



Constant motion stimulus for peripheral vision to create Unconscious Notifications

BACKGROUND

The human peripheral vision provides us with information without shifting our focus from the primary task. This is particularly interesting since peripheral vision demands less cognitive load. So information that is positioned at the edge of the field of view can be received unconsciously without drawing attention. A prominent example is car driving since only a short moment of inattention might end in serious accidents. However, even daily struggles with loud and attention-drawing smartphone notifications that distract from working might be solved calmly with peripheral displays. In order to enable this concept, Augmented Reality glasses are the key since they provide us with wearable displays attached to our view.

RESEARCH QUESTION

There is already some work investigating the recognition of movement patterns in the periphery using AR. However, this project's aim is to examine the effects of a constant moving stimulus in the periphery while the user is performing a cognitively demanding task. Hence, changes in the motion of the stimulus (e.g., speed changes, changes in the direction, or changes in the motion path) can be used to code specific information. For example, the number of notifications the user received or their urgency.

During this thesis, a concept for different motion cues in the periphery should be designed, and a prototype in AR or VR should be implemented. Finally, the design should be evaluated in a user study.

Based on bachelor/master level, the scope will be adapted.

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FOCUS IN THIS PROJECT

VR/AR
Calm Technology
Design of new visualizations
Conducting a user study