Danish Broadcasting

Danish Broadcasting (DR), Denmark's oldest and largest public service radio and television company, is halfway through its complete digital conversion, which began in 1999 with digital radio production, continued in 2000 with a digital TV pilot phase, and will result in an all-digital DR and a new facility in Copenhagen – "DR Byen" – that will bring the company together in a multimedia community in 2005-2006. After the successful completion of a pilot phase architected by SGI, DR chose SGI equipment and systems integration services for the next phase – a completely integrated, all-digital workflow for news and sports. With an estimated completion date of December 2003, the Sports and News Production System (SNPS), designed by SGI, is based on the SGI Media Server for broadcast systems.

In the pilot project, completed this year, more than 1000 news broadcasts were digitally produced, delivered and archived.

Once this next phase is complete, staff will have even faster access to archived material and will be able to share video and sound material across television, radio and online operations. The first newscasts produced on the SNPS SGI system are slated for broadcast in May 2003.

For this next phase, SGI designed archival and Web interface functionality into the SNPS system. The project includes the design of the overall digital architecture, integration of the required multivendor technologies, and a variety of professional services, project management and project-specific development. Hardware requirements include eight SGI Media Server for broadcast systems, SGI Origin 3000 and Origin 300 servers, two SGI TP9400 3.4TB storage systems, and SGI Data Migration Facility (DMF) software for moving data from disk to tape that will serve as the foundation for archiving material. SGI will also integrate an automation system from vizrt; desktop editing functionality such as voice-over capability, transcoding software including keyframe extraction, and scheduled ingest automation software from Ardendo; a StorageTek L5500 tape library; 24 Pinnacle Liquid purple and Pinnacle Liquid blue nonlinear editing systems; and a transcoding cluster consisting of 12 dual-processor Linux operating system servers.

In addition, SGI DMF software integrates content on tape and disk, stored offline and online, making it instantly available to the user. Broadcast Integration Service, an XML-based API developed by SGI Professional Services, provided interfaces to all of the different client software and systems, including the Web front end developed by DR.

Design Team

Danish Broadcasting (DR):
- Torben Lundberg, head of technology
- Steen Rabing Christensen, managing editor
- Soeren Holm, project manager
- Finn Vaabengaard, broadcast engineering
- Jan Grinder Petersen, IT systems

SGI:
- Mogens Rasmussen, solution architect
- Gert Hansen, solution architect
- John Foster, system architect
- Peter Macskassy, project engineering

Equipment List

- SGI Origin 3000 and 300 servers
- SGI Media Server for broadcast
- SGI TP9400 storage systems
- SGI CXFS shared file system
- SGI DMF software
- Pinnacle Systems NLEs
- Ardendo automation software
- StorageTek L5500 tape library