



## Automated Tapeless HD Transmission Canal Overseas

### The Challenge

Now part of the Vivendi Group, Canal Overseas provides 24/7 satellite distribution of the very popular Canal+ programming to 500,000 subscribers in sub-Saharan Africa, the Indian Ocean, the Caribbean, and the South Pacific. While 99 percent of programming comes from Canal+, Canal Overseas also purchases and produces additional content for African viewers – most of it relating to football. At its modern facility in St. Cloud, France, just outside Paris, Canal Overseas ingests content, creates trailers and channel formats, and then generates playlists for viewers in each of the regions it serves.

The central playout facility in St. Cloud was created and built by Canal Overseas in 1999. At that time the company leadership looked ahead and recognized that the future of media storage lay with a tapeless workflow based on digital servers. In 2006, Canal initiated the migration from SD to HD, which affected every element of the workflow. The total migration of 11 channels was completed in 2007.

In making the transition to HD operation, Canal Overseas sought a streamlined, file-based workflow to maximize efficiency and cost-effective operation, and to take advantage of best-of-breed solutions. To keep infrastructure simple, Canal Overseas hoped to develop an ingest, playout and storage solution that would be inexpensive and easy to use. Because of its heavy reliance on subtitling, the broadcaster also faced an additional, distinctive challenge as it transitioned to HD. Initially, it seemed that a two-server solution might be required – with one server to play out the video signal and the second to play out the subtitles. This seemed costly, unnecessarily complex, and inelegant. The search for a system that would satisfy all requirements led inevitably to Omneon.

### The Solution Implemented

Today, Canal Overseas' playout facility has been renovated to make it fully automated and tapeless, relying exclusively on HD transmission and HD storage. However, only about half the content received from sister broadcaster, Canal+, is HD (16:9) while the rest is SD (4:3). This necessitates conversion of SD signals to HD before they are ingested into the Omneon Spectrum<sup>™</sup> HD media server system. Additionally, audio is converted to Dolby, and thus, all the files in-house at Canal Overseas are HD (16:9) with Dolby audio.

For each channel, HD playout is from Spectrum servers, and the same channel is transmitted in SD with external Snell & Wilcox downconversion managed by the automation system.



