
Editorial

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Emerging interaction techniques and devices provide users with new experiences, which may have an impact on their feelings, behaviours, knowledge acquisition process, performance and/or enjoyment. Innovative multimedia and augmented reality environments push the user interface beyond the digital into new physical and social contexts, affording a variety of dynamic, context-dependent and also subjective user experiences. This Special Issue reports on original interactive experiences in multimedia and augmented reality environments.

Novel interaction devices may include diverse kinds of sensors to collect input data or explore various media technologies to provide the output. When combined with recent media processing methods and tools, these interaction devices are able to provide innovative user experiences in multimedia entertainment and interactive art.

Design and evaluation methodologies differ according to the system's nature, purpose and functionality. Multimedia and augmented environments can be exploited as interactive art installations or entertainment instruments, sensing users' actions (e.g. motion and touch) and environmental parameters (e.g. heat and light) and producing different sorts of outputs, as well as users' subjective reactions. Interactivity provides creators with new means of expressivity and allows users to have an active role while

exploring these art works or entertainment pieces. Spectators should be seen as both viewers and users in their interaction with the interactive systems, as well as between themselves. It is also relevant to analyse how people interact with technology when they do not have a specific job or task to accomplish, where activity focuses more on experience rather than being goal directed.

However, further research must be carried out regarding: How to exploit the various media combinations and technologies to achieve our goals when designing media art? How can these systems contribute towards enhancing users' experiences and affect their feelings? How users react to these interactive installations? How to design and assemble these kinds of systems for entertainment, information and expressive purposes? The papers compiled in this Special Issue contribute towards giving further insight into these issues.

A discussion of tactility in media art through case studies is presented in the paper by Wilson. This paper critically considers this recent practice in proposals that use several sensory stimuli. It also discusses a more generic trend in media art of shifting to the tangible and corporeal.

Multiple media are used in the paper by Halabi, Motomura and Chiba to generate unique and beautiful images in a highly interactive environment. They present a new display method for combining two projections to create a visual image. Synchronisation and integration methods are key to achieve the final interactive environment.

New media technologies can play an important part in changing roles and behaviours when dealing with social history and reenacting the past. Interactive and narrative experiences in virtual environments, described in the paper by Kuksa and Tuck, allow to gain new insights in history exploration. Interactive museum exhibits their design process and evaluation are covered in the paper by Dubois, Bortolaso, Bach, Duranthon and Blanquer-Maumont. A concrete design experience in a museum provides the testbed for the design decisions and the choice of tools that are used.

Mobile devices and their affordances are becoming platforms for visual media presentation and interaction. The retargeting of existing content, such as 3D games and virtual worlds, poses new challenges specially when retargeting interactive experiences. The paper by Ross, Simpson and Tomlinson discusses the implications of retargeting to mobile devices when there is more than the visual content. Gameplay has to balance a narrative aspect with decision-making for game progression. Sometimes, there is a gap between these two modes that is addressed in the paper by Bizzocchi, Ben Lin and Tanenbaum. This paper proposes approaches that integrate narrative aspects into the games interface. Ludic play can then be combined with narrative pleasure.

The 'Elevator' described in the paper by Psarras, Floros, Drosos and Strapatsakis provides a platform for signalling and expressing human behaviour related to emotions. Emotions, their understanding and representation, are crucial in multiple art and digital media experiences.

We would like to thank all the authors and anonymous reviewers who made this publication. We hope that this Special Issue will provide you a pleasant, enjoyable and rewarding reading experience.