

Integrating Wearable Devices in Real-Time Computer Applications of Petrochemical Systems

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Abstract : As notifications become more common through mobile devices, it is important to understand the impact of wearable devices on the improved user experience of man-machine interfaces. This study examined the use of a wearable device for a real-time system using a computer-simulated petrochemical system. The key research question was to determine how using the information provided by the wearable device can improve human performance through measures of situational awareness and decision making. Results indicate that there was a reduction in response time when using the watch, and there was no difference in situational awareness. Perception of using the watch was positive, with 83% of users finding value in using the watch and receiving haptic feedback.

Keywords : computer applications, haptic feedback, petrochemical systems, situational awareness, wearable technology

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