Chapter I

DynamicTV:
The Long Tail Applied to Broadband-Broadcast Integration

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Abstract

This chapter proposes a way to exploit the ongoing convergence between the worlds of broadcasting and Telco in order to find an added value for the audience. We propose DynamicTV, a concept based on the idea that this scenario may enhance the user TV-watching experience by providing not only a more comprehensive choice (content accessible via the broadband channel are virtually infinite) but most important, a way to take the user from a pure passive TV consumption to a more interactive, on demand, nonlinear experience. The maturity of the current technologies and standards for convergence has been investigated by implementing a prototype in a digital terrestrial television (DTT)/Internet protocol television (IPTV) environment of the DynamicTV concept. Our conclusion is that both standards and technologies need some effort in order to allow a real service of this kind to be offered on the market.
Introduction

In the beginning of television, starting with a single channel available only certain hours a day, the technical solution behind broadcasting shaped the whole TV idea into a simple “the broadcaster chooses, for all the audience, a few things to watch” and that was it. Some choice was given to the audience when it became possible to select among several channels.

Then the digital television came with digital video broadcasting (DVB)-T/S/C set-top boxes, thus increasing the number of available channels to choose from; then a small modem-based return channel appeared on some STBs, allowing some kind of interactivity; but still the idea behind it was that the broadcasters chose the content to propose to their big audience.

Currently, the existing DVB-T interactive applications are generally limited to easy graphic electronic program guides (EPGs) with some hyper-textual information and few T-government solutions, created and promoted in order to try and decrease the digital divide. The availability of a broadband IP access in the DVB-T/S STBs can bring things one step further: not only we can watch on TV what the broadcaster sends over the air, but we are now able to reach multimedia content available anywhere on the Web and watch it on the TV set, without anyone choosing for us what to watch.

But this may not yet be what we want. We already know the drawbacks of this Internet-based approach and we know how little it fits with the idea of watching TV: first you have to know what you want to see. Then you have to find it. And who knows what you end up with: There is no control, no catalog, no quality check for Internet content. And you must be lucky to find the content in the coding supported by your TV set. And at a bit rate compatible with the broadband access line that serves you, provided that your network provider has properly dimensioned the network. These are just a few of the parameters that need to be checked in order to be able to enjoy Internet content on TV. Though the availability of an enormous amount of content and the absence of any form of censorship might be appealing, however, experience with the Web shows how rarely things work properly, thus allowing a relaxed TV-like experience.

What’s next then? The next step along this path is IPTV. The network infrastructure needed to support this kind of broadcasting service is in fact automatically adequate for on-demand content distribution, too. This means that without any significant investment, the broadcaster can complement its business with a content-on-demand offer being delivered on exactly the same network as the broadcasted content.

This actually changes the “we choose, for all of you, a few things to watch” model. There is still an intermediation component, since the content must be checked against public morality; coded according to the desired quality; stored; tagged with metadata and possibly DRM-ed; and so forth, but the range of choices for the
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