

# M6 Group

## CASE STUDY



### M6 Group Builds France's Most Advanced Multiplatform Broadcast Facility on Harmonic Video File Infrastructure

#### About Métropole Télévision Group (M6 Group)

Established in 1987 around the M6 Channel, the Métropole Télévision Group (M6 Group) has become a powerful multimedia group offering a wide selection of programs, products, and services across a range of media including television, the Internet, and mobile devices. The M6 Group's two free, general-interest television channels are watched by diverse TV audiences, and the group offers innovative programs in all genres: news, sports, film, dramatic series, magazines, and entertainment. The flagship M6 channel is the second-leading commercial channel in the French market, and it is complemented by W9, the leading new DTT channel from the M6 Group. A family of pay-TV channels enriches the M6 Group's program offering, given the significant presence of these channels across all broadcasting platforms. On the strength of its brands and its content, the M6 Group has progressively expanded its business activities, and this diversification now accounts for nearly half of the group's sales.

#### The Challenge

The M6 Group technical team began planning the modernization and optimization of the company's production and delivery facilities in 2007. The facility upgrade was designed to enable the group to satisfy the changing expectations and consumption modes of its varied audience, and the project's primary objective was to build an entirely digital infrastructure capable of playing out multiple video formats for broadcast and for services including catch-up TV, video on demand (VOD), IPTV, and Mobile. In establishing this file-based platform, the group's key challenges were

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**Christophe Foglio,**  
M6 Group's CTO

#### SOLUTION AT A GLANCE

The M6 Group has built France's most advanced digital infrastructure with Harmonic media server, storage, and processing solutions at its core. Under control of a Phoenix management system from Media Broadcast-T (MBT),

the tightly integrated Harmonic systems enable rapid and highly automated ingest, processing, and repurposing of media for multiple platforms including HDTV, IPTV, Web, and mobile. The scalability and flexibility of the

Harmonic platform has given the M6 Group a competitive edge in a difficult economic climate, allowing the group to expand its operations and service offering cost-effectively in response to consumer demand.

