

LOG OF MEETING DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: Task Group Meeting on Section 12.3, Spatial Perception, of UL 8400, *The Proposed First Edition of the Standard for Safety for Virtual Reality, Augmented Reality, and Mixed Reality Technology Equipment*.

DATE OF MEETING: September 17, 2020, 12:00pm, ET

LOG ENTRY SOURCE: Stephen Harsanyi (ESHF)

DATE OF LOG ENTRY: September 22, 2020

LOCATION: Teleconference

CPSC ATTENDEE(S): Nevin Taylor (EXHR) and Stephen Harsanyi (ESHF).

NON-CPSC ATTENDEE(S): Contact UL for the attendee list.

Summary of meeting:

The task group met to develop recommendations, requirements, or both, pertaining to enhancing the spatial perception afforded by Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) head-mounted devices (HMDs), *i.e.*, section 12.3 of UL 8400, *The Proposed First Edition of the Standard for Safety for Virtual Reality, Augmented Reality, and Mixed Reality Technology Equipment*. The aim of the task group is to address the potential of death or severe injury from collisions between VR/AR/MR users and their physical environment related to partial or full optical occlusion of the user by the VR/AR/MR device.

The task group believes this section (Spatial Perception) should be its own separate section in the draft standard, rather than a subsection of section 12 (Safety and Warning Instructions). The task group is working on definitions to add to the standard, such as “Mobile Applications” versus “Stationary Applications”; referring to products designed, marketed, or intended for use while moving around the physical environment, such as while walking around a room or riding a bicycle (mobile applications), versus products for use with limited or no movement, such as while sitting down and moving one’s head and arms (stationary).

The task group worked on solidifying recommendations and requirements for HMDs with total optical occlusion used for mobile applications (when the user cannot see the physical environment and is moving around the physical environment). For these products, the task group finds it imperative that users be alerted to the physical boundaries of their use area *sufficiently prior* to them reaching the physical boundaries. Examples of acceptable collision mitigation measures were identified. The task group is in the process of determining what amount of advanced notice (distance) from the physical boundaries is appropriate.

The next meeting for this task group is scheduled for September 22, 2020 at 12:00 PM ET, during which the subcommittee plans to discuss this issue regarding advanced notice, and recommendations and requirements for other types of HMDs.