

ITV Meridian

Broadcasting is changing globally but it's also undergoing considerable rethinking even at relatively local levels. ROB JAMES reports on the new face of regional commercial broadcasting in the UK.

REGIONAL COMMERCIAL TELEVISION in the UK is undergoing enormous change. Meridian took over the South & South-East ITV franchise in 1993 from TVS and was a new form of ITV franchise holder, a 'publisher/broadcaster'. The need for production capacity was considerably reduced, since it wasn't obliged to make programmes other than to provide news, current affairs and local programmes within the region. It was soon apparent that the old studio centre in Southampton was too big and not really suited to modern broadcasting.

When ITV was formed there was a great deal of rationalisation and centralisation of resources. Transmission control was moved to London and Meridian was primarily required to provide a daily news service, which in this region means three sub-regions, South, East and West. The brand new ITV Meridian digital news operation has now been running for a year, and occupies just one floor of a modern office block in a business park at Whiteley, near Fareham. The building is rectangular, with a large atrium in the middle. One side is given over to administration, management, and advertising sales. It also accommodates the journalists in an open-plan newsroom. The opposite side houses the technical areas, and three studios, one for each regional service. All three have identical studio and control room layouts, fitted with identical Calrec Zeta consoles and Ross vision switchers. Equally, the programme formats are more or less identical.

Martin Clarke, a sound supervisor who has worked within the region since Southern Television days and who now looks after Audio Support, showed me around. I asked him how the changes had come about. 'Meridian had already taken the decision to relocate from its city-centre site when ITV was created out of Granada and Carlton, so Meridian became the first of several of the ITV regions to convert to an all digital operation — the guinea pig,' he says.

The capturing format is DV-CAM tape (from Sony PD-570s), but from the moment it gets into the building it is ingested onto Avid Unity servers. From there either the journalists cut their own material, on Avid NewsCutters or, if it's a larger feature item, there is a craft editor and Avid Adrenaline-based editing suite for each sub-region. Sub-regional offices in Newbury and Maidstone each have an edit suite and a dozen journalists with their own NewsCutters. The offices at Strawberry Hill (Newbury) and Vinter's Park (Kent) are connected to Whiteley in both directions, so material can be passed back and forth, either as vision and sound feeds or by file transfer. Edited local items are kept on the Unity servers for seven days, after which the space is re-cycled unless flagged for retention.

The technical area impresses by its small size. For example, the sound equipment for three studios and the talkback system for the entire region fits into just three of the total of 28 full-height 19-inch



racks in CAR, one wall of which is covered with Krone frames and Systimax Visipatch data patchbays. Rack upon rack of hard disks provides a total of nearly 14 Terabytes of on-line storage for the three Avid Unity servers. The noise and volume of air conditioning give testament to the heat dissipated. A giant UPS gives around 30 minutes to shut everything down gracefully if there is a power cut. This area is also protected by an exotic and scary Inergen gas fire extinguisher system intended to put a fire out without destruction.

Everything in this building is run by computer, one way or another, and the requirement to connect everything together with Cat 5 produces a concept known as 'flood wiring'. Every bay, every rack, and every piece of equipment has a small Cat 5 termination panel adjacent to it. Several hundred of these are distributed around the building, which all go to a central termination panel. So, if you want to route any signal to any other point in the system, you do it over Cat 5. It is used, for example, to connect all the presenter talkback boxes in the newsrooms and the studios to the main talkback matrix.

Meridian's connectivity, even to its own transmitters, is via London. Lines go to the Southern Transmission Centre at South Bank, from where they can be passed-on to the BT Tower and the rest of the world. Within ITV itself the Megastream Ethernet infrastructure is slowly growing. Programme items can now be file-transferred directly with other regions as they convert to an all-digital service, as Meridian recently did with its first 'mouse-click' transfer from Tyne-Tees when it came on-stream.

The choice of audio console originally rested with Martin and Paul Stevenson, who is ITV Controller of News Projects & Systems, in charge of the move to new technology. However, as the implications of what Meridian was about to do became more obvious, namely that if this project worked it was likely to be replicated many times over across ITV, then the decisions became more onerous — the first of which was whether to do the sound in the analogue or digital domain.

'However,' says Martin, 'given that we were moving into an all-digital environment, the choice was fairly obvious. More difficult was deciding which digital mixer. The primary requirement was for a studio that could be self-operated for most of the day by the director/vision mixer, when there would be no sound engineer or operator in the sound control room. The original concept was to have a separate sub-mixer to do the audio-follows-video operation. Every manufacturer I spoke to scratched their heads when we said, "Look, we need a digital mixer and a digital sub-mixer, and we need to be able to switch between the two."

'When you've found the solution, it seems so obvious,' he continues. 'You buy a slightly larger mixer than you need, take eight faders off the end of it, and then extend those on a long ribbon cable into the production control room next door. Once you've made that conceptual jump, it is fairly easy to contrive one preset snapshot that has the main 24-fader mixer routed to output, and then to call up a second memory that causes those faders to shut down while the other eight open up next door. Directing the GPUs to the remote fader panel gave us our audio-follows-vision facility, so we have our sub-mixer, except it isn't — it's just a different physical part of the one main mixer in each gallery.'

