



Real time ingest and move to HD gives Lime a twist for their digital workflow and archive

From its inception, Lime Pictures—the independent producer of some of the best-known and popular dramas on British television—has pioneered real time tapeless workflow by filming its studio-based material directly onto the Storage Area Network (SAN). Unfortunately, there are very few solutions available that can provide a guaranteed stable platform to provide this and in the early days Lime was challenged to implement their vision.

In addition to real time ingest, Lime was driving the quest for simultaneous workflow: making content available at the same time to all aspects of production from edit through to final content ready for play-out. Lime evaluated and soon after deployed StorNext® File System that provided them with a centralized storage pool accessible immediately and simultaneously to the company's editing suites as filming proceeded.

With many of the company's productions operating to tight deadlines and high frequency of output, this rapid, reliable digital workflow is paying dividends.

THE MOVE TO HIGH DEFINITION

With the move to High Definition (HD), the StorNext system really came into its own. HD brings its own challenges with a four-fold increase in content and bandwidth requirements. As a result:

- The system has to scale in performance making live HD content available to all the production areas.
- There is a significant impact on production storage costs and management with the potential to affect workflow

The HD challenges on how to keep control over storage costs whilst maintaining the high performance workflow needed were met with the integration of StorNext Storage Manager. Storage Manager works seamlessly with the File System to provide digital archive, including intelligent storage of contents across a cost effective tiered storage environment. Better still, content is automatically archived to a robust, cost-effective environment, where it is available as a searchable repository of content for future broadcast operations. Live ingest, editing and playout never looked so good.



"Reliability and usability have been transformed since we deployed the digital workflow solution. We haven't experienced any downtime and our productivity has increased significantly. Our confidence in the system has certainly risen by 100 percent."

Mike Horan,
SAN Support Engineer,
Lime Pictures

SOLUTION OVERVIEW

- Quantum StorNext File System
- Quantum StorNext Storage Manager
- DDN Fibre Channel Production Disk
- Quantum Scalar i2000 intelligent enterprise library
- PictureReady! running on Apple Xserve using Xsan client
- Final Cut Pro running on Apple workstations using Xsan client
- Pyramix Dubbing Suites running in Windows XP using StorNext FS client
- Vcube virtual VTR running on Windows XP using StorNext FS client
- Geevs MR Servers
- Alacrity Editor

KEY BENEFITS

- Enabled the company to get content to air faster and share content more efficiently and cost effectively.
- Allowed teams to effectively store content in a consolidated environment, share it among the edit suites, and deploy the solution into existing workflow.
- Editing teams can quickly browse for relevant clips or perform proxy editing to build a ready-to-play segment.
- Time needed to create productions has been reduced and equipment costs like tape stock and VTR replacement heads have fallen.
- Transformed tape-less workflow reliability and usability.
- Automatically archived content that is not actively in use—the virtualized data location ensuring any file can easily be accessed for re-use.
- Expanded storage pools into multi-tier archives, automatically moving data between the disk and Scalar i2000 tape resources to reduce costs and protect content.

AT A GLANCE

- StorNext File System uniquely provides real-time ingest and simultaneous editing of HD content during studio filming
- StorNext Storage Manager seamlessly integrates with the file system to provide a cost controlled SD and HD digital archive of all assets, re-usable over time

CHALLENGES

- Reliability and stability in a real-time environment is paramount
- High performance is required to send content to air quicker
- Digital workflow using a central archive is required to share and hold content more efficiently and cost effectively
- Solutions deployed should be able to scale to High Definition and beyond

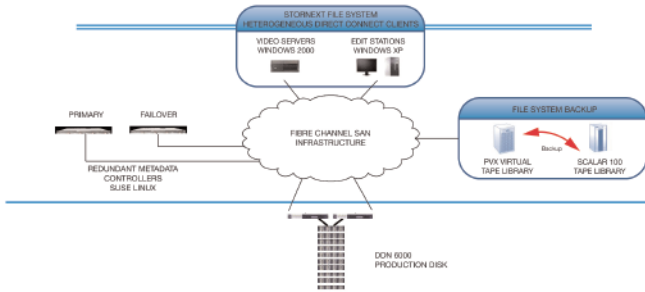
SOME OF THE BEST KNOWN DRAMAS ON BRITISH TV

Lime Pictures is one of the UK’s largest independent producers and is responsible for some of the best-known and popular drama on British television. Channel 4’s Hollyoaks is produced by the company—which is one of Liverpool’s biggest employers, with a staff of more than 350. In addition to this flagship output, Lime Pictures also has production teams working on a wide range of drama projects and development. The company was formed in 1982 and originally known as Mersey Television, before All3Media’s acquisition in 2005 and the name change to Lime Pictures in 2006.

LIVE INGEST AND HIGH PERFORMANCE WORKFLOW

Hollyoaks is broadcast five nights each week, with the original SD requirement to ingest at 50MB/sec, with each episode consuming approximately 150 gigabytes of storage. It was apparent to John Robertson, Production Server Control (PSC) Manager at Lime Pictures and his team that a digital workflow solution would enable the company to effectively store content in a consolidated environment and share it among the edit suites and other teams.

