



# First Media goes state-of-the-art

Dubai Studio City company works with TSL to build a compact news, and production playout facility to produce local content for Pakistan-based channels. *BroadcastPro Middle East reports.*

**As the United Arab Emirates (UAE) is home to a large Pakistani expatriate community, channels like CNBC Pakistan and Samaa felt the need to incorporate UAE-based content into their channels.**

Seeing huge potential to create local content for such channels, First Media FZ LLC, a production and services firm – established by Zafar Siddiqi, well known as the founder of CNBC Networks in the Middle East, Africa and Pakistan – decided to establish a news operation, including a small virtual studio and playout centre at Dubai Studio City (DSC).

Systems integrator TSL was awarded the project as it had previously built a news centre for CNBC Pakistan.

Based in a boutique studio at DSC, the project includes a three-camera virtual studio with full lighting grid, a file-based infrastructure, a newsroom computer system, asset management, editing and production playout.

At the heart of the First Media project is a powerful and flexible asset management and workflow system, developed by TSL for this installation using the Sienna toolkit.

“This modular system allows systems integrators to develop highly-functional workflows that are stable, intuitive to use and cost effective,” says Colin Sherriff, general manager, TSL Middle East.

“It also integrates very tightly with the ENPS newsroom system, as well as other MOS compliant news systems.”

The project included a number of satellite dishes that were installed on the roof of the facility for the reception of contribution feeds and off-air monitoring of news sources. This comes from an array of two x 3.7 metre dishes, two x 2.8 metre dishes and two x 1.8 metre dishes. ▶





The control room at First Media.

**STUDIO**

Dubai Studio City has a range of boutique studios that have floor areas ranging from 100m2 to 250m2 with adjoining offices for production and facilities.

These are typically designed to be self-contained facilities for small broadcasters such as First Media.

“As First Media required only a virtual environment for its news bulletins, it required only a small studio floor,” explains Sherriff.

“A mezzanine floor was constructed over a part of the studio floor to serve as a production gallery and central apparatus room (CAR). The rest of the three sides were used for a permanent green cyclorama,” he adds.

In addition, to provide precise camera tracking to feed the Vizrt virtual studio, First Media uses Vinten Radamec’s Free-d system.

The studio boasts three Sony cameras, mounted on Vinten Osprey pedestals with Autoscript prompters and Trilogy intercom headsets. The studio features a saturation lighting grid using lamps, hoists, dimmers and control systems from Photon Beard.

Besides this, the production control uses a Ross vision mixer and a Yamaha O2R digital audio mixer. Monitoring is on large flat panel displays using Evertz multi-viewers. Signal distribution throughout the whole centre is via a Snell router and modular infrastructure products.

**NEWSROOM AND POST PRODUCTION**

As Samma in Pakistan employs the ENPS newsroom computer system, the team decided to deploy the same solution in Dubai so that both facilities could be linked over a virtual private network, explains Sherriff.

“The installation includes a mirror redundancy server, and the systems at First Media in Dubai and CNBC in Islamabad are linked,” he explains.

The five ENPS workstations in the First Media newsroom run on XP inside fusion 3 virtualisation agents that operate within a Mac environment. This allows the computers to also provide Final Cut Pro (FCP) editing. An additional craft edit suite also uses FCP. This has an adjacent voiceover booth for commentaries.

The editors have an FCP plug-in called StoryCut installed. This is part of the Sienna asset management system and links directly to ENPS through the MOS protocol. It allows whole packages of information and clips to be associated as a MOS object, and linked to ENPS, as well as incorporating WordLink which links the script of a story to the video timeline, thereby helping the editor to match pictures to the story duration. As the script changes in ENPS so it is reflected on the FCP timeline.

Post production is completed in a graphics room that includes four HP 8000 series workstations running Vizrt and Adobe software. All of these systems are networked together to share and deliver materials.

First Media has installed Vinten Radamec’s Free-d system at its facility.



“Sienna OriginOne is the data hub of the system. As well as hosting the proxy server and managing assets on external storage devices, it provides the MOS gateway to other devices.”

Colin Sherriff, GM, TSL Middle East.

**ASSET MANAGEMENT SYSTEM**

At the heart of the First Media installation is an asset management and workflow system developed by TSL in association with Sienna and Isilon.

Sherriff explains that this system was specially designed to ensure that the facility could operate “without high capital or running costs.”

“Sienna is based on Mac computers, the Quicktime video format and Apple communications technologies including Bonjour to provide seamless connectivity. The use of Quicktime allows very rapid turnaround of video content, including allowing live feeds to be buffered, trimmed and played to air while still coming in,” explains Sherriff.

