CASE STUDY

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ESPN Star Sports Employs Active Storage to Abolish Tape Delay

The Challenge

ESPN STAR Sports provides live coverage of sporting events, and in this demanding environment, the broadcaster's ability to edit and finish highlights video has been constrained by a dependence on Digital Betacam tapes. Because ESS traditionally has recorded sports events onto Digital Betacam tapes, editing couldn't begin until the initial recording (and the event) had finished. Following the event, each editor in turn would borrow a single tape to find interesting shots and compile selected shots, resulting in delays of up to nine hours.

While this delay wasn't always a problem with non-sports footage, it was a significant issue for lengthy events such as Wimbledon tennis matches or cricket games, some of which can last up to 12 hours. ESS needed a solution that would allow editors on multiple workstations to begin simultaneous editing tasks such as inserting commercial breaks and promos, extracting highlights, and adding voiceover commentary in multiple languages during an event. Such a system had to be capable of handling files of up to 160 GB and working with the company's asset management and playout automation systems. Because ESS broadcasts on 22 networks in six languages, it also required a solution that would streamline handling of the multiple audio tracks associated with video files.

The Solution

With its new Omneon-based production system, ESS enjoys a robust media processing and storage platform that is capable of handling the growing challenges of modern multilingual live broadcasts. It offers 26 channels of playout, 25 concurrent ingest channels, 100 terabytes of storage, throughput rates of 6.25 gigabytes per second, and simultaneous editing access for 25 workstations.

To eliminate delay in the production of sports highlights and packages, ESS implemented a tapeless workflow built on an Omneon platform including a 100-TB Omneon MediaGrid active storage system with 3,000 hours of capacity (IMX 30Mbps MPEG-2) and full data replication. Four Omneon Spectrum media servers support ingest with 25 recording ports and 2,500 hours of total capacity, and four additional Spectrum servers with total capacity of 1,300 hours support playout of 26 on-air channels. Harris automation controls playout while OmniBus OPUS asset management provides media management and added editing capabilities.

A Gigabit Ethernet connection to the Omneon MediaGrid system enables direct file-editing access from 25 Final Cut Pro workstations. Also connected to the Omneon MediaGrid is a Front Porch Digital DIVArchive content storage management system and a StorageTekSL8500 archive.

ESPN STAR SPORTS™

SOLUTION AT A GLANCE

ESPN STAR Sports (ESS), a 50:50 joint venture between ESPN Inc. and News Corporation Limited, operates 22 networks – 21 television networks and a broadband network – in six languages throughout Asia. ESS handles live broadcasts of both local and international sporting events and produces five local editions of SportsCenter, and it replaced the time-consuming tape-based workflow for editing and localization of content with a fast, efficient file-based workflow that now enables editing before an event has completed. An Omneon media storage and processing platform provides the "active transfer" capability and interoperability with Apple Final Cut Pro systems to enable 25 different editors to begin editing footage as an event takes place and to add newly ingested content with a single click. An Omneon MediaGrid also routes voiceover commentary in the correct language for every file on the server, ensuring that the correct language is delivered to each destination market.

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The Result

At the beginning of the new tapeless workflow at ESS, live video from the studio or satellite downlink is recorded and ingested by Omneon Spectrum systems. In parallel with ingest, incoming material also is transcoded to low bit rates for browse purposes.

