**Virtual Reality Tasks 4 and 5** Tobi Helbig

Task 4:

The four key elements to experience a virtual reality (VR) are: a virtual world, immersion, sensory feedback, and interactivity. Firstly, a virtual world does not necessarily have to be digital, nor visible or audible, as it can exist solely in the mind of its creator. For instance, the Pen and Paper Tabletop game *Dungeons and Dragons* (1974) is such an example for a virtual world that can be shared with others and initially only exists in the mind of its creator. The players are merely placed within the world, usually free to roam around and experience the virtual world though vague and/or detailed descriptions of the Game Master (GM; or Dungeon Master (DM)). Another instance of a virtual world that comes to life through the power of other is a movie. A movie is almost always based on a script. The script functions as guideline for the movie director and the actors obey the directions of the director who interprets the script to create a virtual world that can be experienced by others.

The second factor, immersion, is an amalgamation between imaginative power and the ability to communicate a virtual world to another person. If done on a credible level, any participant of the virtual world should become immersed and for the duration of the play, the physical reality should blur, in the sense that the participant during the play shuts off the surrounding reality and purely focuses on the presented virtual world. The second successful immersion variant occurs when the participant in the virtual world then looks at the physical reality differently, as in he or she received new insight that can be projected onto the real world. There are, however, two distinctions between the two possibilities how the subject experiences the virtual world, namely mental and physical immersion. Mental immersion In 1817, Samuel Taylor Coleridge, phrased the words "suspension of disbelief". The idea behind this phrase is that the audience should for the duration of the play, book, movie, video game, etc. not think critically about the details, but should accept any rules, borders and decisions made by the characters. This acceptance together with the temporary neglect of the physical world is what is described as mental immersion. The other type of immersion is the physical immersion. This physical immersion is achieved only through any stimulus made possibly through technology. For instance, a VR headset, which allow the user to experience the virtual world on a visual level. It is important to point out, that not all senses nor the entire body needs to be engulfed in the virtual world in order to count as a physical immersion.

Thirdly, sensory feedback is indispensable to VR. The user receives direct sensory feedback based on the current physical position of the user. This sensory feedback is most often visual, although if equipped with high-speed computers, the feedback might as well be interactive. Interactive feedback requires modern technology, because the virtual world needs to track the movement of the player.

Lastly, interactivity is especially important when it comes to video games. Interactivity is the connection between player and virtual world. Interactivity can be a direct answer to the player's actions or can be as simple as picking up a cube and putting it down somewhere else to open a formerly closed door. However, in order to count as interactive, the virtual world, does not have to be graphically advanced. Ancient games, such as *Zork* (1980), or *Mystery House* (1980) have simplistic grafics or none at all, but they are interactive. The player is riddled with a quest and has to type commands to move the protagonist around in the virtual world. The responses are sometimes sarcastic, funny, or carry a dark humour if the player types a command which is especially unexpected, for instance "eat shovel" or "cut own hand with sword". The responses the game shows the player are the predetermined responses the developers coded into the game. This level of interactivity is very satisfactory for two reasons, one, the player found an hidden or in-joke and two, the fact that the developers did not forget that what they have designed is a video game which is a means of entertainment.

Task 5:

Ideas that have not been introduced yet are events that occur outside of the daily life of a student. If the goal is to develop the language skills of learners of English, virtual worlds should be created that implement storylines which are vastly different from a 'normal' day. For example, a chase through the woods: Spot hints that help to identify the maniac. This would make good use of the VR aspect (which this course is centred around). These hints are, however, not all useful to the case. This means that the participant schools skills, such as quick observation and ideally prioritises hints and evidence over junk. As this idea includes a chase, the locations needs to change through a timer and not through the participants choice. Since, this may not be feasible another approach might be necessary. The chase should be dropped and the protagonist is now not the hunted anymore, but the investigator who enters a crime scene in search for clues. This achieves its most satisfactory culmination if the virtual world provides a unique cutscene if the case is solved correctly.