

IMEDIATV: OPEN AND INTERACTIVE ACCESS FOR LIVE PERFORMANCES AND INSTALLATION ART

By Ioannis Deliyannis, Ioannis Karydis and Dimitra Karydi

Abstract. Internet-based interactive TV is an emerging field affected by advances in various research areas introducing communication, network-efficiency, content management, usability, aesthetic and copyright issues. Content types that pose special presentation and interaction requirements include interactive installation art, games and multimedia productions that require synchronised content communication. These are clearly aided by the development of custom-built interactive broadcasting infrastructures offering alternative methods of content deployment, presentation and interfacing. On the experimental forefront, educational institutions are exploring the capabilities of high-bandwidth networks and experimental interactive content, setting the standards for the development of new digital services. The reduction of development, production and broadcasting costs enables single users and specialist groups interested to publish their work and appeal to wider audiences, to do so by offering a high-quality media experience in global scale. On the other hand, despite constant reduction of broadcasting infrastructure and communication costs, this new medium has yet to claim its market position and recognition. The large market-share of existing non-interactive technologies may be identified as the principal factor for non-adoption of new broadcasting technologies, followed by various quality-of-service issues and the absence of a widely accepted standard for interactive broadcasting that does not permit the development of devices supporting interaction in an out-of-the-box user-experience.

In this work we are mainly concerned with the development of an interactive TV service destined to broadcast offline and online artistic new media content. Under interactive-TV use-scenarios it may be used to support interactive exploration of interactive works and installation art over the Internet, clearly expanding proprietary interactive presentation capabilities offered today. Most importantly, under live event broadcasting, the proposed technological implementation may either be configured to enable bidirectional communication between the “active” presenter/performer and the “passive” audience, permitting new levels of interaction to be supported. This enables presenters/performers to improvise and interact with the audience, a fact that often introduces the need for transformative use of copyright-protected material. This problem is addressed via the proposal of a direct licensing scheme designed to offer the flexibility required for interactive multimedia content.

Keywords: Interactive TV, End-User Development and Adaptation, User Experience based Approaches, Multi-User Interaction / Cooperation, Copyright Issues