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Tapeless television at ORF

Move heralds tri-media production

By Reinhard Wagner

DigiTV is the tapeless, networked workflow and collaborative production project across all regional studios of the Austrian Broadcasting Corporation (Österreichische Rundfunk ORF). Under DigiTV, editorial staff gain access to centralised archive material, and can easily retrieve and share information.

Dr Hubert Nowak: "We made a strategic investment in the future, with no direct RoI"

The start of this huge digitisation project began with DigiTV-Salzburg in March 2003. The search for applications and system integration for the DigiTV project took place between 2003 and 2005. Performance and power tests were performed with storage solutions such as NetApp and HP.

Early 2006 saw the implementation of a playout solution (K2 server from Thomson Grass Valley) and the training of ORF Salzburg personnel. "During the whole planning phase of the project as well as the evaluation period, the editorial staff have been involved in every facet," explains Hans Kutil, manager TV Projects, ORF Landesstudio Salzburg. "Our technical and editorial project team worked together on radio and TV issues — ie, file sharing, archive retrieval, random access to material, etc — and no general contractor could influence any decision."

"Although the overall project has an estimated value of €0.5 million, we have spent less than any other broadcaster would have done to fulfil the requirements of a similar project," adds Dr Hubert Nowak, director of ORF Studio Salzburg. "We made a strategic investment in the future, with no direct RoI. In the very near future we expect savings in operational costs arising from workflow enhancements. Another future benefit could be the tri-medial repurpose of content, which is shot once but re-used several times — studios can access near-line archived content from anywhere in Austria."

To make DigiTV happen, reporter workstations, ingest stations for tape-based camera material ingest, hi-res editing, playout systems and centralised storage needed to be developed, installed and maintained. In the near future, video replication will be available, too.

D.A.V.I.D's radio-based DBM3 system operates alongside video management tools to enable bi-media operation in the regional studios. "Reporters can pre-edit material directly at their office workstation in low-res quality, which is finalised in

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Playout Automation

Our rich, 10-page Playout Automation section, starting on page 16, is timely as facilities evolve capabilities in HD, multiple languages, multiple delivery platforms and sophisticated media management. We present many case studies this issue, in which the broadcast workflow is being re-defined in the file-based, IT space. – *Fergal Ringrose*

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Television DSO gets underway

Construction on £500 million project begins

By Fergal Ringrose

Work has begun on the UK's biggest broadcast engineering project, Digital Switch Over. Construction is underway on the 337m Selkirk and Caldbeck masts — the first steps into a £500 million project.

DSO will see TV services in the UK become completely digital, TV region by TV region, starting in 2008. The national programme will see the entire terrestrial infrastructure — which took 30 years to build — replaced or upgraded by 2012.

The Caldbeck and Selkirk masts serve the Border region, the first to be switched over to digital in 2008. To prepare for the switch over, Arqiva is constructing a new mast at the Caldbeck site, making it the third tallest structure in the UK, and the first major television mast to be built by the company for 35 years. The new digital transmitting antennas will be installed at Selkirk in 2006 and at Caldbeck in 2008.

www.arqiva.com

Covering the Pope: RTVV selected OVIDE RF to cover Pope Benedict XVI's visit to Valencia, heading a major pilgrimage attended by more than one million people. OVIDE RF used wireless camera systems from Link Research, installed on Thomson and Sony cameras. A crew of 14 technicians and engineers supplied and installed 15 LinkXP systems for point-to-point applications and seven XPR systems with camera control. One XPR system was installed at the top of the Torre Francia building which is 135m high and was remotely controlled from the floor. This gave dramatic images of the event with other cameras used for interviews.

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IT'S ALL IN A PLAYBOX

Trocadero goes high def

PlayBox HD Airbox installed at Paris MCR

By Fergal Ringrose

Broadcast Systems division of PlayBox Technology has installed 8x Dual Channel HD Airbox servers at the HD Production Centre of Paris' Trocadero entertainment complex, providing full HD broadcast capabilities. The system is designed to easily manage the broadcast playlists including live events in the manner of a traditional broadcast television channel.

Installed by systems integrator Axians and supplied by Systemes Audiofrequence Videonique (SAV), the PlayBox system is comprised of 16 channels of HD playout from one master control centre. The 16 playout channels have different playlists, constantly playing out HD video and live events.

Hervé Peuaud, product manager, SAV, said, "This is the first facility of its kind at the Trocadero and as such it was imperative that we have the best knowledge and equipment available. We chose PlayBox Technology because of its high-end technology, MPEG expertise and broadcasting experience."

PlayBox Marketing Director Kornel Kathi added, "PlayBox HD Playout technology can mix SD and HD video in the same playlist at different bit rates using 4:3 or 16:9 aspect ratios. We are pleased to be a key supplier to such a prestigious venue."

