(SAS2019-11101) - HOW 2D ANIMATION HELPS CHILDREN LEARN TO CREATE STORIES USING A TANGIBLE USER INTERFACE

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C. SYLLA received the master's degrees in technology and digital art, and literature studies, and the Ph.D. degree in educational technology. She has lectured with the Institute of Arts and Literature, University of Minho, Portugal. She is a member of the Research Centre on Child Studies, CIEC, University of Minho where she currently leads the Mobeybou project (http://mobeybou.com). Her work focuses on the development of innovative materials that combine the digital and the physical component, promoting exploratory playful learning. She is a fellow of the World Technology Network and a Fellow of EAI Community, European Alliance for Innovation. Her work has been distinguished with several awards, such as the Golden Award for Best Demo at the International Conference on Advances in Computer Entertainment Technology in 2012 and 2015, and the World Technology Award, Category Entertainment in 2013. She is part of the program committee from several international conferences.

Abstract

This research is part of a Master project that consists of developing animations for a Tangible User Interface (TUI) for playful exploration and story creation. The main objective of this work is to analyse if the introduction of animated elements has an impact in the way children use the TUI and how they create stories.
In interactive animations the character is controlled by the player, so the animator's role is to create a behavioral repertoire and the rules that will establish the occurrence of each behavior. Programming these complex behavioral patterns is difficult, and requires that the interactive characters have a limited behavioral repertoire. So, one of the first tasks was to create an interaction tree to define the behaviors for the different elements and the relations between them. From this, we defined the basic animations. Additionally this research aims at investigating if the limitation of those repertoires affects the creation of narratives, and if so, in which way.
The project follows a user-centered design approach involving several iterations with different focus groups. The first tests were carried out with a paper prototype. A second session took place with an animated version with the basic animation and interaction repertoire. This research is a work in

progress and the data collected in the tests indicate that animation is a resource that helps children to create different stories and engage with the Tangible User Interface.

Palavras-chave : animation, tangible interface, videogames, narratives, interaction