

Multimedia systems, languages, and infrastructures for interactive television

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This special issue is based on papers presented at the 5th European Conference on Interactive Television (EuroITV 2007) held in Amsterdam on May 24–25. EuroITV07 was done in-cooperation with Association for Computing Machinery (ACM) and co-sponsored by International Federation for Information Processing (IFIP). The aim of the conference was to bring together researchers from different regions and diverse disciplines. The conference included contributions from Europe, America, Asia, and Oceania with researchers representing disciplines such as media studies, audiovisual design, multimedia, human–computer interaction, and management. This way, the conference tried to develop a common framework for this multi-disciplinary (usability, multimedia, narrative) and new field, interactive television.

For this special issue on Multimedia Systems, Languages, and Infrastructures for Interactive Television the four best papers on multimedia systems and infrastructures were invited to extend their conference contribution in the form of a journal paper. These papers cover a wide range of current challenges for multimedia systems: content recommendation, participatory multimedia genres, evaluation of mobile media usage, and digital media narratives.

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“An Efficient Ad Recommendation System for TV Programs”, from Sudha Velusamy et al., presents an intelligent ad recommender system for television broadcast. The most innovative contribution of this work is the use of fuzzy clustering for accurate recommendations of content. The authors provide an evaluation of their system and thus validating their results to provide the most appropriated ads for a given television program.

“Using High-Level Models for the Creation of Staged Participatory Multimedia Events on TV”, from Jan Van den Bergh et al., introduces innovative concepts for user participation on television programs. Where in the past user participation was restricted to, for example, call or send an SMS to the broadcast channel, the authors provide a full working infrastructure that permits end-users to actually create and host their own television show.

“Podracing”: experimenting with mobile TV content consumption and delivery methods”, by Virpi Oksman et al., presents empirical results on the use of mobile television. The scientific community and the industry have dedicated vast resources on bringing multimedia content to the mobile phones, thus empirical results on how do actually people use the content is essential for next-generation systems.

Finally, “ShapeShifting TV Interactive Screen Media Narratives”, by Marian F. Ursu et al., introduces a language and infrastructure for producing *truly* interactive digital media. The authors present the language and working infrastructure via an example of how to construct productions whose narrative respond in real-time to interaction from active users. Moreover, the authors present real-world results. For example, *Accidental Lovers* is a musical comedy that was broadcast by TV1 of Finland, which allowed end-users to affect its narrative.

The selection of these papers reflects current challenges in interactive television, and thus in the multimedia domain

such as content recommendation and categorization, enriched communication technologies, studies on how people actually use media, and truly interaction in the form of the potential impact of the end-users in the media they are consuming.

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