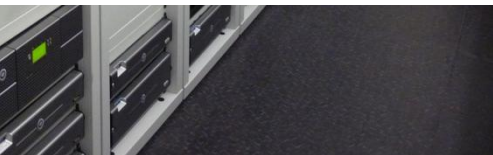


CASE STUDY

KURD1

ARCHIVING IN A TAPELESS HDTV CHANNEL



KURD1 CHANNEL

Kurd1 is a general-interest satellite channel broadcast in Kurmanji, the most widely spoken Kurdish dialect. Its mission is cultural and educational, with programs covering Kurdish culture, music, youth, cinema, sports, and news. Transmitted by Eutelsat's Hot Bird 13° East, it has been broadcasting since 27 April 2009.

Independent and apolitical, its target audience is the population of 35 to 40 million Kurds in the Middle East and the European diaspora. In the context of the fragmented and politicized landscape of Kurdish media, Kurd1 strives to remain accessible to everyone and to rise above political differences, borders, and regional difficulties. Financed by private Kurdish capital, Kurd1 is supported by the major Kurdish sociocultural organizations including the Kurdish Institute of Paris, as well as institutions of Iraqi Kurdistan.

RISING TO THE CHALLENGE

Based in Ivry-sur-Seine near Paris, Kurd1 has the production and broadcasting resources to allow it to create a large part of its programs in Kurmanji. It also has studios in Iraqi Kurdistan (Irbil) and collaborates with independent production companies in Turkey (Istanbul and Diyarbakir), in Germany (Berlin), and in Sweden (Stockholm). All production is done directly in Kurmanji, whereas programs obtained from Fox, Granada International, Canal France International (CFI), or Mediatoon International have to be dubbed.

The dubbing teams are based in Irbil, Istanbul, Diyarbakir, Stockholm, and Berlin and all programs are transmitted over the network between the different sites. In order to meet the challenges posed by this geographic distribution, Kurd1 has been designed as a entirely digital, tapeless TV channel.

END-TO-END DIGITAL WORKFLOW

"Kurd1 is one of the few completely tapeless HDV channels," states Jacky Degorre, the station's technical director. Kurd1 operates entirely in HD digital video, with the pivot format being HDV2 1080i at 25 MB/s. This all-digital workflow – from rushes to R2B (ready to broadcast) - requires the transfer, storage, back-up, and archiving of of an enormous amount of video data prior to broadcast.

The work of dubbing, which is distributed across a number of countries, requires its own workflow: .wav files are generated for the sound and .mov (QuickTime) files for the video. The dubbing teams take these files and produce a .wav file for the Kurmanji voiceover, which is then mixed back into the HDV.

MBT, the architect of the software solution, designed the overall workflow around a redundant broadcast system on two Chameleon servers. Graphics are managed by Liberty and traffic by Paradise software. The acquisition and transfer of files is carried out with the Phoenix suite.

A storage space of 16 TB NAS is used as a staging platform for content awaiting dubbing, broadcast, or transfer. The Media File Mover (MFM) transfers the video files between production, the archives, or broadcast, interfacing with the Active Media Library from Active Circle.

Kurd1 has selected Active Circle to integrate an archiving solution with its digital HD workflow. The archives, which are stored on LTO tape, are secure and instantly accessible for broadcast, dubbing, or editing.

"Kurd1 is one of the few completely tapeless HDV channels"

Jacky Degorre – Technical Director





The Active Media Library system from Active Circle was chosen because “it offers storage on disk or tape, it's an open system that provides access to the archives in file mode, and for its very practical web interface.”

Jacky Degorre – Technical Director

AN ARCHIVING SYSTEM AT THE HEART OF THE WORKFLOW

MBT collaborated with Active Circle for the archiving system with one primary goal: to integrate transparently the archiving system with the rest of the digital workflow in such a way that the archives would be both secure and available at any moment. The archiving system chosen was Active Media Library, a packaged solution that consists of an LTO library and a server running the Active Circle software.

The tape library has 48 slots holding LTO4 cartridges with 800 GB of capacity each for a total capacity of 38 TB. The two LTO4 tape drives can each write at a rate of 120 MB/s for a total of 240 MB/s. The server disk space is used as a cache, which allows for running archiving and restoration operations in parallel and to optimize data transfer from the NAS work space.

ARCHIVING R2B AND RUSHES

As the initial objective was to archive content ready for broadcast, the Media File Mover software from MBT copies the R2B files from a repository on the NAS to the archiving system. The interface is very simple and files are transferred by FTP. Active Circle provides access to the files in the form of 'shares', or directories accessible via FTP, CIFS, or NFS. The files deposited in the directory labelled “R2B” are first written to disk before being automatically migrated to tape by Active Circle's HSM functionality.

In addition to archiving the R2B files, another requirement arose: the need to archive the rushes. This is a more manual process that is performed by dragging and dropping the rush files to the appropriate folder, which is also an Active Circle share accessed via CIFS. Like for the R2B files, these files are written to disk before being migrated to tape.

To access the archives, Active Circle provides a file server mode that can either be accessed directly by users for viewing rushes or R2B or using the MBT software that pilots the overall system.

REASONS FOR THE CHOICE

For Jacky Degorre, the necessity of an LTO-based archiving system quickly became apparent: “The LTO medium is more stable than disk and the stored data more secure. Furthermore, the LTO format is forward compatible, thereby guaranteeing the longevity of the solution.”

Active Media Library from Active Circle was chosen because “it offers storage on disk or tape, it's an open system that provides access to the archives in file mode, and for its very practical web interface.” It also delivers “excellent value for money.”

The standardized design of the archive was also a deciding factor in that it allowed for integrating the system into the workflow without any additional development.

A SOLUTION INTEGRATED AND IMPLEMENTED BY MBT

The Active Media Library solution is integrated and implemented by MBT (Media & Broadcast Technologies), a company specialized in the development and integration of modular broadcast software solutions for premium, local, and thematic TV channels. MBT's team of multidisciplinary technicians employ all of their accumulated experience in the execution of their projects. MBT has already successfully implemented a number of large-scale projects both in France and abroad: M6 in France and Channel 1 in Russia are two examples.



The Active Media Library System



Founded in 2004, MBT is a French company specialized in the development and integration of broadcast software solutions. MBT software suites enable the cross-functional management of hardware and media: automation, acquisition, and transfer (Phoenix), dynamic graphics (Liberty), media asset management (Sphere), traffic system (Paradise), multimedia video server (Chameleon).

MBT (Media & Broadcast Technologies) - www.mediabroadcast-t.com



Created in 2002, Active Circle develops software for organizations that manage large volumes of data: video content, images, scientific or technical data, or user information. The Active Circle solution optimizes data lifecycle management while at the same time simplifying storage administration and reducing total cost of ownership.

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