

Going Beyond iTV: Designing Flexible Video-Based Crossmedia Interactive Services as Informal Learning Contexts

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ABSTRACT

Due to recent technological advances and better interface designs, iTV started to gain its market space. However, new opportunities and challenges have aroused, namely with the convergence and use of different devices as part of the same crossmedia system, allowing to support a multiplicity of contexts of use. Considering the iTV great potential in the learning scenario, so important in a context where lifelong learning is gaining space, and the potential of including iTV as part of rich and flexible crossmedia learning environments, new research opportunities came up along with the challenges the design of these systems face and that may affect their effective use. This paper addresses the effective design of crossmedia services and interfaces with a particular emphasis on iTV and PC, through the eiTV application case study, designed to illustrate and explore this paradigm, based on cognitive and affective aspects that influence user experience. The eiTV application is capable to create, access and share web Personalized Informal Learning Environments (created as additional information to the video being watched), via iTV, PC and mobile devices (the preferred or most adequate device in each context of use).

Categories and Subject Descriptors

H.5.2 [Information Interfaces and Presentation]: User Interfaces - *Evaluation/methodology, Graphical User Interfaces (GUI), Interaction Styles, Prototyping, User-Centered Design.*

General Terms

Design, Experimentation, Human Factors.

Keywords

iTV, iTV learning, iTV interaction, iTV services, HCI, crossmedia, crossmedia design, transmedia design.

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EuroITV '11, June 29–July 1, 2011, Lisbon, Portugal.

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1. INTRODUCTION

TV is a privileged way to watch video - a very rich medium, in cognitive and affective terms, to convey information and support learning and entertainment. In spite of being traditionally watched in a more experiential and passive cognitive mode, it may induce viewers to engage in more reflective modes, although not usually providing an adequate support for this mode. When watching a TV program, at some point in time, the viewers may feel the need or will to know more about a specific issue that caught their attention. Traditional TV is not able to support this type of functionality, but iTV, by its nature, may allow the possibility to access and interact with information about the program and related issues, that may be available as indexed TV content and references to follow and search. In fact, the role that TV has been playing so far is changing. We are definitely in a moment of transition, a moment where “old media systems are dying and new media systems are being born. The traditional ‘spectatorial’ culture is giving way to a participatory culture” [14]. The proliferation of new devices able to support human activities across a range of contextual settings [38], just like it happens in ‘real life’, is one of the main motivations for media integration in what is designated as crossmedia. Simultaneously, global access to information and technology is changing the relationship between people and knowledge, and the trends in convergence, integration and co-existence of various media technologies is creating new opportunities for the globalization of learning and communicational practices. Crossmedia systems are particularly interesting in what concerns the opportunities they create in terms of communication, entertainment, learning, and other activities [3]. In terms of learning support, these systems are particularly promising due to the emerging era of lifelong learning, as learning will take place in a wide variety of contexts and locations and informal learning will tend to become as important as formal learning [3], calling for flexible environments. However, there are aspects that affect the efficient use of crossmedia systems. Some of the proposed systems failed because too much effort was put into technical details, leaving behind crossmedia conceptual aspects such as interaction and service design based on: cognitive processes, usability, affectivity, user experience, contextualization, continuity, media affordances, or device characteristics. The handling of these dimensions is our main motivation. Our main concern is to focus on these conceptual aspects, to study and understand this emerging paradigm which