Mediaset scores a winning goal with Quantum StorNext®

Soccer in Italy is fast and passionate – paying supporters want to see the action with cuts, flashbacks and replays all as it happens. Mediaset, synonymous with the Champions league, is providing real time content with the help of Quantum that is quick and agile enough to create the atmosphere of the live event.

Tapeless workflow in a production environment has been pioneered by Mediaset that is one of the few major broadcasters implementing a completely digital solution. Based around Quantum StorNext, the high performance tapeless workflow enables multiple editors to simultaneously extract and edit content from live ingest to create clips for real time play-out. At the same time, the system provides an HD ready storage infrastructure that saves money, optimizes high performance disk and provides content protection for near-line and long term multi petabyte archives.

MEETING THE DEMAND FOR SMARTER PLAYOUT

With its television mast dominating the Milanese skyline, Mediaset is a leading Italian commercial television network. The Mediaset Group operates analogue free-to-air generalist television (Canale 5, Italia 1 and Retequattro), broadcast infrastructure management (analogue, digital, DVB-H networks), free digital terrestrial thematic channels (Boing, Mediashopping), and pay-per-view digital terrestrial (soccer, films, theatre, and events). Established in 1992, Mediaset has revenues of £2,751.5 million.

FROM DISCREET VIDEO SERVERS TO A SHARED REAL TIME FILE SYSTEM

How do you balance the demands of tapeless workflow—from ingest to archive—against the need for cost-effective, high performance storage? It's a question that was challenging Mediaset. By tuning into StorNext and moving to digital tapeless workflow on their highest revenue generating channels, MediaSet is optimizing workflows across multi petabyte volumes of content, boosting broadcast performance and simplifying their architecture at lower cost. The software combines high speed data sharing with cost-effective content retention, allowing Mediaset to create a scalable, flexible, and consolidated infrastructure to ensure workflow operations run faster and more easily. And of course the company has the confidence of knowing that the content is protected by a highly resilient and secure infrastructure — including a Quantum intelligent tape library.

Until recently, Mediaset was relying on traditional video servers to store and play out broadcast material, most notably the soccer matches involving the domestic league, the Champions League, and such illustrious clubs like AS Roma and AC Milan. It's a fast paced environment, demanding real-time, live events logging and editing, instant replays and playback of soccer highlights, and slow motion—all via joggling, rewinding, and shuttling. The outcome of this reliance on video servers was a growing proliferation of servers—all with their own, separate storage environments. Determined to find a more flexible, simplified approach to high speed data sharing, Mauro Cassanmagnago, Mediaset's Director of Technology, was looking for a content management solution which would enhance storage quality and playback.

 MEDIASET

"Mediaset is using this tiered storage environment to manage vast quantities of multi-Petabyte content cost effectively and enable tapeless workflow—all the way from live ingest to archive."

Mauro Cassanmagnago,
Director of Technology, Mediaset

NEEDS

- Real Time Tapeless Workflow
- Long Term Archive
- HD Ready
- Cost Effective use of Resources
- Integrated Solution
- Solid Partnerships

SOLUTION OVERVIEW
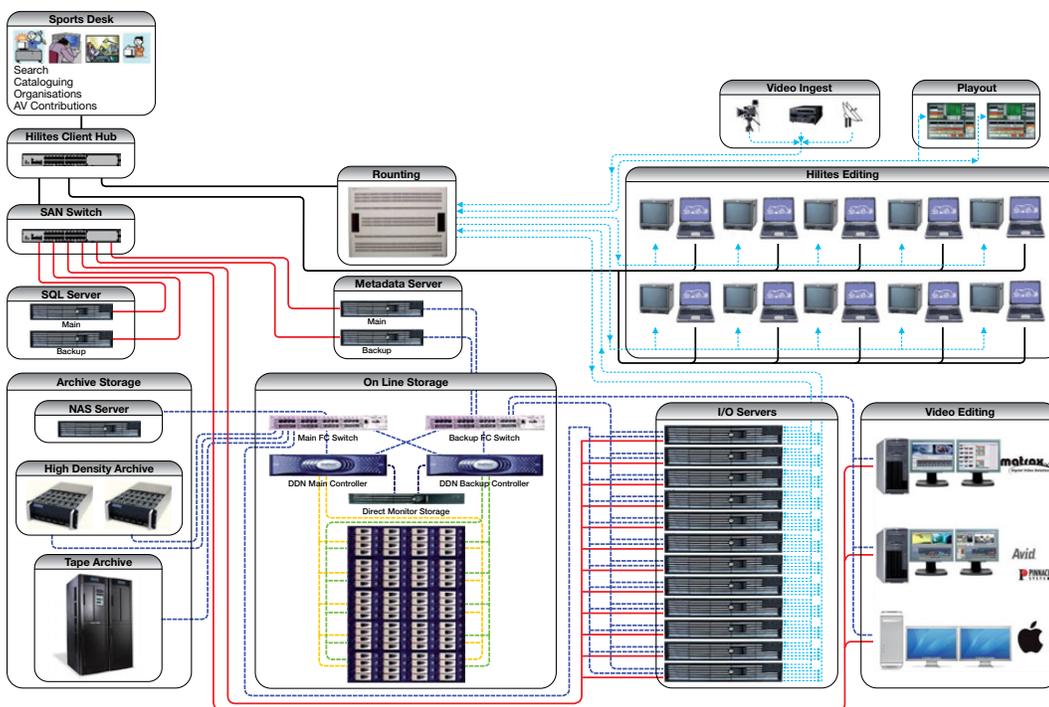
- Quantum StorNext File System
- Quantum StorNext Storage Manager
- Data Direct Fibre Channel Disk
- Data Direct SATA Disk
- Quantum Scalar i2000 intelligent enterprise library
- Media Power Hi-Lites Application

