
Playful moments of activity

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Abstract

In our design-research studies, we aim to persuade teenagers to engage in playful moments of moderate-intensive physical activity. In this article, we present three explorative prototypes: speakers-of-oz, interactive speakers that respond to passers-by; whisper balls, interactive balls that allow the recording and playback of spoken messages; and walk-of-fame, a multimedia installation that creates virtual avatars in a corridor, depending on the walking style of passers-by. We intend to create playful active moments throughout the day, independent of time or location, supported by mobile and ambient technologies.

Keywords

Playful interaction, persuasive technology, design research, teenagers

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms

Design, Human Factors

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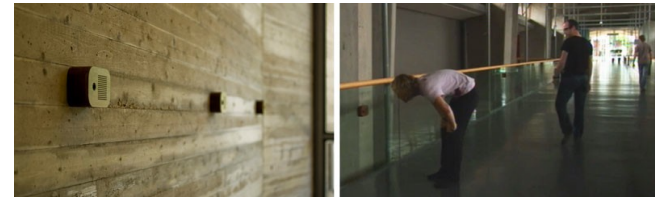
Introduction

My PhD project is a collaboration between Eindhoven University of Technology and the Fontys University of Applied Sciences. In this four-year design research project we closely cooperate with serious-game designers, exergame companies, and governmental sports and health organisations [1]. We design for little moments of active play for teenagers: we try to persuade them to play in a moderate-active way throughout the day. We aim to create cool playful moments, that connect to the teenagers' daily interests and activities; we examine teenagers' lives to ensure that our designs fit in with their lifestyle, and we study the influence of our designs on their lifestyle [2].

Currently, we are conducting design explorations in iterations of implementation and evaluation. Three examples are given in the following section.

Concept 1: Speakers-of-Oz

Speakers-of-Oz creates a 'walk-through-and-use' interaction: it supports a short spurt of playful exploration while walking through a corridor. Six interactive speakers, containing a camera and a loudspeaker each, are attached to a wall in a corridor. The system responds to passers-by and their actions with sound output, either automatically or using a wizard-of-oz control mechanism. For example, in one implementation, each speaker is coupled to a certain type of music (e.g. rock, pop or R&B). Movement in front of a speaker influences the volume level of that speaker: people walking by create a short, soft moment of music while people who stop and 'wave' in front of the speaker create loud music.



Bob and Sandra, two high school students, walk through a corridor to their next class. Suddenly, they hear a short fragment of Pink's new music hit. Surprised, they stop and look around, trying to locate the origin of the music. They walk back, and discover a small interactive object, that emits music when they walk by. Waving in front of the object, they manage to increase the volume, playing the music at a continuous, clearly audible level. Sandra walks to a second object, and discovers –in her opinion– boring classical music, and quickly retraces her steps.

Concept 2: Whisper Balls

Whisper Balls creates a playful, active way of sharing messages, inspired by the secret throwing of paper notes that regularly happens in classrooms. We have created four small balls, each containing two buttons and a recording-playback device. If the orange button is pressed, the ball records sound. If the green button is pressed, the ball softly plays the recorded sounds. The balls are light and feel relatively 'solid', allowing users to roll or throw the balls.



Maria is finishing her lunch in the central hall of the school, when a ball is thrown at her. She catches it, and hears a soft sound coming from inside the ball. Struggling to hear it, she moves to a quiet corner of the hall, and squeezes the ball again. She hears a familiar boy's voice whisper "I like you, Maria!", and sees the classmate she has been flirting with smiling shyly at her. She squeezes the ball again, and, just before throwing it to her classmate, whispers "Shall we meet at four?" to the ball.

Concept 3: Walk-of-Fame

Walk-of-Fame is a playful installation in a corridor, consisting of a group of connected cameras and a display that covers the span of the wall. The system films teenagers walking through the corridor and analyses their way of walking. A digital avatar is visualised on the display, walking alongside the passer-by; which avatar is shown depends on the person's way of walking.



John walks sluggish and slowly through a corridor in his school, bored with his upcoming mathematics class. On his left, he sees a flicker of movement, and suddenly Marvin the Paranoid Robot walks alongside him through the corridor, on the video screen. Curious, he retraces his steps, and starts walking through the corridor with exaggerated heavy movements. Now, B.A. Baracus of the A-team appears! Laughing, he enters the main hall, showing B.A. to his watching classmates. Over time, groups of friends start walking in their specific way, always activating their preferred characters. At certain moments, the system records a movie of the passers-by and their avatars, and uploads it to Facebook; this way, the interplay of watching, walking, and being watched broadens to the network sites.

Intended outcomes

At the moment, we are preparing evaluations to discover whether and how the playful elements embedded in these designs result in the intended active and playful behaviour. Based on multiple case studies, we will derive design guidelines for eliciting active playful behaviour from teenagers.

Eventually, we aim to elicit playful moments throughout the day, independent of time or location. Mobile technologies, social networking, and ambient

intelligence will be required to realise this 'persuasive play throughout the day'.

References

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