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Transactions on Edutainment III

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Preface

With great pleasure we would like to present the third volume of the journal *Transactions on Edutainment*. This journal, part of the Springer series *Lecture Notes in Computer Science*, is devoted to research and development in the field of edutainment. Edutainment, also known as educational entertainment or entertainment-education, denotes all forms of entertainment designed to educate as well as to provide fun. This approach is motivated by the growing demands on individuals for life-long learning and the need to integrate effective learning opportunities throughout life. As such, edutainment has attracted increasing interest in the last few years.

The first 12 articles of this issue represent a selection of outstanding contributions from *Edutainment 2009*, the 4th International Conference on E-Learning and Games held in Canada, in August 2009. The main purpose of the Edutainment conferences is the discussion, presentation, and information exchange of scientific and technological developments in the new community. These 12 papers cover mainly the topic of using games to stimulate learners' learning motivation, i.e., learning by playing, including: "Engaging Kids with the Concept of Sustainability Using a Commercial Videogame—A Case Study," "Doing It Right: Combining Edutainment Format Development and Research," "Edutainment Robotics as Learning Tool," "SoundTag: RFID-Based Wearable Computer Play Tool for Children," "Do Improve Typing Skill but No Significant Difference Between Drill-Based and Game-Based Typing Software," "Widget-Based Simulator for Testing Smart Space," "Entertaining Education – Using Games-Based and Service-Oriented Learning to Improve STEM Education," "Learning English Through Serious Games – Reflections on Teacher and Learner Performance," "Motivational Factors in Educational MMORPGs: Some Implications for Education," "A Distributed Multi-agent Architecture in Simulation-Based Medical Training," "Designing a Trading Card Game as Educational Reward System to Improve Students' Learning Motivations," and "Sketch Learning Environment with Diagnosis and Drawing Guidance from Rough Form to Detail Contour."

The following ten papers are regular papers. In "Application of Visualization in Virtual Endoscopy System," Yanjun et al. developed an efficient algorithm to solve path planning based on distance transform. In "Design and Implementation of Virtual Museum Based on Web3D," Zhang and Yang explain how to develop a Web3D-based virtual museum. In "Large Area Interactive Browsing for High-Resolution Digitized Dunhuang Murals," Yuan et al. use a Gaussian pyramid structure on Dunhuang Mural arts and allowed visitors to interact with the system by gestures. In "Research of Autonomous Active Control for Virtual Human Based on Emotion-Driven Model," Wang et al. create an emotion-driven virtual human on the smartphone. In "An XML-Based Interface Customization Model in Digital Museum," Wang et al. propose an XML-based Web interface customization model which can be used to construct a digital museum. In "Animation as an Aid for Higher Education Computing Teaching," Taylor and Pountney examine the potential use of animation for supporting teaching courses in UK higher education. In "Bringing Integrated Multimedia Content into

Virtual Reality Environments,” Sampaio and Rodríguez Peralta propose a solution for the integrated presentation of different kinds of media objects inside virtual environments based on the Graphical Engine OGRE. In “Virtual Reality House for Rehabilitation of Aphasic Clients,” Horváth et al. develop an innovative virtual reality house therapy, Virtual ELA[®]-House, for patients with language and speech disorders and cognitive neuropsychological disorders, e.g., aphasia, apraxia of speech, and neglect. In “Investigating the Effects of Educational Game with Wii Remote on Outcomes of Learning,” Ho et al. develop a health education-based game with the Nintendo Wii remote. In “Using Computer Games for Youth Development,” Yun et al. describe how to use games to assist students learning declarative knowledge, developing intellectual skills and psychomotor skill, and forming attitude structure.

The papers in this issue present a large number of application examples of edutainment, which gives more evidence of the great potential and high impact of edutainment approaches. We would like to express our thanks to all those people who contributed to this issue. They are authors of all papers, the reviewers of the regular papers, and the IPC of Edutainment 2009 for recommending high-quality to this new journal. Special thanks go to Yi Li, Ruwei Yun and Qiaoyun Chen from the journal’s Editorial Office in Nanjing Normal University: they put in a lot of effort in contacting authors, managing the reviewing process, checking the format of all papers, and collecting all the material.

October 2009

Maiga Chang
Adrian David Cheok
Zhigeng Pan
Abdenmour El Rhalibi

LNCS Transactions on Edutainment

This journal subline aims to provide a highly visible dissemination channel for remarkable work that in one way or another addresses research and development on issues related to this field. It targets to serve as a forum for stimulating and disseminating innovative research ideas, theories, emerging technologies, empirical investigations, state-of-the-art methods, and tools in all the different genres of Edutainment, such as game-based learning and serious games, interactive storytelling, virtual learning environments, VR-based education, and related fields. It will cover aspects of educational and game theories, human-computer interaction, computer graphics, artificial intelligence, and systems design.

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