

GUEST EDITORIAL PREFACE

Special Issue on Entertainment Computing

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This special issue of the International Journal of Creative Interfaces and Computer Graphics contains a selection of papers from the first edition of the Spanish Symposium on Entertainment Computing (SEED), held in September 2013 in Madrid, Spain. SEED was targeted at both the research and commercial communities, promoting research and practice in the context of interactive digital entertainment systems with an emphasis on commercial computer games. The aim of the symposium was to become a point of interaction between entertainment software developers and academic researchers both in Spain and Latin America, and serve as a cross-disciplinary meeting point for research in entertainment computing.

The Symposium was successful from several points of view. From the research point of view, it presented a broad spectrum of results in games, HCI, education, design, engineering and art, with high quality standards as shown by the papers selected for this special issue. The community first gathered at the symposium has resulted in the creation of the Spanish Society for the Science of Video Games with the main

goal of further promoting research in this area. The first event organized by this scientific society was a conference in the Summer of 2014, co-located with Gamelab, the main event of the game industry in Spain, thus advancing in the connection between industry and academia through research.

PAPERS IN THIS ISSUE

Authors from some of the best papers from SEED 2013 have been asked to update and improve their papers to be included in this special issue. Four representative papers have been chosen that fit with the mission of the International Journal of Creative Interfaces and Computer Graphics.

The paper “Implementation of an immersive videogame: Legends of Girona” by Rodríguez *et al.* presents a graphic adventure game aimed to teach local history to students and visitors of the Spanish province of Girona (Catalonia). It is a kind of serious game which combines puzzle-based learning with aspects

of advanced artificial Intelligence, computer graphics, immersive display and mobile platforms.

The paper “Modelling a Human-like Bot in a First Person Shooter Game” by Mora *et al.* describes the design of a human-like autonomous agent (bot) for playing one versus one combats in the game Unreal Tournament 2004. This bot includes a behavioural model inspired in the actions (and tricks) that an expert player does when playing the game in a competition. It is based in a two-level finite state machine and also counts with a learning component modelled as a database. The obtained bot has yielded very good results in the comparison against human players (including the expert) and it is unbeatable for the default agents included in the game.

The paper “Supporting the construction of a GUI component for specifying the behavior of non-player characters in Unity” by Sagredo *et al.* introduces a tool named UHotDraw, which is a framework in C# that simplifies the implementation of graphic user interfaces in Unity 3D, the well-known middleware for game development. This tool extends the functionality of Unity 3D, providing a high-level plug-in which makes it easier the definition of the behavioural models that the non-player characters will follow.

The paper “Towards Creative Smart Learning Environments: Experiences and Challenges” By Catala *et al.* presents the conclusions reached in the CreateWorlds project, which aims to simplify the creation of the so-called digital ecosystems by means of an interactive tabletop. This is proposed instead of the usual WIMP (Windows, Icons, Menus,

Pointer) interfaces, which normally have a negative effect in the collaboration and active participation of the designers, and thus, limit somehow the creativity. The paper reviews the state of the art in this scope and analyses the open challenges for the definition of creative entertainment-based environments.

The paper “A virtual reality drumkit simulator system with a Kinect device” by Rosa-Pujazón *et al.* describes an application of the famous camera-based sensor Kinect. It is based in the recognition of gestures for implementing a virtual drum and in the prediction of these gestures in order to minimize the delay between the user’s actions and their visualization in the system. The prediction has been done by means of machine learning and signal processing techniques, and the results show that the lag introduced by the sensor is effectively reduced with this system.

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Guest Editors

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