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Volume 9787, 2016, Pages 509-518

16th International Conference on Computational Science and Its Applications, ICCSA 2016; Beijing; China; 4 July 2016 through 7 July 2016; Code 177699

A novel integrated system of visual communication and touch technology for people with disabilities (Conference Paper)

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Abstract

Due to the current popularity of the internet of things (IoT), the research topic for communicating, connecting, and supporting people remotely through the internet is very popular in computational science in recent years. This paper presents a new integrated application to assist people with disabilities based on enhanced technologies of visual and touch communications in exploiting information and communication technology (ICT) innovative technologies. Our research aim is to help hearing impaired people to communicate both visually and affectingly to their loved one who may live distantly in different part of the world. By integrating an augmented reality application for visual communication and a wearable jacket for touch communication, it is able to support hard of hearing people via the human-computer interaction experience. A Google cardboard is also built for allowing people with hearing loss and deafness to have an immersive experience visually using augmented reality for geometric visualization. A hugging communication wearable tool, called T.Jacket, using sensor technology is then extended and applied to assist disabled people for hugging their loved one remotely by reproducing an artificial hug sense between two people affectingly. Experimental results have also been included to show the robustness of the proposed integrated application. © Springer International Publishing Switzerland 2016.

Author keywords

Computational science; Hard of hearing people; Information and communication technology; People with disabilities; T.Jacket; Touch technology; Visual communication; Wearable tool

Indexed keywords

Engineering controlled terms: Audition; Augmented reality; Human computer interaction; Internet; Visual communication; Wearable computers

Computational science; Hard of hearings; Information and Communication Technologies; People with disabilities; T.Jacket; Touch technologies

Engineering main heading:

Wearable technology

ISSN: 03029743 ISBN: 978-331942107-0 Source Type: Book series Original language: English

DOI: 10.1007/978-3-319-42108-7_39 Document Type: Conference Paper

Volume Editors: Murgante B., Misra S., Torre C.M., Rocha A.M.A.C., Wang S., Gervasi O., Stankova E., Apduhan B.O., Taniar D.

Sponsors: Beijing University of Post and Telecommunication, China, et al, NVidia Co., USA, Springer International Publishing AG, Switzerland, State Key Laboratory of Networking and Switching Technology, China, University of Perugia, Italy

Publisher: Springer Verlag

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