

Summary 2:

The effectiveness of changing the field of view in a HMD on the perceived self-motion

Operating in a virtual reality often causes users to perceive self-movement that is not present. A study was conducted to investigate how changing the FOV (field of view) affected user perception of self-motion. Similar research in the past has indicated that a larger FOV induces a higher intensity of self-motion perception and that this effect is amplified through HMD. Several pilot studies with different accelerations, velocities, and timings were tested to invoke self-motion perception without causing simulator sickness. FOV was limited by filling in the absent space with black canvases during rendering. Users self-reported their own perceived intensity of self-motion on a scale of 0-5 using an input device and verbally rate their perception in comparison to the previous round. Users remained seated through the four round experiment, each with a different FOV of 110°, 77°, 55°, and 33°. To reduce the influence of learning effects, the sequence of rounds were changed for each user. Results showed that the restriction in FOV seem to caused a decreased in the intensity of perceived self-motion. Acceleration and deceleration in the VE also seemed to influence the intensity of perceived self-motion.

BibTeX:

```
@INPROCEEDINGS{7958461,  
  author={A. Croatti and A. Ricci},  
  booktitle={2017 IEEE International Conference on Software Architecture  
  Workshops (ICSAW)},  
  title={Towards the Web of Augmented Things},  
  year={2017},  
  volume={},  
  number={},  
  pages={80-87},  
  abstract={In this paper we envision and discuss the idea of the Web of Augmented  
  Things (WoAT). The idea is about the integration of Web of Things with Augmented  
  Worlds, i.e. distributed software systems augmenting the physical space with virtual  
  entities and holograms in an Augmented Reality perspective, eventually coupled  
  with smart things that are part of the same environment.},  
  keywords={Internet;Internet of Things;augmented reality;Web of Augmented  
  Things;augmented reality;augmented worlds;distributed software  
  systems;holograms;physical space;smart things;virtual entities;Augmented  
  reality;Context;Hardware;Mobile communication;Pervasive  
  computing;Software;Augmented Reality;Pervasive Computing;Web of Augmented  
  Things;Web of Things},  
  doi={10.1109/ICSAW.2017.49},  
  ISSN={},  
  month={April},}
```