Success Story

France Télévisions Publicité Revolutionizes TV Ad Delivery

Many broadcasting companies around the world are looking for new ways to consolidate the distribution of their programming content and advertisement delivery through an architecture called "centralcasting." This method enables broadcasters to reduce operating expenses and derive greater efficiencies by centralizing the delivery of content to various owned or affiliated stations without having to replicate material or incur costly satellite or shipping charges.

France Télévisions Publicité (FTP), the advertising-production subsidiary of national broadcaster France Télévision, chose SGI to design and implement a unique and impressive centralcasting vision that fundamentally changes the methodology of television advertising placement, broadcast, and tracking.

Early last year, Christophe Scherer, FTP's IT and technical director, took FTP digital. With an average of over 1,000 ad spots per programming day, FTP wanted to streamline its production process into one that was more cost-effective and efficient. A good portion of its costs involved creating videotapes of commercial spot segments, making dubs, and transporting these dubs via courier to remote broadcast locations throughout the country. FTP wanted to digitally ingest commercial spot content, edit specific commercial break sequences, and deliver content directly from the central location to the transmission servers—all allowing for last-minute schedule changes impossible with a tape-based system. They wanted storage and immediate access to at least 35,000 ad spots (ranging from 10 seconds to four minutes each).

But if you're going full-speed ahead into the future of television, why stop there? FTP also wanted to develop an extranet for advertisers and agencies to view spots before they air. Plus, they wanted to add the capability for advertisers and agencies to view a legal air-check online, up to eight days after broadcast, with a minute-by-minute graphical link to ratings of the program and the commercial, provided by French audience research firm Médiamétrie.

With three main channels—France 2, France 3 (including local transmission sites), and France 5—in addition to nine thematic channels, the immense size of the project meant that traditional broadcast hardware companies simply wouldn't fit the bill. What FTP needed was a high-performance computer company that understood distribution of large amounts of data in the broadcast space. FTP chose SGI as the prime contractor to migrate to this centralcasting model. Scherer began with France 5.

The solution designed by SGI is based on a hub-and-spoke model and similar to an edge-server architecture. It employs SGI Media Server™ for broadcast systems providing MPEG-2 ingest capabilities at the central facility in Paris. From there, content is distributed as video files to smaller SGI Media Server for broadcast systems, which provide playout services for the spots at the local transmission facilities. The solution is currently operational for France 5. Connection to the SGI Media Server systems is via a private ATM network. The extranet for viewing spots before they air is currently operational and the legal air-check capabilities will be online soon. As a free service to FTP's customers, a 200TB Sony® Petasite® archive system has housed all spots since the system went online and has a capacity of 35,000 30-second spots. Because of the open networking capabilities of SGI Media Server for broadcast, France Télévisions Publicité was able to utilize an existing network without purchasing hardware to convert physical interfaces.

The first phase of the project introduced a direct broadcasting architecture, without the use of cassettes, on January 1, 2001, for FTP's France 5 channel. Any advertising spot can be called up on any one of dozens of workstations connected to the Fibre Channel network. With a read-write rate of 48Mb per second for M-JPEG files (depending on the compression-decompression format), it is possible to transfer several files simultaneously at a Fibre Channel rate of up to 600Mb per second.

A video sequence, once cut together and encoded as M-JPEG or MPEG-2, is sent directly from the Profile servers to an SGI Media Server system at France Télévision premises in Paris. This server communicates via an ATM connection with another SGI Media Server system located at France 5's offices. Once sent to the channel's storage server, the programmed sequence is ready to broadcast. The equipment here is also entirely replicated for security reasons, with four SGI Media Server systems being used.

FTP now also uses an all-digital, disk-based architecture for commercial playout. It runs on an SGI® Origin® 3200 server with two Sony Petasite systems, Grass Valley Profile servers (which are being replaced by a number of SGI Media Server for broadcast systems), an SGI® CXFS™ shared filesystem, SGI® Origin® 2000 servers, SGI® DMF (Data Migration Facility) software, and other support equipment. The commercials can be removed or replaced up to one hour before airtime should the day's news, sports, or weather dictate a different spot. Commercial metadata can be managed so that traditional metadata and the content of a spot are available in an asset management system.

With more than 35,000 commercial spots now in online or near-line storage, the staff at FTP has access to the spots as data via a high-speed Ethernet network. The file that is transferred is identical in all characteristics to the original, even though it is transferred at faster than real time. For example, a 30-second file of 25Mb-per-second MPEG-2 would transfer via ATM Ethernet at approximately three times faster than real time.

"We started at France 5 and expanded to France 2 with the SGI Media Server for broadcast servers," comments Christophe Scherer. "This innovation allows considerable time savings in terms of last-minute editing and improves our capacity to react to changes right up to broadcasting. We are so pleased with how the system works that France 2 is currently testing its system and France 3 is scheduled for testing in late 2003."

By changing to an all-digital ingest and distribution model, removing the requirement of real time from their centralcasting architecture, and migrating to a central file server and edge-server architecture, France Télévisions Publicité now enjoys the efficiency of its operations, while revolutionizing the process of acquiring content and successfully delivering approximately a billion Euros in advertising revenue per year.

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