Brendan Jacques

Computer Graphics – Literature Review 3

Bibliography:

1. Retinal 3D: Augmented Reality Near-Eye Display Via Pupil-Tracked Light Field Projection on Retina

@article{Jang:2017:RAR:3130800.3130889,

author = {Jang, Changwon and Bang, Kiseung and Moon, Seokil and Kim, Jonghyun and Lee, Seungjae and Lee, Byoungho},

title = {Retinal 3D: Augmented Reality Near-eye Display via Pupil-tracked Light Field Projection on Retina},

journal = {ACM Trans. Graph.},

issue\_date = {November 2017},

volume = {36},

number = {6},

month = nov,

year = {2017},

issn = {0730-0301},

pages = {190:1--190:13},

articleno = {190},

numpages = {13},

url = {http://doi.acm.org/10.1145/3130800.3130889},

doi = {10.1145/3130800.3130889},

acmid = {3130889},

publisher = {ACM},

address = {New York, NY, USA},

keywords = {computational displays, eye tracking, holographic optical element, near-eye display, vergence-accommodation conflict},

}

1. 3D holographic head mounted display using holographic optical elements with astigmatism aberration compensation

@article{Yeom:15,

author = {Han-Ju Yeom and Hee-Jae Kim and Seong-Bok Kim and HuiJun Zhang and BoNi Li and Yeong-Min Ji and Sang-Hoo Kim and Jae-Hyeung Park},

journal = {Opt. Express},

keywords = {Aberration compensation; Computer holography; Heads-up displays; Holographic display; Holographic optical elements},

number = {25},

pages = {32025--32034},

publisher = {OSA},

title = {3D holographic head mounted display using holographic optical elements with astigmatism aberration compensation},

volume = {23},

month = {Dec},

year = {2015},

url = {http://www.opticsexpress.org/abstract.cfm?URI=oe-23-25-32025},

doi = {10.1364/OE.23.032025},

abstract = {We propose a bar-type three-dimensional holographic head mounted display using two holographic optical elements. Conventional stereoscopic head mounted displays may suffer from eye fatigue because the images presented to each eye are two-dimensional ones, which causes mismatch between the accommodation and vergence responses of the eye. The proposed holographic head mounted display delivers three-dimensional holographic images to each eye, removing the eye fatigue problem. In this paper, we discuss the configuration of the bar-type waveguide head mounted displays and analyze the aberration caused by the non-symmetric diffraction angle of the holographic optical elements which are used as input and output couplers. Pre-distortion of the hologram is also proposed in the paper to compensate the aberration. The experimental results show that proposed head mounted display can present three-dimensional see-through holographic images to each eye with correct focus cues.},

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