KEY BENEFITS

- A single shared environment that handles live ingest, editing and play out, combined with near-line and long term archive, reducing complexity and increasing performance
- Fully digital tapeless workflow, streamlining processes enabling faster data sharing with content accessible to all
- Significantly improved processes allowing costly editors and other resources to work concurrently
- Ability to re-play live events and other high visibility content quickly with play out straight off disk
- Reduced cost storage infrastructure held on multiple tiers of disk and tape in a managed environment, transparent to the user
- Archived data kept near-line and accessible so it can be re-purposed for future revenue-generating projects
- Open architecture providing the flexibility to use industry standard hardware and best-of-breed applications of choice
- Built in content protection and recovery across disk and tape
- HD ready in performance and storage, scaling to multiple petabytes

"We already had a comprehensive 50 terabyte Fibre Channel infrastructure and the simple solution would have been to buy more storage, but our aim was to reduce complexity—not add to it," said Cassanmagnago. "A shared file system would create a central hub for storing and sharing content, giving each Mediaset server direct access to the content pool and getting content to-air faster."

The first step was to deploy Media Power Hi-Lites for highlights production and playback, including network, storage, logging, and editing applications. The video tapeless technology allows Mediaset's editors to cut, edit and replay, while the system is still recording, making it suitable for all live and near-live football environments. To tackle the shared file system conundrum and complement the Hi-Lites environment, Mediaset chose Quantum StorNext. "The reason for choosing Quantum StorNext was straightforward. We wanted the best, high performance digital archiving system on the market," said Cassanmagnago.

"StorNext File System plays a significant role in enhancing our broadcast workflows and reducing complexity. It acts as a hub for our content storage, with acquisition, ingest, editing, and playout all taking place transparently but all via a consolidated storage environment."

**Luca Cattaneo,
Mediaset**
Systems Engineer

STREAMLINE WORKFLOW PROCESSES

StorNext File System data management software has been deployed by Mediaset to streamline the company's workflow processes and enable faster data sharing—all via a shared pool of content which is accessible to everyone in the editing suites. Taking the example of the live soccer match broadcasts, Mediaset's team of editors can take advantage of the shared digital archive to share highlights at the touch of a button, edit the content and play back goals, tackles, or any other match highlight in near real-time. "Tapeless workflow—from live ingest to archive is all made possible by the StorNext shared file system," says Cassanmagnago. "Mediaset is using this tiered storage environment to manage vast quantities of multi-petabyte content cost effectively and simplify the architecture using the Quantum integrated File System and Storage Manager."

What makes StorNext so special is that it manages multiple types of storage—including Fibre Channel, SAS, SATA, and LTO tapes for long-term archive—and includes affinities. These affinities steer data within the file system to a specific disk device and can be used to move Mediaset's crucial high throughput files to a Fibre Channel disk volume while temporary files can be stored in a directory that is tied to SATA disk. Users and applications do not see this operation: they simply

see the directory structure of the file system.

A HUB FOR CONTENT STORAGE

"The StorNext File System plays a significant role in enhancing our broadcast workflows and reducing complexity," said Luca Cattaneo, Systems Engineer for Mediaset. "It acts as a hub for our content storage, with acquisition, ingest, editing, and playout all taking place transparently but all via a consolidated storage environment. The fact that it is based on an open-systems architecture also gives us the flexibility to use any hardware or applications we need in the workflow."

It doesn't stop there. To complement this dynamic, high performance file sharing infrastructure, MediaSet has also implemented Quantum StorNext Storage Manager. MediaSet has three main lines of storage: the 'on air' server, 'near-line' server, and library storage, each based on how time-sensitive the broadcast data is. Archiving helps control storage costs by moving data from primary storage on to lower-cost secondary storage tiers. This allows users to reduce the amount of expensive, primary disk in play and instead, use more cost effective storage devices for infrequently used content. Archived content is kept in a near-line state and accessible to users so it can be re-purposed for future revenue-generating projects.

Using StorNext Storage Manager, Mediaset is capitalizing on automated and transparent data movement between devices as well as management of the SCSI disk, SATA, and library storage devices where the broadcast data is retained. Storage tiers are virtualized so that data movement is non-disruptive and staff no longer worries about where data is located. "Storage Manager takes our integrated digital archive to the next level of performance and broadcast quality," says Cattaneo. "We can re-play live events quickly, confident that the data is residing on a highly resilient, cost effective hierarchical storage environment."

Part of the reason for that confidence is the fact that Mediaset is also using a Quantum Scalar i2000 intelligent enterprise library as part of its archive and data protection strategy. The solution provides Mediaset with maximum density and flexibility—all within an integrated, easy-to-use system. The company can be certain that the data is secure. It is an invaluable asset for Mediaset, especially as the company is looking to scale the infrastructure to one petabyte in the coming years, keeping up to 75,000 hours of broadcast data online. Cassanmagnago likes what he sees. "By standardizing on this unified storage solution from Quantum, Mediaset is quickly and efficiently accessing crucial broadcast footage in the face of tight deadlines. By partnering with Quantum, Mediaset is making the process of playout more flexible and improving overall performance."