



Wallace and Gromit make the grade

Aardman harnesses the power of DI with iQ



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With first generation digital intermediate finishing technology starting to look as Heath Robinson as some of Wallace and Gromit's famous contraptions, Aardman's decision to digitise *The Curse of the Were-rabbit* and challenge some of DI's remaining gremlins has offered up super intelligence for other film producers.

The early decision to digitise instigated a finishing route that Wallace and Gromit can never now abandon because of the huge number of pieces to each shot in their movies. Putting this in context, and taking us through to the final grade, were director of photography Dave Alex Riddett and technical director Tom Barnes. The man responsible for the final look of the movie – '1950s allotment' – was colorist Max Horton from The Moving Picture Co, and he did his work on the Quantel iQ with QColor, starting a year before the final grade was done.

A lot more trust

From Chicken Run, Aardman Features had learned valuable lessons about crew size, how fast they could work, and that the bits of the process that they weren't going to change – in acquisition – were established and solid. They didn't decide to digitise Chicken Run until quite late, but it worked out well in their favour. "This time we knew we were going to

digitise the film. We were a lot more trusting of that process and the digital grading of course," said Riddett. "We also used a lot more digital VFX in the film in terms of CG characters, so we had a lot more trust in things beyond our control."

"I think we knew this time round that we could rely on compositing shots," Riddett continues. "In the past we were trying to do everything in camera. So by the end of Chicken Run we knew a lot of what we could get away with. And of course, by the time we did this film the technology had improved by so much as well."

Faster and better

Asked how the DI chain had improved, Riddett observed, "The digital grading technology has improved no end, but I think though that the big change is just the speed at which they could do stuff. We could also beam stuff to and fro between





MPC and ourselves, which was a major thing. We could send stuff up to MPC, they could send us Quicktimes back so we could review and approve. Let's say we were adding a bit of smoke to a scene – the directors could see it pretty well as soon as something had been done at MPC.”

No going back

Once Aardman had done tests to prove that the DI process would not impair photographic quality, there was no going back. “The speed that we had to work, given the incredibly limiting schedule for post production, meant we couldn't possibly have worked in any other way,” said Barnes. “We had about five weeks, but by going through the DI process we were able to roughly grade, and roughly cut sequences. We were able to get all the effects work out of the way in advance, so that by the time we got to post production, 80-90 percent of the work was done

excepting the final VFX work plus some shots that were just coming through, and the final grade.”

Pre-grading speeds post

Most of the movie was pre-graded. Generally as they finished a sequence, Riddett and his fellow DOP Tristan Olliver would visit Max Horton and pre-grade it. “Obviously we could come back and re-do it later, which was nice as well of course, because in the context of putting stuff together you want to make further changes,” said Riddett. “Did we see what we got on the grading screen repeated in the cinema? Not exactly. You have to train your eye a little bit. At the end of the day you are looking at a monitor and no matter how good the monitor is and how well it's actually set up, simple things like reds always come out a bit different. The crunch checks come with printing back to film, and you have to get used to the differences.”

Right: Nick Park with his creations.





If they hadn't gone to the DI process, how long would post production have taken? "I don't think we could have done it to the accuracy that we require because our shots take so long to do. There are variations throughout a shot that optically you could never grade for," said Riddett. "But you can't kiss goodbye to chemical finishing at the moment because you have to be outputting back to film," added Barnes.

Allotment look

The particular look Aardman wanted is already established with Wallace & Gromit, but directors Nick Park and Steve Box wanted a Gothic feel. "It is a horror film, and I think that look was in our heads," said Riddett. "We had actually achieved most of that on the rushes. It's the consistency of it; if you can imagine, a lot of the shots are taking place on repeated sets. There are a lot of discrepancies when you put the stuff together. Quite often it's a matter of

contrast and things, lots of stuff which you couldn't actually grade optically. We would just sit with Max Horton and work out a key shot. In fact, you could leave him to it. He could rattle through it because he knew what the master shot looked like."

