Linking the physical with the perceptual: Health and exposure monitoring with cyber-physical questionnaires

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Abstract—Health often depends as much on human choices as on physical phenomena: how people perceive their status and how they decide to respond affect their health and, more generally, their wellness. Supporting health and wellness with a cyber-physical system requires a holistic integration of components for remote monitoring of both physical and perceptual phenomena. This paper presents a system that meets this requirement through cyber-physical questionnaires, which trigger questions based on physical phenomena to record human perceptions. This prototype is a basis for future efforts aimed at evaluating the system in the field and expanding it not only to track human perceptions but also to affect choices and lifestyles.

Keywords—health; wellness; cyber-physical; methodologies

Refer to the IEEE website for the full paper