



## HOLLYOAKS GOES HD

Upgrading for high-definition at Lime Pictures.

**BEN WRIGHT** learns how the TV production company behind UK soap *Hollyoaks* made the best of a move to high definition, and completely re-imagined their audio and video production processes.

Is it Lime Pictures – or Strawberry Fields? When you first enter the grounds of Merseyside's foremost independent television production company, there's a similar nothing-is-real atmosphere, the impression aided by the fact that John Lennon's old stomping ground is only a couple of miles from the leafy Liverpool suburb where Lime are based. If you've ever taken a Hollywood studio tour, you'll know what I mean. Is that crèche by the entrance a real one for employees, or is it part of a permanent *Hollyoaks* set? Is this the entrance to Lime's production facilities, part of the now sadly defunct Grange Hill, or the entrance to *Hollyoaks* High School? Confusingly, it turns out that the answer to all of the above questions is 'yes'. Most of the Lime Pictures premises are also used as sets, inside and out, to the extent that the company's employees are frequently trapped in their dubbing suites or offices while a bevy of impossibly well-toned bodies completes a take in what has temporarily become a 'school corridor' outside. To complete the sense of mental disorientation, it turns out that the reason why so much of Lime's premises looks like a secondary school or art college is that it used to be, well, an art college.

But then there is much that sets Lime Pictures apart from other independent TV production companies. Known originally as Mersey Television, it was founded by Grange Hill and Brookside creator Phil Redmond in the early '80s, and has been home to both of those former shows at different times. Since 1995, *Hollyoaks*, now Channel 4's flagship soap, has been made there, and production is now continuous, most days a week, 52 weeks a year. To support this rolling production, Lime owns its own premises, builds its own sets, services its own equipment, and has its own on-site video and audio post-production facilities. As Lime's Group Head of Production Jamie Hall points out, Lime is really more like a small division of an older-style broadcaster on the BBC or Granada model than the usual small-footprint TV production company.

Technically, too, the company has distinguished itself, adopting a server-based production process for

*Hollyoaks* in 2001, and earlier this year, becoming one of the world's first continuously produced soaps to move to high-definition production. It's rare that a TV company gets an opportunity to completely revamp its audio and video equipment, workflows and production methods – to say nothing of the funding – and yet Lime's HD upgrade allowed it to do just that. Moreover, the unforgiving all-year-round schedule of a continuous soap leaves little room for such far-reaching changes to the production process. Yet somehow, Lime have pulled it off.

### End Of The Tape

The major impetus for the changes at Lime came from satellite broadcaster Sky, which wanted more high-definition drama to complement its impressive roster of HD Sports coverage. Channel 4 decided to offer *Hollyoaks* to Sky in HD – which in turn required them to make some serious investment in new video equipment at Lime Pictures. However, it was Jamie Hall's decision to find additional funding to take the improvements a stage further. An upgrade of Lime's aging AMS AudioFile DAWs and dubbing suites had already been under consideration for some time, and there was a tentative plan to switch to Merging's Pyramix. But Hall decided to do even more. "It was a question of funding; you always have to demonstrate what benefit you can bring to the programme by investing in new equipment. And the impetus to go HD was the perfect opportunity."

The upgrade proved to be a break with the past in many ways. With *Hollyoaks*' relentless production schedule, there was no downtime or between-seasons hiatus in which to install the new equipment, so preparations were made for the new HD video and audio facilities to be installed alongside the old SD systems. This also gave Lime the opportunity to bring all their video and audio production suites together on one floor of their offices, with a new Central Apparatus Room (CAR) on the floor below, next to the in-house engineering workshops.

As part of these sweeping changes, Jamie Hall decided that there was too much tape involved in Lime's production process. He asked various Lime staff, including the then Director of Technology Graham Deaves, Installation Projects Manager Andy Murray, and Head of Sound Dub Chris Lovgreen, to bring Lime Pictures as close to tapeless operation as possible, in addition to managing the other equipment and workflow changes. As the work proceeded, Graham Deaves retired (although he continued to contribute to the design of the HD system as a consultant), and the team was joined by Chris Davey, who became Lime's Head of Post-production in February 2008.

Not all of the workflows were revamped. Thanks to the foresight of the now-retired Graham Deaves, who foresaw the rise of server-based production systems years ago, Lime have had a central video production SAN since 2001, and ingest video shot on site for Hollyoaks directly from their cameras onto their server (location material, by contrast, has always been ingested from HDCAM tape). From here, the company's dubbing engineers could extract the audio as OMF files to begin the work of track-laying. Nobody wanted to change this part of the operation – as Chris Davey comments, "There's no point bringing in new processes if they're going to make things harder to handle." But Chris Lovgreen admits, "Previously, we were just drowning in tapes; every shelf was covered." Andy Murray agrees, "Every Hollyoaks episode used up about 40 or 50 DigiBetas," while Lovgreen begins ticking just the master copies off on

his fingers: "Master, Filmic Master, TX copy, an Omnibus master, Omnibus TX copy..." "... and a clone of each of those for safety!" cuts in Murray. "And the audio dubbing editors had to be given edited episodes on tape before they could start work" recalls Chris Davey.

## Enter Apple And Merging

As part of the upgrade to the video systems at Lime, the company's old Lightworks video editing systems were replaced, after much debate, with Apple Mac systems running Final Cut Pro. This, and the introduction of a much larger production SAN, with integrated audio dubbing and associated video playback systems from Merging Technologies (Pyramix DAWs, VCube HD video players, and Ramses control surfaces) put paid to the use of tape during the audio dubbing process for good.

