

Questionnaire

I agree to participate in this user study. I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

☐ Check here to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

1. Demographic section

ID Participant: _____ Age: _____

Gender: ☐ Male ☐ Female Interface Used: _____

- 1) How often do you use Virtual Reality system such as HTC-VIVE, Oculus Rift, Cardboard?
☐ never ☐ little ☐ sometimes ☐ often ☐ very often
- 2) How familiar are you with the locomotion technique you will use in this test?
☐ never ☐ little ☐ sometimes ☐ often ☐ very often
- 3) How often do you play 3D video-games using interaction technologies different than VR?
☐ never ☐ little ☐ sometimes ☐ often ☐ very often
- 4) How often do you use 3D software such as Blender, Unity, 3DSmax, Maya?
☐ never ☐ little ☐ sometimes ☐ often ☐ very often
- 5) How often do you suffer from motion sickness?
☐ never ☐ little ☐ sometimes ☐ often ☐ very often

2. Pre-test section

Simulator Sickness Questionnaire (SSQ): Rate how much each symptom below is affecting you right now in a scale: 0 (*None*), 1 (*Slight*), 2 (*Moderate*), and 3 (*Severe*).

6) General discomfort:	
7) Fatigue:	
8) Headache:	
9) Eye strain:	
10) Difficulty focusing:	
11) Salivation increasing:	
12) Sweating:	
13) Nausea:	
14) Difficulty concentrating:	
15) « Fullness of the Head »:	
16) Blurred vision:	
17) Dizziness with eyes open:	
18) Dizziness with eyes closed:	
19) Vertigo:	
20) Stomach awareness:	
21) Burping:	

3. After-scenario section

Ease of Use: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

	S1	S2	S3	S4	S5
22) I found the interface easy to use					
23) It was easy to select and move objects in the virtual environment					
24) The interface was too complicated to use effectively					
25) I found it easy to move or reposition myself in the virtual environment					
26) The lack of tactile/force feedback reduced my performance					
27) I did not need any further help					
28) The interface interfered with the way I wanted to interact with the system					
29) I found it easy to undo mistakes and return to a previous state					
30) I was confused by the operation of the interface					

Perceived Errors: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

	S1	S2	S3	S4	S5
31) The interfaces provided protection against trivial errors					
32) It was not possible to make silly mistakes					
33) The interface was very robust and reliable					
34) I kept making mistakes while interacting with the virtual environment					
35) I was unaware of making mistakes					

Appropriateness: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

	S1	S2	S3	S4	S5
36) The level of functionality (control) provided by the interface was appropriate for the task					
37) The functionality provided by the interface was ambiguous					
38) I would have preferred an alternative interface to carry out the task					
39) The interface was ideal for interacting with a virtual environment					
40) I had the right level of control over what I wanted to do					
41) I could not achieve what I wanted to do					

Input sensitivity: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

	S1	S2	S3	S4	S5
42) I found the interface too sensitive to use					

Input Responsiveness: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

	S1	S2	S3	S4	S5
43) The response to user input was acceptable					
44) The response time did not affect my performance					

Naturalness: Rate interaction with the system in a scale from 1 (*Very Low*) to 5 (*Very High*).

	S1	S2	S3	S4	S5
45) Rate how natural you found the experience of walking and interacting in the virtual environment					

V/R Physical Strain Similarity: Rate interaction with the system in a scale from 1 (*Very Similar*) to 5 (*Very Different*).

	S1	S2	S3	S4	S5
46) Rate how different the physical strain of the input methods were, overall, compared to the actions they were serving as a proxy for					

Mental Effort: Rate interaction with the system in a scale from 1 (*Very Low*) to 5 (*Very High*).

	S1	S2	S3	S4	S5
47) How mentally demanding was the task considering the interface used to perform it?					

Perceived Physical Effort: Rate interaction with the system in a scale from 1 (*Very Low*) to 5 (*Very High*).

	S1	S2	S3	S4	S5
48) How physically demanding was the task considering the interface used to perform it?					

Satisfaction: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

	S1	S2	S3	S4	S5
49) The interface used to perform the specific task was satisfying					
50) The interface behaved in a manner that I expected					

Subjective Units of Discomfort (SUD): Rate interaction with the system in a scale from 1 (*Very Low*) to 5 (*Very High*).

	S1	S2	S3	S4	S5
51) Rate the severity of the discomfort induced by the interface while performing the fear task (walking close to the chasm)					

Physical Effort: Specify the heart rate.

	S1	S2	S3	S4	S5
52) Heart Rate Pre-task					
53) Heart Rate Post-task					

4. Post-test section

Self-motion compellingness: Rate interaction with the system in a scale from 1 (*Very Low*) to 5 (*Very High*).

54) Rate whether you indeed felt as if you were moving while walking and interacting with the virtual environment, overall	
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Acclimatisation: Rate interaction with the system in a scale from 1 (*Very Slowly*) to 5 (*Very Quickly*).

55) Rate how quickly you forgot that you were not really walking	
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Presence: Rate the statement in a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

56) I got a sense of presence, ie., of “being there” during the experience	
57) The behavior of the interface reduced my sense of presence	
58) I had a good sense of scales while moving and interacting with the virtual environment	
59) I often did not know where I was in the virtual environment	

Overall System Usability: Rate the statement in a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

60) I thought that the interface worked against me	
61) The overall response time did not affect my performance	
62) I can see a real benefit in this style of man-machine interface	

Enjoability: Rate the statement in a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

63) I enjoyed carrying out the tasks	
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Control: Rate the statement in a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

64) I felt in control of the interface	
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Learnability: Rate the statement in a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

65) I found it difficult to learn how to use the interface	
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Intuitiveness: Rate the statement in a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

66) I did not have a clear idea of how to perform a particular function	
67) The interface did not work as expected	
68) I found it difficult to work in 3D	

Comfort: Rate the statement in a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

69) I would be comfortable using this interface for long periods	
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Simulator Sickness Questionnaire (SSQ): Rate how much each symptom below is affecting you right now in a scale: 0 (*none*), 1 (*slight*), 2 (*moderate*), and 3 (*severe*).

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71) Fatigue:	
72) Headache:	
73) Eye strain:	
74) Difficulty focusing:	
75) Salivation increasing:	

76) Sweating:	
77) Nausea:	
78) Difficulty concentrating:	
79) « Fullness of the Head »:	
80) Blurred vision:	
81) Dizziness with eyes open:	
82) Dizziness with eyes closed:	
83) Vertigo:	
84) Stomach awareness:	
85) Burping:	

5. Comments
