

Design models for mobile augmented reality exergames: state-of-the-art review

ABSTRACT

The sedentary lifestyle is common in this digital age and a cause of concern as it encourages individuals to elicit sedentary behavior i.e. lower instances to being physically active. This lifestyle affects the major portion of the population; with obesity being a major risk and a factor for many cardiovascular diseases such as coronary heart rate disease, heart failure, stroke etc. Use of mobile devices may be linked to the increase of sedentary individuals; however, its usage could also be utilised to encourage fitness awareness among its users. Incorporating interactive digital applications such as exergames, a combination of exercise and games, to mobile devices could provide the means to encourage fitness activity for sedentary individuals through physical gameplay. This paper explores the current design models of exergames and how their usage can affect changes to the psychological and physiological states of the players as well as the promising directions for adapting their usage for the mobile environment through augmented reality immersion.

Keyword: Augmented reality; Design model; Exergames; Mobile games; Sedentary lifestyle