐ Very

12c. I had trouble orienting myself.

Not at all ☐—☐—☐—☐—☐ Very

12d. I would have liked a different input/control method.

Not at all ☐—☐—☐—☐—☐ Very

12e. The usage felt very natural and intuitive.

Not at all ☐—☐—☐—☐—☐ Very

12f. I had to keep track of too many things at once.

Not at all ☐—☐—☐—☐—☐ Very

12g. I was put off by the prototype character of the software.

Not at all ☐—☐—☐—☐—☐ Very

12h. I needed a long time to learn how to use the software.

Not at all ☐—☐—☐—☐—☐ Very

12i. The interaction felt very precise.

Not at all ☐—☐—☐—☐—☐ Very

12j. Having my eyes tracked irritated me.

Not at all ☐—☐—☐—☐—☐ Very

12k. The cell tracks created looked reasonable to me.

Not at all ☐—☐—☐—☐—☐ Very

12l. I could complete the tracking tasks with confidence.

Not at all ☐—☐—☐—☐—☐ Very

12m. Relative to regular manual tracking, tracking with the presented technique would take _____ times the time.

Adoption Questions

13a. I could imagine adopting the presented technique for tracking of my datasets.

Not at all ☐—☐—☐—☐—☐ Completely

13b. The presented technique provides an improvement over current techniques.

Not at all ☐—☐—☐—☐—☐ Completely

13c. The presented technique would allow me to perform tracking tasks faster.

Not at all ☐—☐—☐—☐—☐ Completely

13d. The presented technique would allow me to perform tracking tasks more precisely.

Not at all ☐—☐—☐—☐—☐ Completely

Task Load Questions

- 14a. How mentally demanding was the task?
Very Low ☐—☐—☐—☐—☐—☐—☐—☐ Very High
- 14b. How physically demanding was the task?
Very Low ☐—☐—☐—☐—☐—☐—☐—☐ Very High
- 14c. How hurried or rushed was the pace of the task?
Very Low ☐—☐—☐—☐—☐—☐—☐—☐ Very High
- 14d. How successful were you in accomplishing what you were asked to do?
Perfect ☐—☐—☐—☐—☐—☐—☐—☐ Failure
- 14e. How hard did you have to work to accomplish your level of performance?
Very Low ☐—☐—☐—☐—☐—☐—☐—☐ Very High
- 14f. How insecure, discouraged, irritated, stressed, and annoyed were you?
Very Low ☐—☐—☐—☐—☐—☐—☐—☐ Very High

Simulator Sickness

Do you experience any of the following symptoms? How badly?

- 15a. General discomfort
None ☐—☐—☐—☐ Very High
- 15b. Fatigue
None ☐—☐—☐—☐ Very High
- 15c. Headache
None ☐—☐—☐—☐ Very High
- 15d. Eyestrain
None ☐—☐—☐—☐ Very High
- 15e. Difficulty focussing
None ☐—☐—☐—☐ Very High
- 15f. Increased salivation
None ☐—☐—☐—☐ Very High
- 15g. Sweating
None ☐—☐—☐—☐ Very High
- 15h. Nausea
None ☐—☐—☐—☐ Very High
- 15i. Difficulty concentrating
None ☐—☐—☐—☐ Very High
- 15j. Fullness of head
None ☐—☐—☐—☐ Very High
- 15k. Blurred vision
None ☐—☐—☐—☐ Very High
- 15l. Dizzy with open eyes
None ☐—☐—☐—☐ Very High
- 15m. Dizzy with closed eyes
None ☐—☐—☐—☐ Very High
- 15n. Vertigo
None ☐—☐—☐—☐ Very High
- 15o. Stomach awareness
None ☐—☐—☐—☐ Very High
- 15p. Burping
None ☐—☐—☐—☐ Very High