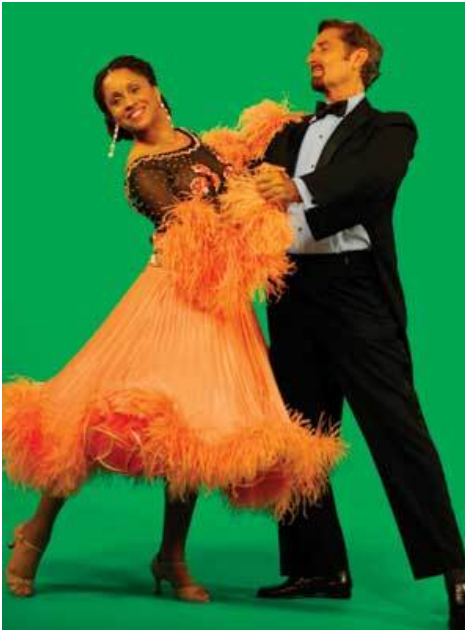


SAN replaces sneakernet at Orange TV

Like many non-profit broadcast stations with tight budgets, Orange TV's 10 program editors had grown accustomed to making do with the current tools and resources at hand. For the Orlando-based Orange County Government broadcast station, that meant making their Windows-based desktop computers work double-duty as edit workstations.

On the software side of the equation, this involved use of Canopus DVStorm editing software to help editors produce and edit about 30 shows per month airing on both Orange TV and its sister station, Vision TV. As part of the production process, editors had to work diligently to add the required intros, credits, bumps, bricks, and other short animation sequences often required to get Vision TV's pre-recorded arts and education programming ready for TV viewing.



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Using Facilis' TerraBlock 24D Fibre Channel SAN, Orange TV says it can do more-elaborate transitions on TV shows such as World of Dance.

The real trouble in this equation, however, began to crop up on the storage side. Relying on the use of portable Apple FireWire disk drives, the edit process usually involved editors carrying the drive from one desktop to another when it came time to perform a function like audio edits. In the early days, some projects needed so much storage they were also forced to span multiple FireWire drives.

According to operations manager Michael Seif, edits for an average 30-minute, magazine-based show shot with a single camera might need more than 30GB of storage capacity. Editing longer, multi-camera programming, such as a two-hour opera, could easily consume 150GB of storage space.

Besides adding extra hassle to the process and inhibiting editor collaboration, the station's reliance on "sneakernet" and its FireWire drives had begun to cause serious issues that could no longer be ignored.

"Sometimes the drive would just spontaneously die after a few months of use. Or someone would drop one, which almost always seemed to happen when they were almost done with a show they'd worked on for months," says Seif. Other storage issues consuming the editors' creative time included extended waits for Adobe Premiere Pro's NLE system to remap drive letter designations from recently swapped FireWire drives.

In preparation for an upcoming move to a new facility, Seif and Orange TV's general manager began to talk about upgrading the edit environment to networked storage. They were hoping such a change could resolve not just the station's worst storage issues, but also increase the edit team's file sharing and collaboration.

They also wanted to better position the station in its ongoing transition to full-digital, high-definition (HD) programming. "Even though most stations emphasize making the transition to HD on the broadcast side, you also have to be able to edit and produce in HD with enough storage that can handle the throughput," says Seif.

After receiving input from local integrator Profile East about the different options available, the station decided to directly connect each of its new Apple Macintosh FinalCut Pro edit workstations to a TerraBlock 24D Fibre Channel SAN from Facilis Technology.

Equipped with 12TB of storage, the TerraBlock system seemed an affordable option that could handle the network bandwidth requirements of editing 30 shows per month, while still giving the editors real-time, render-free access to their work.

Although the team's DV25 video format doesn't use much bandwidth, throughput becomes more of an issue with 10 editors accessing the same storage simultaneously, says Seif. Accustomed to the throughput capabilities of their former Canopus systems, Seif expected TerraBlock to support the same level of throughput: four to five simultaneous streams needing real-time access. He and the station's GM also wanted the system to have enough bandwidth to handle the future growth they envisioned, such as the addition of more workstations or video needing to be edited in different resolutions (HD, uncompressed, etc.)

Now, the TerraBlock system resides at the hub of the station's new edit facility. The edit workstations are direct-connected to the TerraBlock via fast, 4Gbps Fibre Channel connections. A 500GB Ethernet Server, also provided by Facilis, fronts the SAN and allows other Windows-based workstations in the station's production studio to access the TerraBlock storage system via their current Ethernet connections.

"We wanted to connect the whole building via a network and share files between our Windows and Mac systems," Seif explains. "We needed our editing systems to talk to our production studio's digital playback system [a Grass Valley Kayak DDR and playback system] without having to pick up a thumb drive or tape and move it across."

The subsequent change in workflows has been dramatic. "We can now edit a roll-in for a TV show, edit a bump or brick, and send it over to the TerraBlock. Then, in the studio, you can pull those into the DDR, through the Grass Valley system, without having to pull a tape and nobody ever has to get out of his/her seat," says Seif.

While the move to a SAN hasn't necessarily cut down on the time it takes most editors to perform edits, Seif is quick to note the new storage environment has undoubtedly enhanced the creative process: "Whereas before, it would have taken two hours just to do the bare minimum of edits, it now takes half the time. We can now do more animations and more-elaborate transitions, because they render at such a fast pace."

In the end, Seif maintains the move came down to dollars and cents. "We were losing a lot of money with people editing the same projects twice with FireWire drives. To pay somebody to do the same project twice costs more in man-hours than buying new [storage] equipment. I'd rather buy it once and buy it right than continue to replace breaking drives or having editors take weeks to re-create all the elements they lost."