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Smart glasses in warehouse: An ergonomic view

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Smart glasses or data glasses present novel technological equipment with a great potential in different environments and especially in warehouses. Despite of several benefits such as supporting workers with right information at right time, improved productivity because of both free hands and others there are also possible problems evidenced from literature that work with head mounted displays (HMD) can also cause headaches, pressure in eyes, problems with focusing and also the difficulties of text reading. To study addressed problems we performed a research together with ophthalmologists from Maribor Healthcare Centre. The research was funded by The Public Scholarship, Development, Disability and Maintenance Fund of the Republic of Slovenia. We tested effects of using smart glasses Vuzix M300 during order picking activities that last four hours in testing warehouse environment at the faculty of mechanical engineering. We tested users comfort during wearing smart glasses through detailed questionnaire, performed several eye investigations before and after use of smart glasses and performed several ergonomics analyses about workers posture

during work. Results confirmed some benefits and also obstacles. Among them two ergonomics problems can be exposed that are tested by HMD which is very heavy and not the most appropriate for long-term use and since start button for scan function is on smart glasses a constant posture with lifted right arm is present that can be harmful for worker according to ergonomics standards.

Biography

Natasa Vujica Herzog is an Associate Professor at the Faculty of Mechanical Engineering, University of Maribor, Slovenia. Her research area is operations and production management in particularly ergonomics. She is author or co-author of more than 100 publications, several original scientific articles published in international journals, monographs, and chapters in scientific books.

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