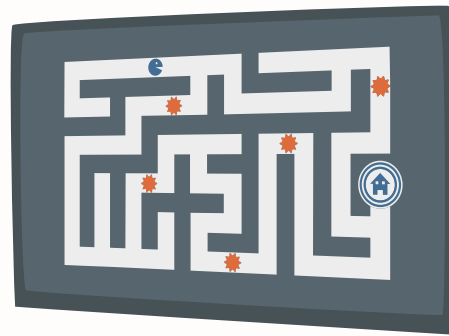
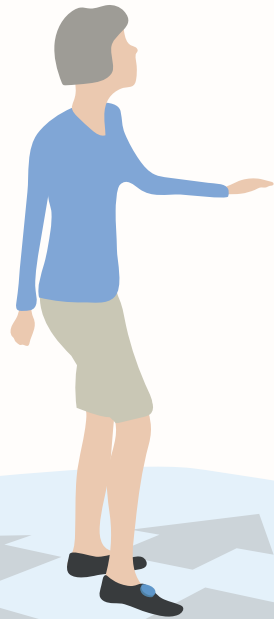


USING WALKING SPEED ASSESSMENT FOR PERSONALIZED
INTERVENTIONS ON GERIATRIC GIANTS

VITAAL



WEARABLE MOTION SENSORS FEATURING AN ADVANCED INERTIAL MEASUREMENT UNIT AND BLUETOOTH SMART® CONNECTIVITY.



User tailored interventions for immobility, instability, urinary incontinence and intellectual impairment relying on challenging and fun physical interactive games. A home-based solution, specifically designed for the elderly.

Motivation

In the older population, reduced usual or preferred walking speed is strongly associated with increased risk of disability, cognitive impairment, falls and all-cause mortality. Being inactive also increases the risks of urinary incontinence and muscular weakness, being a common pathway for many diseases and a significant functional decline. Recent advances in technology present an opportunity to early detect signs of decline and apply user tailored interventions, specifically designed for the elderly.

Solution

VITAAL is proposed as a new concept of home-based exergaming targeting older people threatened to develop mobility-

related problems. VITAAL will design interventions for immobility, instability, urinary incontinence and intellectual impairment, and will use gait speed as a simple geriatric assessment to identify the training needs of older adults. The proposed solution will rely on concepts of gaming to improve engagement and maximize the results of the interventions.

Benefit

Personalized training programs based on physical interactive games can efficiently target the most prevalent and serious problems of the old age, the so called Geriatric Giants. As a home-based solution, it enables an early detection of signs of decline through the analysis of gait, which helps formulate individualized interventions. Developed on the basis of theoretical background from movement sciences and inclusive design, VITAAL is expected to have a real impact on the quality of life and independence of older people.

Vitaal



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