The Sienna installation is a modular solution and a number of its modules have been deployed at First Media. Ingest, for instance, is handled by Sienna PictureReady, which can accept content from lines, by controlling attached VTRs. File-based acquisition formats such as P2 and XDCAM can be ingested using StoryCut directly in the FCP suite. During ingest, a proxy version is also created. This is stored in the Isilon server attached to the Sienna network.

This is available to any journalist or editor within approximately 15 seconds of the start of ingest, allowing them to start work on the content immediately, explains Sherriff.

Picture Ready is also capable of recording the output of the studio, and enough clients are provided for recording from the three

cameras. These can then be cut in FCP’s multi-camera mode. Editing can start while the recording is continuing if required.

“Sienna OriginOne is the data hub of the system. As well as hosting the proxy server and managing assets on external storage devices, it provides the MOS gateway to other devices. In this case, it links to ENPS, and also provides the link for StoryCut, the FCP plug-in that matches scripts to video timelines. The link allows a placeholder in a rundown to be automatically replaced with the finished video once the editor has published it, updating timings and making it available for playout,” explains Sherriff.

FCP and StoryCut can also be used on a laptop for field editing, he adds.

In this case, when the story is complete, a 1Mb/s H.264 proxy is generated and sent in first before the full resolution cut. The proxy is good enough to be used on air if time or bandwidth constraints mean that the full resolution version cannot be transferred in time. Output channels from Sienna are called Virtual VTR with the playout rundown managed by a module called Automation X. This plans to use Virtual VTRs in rotation, allowing for fast cutting from story to story. When breaking news stories are likely, one Virtual VTR can be taken out of the pool to be used for manual playout, putting feeds to air.

More commonly at First Media, live stories are sent straight to the production switcher, but fast turnaround edited material can start playing out before recording is completed into Sienna. Automation X can be driven by MOS, or under manual control, or by a combination of the two if required. ▶



At the studio.



The online storage architecture is a cluster of Isilon storage nodes that present themselves as NAS to clients. This uses an Infiniband internal network for very low latency, with the Isilon customer operating system called OneFS managing content distribution across the discs. When material is selected, the Isilon node pulls the required content together from anywhere in the cluster and buffers it in non-volatile RAM ready for delivery.

The architecture of the storage was designed to achieve high levels of redundancy and therefore security, while at the same time maintaining high levels of utilisation and efficiency.

Externally, content is moved over a fast ethernet network under IP, managed by Sienna. This makes it a very responsive architecture as well as cost-effective, but the absolute reliance on the IP network meant that TSL system engineers had to design for very high reliability with careful attention to load balancing.

The IP network uses a pair of Cisco 3750E switches. Design calculations, which were proven during systems integration and testing, called for at least five concurrent streams per Final Cut Pro seat, and this was achieved successfully.

Once used, content is transferred to LTO4 data tapes in a Spectralogic archive. The archiving process is controlled by Sienna using XenData software. This allows a partial restoration of content from the archive. A journalist can research using the browse proxy content, which is always kept online, identify the clips required and if necessary make a rough cut edit. The full resolution clips are then recovered from the archive and loaded into a new bin in Final Cut Pro.

### SYSTEMS INTEGRATION

TSL Middle East's business development manager Andrew Davies explains that the system architecture and workflows were developed by TSL after discussions with First Media, and the whole project was delivered within a very tight deadline.

"The requirement from First Media was to take a studio shell in Dubai and convert it into a highly efficient, file-based news



production base and to create local content for two popular Pakistani channels. The capital budget was limited, and operationally, it had to be straightforward, allowing it to be run with minimum staff," Davies explains.

"Despite the tight timescales of only about six months from initial contract to handover, the decision was taken to pre-fabricate the entire system in TSL's workshops in the UK. This allowed performance to be fine tuned, including TSL and Sienna engineers collaborating to ensure the best possible performance from the network. The project plan included eight weeks to install and commission on site in Dubai.

"In fact, the process was completed in about six weeks, allowing extra time for the engineers and operators from First Media to gain familiarity with the operation of the system. The complete production centre is now operational," Davies confirms.

"TSL has developed a highly innovative architecture. The use of Sienna and Isilon, in particular, gave it high performance and an intuitive user interface, while at the same time representing a significant saving over other, perhaps more well-known vendors of comparable technology. Use of virtual studio technology gives very high production values from a small studio space," Davies adds.

The specified performance was confirmed during pre-assembly off site, and installation and commissioning on site was completed ahead of schedule, he explains.

Today First Media boasts a compact but state-of-the-art news production centre that is fully capable of producing extensive local content and news and delivering them to its clients. **PRO**



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Andrew Davies, Business Development Manager, TSL Middle East.