“Lime Pictures was already a satisfied Quantum customer having previously deployed a Quantum Scalar library to backup and recover data in existing systems. When we saw the StorNext solution, it appeared to answer all our questions. The software was proven in the market, its open architecture gave us the flexibility to choose whichever technologies we wanted, and it offered rich acquisition, ingest, and production editing functionality. Best of all, it provided the resilience and reliability we needed. DataDirect Networks (DDN), the disk storage partner also endorsed the solution.”



Sixty percent of content is shot directly to the SAN based on a StorNext shared storage pool, with the remainder shot to XD Cam or Digibeta tape. The original implementation used 16 terabytes of DDN high performance production storage, which was backed up by a Quantum Virtual Tape Library (VTL) and a Scalar tape library.

Each ingest server has direct access to the shared storage. Multiple encodings of data can be written by ingest servers in parallel to the shared storage so that low-res and hi-res copies are available for production. Once content is stored in file format it is available for use across the entire workflow without the need to write back to or ingest from tape, enabling an ‘ingest once, use many’ process.

As the data is being written into the StorNext shared storage pool, it is immediately available to the editing suites—in parallel, should it be needed. The client user interface allows creation and administration of each clip, providing each one with its own unique file naming structure—thereby ensuring editing teams can quickly browse for relevant clips or perform proxy editing to build a ready-to-play segment. Content is accessed from the central storage pool without the need for slow, methodical exchanges between the editing servers.

Being heterogeneous, the StorNext file system can seamlessly handle Windows, Apple, Unix and Linux operating systems concurrently, leaving Lime to select best-of-breed applications on platforms of their choice. Existing Apple Xsan workstation clients can be redeployed as StorNext clients without additional expense. Since data never has to be written out to tape during the editing process, the time needed to create Lime Pictures broadcasts has been reduced and equipment costs like tape stock and VTR replacement heads have also fallen.

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John Robertson,
Production Server Control (PSC)
Manager, Lime Pictures

Deploying an integrated digital workflow with Quantum StorNext, the results were immediately obvious. Lime Pictures’ content is written to the StorNext shared storage pool, being made immediately and simultaneously available to the company’s editing suites.

High Definition content is automatically archived to a robust, cost-effective environment, where it is available as a searchable repository of content for future broadcast operations.

“Quantum StorNext File System sits in the background and does everything we ask of it,” says Mike Horan, SAN Support Engineer, Lime Pictures. “Reliability and usability have been transformed since we deployed the digital workflow solution. We haven’t experienced any downtime and our productivity has increased significantly. Our confidence in the system has certainly risen by 100 percent.”

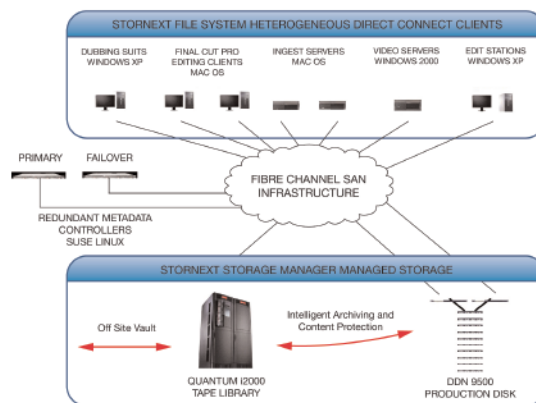
Robertson concurs. “If the SAN decides to sneeze, we know we won’t experience any delays to production with StorNext. Our users like it too. An editor recently said to me, ‘The ingest and editing phases are seamless. We can import immediately and there’s no judder on the shot’. When these guys pass a compliment like that, you know you’re onto a winner!”

HIGH DEFINITION AND THE DIGITAL ARCHIVE

Moving to High Definition has its own challenges, with a four fold increase in content, leading to higher bandwidth requirements and enhanced storage infrastructure requirements that can support both current and longer term reusable content. Lime Pictures took the decision to complement the StorNext File System with StorNext Storage Manager combined with a Quantum Scalar i2000 library and an increase in the DDN primary storage (to 102 terabytes).

StorNext Storage Manager complements the existing StorNext high performance file system by providing a tiered storage infrastructure that is scalable. Content that is not actively in use is automatically archived from production disk to the near-line Scalar i2000 tape library, so reducing storage costs. Further costs and data protection is accommodated by using the off-site vaulting option, negating the need for separate backup hardware. Archived content is available through the file system, at the same place that it was originally ingested or worked on using a virtualized content location.

“All of this data movement is transparent so that applications and operators do not have to worry about where data is located,” concludes Robertson. “Irrespective of whether the content is on the primary disk or tape it all looks like it is in the same location. This enables Lime Pictures to create a large, searchable repository of content for future broadcast operations”.



ABOUT LIME PICTURES

Lime Pictures is one of the UK’s largest independent producers and is responsible for some of the best-known and popular drama on British television. Channel 4’s Hollyoaks is produced by the company—which is one of Liverpool’s biggest employers, with a staff of more than 350. In addition to this flagship output, Lime Pictures also has production teams working on a wide range of drama projects and development. The company was formed in 1982 and originally known as Mersey Television, before All3Media’s acquisition in 2005 and the name change to Lime Pictures in 2006. Lime is derived from the first two letters of Liverpool and Mersey.

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