Chapter V

Analysis and Development of an MHP Application for Live Event Broadcasting and Video Conferencing

Kristof Demeyere, Ghent University, Belgium
Tom Deryckere, Ghent University, Belgium
Mickiel Ide, Ghent University, Belgium
Luc Martens, Ghent University, Belgium

Abstract

This chapter will introduce a technology framework that can be used to add video conferencing services and live video events on the multimedia home platform (MHP). The solution is based on a bridge between Internet protocol (IP)-networks and digital video broadcasting (DVB) channels in order to stream video that originates from an IP network into the broadcast. The introduction of (iDTV) is completely changing the user experience of television in the living room. In our opinion, the iTV infrastructure lends itself perfectly to support live event broadcasting and video conferencing, both enriched with interactive applications. These services have a vast application domain which includes plain video conferencing but also video surveillance, t-learning, t-health, and user-centric content services. The objective of the framework is to provide basic functionality to the service provider to create these and other innovate services.
Introduction

Interactive digital television (iDTV) is gradually replacing its analogue predecessor, whom everyone has been so familiar with for a long time. iDTV offers superior image and sound quality. On top of that, it enables the user to interact with the broadcasted services. The magic box that unlocks the wealth of new services is the set-top box (STB). An STB is capable of decoding the broadcasted digital video signal and provides local as well as regional interactivity. Next to the introduction of iDTV, there is the growing popularity of multimedia video services on the Internet. Live events are being broadcasted, people share their own video files, and communicate with each other using low cost webcams. In this chapter we will give an overview of technologies that will enable the convergence of these advanced video services from PC to the MHP. We will start with an overview of relevant and existing technologies together with their limitations. Finally, we will propose an architecture for live event broadcasting and video conferencing.

MHP

The multimedia home platform (MHP) is the first common open middleware platform being deployed at a large scale in STB. It provides the application developer with a number of application program interfaces (API’s) suitable to develop a variety of applications irrespective of the underlying hardware of the STB. Applications developed for this MHP will be interoperable with different MHP implementations resulting in a horizontal market. The MHP standard considers the following profiles: enhanced broadcast profile, interactive broadcast profile, and Internet access profile. The first two profiles are incorporated in the MHP specification 1.0 while the last one is present in the more recent specification MHP 1.1. Each profile refers to an application area and describes the required STB capabilities. Enhanced broadcast profile combined digital broadcast of audio and video with applications providing local interactivity and does not require the STB to have a return channel. However, the interactive broadcast profile extends the enhanced broadcast profile by enabling services with regional interactivity, which requires the presence of a return channel. The Internet profile, at last, extends interactive broadcast by providing Internet services and requires a more sophisticated STB with more processing power and memory. Most of today’s STBs labelled MHP compliant, currently implement MHP specification 1.0.2 or 1.1.2 (European Telecommunications Standards Institute [ETSI], 2002, 2005).
Beauty in the Background: A Content Analysis of Females in Interactive Digital Games
www.igi-global.com/article/beauty-background-content-analysis-females/75313?camid=4v1a