

# Case Study: ITN

## About ITN

ITN is one of the world's leading news and multimedia content companies creating, aggregating, packaging, and distributing news and other multiplatform content to a wide range of customers around the globe.

In the U.K., ITN produces television news programs for ITV, ITV London, Channel 4, and More 4, as well as supplying news to 300 commercial radio stations (IRN). ITN's multimedia division, ITN On, has led the way in producing news and entertainment content for mobile and broadband platforms. Clients include 3, MSN, BT Movio, and Vodafone Live!.

ITN Source is the world's leading provider of professional video content, representing the largest collection of moving image libraries in the world, selling clips from over 800,000 hours of footage captured over three centuries. As well as ITN's own news material, ITN Source represents the British Pathé, Reuters, Channel 4 (including E4, More 4, and Film 4), Granada, FOX News, and FOX Movietone content libraries.

*"The integration of Front Porch Digital's DIVArchive for our storage management is a significant development to the system we started to create back in 1998, when, although we were using video servers, it was still cheaper to store material on video tape. Now, with all video servers supporting file transfer, and with the maturity and cost-effectiveness of digital archiving, we have been able to complete another stage of the vision we had at the outset: using best-of-breed components such as DIVArchive to greatly optimize our workflows and gain in operational efficiency."*

— Keith Cass, Director of Technology for ITN



## The Challenge

In the past ITN had relied on video tape-based storage solutions for their content distribution operations. However, in order to optimize workflow efficiency, and with the development of ITN Source, its on-line clip sales platform, ITN needed to provide their customers with immediate online access to specific clips. To accomplish this, a transition from video tape-based storage to a digital file transfer and storage system was required.

One of ITN's key requirements for their system was to make maximum use of their assets. Its video library is the cornerstone of the business model, providing pictures, footage, and metadata on major news events acquired over the span of many years. Knowing how to access this increasingly large stock for internal and external use was a challenge.

ITN had to consider not only how much material to store each day and the amount of restoration to allow for newsroom customers, but also how this material could be opened up to users outside the company community. This meant investigating the amount of restoration and file conversion that online customers to their portal Web site would require.

## The Solution

The investigation team produced a detailed requirement specification and after looking at a number of companies who could provide a solution, they chose a system integrated by Sony, which relies on a core Quantel SQ server and Sony PetaSite for mass storage, with Front Porch Digital's DIVArchive providing the content storage management middleware and IBIS controlling the movement of media assets around the system.

One of the largest of its kind in Europe, ITN's system is unique in providing facilities to in-house production staff, while additionally making content available via ITN Source's e-commerce-enabled Web site. The system is capable of storing 100,000 hours of footage at IMX30 resolution. It makes a copy of high-resolution archived assets in QuickTime format for viewing by archivists preparing shot lists stored on the in-house database. Shots selected to be made available via ITN Source are flagged as part of this process, in which the system uses two separate search and retrieval facilities — one unrestricted set for ITN newsroom use, and a second restricted set for publication on the ITN Source Web site.

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Clients can select and order the precise pieces of footage that they need, in the format they require, whether on file or tape, and material can also be provided in formats compatible with broadcast over digital networks, Web, or mobile phone platforms.

Throughout the life of each piece of content, DIVArchive's components can track different versions and allow metadata editing for faster subsequent searches. A clip that has been identified and selected by viewing a browse version can be extracted far more quickly than retrieving the entire file, which may represent several hours of media.

DIVArchive consists of two major software components:

- **DIVArchive Manager** maintains the DIVArchive database, manages all requests issued by the applications and controls the storage resources.
- **DIVArchive Actors** move the content data from the video servers to the storage resources or from the storage resources to the video servers.

In a DIVArchive system, there are as many Actors as determined by the amount of data to transfer per day and by the level of redundancy required, while only one Manager is running at a time. If a DIVArchive Manager or Actor fails, the second server takes over, providing a full redundancy.

DIVArchive architecture is based on a combination of software and hardware components, which are integrated and tested to provide a turnkey solution. These components allow ITN to build a variety of configurations from a small archive solution to a large distributed storage repository.

The system is uniquely flexible in this regard. DIVArchive solutions can combine on-line disk, near-line automated tape libraries, DVD jukeboxes, and off-line storage, and enable applications to store,

archive, and retrieve objects or files from this archive transparently. The product encompasses hierarchical storage management (HSM) and disk-extender functions and is "video aware."

As a result, DIVArchive simplifies the process of preserving, managing, and accessing content with infinite capacity and performance. Architectures are modular, and can scale from small disk-only systems to large capacity systems using different forms of physical storage to balance response time, performance and cost.

### Advantages and Benefits of the Solution

DIVArchive is particularly adapted to a SAN architecture and is considered to be a true SAN product in the sense that it takes advantage of the SAN benefits:

- **Resources sharing** – The tape drives are not physically allocated to a particular DIVArchive Actor, which allows a better load balancing of the traffic.
- **Extensibility** – Adding new tape drives or additional DIVArchive Actors for a larger traffic is very easy and does not disturb operation of the system.
- **Redundancy** – The failure of a tape drive or a DIVArchive Actor does not impact the complete system, thanks to the flexible DIVArchive resources allocation.

### Future Evolution

ITN's system supports its news contracts with "ITV News" and "Channel 4 News" and, at the same time, provides an expandable and adaptable digital platform for the burgeoning ITN Source operation. The system is so flexible that it can be adapted and utilized in many different ways for future uses, providing ITN with a great way of reusing its enormous wealth of video content to create what it intends to be the most advanced moving-image resource in the world.

## ITN Network Architecture

