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Transactions on Edutainment II

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Preface

With great pleasure we present the second volume of the new 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 increasing 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 five articles of this issue represent a selection of outstanding contributions from GDTW 2008, the 6th International Conference in Game Design and Technology held in the UK, in November 2008. The main aims of the workshop are: (1) To provide a forum to discuss state-of-the-art games design and current and future games technology with the specialists. (2) To enable academics and researchers in computer game technology and computer entertainment to present their work during the research sessions, and to seek opportunities for collaboration with industry and for academic research partners. (3) To facilitate relationships and collaboration between academics promoting computer games technology courses, the UK games industry and supporting organizations. These five papers cover mainly the topic of edutainment platforms or methodology: “Coordinating Heterogeneous Game-Based Learning Approaches in Online Learning Environments,” “Networking Middleware and Online-Deployment Mechanisms for Java-Based Games,” “A Testbed for P2P Gaming Using Time Warp, How to Steer Characters in Group Games,” and “Time-Based Personalized Mobile Game Downloading.”

The next six articles represent a selection of outstanding contributions from Cyberworlds 2008 held in Hangzhou, China, in September 2008. Some topics of this conference are related to those of this new journal. They include mobile games, E-learning, Web-based learning and edutainment, intelligent agents in cyberworlds, cyber fairs and digital museums, game engines, game algorithms, and multi-user Web games, VR/AR/MR for industrial design, digital heritage, shared virtual worlds, collaborative work using cyberworlds, human animation in cyberworlds, virtual reality, augmented reality, and mixed reality. These six papers cover topics on virtual avatars, game designing, educational systems etc. The paper titles are: “Adopting Virtual Characters in Virtual Systems from the Perspective of Communication Studies,” “Teaching Me Softly: Experiences and Reflections on Informal Educational Game Design,” “Visual/Haptic-Based Biomolecular Docking and Its Application in E-Learning,” “Exploring Movie Recommendation Systems Using Cultural Metadata,” “Virtual and Augmented

Reality Tools for Teleportation: Improving Distant Immersion and Perception,” and “HES-SPATO: An Online History Educational System Based on SCORM.”

The following nine papers are regular papers. In “Proxy 2: An Audio Game Accessible to Visually Impaired People Playable Without Neither Visual nor Verbal Instructions,” Thomas Gaudy et al. made a game, all the players managed to progress in the game but not all understood all the principles of the game. For this kind of game, they assume that players do not have to understand the game during the first contact but they have to be encouraged to continue interaction. “Design Tools for Online Educational Games: Concept and Application” is an invited paper. Louise Sauvhas developed a series of generic educational game design shells to enable teachers, trainers and community service workers to create educational games that provide effective learning conditions and are adapted to their distance learning needs. In “Earth and Planetary System Science Game Engine,” Gloria J. Brown-Simmons et al. presented a game engine for using unconventional interaction and visualization techniques to experience geophysical environments. Players are provided with dynamic visualization “assets,” which enable them to discover, interrogate and correlate scientific data in a game space. The spirit of exploration is to give players the impetus to truly understand how complex the Earth and planetary systems work and their intrinsic beauty, the impact of humans, and a sense of responsibility to serve as caretakers of those systems. In “An XML Tree-Based Leveled Filtering Method and Its Application,” Jiming Chen et al. present a new XML tree-based leveled filtering method - LevelFilter. In “Fostering Students’ Participation in Face-to-Face Interactions and Deepening Their Understanding by Integrating Personal and Shared Spaces,” Etsuji Yamaguchi et al. introduced *CarettaKids* into the social context of a classroom environment to evaluate whether integration of personal and shared spaces can help promote students’ participation in synchronous/co-located interactions in the classroom and deepen their understanding of subject matter.

In “Make Learning Fun with Programming Contests,” Gines Garcia-Mateos et al. propose a new methodology based on two key ideas: (a) replacing the final exam with a series of activities in a continuous evaluation context; and (b) making those activities more appealing to the students. In “KEI-Time Traveler: A Virtual Time Machine with Mobile Phones for Learning Local History,” Hiroyuki Tarumi et al. present the KEI-Time Traveler, a kind of “virtual time machine” that requires only commercially available mobile phones with no hardware attachment. In “A 3D Campus on the Internet—A Networked Mixed Reality Environment,” Jiung-yao Huang et al. present a study of networking the mobile augmented reality system with the conventional networked virtual environment for implementing a virtual campus. In the final paper “Photo Realistic 3D Cartoon Face Modeling Based on Active Shape Model,” the authors present a novel framework to automatically build 3D cartoon face models from a single frontal face image.

The papers in this issue present a large number of application examples of edutainment, which gives more evidence on the high potential and impact of

edutainment approaches. We would like to express our thanks to all those people who contributed to this issue. They are the authors of all the papers of this issue, the reviewers for those regular papers, and the IPC of the two related conferences (GDTW 2008, and Cyberworlds 2008) for recommending high-quality articles for this new journal. Special thanks go to Yi Li, Ruwei Yun and Qiaoyun Chen from the Editorial Office of this journal in Nanjing Normal University; they put a lot of effort in contacting authors, managing the reviewing process, checking the format of all papers and collecting all the material.

April 2009

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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