Jamie Hall: "There were a lot of reasons to switch to Final Cut Pro. It was becoming harder and harder to find good freelance Lightworks operators. We were having to choose operators based on their ability to use the kit, rather than on their talent – whereas every kid coming out of university, the editing talent of tomorrow, works on Final Cut Pro. Hollyoaks has also become a much more effects-rich, graphics-heavy production, with a lot of dream sequences, and it seemed to me that Final Cut Pro was better suited to those tasks. It even integrates better with our new media division, Conker, who reformat all of our Hollyoaks content for web and mobile phone playback; they're all Final Cut Pro users too. And finally, of course, it was a much more

affordable solution than a comparable set of Avid editing systems."

The choice of Final Cut Pro over Avid and Lightworks had an immediate knock-on effect on the choice of Lime's new audio dubbing systems. Chris Lovgreen had established Pyramix as his preferred DAW choice since early on in the upgrade, when the only aim had been to replace the audio production chain. "I began talking about Pyramix to Paul Mortimer at eMerging, Merging Technologies' UK office, over two years ago," he recalls. "Of course, we looked at all the other systems as well, and we had Pro Tools and SADiE in here for a while. But pretty quickly, the consensus was that Pyramix was the way to go. Paul introduced me to former AudioFile users who had upgraded to Pyramix at post houses in Soho, and they were able to describe to me the changeover from one system to another. I fell in love with it, really – it integrates fantastically well into the post-production process, and it's very customisable. If you're used to working with an AudioFile, it's easy to set up macros and shortcuts to emulate functions that you're used to. We liked that, as it helped us smooth the transition a bit." "Pyramix was the best fit for what we were trying to do," agrees Andy Murray. "Pro Tools is probably on a par with it, but that's geared towards working with an Avid video system. So once we'd decided to go for Final Cut Pro, we were free to choose Pyramix."

The choice of Merging's VCube HD and Ramses followed logically, as Chris Lovgreen continues. "It's all about integrating well with

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the network, basically. We didn't want work to tape at the dubbing stage any more, we wanted to stream all the pictures straight from the production SAN, and, put simply, the VCube HD is the high-definition video playback tool that integrates best with Pyramix. Similarly, with Ramses, I liked the integration with Pyramix, and again, the options to customise it."

"Also, integrating an untried desk into a Pyramix system could have caused a lot of heartache," adds Andy Murray, "whereas we knew the Ramses would work. Of course the other thing that's beneficial about that kind of arrangement is that you've got one set of people supplying your kit, who you can go to for help if it's not working. Naming no names, but we've all heard of situations where there are two manufacturers supplying equipment that turns out not to work properly together, and all they do is point the finger of blame at each other. The guys at eMerging, by contrast, have been great. During the install, if we've had a problem, they've just dealt with it, which is what you want from a supplier."

## Installation

Following a dry run, when Lime successfully tested the new equipment by producing a complete five-episode block of Hollyoaks in HD, the new systems were installed throughout Spring 2008. Jamie Hall: "We did everything we would normally do, in the same time we normally have to do it – except that we did it in HD. And then we just down-converted those episodes to SD before transmission. It also gave us an opportunity to hold internal viewings of the episodes we'd shot in HD, to make sure we were happy with the look of the show: that the sets still stood up, that the make-up was OK, and so on."

In the end, six new video editing suites based around Final Cut Pro were installed at Lime, together with six new audio dubbing suites, each with a Pyramix post-production system, a VCube HD, and a Ramses controller. Five of these have eight-fader Ramses, while the master dubbing suite is equipped with a 16-fader model. There's an additional audio suite for track-laying only, running a VCube HD and a Pyramix Native System. Everything integrates with the production SAN, based on a 102-Terabyte Data Direct array, and tapes are only employed at the ingest stage, when rushes are being imported from XDCAM location shoots – all of the material shot on the new Sony HDC-1500 cameras at Lime's HQ is ingested directly to the SAN via four HD production galleries. Hollyoaks began transmitting in HD at the beginning of June.

Jamie Hall's goal of 'virtually tapeless' production has been reached: as Chris Davey puts it succinctly, "All the media, audio, and video, is now dealt with over the network." OMF files can be extracted from the rushes on the SAN for the dubbing editors to work from, as before, and dubbing is carried out to Final Cut-edited video files being played back on the VCube HDs. The finished audio tracks are laid back to Final Cut Pro via the SAN, and the final export of a consolidated episode of Hollyoaks takes place from Final Cut Pro.

The only thing obviously missing from the HD production environment at Lime at present is 5.1 monitoring in the dubbing suites, but it turns out that this is deliberate.

Andy Murray: "Channel 4 didn't request 5.1 audio, so it's just stereo at the moment. Of course, the Pyramixes will handle 5.1 OK, so we'll just need some extra monitors when the time comes." "Channel 4 will probably start looking at the audio in about a year's time," adds Jamie Hall.

## We've Got It... Taped

Ironically, given the tapeless nature of much of Lime's new workflow, the final output format for broadcast is still a tape – Channel 4 does not yet have the facilities to receive files for broadcast tapelessly. But aside from this minor issue, everyone at Lime is pleased with the new systems. Chris Davey expresses relief that despite the far-reaching nature of the works and the punishing Hollyoaks schedule, transmission has not been delayed or interrupted once. "That's pretty impressive, when you consider everything that's been going on here. Hollyoaks viewers wouldn't know, which is how it should be." And Jamie Hall looks back on what Lime



Behind the Hollyoaks scenes.

have achieved with pride: "The move to HD gave us this fantastic chance to review the way we did things, and we've made good on that." Andy Murray and Chris Lovgreen concur. Andy: "This was a once-in-a-lifetime opportunity; it was never going to come along again." "So we had to do it right," adds Chris, "And we did." **TA**

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