A NEW METHOD FOR IMPROVING 3-D DEPTH PERCEPTION

Tech ID: 25168 / UC Case 2015-215-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,500,124	12/10/2019	2015-215

BRIEF DESCRIPTION

The ability to see depth is a key visual function, as three-dimensional vision is used to guide body movements. Although many visual cues are used to infer spatial relationships, depth perception relies primarily on stereopsis, or the perception of depth based on differences in the images in the two eyes. More than 5% of the US population, however, is unable to see in three dimensions due to stereo-blindness and stereo-anomaly. Without depth perception, basic activities such as catching a ball or driving a car are not possible. Current therapeutic methods to address this issue include a set of eye-training exercises that aim to equalize the input from the eyes to the brain, which are collectively called orthoptics.

Researchers at UC Berkeley have developed an orthoptic method to train stereo depth perception. This method includes devices and systems for implementation, and it can be used in the home.

SUGGESTED USES

- Orthoptic method to improve depth perception

ADVANTAGES

- Training system that allows adjustments tailored to individuals
- Interactive
- Can be used in the home

PUBLICATIONS

Relieving the attentional blink in the amblyopic brain with video games

Mechanisms of recovery of visual function in adult amblyopia through a tailored action video game

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OTHER INFORMATION

KEYWORDS

Orthoptics, stereoblindness, stereo-anomaly, depth perception, 3D vision

CATEGORIZED AS

- **Optics and Photonics**
  - All Optics and Photonics
- **Computer**
  - Hardware
  - Software
- **Imaging**
  - 3D/Immersive
- **Medical**
  - Disease: Ophthalmology and Optometry

RELATED CASES

2015-215-0

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