

DIGITAL TV CORPORATV - PROTECTED IP STREAMING OF AUDIO/VIDEO CONTENTS

Corporate TV is usually defined as a system of multimedia contents broadcast using the medium of television to a limited number of users, via internet-based broadcast channels and protocols such as broadband, IPTV and video streaming. Corporate TV is used for the following applications:

- video conferences: using instant messaging and webcams on desktop PCs;
- IPTV: a flow of contents gathered from the internet and structured for access;
- digital radio: with digital audio contents from the internet.

SECURITY ISSUES

The fact that the contents of Corporate TV address a restricted number of users and may be of a confidential nature means that there are security issues involved in setting up the service. In recent years developments on the content security front and the advent of various streaming protocols (RTP, H263, SIP, DVB, SHOUTCAST etc...) have provided extensions to manage authentication and protect the data being exchanged, but this technology has not always given rise to concrete, usable applications. To address this situation CSP has developed CorporaTV, an application capable of providing a protected IP stream of audio/video contents.

CorporaTV - operative architecture

The CorporaTV system is based on two multiplatform software modules: one server-side to encrypt and authenticate the flows and the other client-side to access the encrypted content. The two modules act as proxies for the purposes of the streaming server – VLC, Windows Media Encoder... – and the player – VLC, Windows Media Player... available on the market. The proxies use a plug-in



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architecture designed to ensure compatibility with the various streaming protocols available such as HTTP and RTP. With HTTP, for example, access to audio/video flows takes place through SSL protocol, using X.509 certificates both server-side and client-side. CorporaTV thus ensures that audio/video flows can be broadcast and received in protected mode over IP, using encryption and authentication to protect the data being transmitted, for example in a company video conference, or in pay-per-view IPTV transmissions from a service provider.



SCHEDULING

The server-side web-based interface of the general architecture enables the administrator or individual users to create a schedule for the channel of corporate video flows. The schedule can be constructed using a media library available server-side, which can be integrated with DVB-S/T television channels and streamed contents from the internet.

The streamed contents are encrypted and accessible only to users in possession of the correct certificate. The system lets users create playlists, manages user profiles server-side and enables access to encrypted contents client-side.





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CSP - innovation in ICT Via Nizza 150, 10126 Turin - ITALY (main entrance via Alassic 11/c) Tel. +39 011 48.15.111 Fax +39 011 48.15.001 www.csp.it - innovazione@csp.it