## CANAL OVERSEAS

### SOLUTION AT A GLANCE

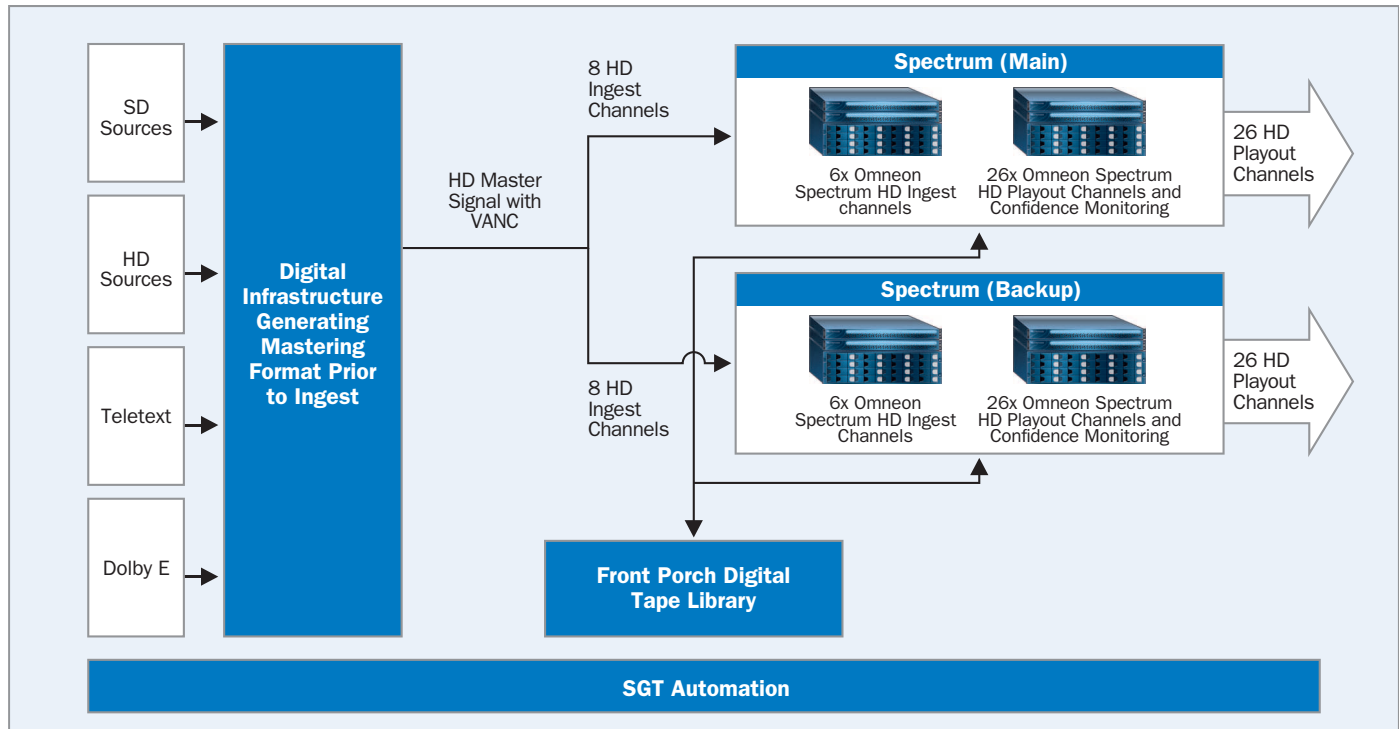
*Canal Overseas – satellite distribution provider for Canal+ programming to circa 500,000 subscribers in sub-Saharan Africa, the Indian Ocean, the Caribbean and the South Pacific – selected the Omneon Spectrum<sup>™</sup> video server for its transition to HD.*

*Thanks to Omneon, Canal Overseas now boasts full HD playout with a streamlined tapeless workflow, which is simpler, more reliable and less expensive to maintain.*

*After exploring various solutions, Canal Overseas recognized that only the Spectrum HD system was able to meet the important requirement of embedding subtitling data in the video signal.*

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## ■ CASE STUDY



The tapeless workflow relies on two 10.5-TB Spectrum servers offering six channels of ingest along with 16 channels (HD and downconverted SD) for preview and playout for a total of 52 HD channels. The Spectrum servers are directed by SGT DBOS automation handling transfers, copies, ingest, and playout of MXFop1a-wrapped XDCam HD35 files. The Spectrum playout servers hold 10 TB of content, enabling quick access to files. In addition, near-line storage is available on a 380-TB Sun StorageTek library relying on Front Porch Digital DIVArchive™ content storage management. When files are requested, the automation system manages retrieval of clips either from the Spectrum system or from the tape library with no manual intervention needed.

With Canal Overseas channels broadcasting so many different language tracks, French subtitling is crucial and can be a potential stumbling block for the HD workflow. In SD configuration, subtitling is normalized in Vertical Blanking Information (VBI), but that is not the case in HD. To avoid a solution with two servers – one playing out video and the other subtitles – Canal Overseas sought a means of playing out the World System Teletext subtitling data within the Vertical Ancillary Portion (VANC) of the HD-SDI video signal. The Canal Overseas quest resulted in an innovative solution: a Wohler closed-caption bridge to encode and decode subtitling data in combination with the Spectrum HD video server, which provides actual playout. The cost-saving system allows Canal Overseas to store content only in HD, rather than both SD and HD, while maintaining playout in both formats.

Canal explored many solutions before recognizing that only the Spectrum HD system met the requirement of transparently embedding subtitling data in the video signal. The resulting workflow is simpler, more reliable, and less expensive to maintain. Canal Overseas realized many workflow efficiencies in the migration to HD, and this is one of the most important.

### The Result

At Canal Overseas, an innovative new workflow has made for smooth and reliable operation that requires minimal manual intervention. As the broadcaster looks to the future, the plan is to continue to implement solutions that scale to accommodate growth and interoperate seamlessly with a variety of other systems.

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