Intermediate DI

"Max and the iQ were enormously valuable in that respect right the way through finishing the film," said Barnes. "We were doing trial audience screenings for DreamWorks. We were doing TV commercials, cinema commercials and a 30-minute finished version of the film. So, we had to produce an enormous amount from that DI during the project, before we got anywhere near the end. So that was another area of the process that would have been completely impossible had we not been running a digital intermediate."





Naughty but nice

MPC produced over 750 VFX shots, most of which comprise Gromit's 'Bun Vac' machine. This meant there wasn't much CG work that had to cut directly in with the normal characters, so Riddett's hours at MPC were spent in the iQ suite, not in 3D. "The Quantel stuff worked a treat, but it is always in combo with a good colorist." When Aardman had its first experience of DI on Chicken Run, the technology proved somewhat limiting in terms of its speed, load up time and freedom to experiment. "This time, with the Quantel iQ, it's amazing to see the speed of it," enthused Riddett. "And we've been a bit more adventurous with the 'naughty buttons' on the system - quite often we were keying off the skies," he added.

Looking back, Barnes and Riddett drew one last lesson. "The other big thing we found on this film

was that it would have been impossible to produce one grade at the DI stage which is then fine for publishing to film, digital theatre and TV. They are different mediums."

The tablecloth test

Max Horton came onto the Were-rabbit team for the early tests. "When they were just taking the decision to go for the DI route, I was brought in to test grade some material for them. One of their considerations was would the black and white points be captured accurately on film. Wallace and Gromit has got to be a bright and jolly environment but it still has to conform to what almost an old fashioned cartoon would look like," he said. "You don't want any modern effects. You don't want the whites blowing out and losing detail. In a bright and sunny breakfast room you want to see the difference between the tablecloth and the windows and things like this.

"With the iQ, It's amazing to see the speed of it."

Dave Alex Riddett

Their concern was that the DI would lose some of that detail. So we did various tests, shot them back to film, and they were happy,” he added.

Ahead of the game

Horton did note one difference to his experiences with live action projects. “The fact that we started grading the feature film probably 12-14 months before the final grading session because they were producing finished sequences and clips, meant that we could go ahead and grade those out of context. That way they could get pre-grades on quite a lot of the scenes,” he said.

“One always thinks of the 50s as slightly drab in colour, but the 50s world that Wallace and Gromit occupy in for this film has almost a naïve brightness and lightness of touch on the majority of the scenes. They are colourful, bright, happy and up, and then we went more to town on some of the more specialised sequences and the night scenes. We played around with various levels of blue to get the moonlight looking nice. We were constrained to some extent by those scenes that had large numbers of special effects in them, because obviously those shots were coming in late. They needed to be fitted into the context of the bits of the scene we had already graded,” Horton added.

MPC has two Quantel iQs, enabling it to swap control surfaces. It can put half a film on each

machine, so editorial and dust busting can take place in one suite while color correction takes place in the other. Asked how the iQ and QColor had performed, Horton said, “VFX shots would come in late or sequences would be re-cut, or be re-shot in some cases, and slotting in the shots was very quick. We would stop for half an hour for lunch and one of the conforming guys would come in and re-import the sequences and put a shot in. It was very fast turn round from that point of view. You really don’t want to stop working for a day or half a day in order to re-edit or make changes.”

iQ gets the nod

“From the point of view of a colorist coming from a telecine background, when you first look at iQ it looks quite basic. In fact it is much more powerful than the grading systems I have been used to using in my world of commercial telecine. You can have unlimited layers. You can key frame shapes. Generally the speed of the process could be faster though.” Quantel clearly agrees – the recent introduction of Time Magic technology on iQ has addressed this issue, providing a massive boost to rendering speed, and also making rendering a background task while the colorist continues work unhindered on the next shot. And the just-released Pablo Suite gives the colorist more tactile controls and more facilities too. Cracking idea, Gromit!

George Jarrett, 2006

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