**Project Specification Report**

Project Title: Virtual Reality Questionnaire Toolkit: Examining Interaction Techniques for Doing Questionnaires in VR

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**Project Introduction**

The notable rise of a new generation of virtual reality (VR) systems in recent years opened up new methods and interventions for researchers across different areas. It is vital for VR research and development to understand users’ subjective feedback, which is usually assessed through questionnaires after leaving a VR scene. Recent research has found that completing questionnaires directly in VR can help mitigate the break in presence (BIP). In this final year project, the student will develop a Virtual Reality Questionnaire Toolkit (VRQTK) and examine the interaction techniques for doing questionnaires in VR.

As the development of the Virtual Reality (VR) technology, head-mounted displays (HMD) are becoming popular. VR has since been applied to many areas such as computer graphics, gaming, or education [1], [2] and during 2020 fourth quarter alone there were over one million Quest 2 units sold worldwide [3]. Questionnaire is one way to evaluate the application which allows product owner or developer to understand its upsides and downsides like measuring presence or immersion from the questionnaire result.

Despite paper questionnaire is a way to evaluate most current application or production. However, traditional appraisal methods have inadequacy. Putze Susanne et al. describes the ﻿switching between VR and physical reality leads to a break in presence [3] ﻿that might alter the outcomes [4]. Embedding question items in the VE offers a way to stay closer to the context of an ongoing experience[5], Putze Susanne et al. [3] ﻿show evidence that in virtual reality questionnaire (VRQ) are less invasive than out VRQ.

In this project I propose Virtual Reality Questionnaire Toolkit (VRQTK), a tool enable questionnaire to be the part of the VR experience and interact with the user and virtual environment (VE) and exploring a suitable VRQTK in VE.

**Related Work**

**Methodology**

This project will first do a literature review on the research conducted on the area of VRQ and focus on design and experimental process. (still working…)

**Project objectives**

The literature review, understand the theory, analysis, and comparison of various questionnaires strategies of existed work will be at the end of this semester. And at the beginning of next semester, a detailed comparison will be conducted to get a comparatively optimized method. (still working…)

**Project plan (Timeline)**

(still working…)

Gantt chart

**Project deliverables (Expected outcomes)**

1. A summarized report about designing a suitable questionnaire that helps mitigate break in presence in virtual reality.
2. A complete virtual reality questionnaire toolkit (VRQTK) which can be used in different virtual reality environments.

References

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