*Please delete all instructions in italics*

*Suggested length: Maximum one page*

*Please upload Highlight Reports to the SPMS the day before your supervisory meeting*

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| **PRCO304: Highlight Report** |
| **Name: Marc Brooks** |
| **Date**: 06/05/17 |
| **Review of work undertaken**  Managed to develop the haptic warning system. Currently displays a green message upon task being set. If the task is ignored for 10 seconds then the message will stop to flash by alternating between a set of colours. This message is supposed to show up in the vive headset however at current using UI text it will display on the desktop camera and following the rotation and positioning of the headset but will not display on the headset camera. The opposite happens when using 3D text it will show up on the camera yet for some reason the rotation will move about but not the positioning. Following the flashing message if the task is ignored for 10 seconds a 5 second haptic pulse will play as a warning to the user to proceed with the task. If this is ignored then 10 seconds later a haptic pulse will start looping at a slightly high intensity but lower amplitude. If the task is still ignored after 10 seconds passing then this looping pulse will build up in intensity with the aim of being irritating to the user to the point that they complete the task. If the task is completed then the warning system will reset back to the beginning ready for the new task to be set.  The haptic blind simulator was also completed this week by using Unity’s standard objects: Cube and Cylinder. At first cylinder objects used a capsule collider but was swiftly changed to a convex mesh collider as it covered a larger area. Cubes simply used a box collider which did the same job. Each object was duplicated increased in size on the X and Z axis by 0.4 this helped to create a staggered set of proximity triggers. If the blind stick object hit a trigger then a haptic pulse would play. This pulse would be 1/10th a second long with a pause of 9/10th a second long. The closer the blind stick got to the centralised object then the more proximity triggers were activated. As more triggers were activate, the haptic pulse was changed to a quicker pulse. The only difference in speed was that the pause break was reduced by 1/20th of a second for a total of 19 times, which related to the 19 proximity triggers.  A small problem occurred which are current can’t be fixed is due to the quickness that the user places the blind stick into the proximity triggers. If they’re activated too fast then it will cause an overlapping pulse which may cause confusion to the user. However, as the pulse is set to loop, this overlap will be gone within 1/10th of a second and the new pulse will be played. |
| **Plan of work for the next week** *(derived from the current stage plan).*  Don’t see the pulse loop as much of a problem as it sorts itself out and is more of audio bug than that of a programming bug so will leave that. The headset bug I will try and fix it so this shows up in the headset.  Also planned for next week is the rough development of the haptitory sound file.  Will also create a level for the blind simulator so users can navigate blindly to a chosen destination. |
| **Date(s) of supervisory meeting(s) since last Highlight N/A** |
| **Notes from supervisory meeting(s) held since last Highlight**  N/A Not seen supervisor as of current. |
| **Stage review**  Developed warning system with HUD bug with messages not showing.  Created working blind simulator |