Learning Cabin Safety through Play: Using Video Game Technology in Passengers' Education

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Serious games, i.e. video games to further training and education objectives, are increasingly used in a variety of domains. Unfortunately, the domain of cabin safety had been left unexplored so far. For this reason, two years ago we started to investigate the possible ways in which serious games can be used for educating airline passengers about personal safety. This presentation will illustrate two serious games we developed and the results we have obtained with them. The first serious game allows the player to interactively try a virtual risk experience of an emergency landing and evacuation on a personal computer. The evaluation on a sample of users, which will be discussed in the presentation, showed that just playing the serious game for a few minutes results in significant increases in user's knowledge and self-efficacy. Then, I will illustrate a second version of the game, in which we replaced the common computer keyboard for game control with low-cost body-tracking to make the virtual experience more engaging for the player. Finally, to face the limitations of low-cost body-tracking, the presentation will deal with how game technologies can be used to provide detailed instructions about physical actions such as assuming a correct brace position.