The Magic Box

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Introduction

The Magic Box is Veria's Library proposal for an innovative children's area. The construction phase of the project started in October 2008. In December 2008 it went into beta operational phase[1]. The aim of this project was to create a children-centric environment where on one hand individual talents and needs will be exploited and on the other hand children will be inspired to interact with each other. In this context, children-centric environment means an area inside the library that is open and accessible to all children, is aesthetically children-friendly, addresses personalised knowledge and learning requirements and provides the means for children to express their creativity and curiosity.

The name "Magic Box" aims to stress that the emotional and pleasurable aspects of experiencing creativity are becoming central in the new children area. Hence the terms like 'magic', 'fun', 'wonder', 'excitement' and 'surprise'[2] had to be adopted in the vocabulary of the children using the Veria Library.

Current situation

The Magic Box primarily engages children through its innovative interior design. Rounded caves build-in the walls are places where children will climb, hide and discover music and digital story-telling. A floor of magic boxes and hidden selves are repositories of books, while a magnetic wall is the surface to exhibit creative work.

Currently the Magic Box is on a beta stage and several experiments, evaluations and adjustments are taking place on a daily basis. The beta will remain during all the year to keep the focus on experimentation and on usability testing. Experimentation involves various creative activities organised by the librarians, teachers, volunteers and experts in children education. To this end a large number of activities have been scheduled for the coming months, while all elementary and primary schools of Veria (approx. 5,000 students) are expected to visit the new area, participate and use features of the Magic Box.

Enhancing the area with technology that improves interactivity, collaboration and curiosity among children and parents is central to the operation of the Magic Box. Towards this goal the Magic Box was enhanced with touch screens, laptops, video projectors, and interactive whiteboards all inter-linked in a wireless network. Recently, the Magic Box was enhanced with a 3D gaming space where children together with parent can experience interactive and collaborative experiences. The 3D game space was installed on the rotating wall, featuring the Nintendo Wii platform. At a first stage, children are required to be accompanied by an adult. As the Magic Box is entering the fascinating world of interactive virtual environments, the library staff analyses and defines the most appropriate use plan, taking into account ethical issues and the sensitive nature of children. From the first days of its operation, the user feedback is very encouraging. Children are enthusiastic as they get in touch with wireless, motion sensitive technology and 3D virtual characters. They perform interactive and collaborative tasks for fun, education or sports.

Children and staff are also exploring an emerging area in child-computer interaction where the emphasis is on the interaction between robots and children. The Library has made available to its users the robotic platform Lego Mindstorm, which is able to generate basic reprogrammable interaction capabilities. Children can play and interact with two types of characters – characters on the virtual environments and the tangible reprogrammable robots. Both have different capabilities and limitations. On one hand, virtual environments generate more emotion and action potential, but are not physically touchable. On the other hand, robots are tangible interfaces and mobile in the real physical world.

Monitoring children activity and receiving user feedback are very important factors for the successful beta operation of the Magic Box. Currently, various performance indicators are being defined in order to assess children creativity and curiosity inside the Magic Box, monitor the usability of the installations, and measure the dissemination and impact of the project in the local community.

Conclusion

The main innovation of the Magic Box lies in the significant adoption of the state-of-the-art in child-creativity by means of intuitive interior design, technology, and professionals in children education. The approach that is proposed is expected to open new vistas in child interaction within libraries and, moreover, pave the way towards a new era of children areas in public libraries, where children co-exist with media and book collections, virtual as well as robotic characters, while operating in everyday environments.

Acknowledgements

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[1] Check the Magic Box on Flickr:
http://www.flickr.com/photos/libver/sets/
[2] Harper, R., Rodden, T., Rogers, Y., Sellen, A., (Eds), "Being Human: Human-Computer Interaction in the year 2020", Microsoft Research Ltd, ISBN: 978-0-9554761-1-2, 2008