

Building media-centric video facilities

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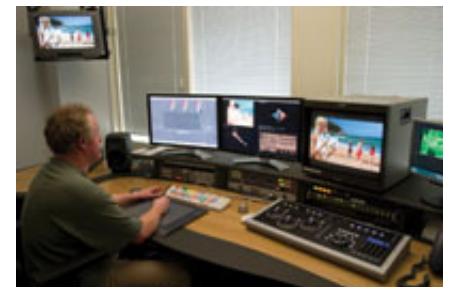
Channel Five implements a file-based workflow.



Launched in 1997 as Channel 5, the UK's fifth and final analog terrestrial broadcaster was rebranded as Five in 2002. It now serves five regions with multiplatform services delivered by digital terrestrial, cable, satellite and the Internet in addition to the original analog signal. With multiple sites across London and a mix of outsourced and in-house resources, Five's model presents a number of challenges as it seeks to evolve its tape-based operation to a file-based workflow.

Chris Anning, Five's chief technology officer for broadcast services, thought it would be great to start with a blank sheet of paper, but in the real world that's often impossible. The planning team had to bolt new practices on top of the existing analog workflow and demonstrate that the new technology could deliver clear and tangible benefits.

A producer can hold a DigiBeta. It's a physical thing; files are ephemeral. A file-based workflow will save Five a fortune on dubbing tapes and the cost of ferrying them around London. The new workflow will also buy its people more thinking time. However, Anning found it was important to keep all parties in agreement during this transition. The broadcaster regarded the move to a file-based workflow as much more fundamental than a technology project. It's a business transformation, driven by a change in culture, enabled by technology.



Channel Five uses Apple Color, part of Final Cut Studio, for color grading in its edit suites.

Existing tape workflows

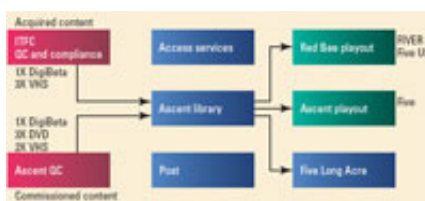















Figure 1. The legacy media flow stood to benefit from a move to file-based

In the present operation, acquired content, including such programs as  CSI,   House,   Home and Away  and  Neighbours,  is ingested at the Independent Television Facilities Company (ITFC) at Acton in West London. Here, compliance, QC and versioning are undertaken, and technical masters are created on DigiBeta with three VHS copies, destined for the Five library at Ascent Media's Stephen Street facility in Central London. (See Figure 1.) Commissioned content, such as  The Gadget Show,   Fifth Gear  and  Paul Merton in

operation.

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China, arrives at Ascent and is similarly processed with a mixture of VHS tapes and DVDs. Distribution of the assets from here includes sending the DVDs to the commissioning producers, as well as the press and PR departments based at Five's corporate headquarters in Long Acre, also in Central London.

Because almost everyone needs access to the same content simultaneously, there are lots of duplicated traffic flows, and the library acts as an extremely busy post office. The process worked well up until a couple of years ago when the broadcaster launched two digital channels Five Life (recently rebranded as FIVER) and Five US with a second playout contract awarded to Red Bee Media in West London. With an ever increasing amount of content to dub and move around and yet more people needing access, Five needed a better way to make the workflow more efficient.

Anning felt it was important to keep it simple and aim for a quick win. The design team began by taking an inventory of the existing workflow, examining who needed content, what for and where they needed it. The team looked at how long existing processes took and where they might expect to save time by using new technology. They spent a lot of energy at this stage just doing the homework.

Proof of concept

The broadcaster started with a Proof of Concept trial a nondisruptive and simple procedure that would involve only newly acquired material from which a Windows Media file would be generated in addition to the other deliverables. Authorized users would have access to the file-based material in addition to tape, which eventually would be phased out. If the concept worked, it would be a simple matter to increase storage capacity and replace the DigiBeta tapes with digital files encoded as MPEG-2, I-frame at 50Mb/s.

Five contracted with ITFC to generate browse assets from the master tapes. These are made available on a local server together with relevant metadata in an XML sidecar. Using Signiant's traffic management system, encrypted files are transferred to Five via the Internet and displayed locally on the broadcaster's corporate network to authorized users. (See Figure 2.)

This year, the browse trial is being rolled out throughout all the sites. If the concept is proven, storage will be scaled up for all assets to a considerable 4000 hours at 50i at Red Bee, with a further 2000 hours in Five's staging server at Stephen Street.

An overarching asset management system is also currently being investigated to act hand in hand with the existing traffic management solution and storage systems.

Originally, Five didn't own any equipment, but that's changed as content has moved to the heart of its engineering process. While it can make sense in this model to outsource such services as QC and playout, the broadcaster needed to manage its content directly, hence the investment in post production.

Anning chose his partners for the workflow solution carefully. A single-stop solution from a

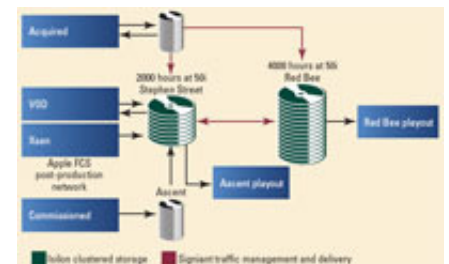
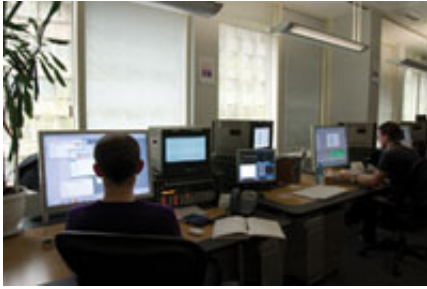


Figure 2. A Signiant media network delivers content to the Ascent Media and Red Bee sites.

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large manufacturer may result in a system that suits the provider better than it suits the broadcaster. On the other hand, too many partners could mean that the interfacing becomes a nightmare.




For Five, it became obvious that a few key technology partners would work best. The broadcaster already had an excellent relationship with system integrator root6 through its support of Five's Avid NLEs. And while Five had already identified a supplier of browse technology and is continuing to examine core asset management solutions, root6 introduced the broadcaster to Isilon's clustered storage and Signiant traffic management.

The five-seat graphics workstations at Five use After Effects.

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