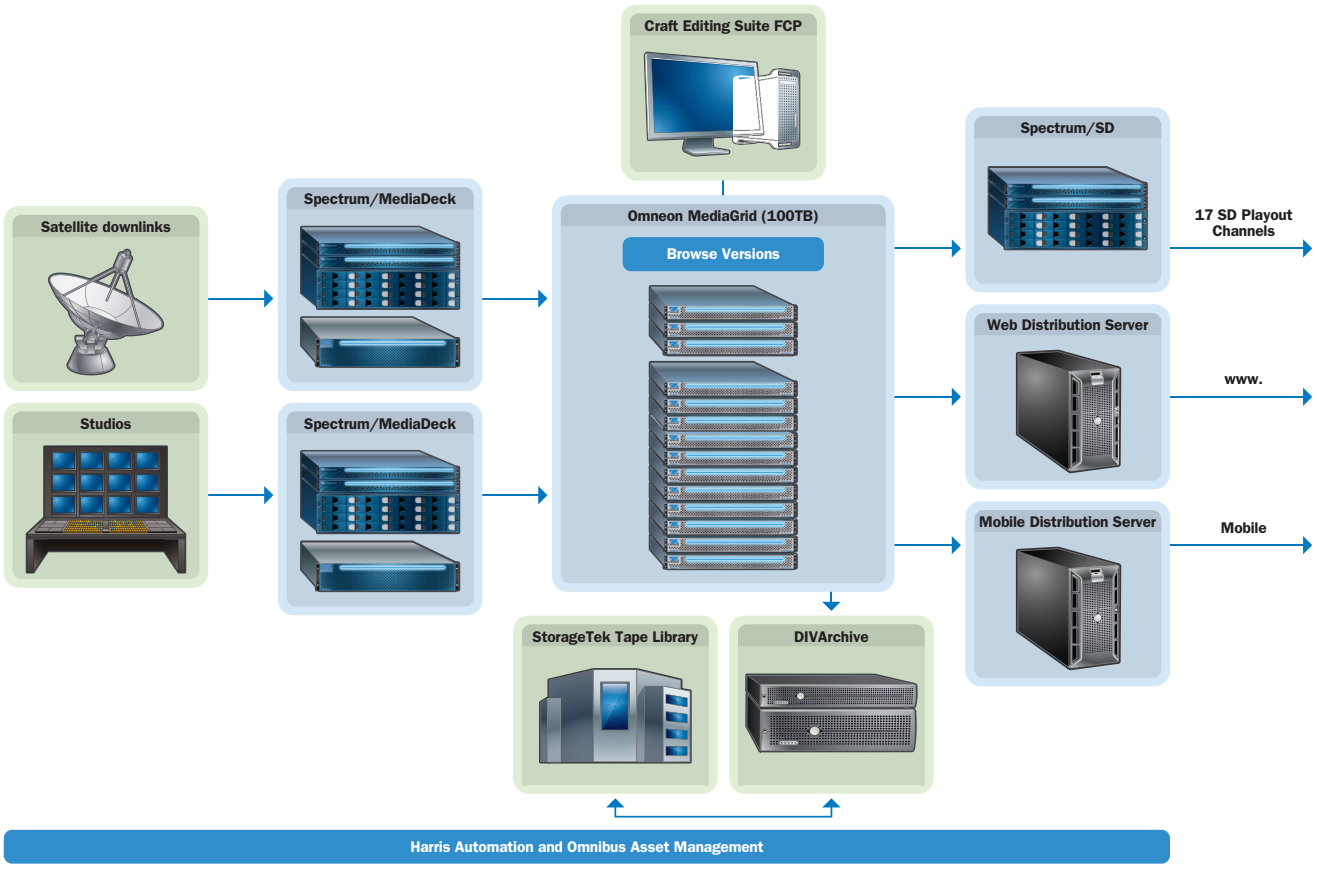
The “active transfer” capability of the connected Omneon MediaGrid encodes incoming video into standard IMX 30 Mbps MPEG-2 format and wraps it in a QuickTime wrapper so that it can be interpreted by Mac OS systems. Consequently, editors using Final Cut Pro software can open and edit a “growing file” on the Omneon MediaGrid just two minutes after ingest begins. To get at subsequent material recorded in the server file since it was first opened in Final Cut Pro, the editor need only click out of the editor, into another application, and then back again to access the added footage. “It’s a dream come true,” says ESS Head of Creative Services Cheah Wei Kim.

ESS records several languages of commentary voiceover on up to eight audio tracks on the ingested Omneon MediaGrid files. Omneon MediaGrid works with the Harris playout automation control and OmniBus asset management system to automate routing of the correct language track in the server file to the correct destination market.

Omneon Spectrum server systems playout 18 SD channels across Asia Pacific. The edited and finished material on the Omneon server system also is transcoded for browse and non-DVB distribution platforms such as the Internet and mobile networks. Finished content residing on the Omneon MediaGrid also is transferred to the data storage subsystem at 18 times real time, a high rate that speeds both storage and archive access.

The tapeless workflow at ESS has proved reliable in handling the large volume of material that the broadcaster handles on a daily basis, as well as the specialized requirements of the ESS operation, enabling the fast turnaround of lengthy live sports event broadcasts and the automated insertion of multilanguage commentary required by such a broad, diverse viewer base.

ESS Workflow with the Omneon MediaGrid Active-Storage System



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