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IS1. Combining playware exergaming with a mobile fitness app

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We propose a novel playware as a merge between exergames and mobile fitness apps to engage the users in physical exercises, not only as competitive play, but also in the form of cooperative play. The concept connects modular interactive tiles with radio communication to Android tablets and smart phones, which can connect to the Internet. This allows the players to monitor their playware exergaming performance on the smart device(s). The test subjects playing the games were school children (12-13 years old). As a social playware, we investigated how the playware mediated cooperative and competitive play amongst the users. It was found that the majority of game play involved social interaction between players, and that 8 out of 10 pupils on the top-10 were girls. The playware seemed to motivate the girls to become physically active.

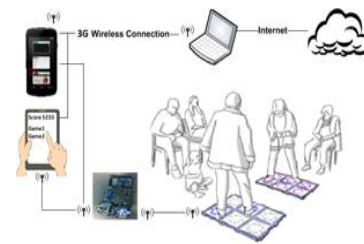


Figure 1. Modular tiles connected to smart devices and internet.

Short Biography of Henrik Hautop Lund

Henrik Hautop Lund, Professor, Technical University of Denmark, is head of the Center for Playware, and has published more than 175 scientific papers and several patents. He has served in the Danish National Research Council. He is World Champion in RoboCup Humanoids Freestyle 2002, has developed shape-shifting modular robots, and has collaborated closely on robotics, ALife and AI with companies like LEGO, Kompan, BandaiNamco, etc. for the past two decades. His Center for Playware at the Technical University of Denmark has a long track record of developing modular robotic playware for playful contextualized IT training in Sub-Saharan Africa, for playful rehabilitation for sport, for music, for wearable, for play, and for education. These modular playware technology developments include I-Blocks (LEGO bricks with processing power) and modular interactive tiles (larger bricks for physical rehab). Further, with the development of East-Africa's first science and business park, local entrepreneurship has been fostered amongst students graduating from the university degree programs in contextualized IT. Combining such skills, it became possible to

develop technical skill enhancing football games and global connectivity based on modular playware for townships in South Africa for the FIFA World Cup 2010. Lately, together with international pop star and World music promoter Peter Gabriel, he has developed the MusicTiles app as a music 2.0 experience to enhance music creativity amongst everybody, even people with no initial musical skills whatsoever, and made physical modules for Peter Gabriel's live stage performance. In all cases, professor Henrik Hautop Lund and his research center develop modular playware technology in a playful way to enhance learning and creativity amongst anybody, anywhere, anytime.