'We looked at four manufacturers, three UK based, and one from the States. We quickly dismissed two. Of these, the SSL C200 was a delightful piece of kit, but required a trained operator and was well outside our budget. Another was just too big, both in terms of the control surface fitting into the sound cubicle, and the entire rack-bay of equipment per console that went with it. Ultimately the decision was made to go with Calrec's Zeta. It fitted the space and could readily provide the sub-mixer. The Calrec's robustness was also impressive. Everybody asks: "What happens if the power goes off, and how long does it take to boot up?" Some were reluctant to demonstrate, but Calrec just turned around and switched it off, then back on again. It restored itself within 15 seconds, exactly the way you'd left it. Nor did it get too upset when I hot-swapped a random board, other than muting a few channels from which I'd unknowingly removed the processing! What finally did it for me was the fact that the PC in the rack plays no operational part in the running of the mixer, but merely stores the presets and configs, and provides the user with a graphic interface.'

The system is necessarily complex because there are three different regions to feed, three roving satellite trucks, dial-ups to the London studios and around the rest of the network, and three remote newsrooms, all of which are in use on a daily basis. However, there are no specialised sound staff involved in the studio operation. The ubiquitous 'Technical Operators' do the sound mixing, direct bulletins, control vision, and operate cameras in the studio, as well as working in the technical area, doing playouts and recordings. Multitasking, to say the least, but not necessarily all at once!

'You need mix-minuses to feed every location to enable them to interact,' continues Martin. 'Asking a non-technical person to set that up each time would be too much, therefore it has to be built into the system. The physical wiring is based on the assumption that each studio will produce six dedicated mix-minus feeds, one associated with each assignable source. The Calrec Zeta is configured to produce these, and route them, without any user intervention. The Technical Operators just mix the programme, knowing that the system is following what they are doing. A year down the line, we haven't had one notable failure. Given that it's all programmed into the console, my job is to work in the background to ensure that it all keeps running smoothly. I'm also responsible for the talkback system, and any modifications needed as its requirements change. Control for the entire region's Trilogy Pathfinder talkback system is centralised, so a talkback panel in, say, Newbury is actually configured from Whiteley.

'One slight problem is the volatile mixer memories. Occasionally, operators overwrite them, so I keep another set duplicated in the mixer, another on the configuration PC, and if that should fail I have a USB stick containing them as well! Of course, the real answer is to have protected read-only memories built into the console. We've had a couple of visits from Calrec R&D people to see what we do with their mixers, and I mentioned this along with a few other minor points — perhaps one day they will materialise as an upgrade.'



Technician's and journalist's job descriptions, have changed dramatically.

For example, journalists are now expected to edit their own material on Avid Newscutters, and do their own desk-top voice-overs, using a Coles' lip mic and a BCD Audio Level Taker. They also insert their own basic graphics, using templates designed by the in-house graphics department.

For jingles, stings and music beds, Meridian use Spot On, a PC-based playout, touchscreen device. Material is loaded and edited with Adobe Audition.

Cues can be fired by GPIs from the Ross vision switcher, or manually triggered.

Meridian also produces 30-second rundowns of the days programming for local radio stations to use, in versions specific to their regions. These are transferred onto a MiniDisc that is put into loop and fed out via an APTX ISDN machine. The local radio stations then just dial in to the dedicated number, wait for their specific, idented, version to come round, pick it off, and hang up.

In the brave new digital world, sync and delays in general are big issues. Martin Clarke sees it this way: 'Analogue was effectively instantaneous, even when carried by fibre. Pictures went from here to the other end of the country with no perceptible delay so you could, for instance, take an off-air cue at an OB. Now all the processing takes a finite time. The odd frame, here or there, might not seem significant, but they all add up. Our Kent studio is a classic example. With analogue lines we could do a two-way interview with no problem. Now there is an overall delay of nearly three seconds there and back, so it becomes even more important that all the feeds to and from the various parts of the operation are mix-minuses.

'These problems occur with digital vision mixers as well,' he says. 'You either end up with a load of audio delays all over the place that you switch between, because it's usually the vision processes that take longer than the audio, or you try to think up some sort



of variable delay, but that would introduce problems of its own, so perhaps best not to go there!'

The old wall of monitors in the control room has been replaced by two large plasma screens, each with several tiles — the previews, the cameras, the servers, and so on, all with tallies and idents. Inserting all this takes time too, and the plasmas themselves have an inherent delay. By the time anything appears on a screen in the gallery it is very difficult to tell if you've got lip sync, even when it's a live source from the studio. 'You just have to assume it's in sync,' says Martin, 'because you haven't done anything to it, other than watch it. One problem we are currently facing is trying to establish the critical point in the system that we can consider to be 'in sync', against which we can reference everything else. We're currently awaiting the arrival of a LipStick delay measurement system, to see if that can help us to at least quantify the problem.'

For the present, however, sync problems remain an egregious fly in the ointment, affecting the entire digital broadcast chain. This is one issue that really must be addressed, not just by Meridian but by the entire industry.

'Hearing all this,' says Martin, 'you might think, on the face of it, that the value given to sound has declined. However, with the hindsight of 35 years in TV, all I can say is that the value of sound only becomes apparent when it's not there. Then it suddenly becomes absolutely paramount, and they all shout, and look at you, and wave and point. That hasn't changed at all!'

The quiet, friendly and efficient atmosphere pleasantly surprised me. This is a logical extension of the digital desktop production integration promise across an entire ITV region. The Whiteley operation has become the template for the entire ITV regional news network. So far as regional variations will allow, the formula has already been repeated by Tyne Tees at Gateshead, and is currently under way at Anglia. Several other regions remain to be converted as the basic premise of server-based transmission with desk-top editing is being rolled out across ITV.

Once these production methods become embedded, we will probably look back in wonder at the way we once used to make news and current affairs programmes. ■