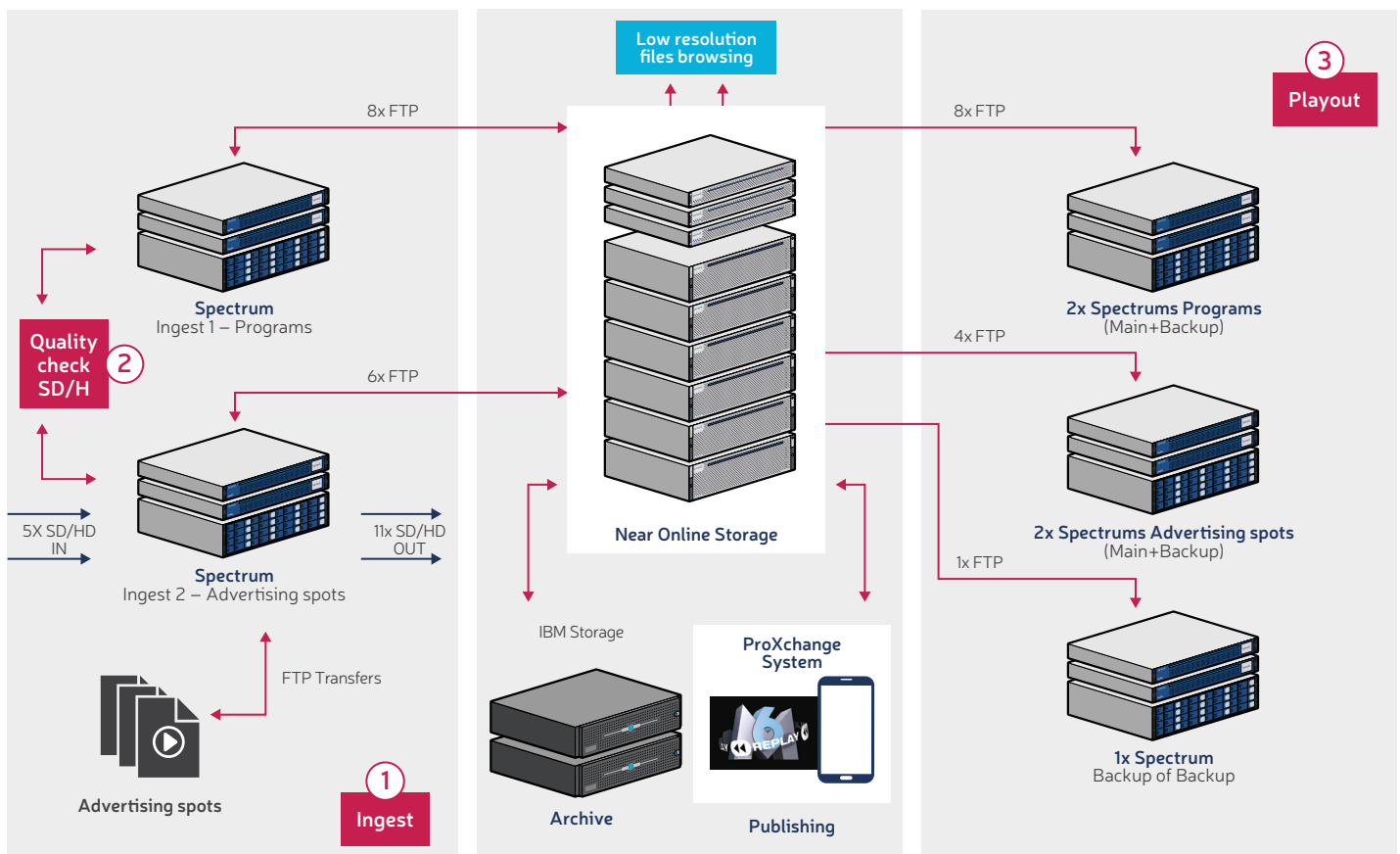
to consolidate and centralized storage to reduce duplication of material and maximize the availability and value of assets; to implement a fast, efficient repurposing workflow that would enable fast turnaround for new media distribution; and to build a highly stable and resilient system boasting complete redundancy.

At the core of the M6 Group's fully integrated digital infrastructure are a Harmonic MediaGrid™ active storage system, seven Harmonic Spectrum™ media server systems, and the Harmonic ProXchange™ transcoding systems. These systems operate under the control of a Phoenix media management system from Media Broadcast-T (MBT) in an end-to-end file-based workflow for media preparation and on-air delivery.

Harmonic Spectrum systems used for ingest are connected to Avid post-production tools to facilitate editing and repurposing, and the remainder are dedicated to playout. The Harmonic MediaGrid provides centralized storage, distributed across three technical rooms on multiple intelligent, interconnected-yet-independent nodes, running on independent power sources, to ensure overall system redundancy and resiliency. The MediaGrid's media-processing power supports the facility's high-performance Harmonic ProXchange transcoding systems, which provide automatic transcoding of files as required. Five additional Spectrum server systems support playout in an n+n+1 configuration. One server system is allocated to programs and the other to advertising and auto-promotion. Each of these playout servers has a dedicated backup Spectrum system, with a fifth Spectrum server system available to both as a secondary backup.

The Harmonic video infrastructure supports the M6 and W9 digital terrestrial channels, Paris Première and TEVA pay-per-view channels, three music channels, and preparation and distribution of content for VOD, IPTV, and Mobile. An IBM LTO robot archives content following playout. MBT's modular Phoenix range manages these processes through four solutions: Phoenix Automation for playout, Phoenix Production for live broadcasting, Phoenix Media Recorder for ingest, and Phoenix Media File Mover for media transfers. The open architecture of the Harmonic platform coupled with robust APIs (Application Programming Interfaces) for device control, monitoring, and media movement and manipulation made seamless integration of the Harmonic and MBT systems possible.

"Harmonic and MBT have collaborated perfectly all through the project and have been especially effectively when jointly addressing specific issues during the deployment," says Christophe Foglio, M6 Group's CTO. "As we continue forward in our evolution, we enjoy ongoing professional cooperation between these two leading vendors."



