SGI Designs and Delivers SWR's Tapeless Digital Newsroom

The transition to the all-digital newsroom is well under way throughout Europe, where SGI is leading the effort, designing and integrating a number of high-profile digital broadcasting systems in France, Sweden, Norway, Denmark, and Germany. One of the first public broadcasting stations in Germany, Südwestrundfunk (SWR), or Southwestern Broadcasting, chose SGI to architect its migration to a tapeless digital newsroom and went on-air, supported by SGI® Media Server™ for broadcast systems, in February 2003.

SWR belongs to ARD, the first German public television network. The station has three broadcast sites, one each in the cities of Mainz, Baden-Baden, and Stuttgart. With more than 14 million viewers, it is the second-largest station of Germany's public broadcasting network.

"With the increasing availability of advanced broadcast technology and the desire to better serve our viewers, SWR made the decision to select SGI to implement a tapeless digital newsroom that enables our 50-person news team at the Mainz facility to streamline its operations for distributed news production and play to air," said Gerhard Gaa, SWR project manager, who worked closely with the SGI Professional Services organization system integration team. "The project goal was fast and efficient news production with an easy reuse of content. In the short time we have been on-air, the facility is experiencing greater flexibility, faster time to air, and smoother news operations."

"SGI...has a great understanding of the needs of broadcasters and offers highly innovative concepts."

—Bertram Bittel
  Director of Technology and Production, SWR

Project Goals

SWR's station team had the following requirements for the system:

- Tapeless production and editing
- Server-based editing with direct server playout
- Nearly paperless production
- Concurrent access to all video material by all staff members
- Browse-quality rough-cut editing on the journalists' desktop PCs

While the station had built a completely new studio for this project, some newer equipment (a BDL teleprompter, an Aston Ethos character generation system, and a Signum Sigi still store) needed to be integrated. The completed solution also had to interface with SWR's production planning system and archive as well as allow for easy reuse of the news story texts and video clips on the station's Web site. Like other broadcast facilities migrating to a digital workflow, the SWR team called on the new digital infrastructure to be dependable and both flexible and scalable enough to allow the station to grow and service its viewers.

Ingest

For feed and tape ingests, the station's team chose the SGI Media Server for broadcast system. It is configured with eight ports (four for ingest, two for backup playout, one for low-resolution encoding, and one for content review) and 44 hours of protected RAID 3 storage, coupled with a protected filesystem for high reliability. The SGI Media Server for broadcast system offers the benefits of digital broadcasting without investing in format-specific equipment. It treats video as data files and takes advantage of SWR's newly installed IT infrastructure, which uses a switched 100/1000Mb/sec (also known as Gigabit Ethernet) backbone. The network also provides the link from the newsroom to the balance of the facility's systems in addition to connections to the public Internet.

Operators schedule ingest from their workstations. High-resolution clips are created on the ingest server, low-resolution versions on the SGT VideoBrowse MPEG-1 browse/edit system. The low-resolution version can be browsed and pre-edited using the company's Media Manager software on any of the

"The project goal was fast and efficient news production with an easy reuse of content. In the short time we have been on-air, the facility is experiencing greater flexibility, faster time to air, and smoother news operations."

—Gerhard Gaa, Project Manager, SWR

50 PC-based Dalet A.N.N. Open-Media newsroom clients. All files ingested are referenced in SGT's Media Asset Management database and are updated via a Media Object Server Protocol (MOS) gateway to the newsroom computer system. MOS is intended to be an open solution to the problem of communication between varied makes of broadcast equipment, including newsroom computer systems, automation systems, and media servers. Additionally, information about all clips available in the SGT DBOS Automation News system is dispatched through the same MOS gateway to update the newsroom computer system. During ingest, the high-resolution files are simultaneously transferred from the ingest server to the central content server where all content is stored while used in the news process. It's equipped with 100 hours of SGI® TP9400 RAID storage, which allows it to also act as the network-attached storage server for the five Pinnacle Systems Liquid blue™ edit systems.

"SWR made the decision to select SGI to implement a tapeless digital newsroom that enables our 50-person news team at the Mainz facility to streamline its operations for distributed news production and play to air."

—Gerhard Gaa, Project Manager, SWR

Editing

Employing low-resolution desktop browsing and rough-cut editing has reduced the amount of effort and cost previously required to provide viewing and editing stations. It has also reduced the bottleneck of the edit room, speeding workflow. Journalists enjoy greater access to their critical content. In coordination with the newsroom computer system, the media management system allows for searching and retrieving all clip content.

The user saves the proxy edit, and the EDL is sent directly to the central content store and then is automatically conformed. The media management system then notifies the automation system, and the new clips are then automatically transferred at faster than real-time speed via the high-speed network to the playout server, ready for broadcast. At the same time, clips are sent to the ingest server and transcoded to low-resolution MPEG-I. When transcoding is complete, the media management system is notified, making the clip available for others to browse or edit.

> ## *"Our expectations for the contract were high and we are convinced that SGI has done an excellent job in fulfilling them."*
>
> — Bertram Bittel, Director of Technology and Production, SWR

In the case of editing high-resolution files, the Liquid blue edit systems have direct access to the complete central shared storage via the high-speed network. There is no need to copy the clip via the network to the local disk, so both time and disk space are saved. The edit functionality is as if the clip were on the local disk. In addition to the time and space saved, more than one editor can access this file simultaneously. This feature eliminates bottlenecks and allows parallel editing to take place. The clip support between the server and edit systems is seamless.

Project Success

Owing to the SWR team's involvement in the tender, specification, and integration process, all vendors involved had continuous and complete updates and feedback on requirements in the system implementation. SGI Professional Services received final acceptance of the project in December 2002. The station's team spent the month of January working with the system to gain experience on trial news operations and went on-air in February 2003.

"SGI is a relatively new player in our field but has a great understanding of the needs of broadcasters and offers highly innovative concepts," said Bertram Bittel, director of technology and production, SWR. "Our expectations for the contract were high and we are convinced that SGI has done an excellent job in fulfilling them."

sgi®

3460 [04/04/2003]   J14228