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I4CT 2015 - 2015 2nd International Conference on Computer, Communications, and Control Technology, Art Proceeding

24 August 2015, Article number 7219563, Pages 186-191

2nd International Conference on Computer, Communications, and Control Technology, I4CT 2015; Imperial HotelKuching, Sarawak; Malaysia; 21 April 2015 through 23 April 2015; Category numberCFP1552X-ART; Code 114412

Design and development of eye movement data acquisition kit (Conference Paper)

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Abstract

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There are several researches that have been done to improve the life among tetraplegia. It has become an attractive research field in the rehabilitation engineering because the eye movement have abilities as a communication tool for disabled people. However, the previous research has not much provided an appropriate design for the user among tetraplegia. Motivated from that, a new design of eye movement data acquisition kit has been developed. This paper aims to describe the design of eye movement data acquisition kit for the user among tetraplegia based on the proper electrode positions, the prototype as well as the signal conditioning circuits. Then, this EOG kit was used to acquire the eye signals for eye movement in the left and right direction. The eye movement data was obtained from the kit, which can be used as a significant communication tool among tetraplegia. The results show that the kit equipped with a proper signal conditioning is able to acquire the eye movement signal. © 2015 IEEE.

Author keywords

data acquisition Electroocolugram EOG EOG kits Eye movement

Indexed keywords

Engineering controlled terms: Data acquisition Design Signal conditioning circuits Strain measurement

Appropriate designs

Communication tools

Design and Development

Electroocolugram

EOG EOG kits

Eye movement datum

Rehabilitation engineering

Engineering main heading: Eye movements

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