## The Workflow

Two Spectrum media server systems equipped with 15 I/O channels support ingest at the front end of the M6 Group's digital media workflow. The Spectrum systems ingest all internally created programs and all FTP inputs, both SD (MPEG IMX 50—MXF OP1A) and HD (MPEG LGOP50—MXF OP1A) with eight audio tracks. Descriptive metadata is encapsulated in the MXF files, which are routed to a quality checkpoint where video and audio quality is technically validated, trimming is performed as necessary, and the digital asset management database populated with clip details including aspect ratio, time code in and time code out, audio language and duration. Following validation, the clip is automatically transferred over FTP from the ingest platform to the MediaGrid active storage system. MBT's Phoenix system uses the Harmonic Player API to retrieve information about all MXF clips stored on Harmonic systems, as well as to control record and playout.

Using the processing power of Harmonic MediaGrid, Harmonic ProXchange generates low-resolution copies of media for efficient internal review and, when edits and repackaging of content are complete, also provides ready-to-use files for over-the-air broadcast and delivery to other platforms. The Harmonic remote Media API enables the Phoenix system to concatenate files before directing ProXchange to convert the resulting clip into the desired format. This process gives M6 staff flexibility in tasks such as inserting advertising spots before the beginning of the clip or removing part of the original clip. All of this processing occurs within the Harmonic MediaGrid, which grows in system bandwidth and processing capability as it grows in storage capacity. As a result, the M6 Group will not need to upgrade automation or other applications as it takes on a higher volume of media and additional processing tasks.

To provide the M6 Group with the multiple formats required, the ProXchange system performs up to six simultaneous and entirely automated transcoding processes, several times faster than real time. By capitalizing on the parallel processing capabilities of MediaGrid to perform processing functions, Harmonic ProXchange eliminates the bottlenecks created by most transcode solutions. Each week the system processes approximately 4,000 files. The system generates HD video for the M6 Group playout center, provides files for internal review by staff using HBCB, and outputs versions in Windows Media®, QuickTime®, Flash, and other formats specific to different platforms and providers for Web delivery, catch-up TV services, and mobile delivery via M6 Mobile and other services.

The Harmonic platform is already enabling the M6 Group to honor new distribution agreements with Internet providers. As new formats are embraced by the industry, the M6 Group will be able to rely on the continued refinement of its Harmonic ProXchange system to support those formats.

"Thanks to Harmonic, we have implemented the most advanced file-based technologies, and the resulting digital infrastructure has allowed us to catch up with and outdistance our competitors," says Foglio. "Although some cable operators already deliver TV channels from a single streamlined distribution center, this achievement is a big first from a content producer such as the M6 Group."

## The Result

Thanks to close collaboration between Harmonic and MBT, as well as the on-site assistance of Harmonic's French support team, the M6 Group deployed its ultra-modern production and playout infrastructure within an aggressive 10-month schedule. Now fully commissioned, the company's Harmonic MediaGrid, Spectrum, and ProXchange systems provide an extremely homogeneous multichannel platform for fluid and cost-effective production and playout.

The Harmonic platform has also given the M6 group a large centralized store of digital assets, which today are more valuable because of their accessibility, because they are enhanced with metadata that informs their use and the repurposing workflow, and because they are securely stored on a single platform that is scalable in both capacity and bandwidth. The scalability and flexibility of the system have given M6 a competitive edge in a difficult economic climate, making it easy for the group to expand its operations and services cost-effectively—across traditional, new, and emerging platforms—in anticipation of consumer demand.

"Harmonic has developed some breakthrough tools compared with the rest of the industry, and the company's technology has enabled us to realize much faster expansion than if we had used more traditional solutions," concludes Foglio. "In this period of economic crisis, which has touched the media business, Harmonic's tools allow us to streamline our processes and maximize our investments. We are starting to industrialize our content production; our next challenge will be to preserve our lead by developing production/ playout platforms that will be ready to integrate the new emerging media formats and their new consumption modes."