PlayBox Technology can be visited on IBC stand 8.274 where it will demonstrate its ability to create a totally automated playout workflow system solution for start-up TV channels, web-casters, interactive music channels, film channels, thematic channels, satellite broadcasters, disaster recovery as well as local, regional, national and international broadcasters.

www.PlayBoxTechnology.com

The 16 HD channels constantly play out HD video and live events

Tapeless TV at ORF

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one of the three Avid (Pinnacle) Liquid blue NLE suites," says Kutil.

Transmission scheduling tools, high-res recording units (LoopRecorder) and locally placed video storage are basic instruments ORF has worked with for many years. RedSys is the editorial tool, designed and developed in close cooperation between the Austria Press Agency' (APA) and ORF. This is the background engine for rundowns, storyboards, etc. Redsys offers transmission schedule, planning, preparation and execution of a programme.

Two LoopRecorders are used for recording of 48 hours of transmission and distribution content delivered over the ORF Lnet distribution network. I/O options such as analogue, digital SDI and two AES/EBU audio channels or ASI video signals are supported. Software encoding delivers various quality levels: high-res MPEG-2 D10 @ 50Mbps, mid-res MPEG-2 @ 8Mbps GOP and low-res MPEG-4 @ 850kbps (browse quality).

The recorded content is forwarded onto the editing storage (7.4TB NetApp storage capacity with approximately 300 hours of high-res material) from where it is conformed onto the Grass Valley K2 server for playout (four channels). The enhanced system functionality makes manual record (start/stop) of programming superfluous and the overall reliability of the LoopRecorder is much appreciated by everyone.

Broadcast centre of the future

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TX here but it's not here, why not? If there is any delay to media anywhere in the workflow, the media coordinators can see that and chase it. The compliance edit is completed on the Quantel desktop, and then as there are always certain issues that are only ever seen in an online suite, it's also run quickly through a craft suite to make sure there are no glitches.

Once online is finished, content is published back against a transmission copy placeholder. MOMS knows what is expected, so inside Quantel it generates a missing media list via a plug-in (this tight integration being one of the main reasons why Quantel was chosen for this system). This is accessed from inside Quantel and published against from the Quantel suite, where it goes off in half realtime as a background task. Once a project is completed in MOMS workspace, it automatically deletes the material from the Quantel servers to keep them free. Additionally, TX Ready status has been kept outside of MOMS to provide a further check and balance.

The Creative workflow starts with a make list of the shows that Flextech wants to promote, which gets populated in IBMS. Once that's done, these trail projects appear in the creative worklist and — to be implemented in a month or so's time — an editor's user profile will take them only to the projects that have been assigned to them.

Escalation paths exist within Flextech to contact people responsible for any missing material. The rough cut is completed on the Quantel workstation, then published to the approvals worklist where the Creative Director or whoever is signing it off can approve or reject it.

Flextech's goal is to move the approvals process almost entirely to the offline stage to save costs. If approved, it next goes on to online for versioning and then on to a ProTools suite. "That's been the most difficult to set up because the AAF file transfer isn't what it could be, particularly with the video, though we can get browse copy in there as a guide," says Marbrook. "Soon though it will be almost seamless."

Producers get a two week window to produce a promo within the Quantel servers as they are the least cost-effective server space Flextech possesses. Finally, all the items get green lights against them saying they're ready for playout. Ideally 48 hours before transmission, content is then pulled over to the Omnibus playout servers, where it's then archived and deleted after playout unless there's an immediate repeat.

Both the Omnibus automation and MOMS will shriek in good time if there is a blank space against a TX slot. Finally, as Howe explains: "Once it's played out then there's an As Run log and a flow of data back through the automation system and through MOMS and into Flextech's scheduling system which says this is the status of the item, this is how it was played out, and so we close the loop."

We're no blueprint

Red Bee has had a similar Quantel-based tapeless promos department in operation for some time, and has cut production time by around a third as a result. Flextech hopes for the same once staff are fully comfortable with the system and reckons the move to tapeless will reap significant cost benefits in the long run (partly because the system is scalable to HD, though the format is not yet firmly on the company's radar).

So far it has operated smoothly as well, though there are plenty of contingency plans in place: not only has the Creative Village been designed to outgest in volume, but if the link between the two locations goes down couriers can take over. And if the Quantel kit falls over the entire Soho post community is less than a stone's throw away.

That, though, represents the old workflow. "Tapeless projects should not just be about mirroring the present workflow, but about doing it better," says Marbrook. "I believe we will lose certain parts of the workflow as we go forward; we will find better ways of doing things. We're not a blueprint for how to do it. A blueprint doesn't really exist because every broadcaster is going to have a different workflow once they put it on paper and look at it, because their internal departments and their content are all set out differently. But certainly we're a guide."