

Chapter 10

Remote Delivery of Video Services over Video Links

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ABSTRACT

The spreading of new systems of broadcasting and distribution of multimedia content has had as a consequence a larger need for aggregation of data and metadata to traditionally based contents of video and audio supply. Broadcasting chains of this type of channels have become overwhelmed by the quantity of resources, infrastructures, and development needed for these channels to provide information. In order to avoid this kind of shortcoming, several recommendations and standards have been created to exchange metadata between production and distribution of taped programs. The problem lies in live programs; producers sometimes offer data to channels, but most often, channels are not able to face required developments. The key to this problem is cost reduction. In this work, a study is conducted on added services which producers may provide to the media about content; a system is found by which additional communication expenses are not made, and a model of information transfer is offered which allows low cost developments to supply new media platforms.

INTRODUCTION

The model change which Digital Terrestrial Television (DTT) is causing, IP-based television in all its forms or simply diffusion on Internet is provoking on one hand, that traditional broadcast companies

look for new markets with new technologies and on the other hand, other companies have started to broadcast material by these new means with only having rights and not necessarily licenses, as in the case of broadcasting.

The proliferation of chains and transmission channels have consequently put into motion, as a consequence, the abandoning of productions, and

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concentration on transmission itself while at the same time, companies specialized in production have emerged which generate cheaper content and which can be commercialized on different supports.

Audiovisual contents which are generated are sent to different clients by two clearly differentiated types of transmission:

- Delivery in real time (live programs). The video material is coded in MPEG2 Transport Stream for its transfer to the destination by a data link. On the other end of the link it is connected to a decoder to decode the data stream on base band.
- Delivery in a file or tape (recorded or taped). By this means of delivery, the edited file is sent by disk or tape to transmitting stations.

Production companies have the data; they are experts in each of the subjects they produce. For data and metadata interchange of taped programs, different standards and recommendations exist, the problem arises in data exchange for live programs in which channels have to adapt their applications or create new ones to be able to give service to viewers.

In this work, the need to create a standard of data service on distribution networks of live programs will be presented based on the following principles:

- The producer of the event generates data, because he best knows the content of the broadcasting.
- Data on XML documents for a better adaptation to existing technologies. This data exchange facilitates creation of new applications.
- Data delivery on the same video networks, so that data go tightly connected to the signal itself with the consequent saving in communications.

In this chapter, technological aspects related to the work presented are reviewed. The main objective is to show an analysis of services which can be offered from producers to broadcaster, and to present solutions to these services. We finished with the models which differ from the general model in order to adapt special services and the solutions are discussed in more depth, and we include conclusions as well as mention of future work to be developed.

BACKGROUND (PRODUCTION ISSUES)

In this section we will review some aspects in the professional video production.

Data Exchange

What are metadata? Metadata provide information about data content. Literally, metadata are data further than data, and characterize the content by a group of attributes. These attributes may not only describe content in the form of raw data, meaning, and/or key concepts, content is also characterized in terms of author, quality, production time, format, etc. Also, added information during delivery service (such as receipt information) or information about permits for use of content must be correctly described by metadata. In short, metadata (referring to multimedia/audiovisual content) contain information about all related aspects to the entire chain of content provision.

The fact that audiovisual content has associated metadata offers many advantages. One of the main ones is to be able to make searches for content in a very intense way. Due to the great quantity of information metadata contain, very complex and varied searches may be carried out: by author, description, permits, etc. Another advantage is the ease of content exchange or distribution, since metadata are associated with content, distribution or exchange information is

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