



The making of 'The Day the Walls Fell In'

One of the nice things about working for Avid is having access to the latest products and being able to push them to their limits. But what happens away from work? What does a creative person *really* use? One of Avid's pre-sales consultants, Richard Hingley, looks at different options during the making of his latest music video.

Like most working people, we all have our little hobbies and dreams away from work. Mine has always been music; not just listening but writing, recording and also producing when I get the chance. In fact, my grounding in the media industry was as an audio engineer, working in studios in the late eighties and early nineties, when the concept of non-linear was just being adopted. So, for my latest music video, I decided to test out the whole range of Avid and Digidesign products.

I had worked with the likes of Digidesign's Sound Designer software in the past but, of course, you have to move with the times, so I recently purchased a Pro Tools|HD3 Accel system running on an Apple Macintosh G5. Why Pro Tools? Well, for what I needed to do, I can honestly say it's the most versatile and highly flexible system you could have. My requirements were to have a high track count, plus

high sample rate capability, with access to plug-ins that replicated some of the original desk and outboard gear I was accustomed to all those years ago. It was a vintage sound I was after for my new track 'The Day the Walls Fell In' but with a real cutting edge.

Digidesign's Pro Tools HD system, as well as being an excellent audio recorder and production system, has a very nice MIDI sequencer, which has vastly improved with the latest release; this allowed me to put together the rough basis of the track. The original guitar demo was recorded live, then working with the Identify Beat feature, I was able to extract a tempo map to work from. But how does someone on their own manage to play and record in different rooms? This was solved with an off-the-shelf wireless network. I placed a laptop in the hall (my recording booth), isolated from the recording equipment,

and with remote desktop software, I could control the main Pro Tools system without worrying about any extraneous CPU noise creeping into the mic.

As a guitarist, one of the real bonuses of recent technology is the ability to have a plug-in re-model a guitar sound through an almost endless selection of effects and amp simulators; these can be recalled instantly without committing the effect to disk. For this purpose, I used GuitarRig from Native Instruments, which allowed me to harness the power of the TDM architecture within Pro Tools, freeing up the CPU's processors. The benefits of this way of working are that I could stack up guitar tracks and experiment with different takes without worrying about memory problems or track count.

So what about sounds? This brings me back to plug-ins, since all the drums were sampled sounds compiled into a plug-in sampler called Mach 5 from MOTU, which slots seamlessly into the Pro Tools architecture. I also needed some good old synth sounds and, again, plug-ins came to the rescue. I used to own a Yamaha DX7 and an old Prophet 5; amazingly, these have been resurrected as plug-ins (the FM7 and the Pro-53 again from Native Instruments). I was a bit dubious, being a bit of an aficionado of the 'old school' synths, but once I'd heard them, I was truly amazed by their authenticity. So not only do I now have access to numerous mixing desk dynamics strips and outboard gear, I also have a few hundred guitar amps and multiple keyboards. It's amazing what you can fit in a second bedroom nowadays.

So I was off, recording and mixing away, until I was happy with 'The Day the Walls Fell In'. So what next? Let's shoot a video! OK, but with what and how? For the last eight years or so I have been heavily involved with Avid DS and, before that, Softimage DS. And, being so familiar with HD as a

format, to shoot a video in HD was a real draw. Even on my humble earnings buying or renting out an HD camera for a one week shoot was a bit un-realistic (even favours run out sometimes). Technology came to the rescue again with the advent of HDV; OK, it's not as great as its bigger brother, but if handled in the right way and respecting the compression limitations, the results are very impressive. So the bank manager was seduced once again and a Sony HVR-Z1E was purchased. Deciding the format was obvious (shooting 1080 at 50i) but what about the workflow? That's always been one of Avid's strengths; the ability to piece together a total solution, with video and audio.

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I had a basic storyboard idea; a sort-of road movie shot in the US, and with the NAB broadcast convention in Las Vegas fast approaching, it seemed like an ideal opportunity. A bit of research on the internet found a car and a location - a 1969 black Buick Skylark convertible and a long straight road in the Mojave Desert, about forty miles outside of Las Vegas.

The scenario was to shoot multiple different takes, angled from around the car, of me lip syncing to the track as I drive through the desert to Vegas. Picking up a very valuable classic car in Los Angeles and driving it through downtown LA and onto Las Vegas was a once in a lifetime experience. I had hoped to shoot some footage on the way but time and light conditions were against us. Shooting in the desert in HDV is a little bit of a challenge too; one of



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the things you really have to watch out for is clipping and the loss of chroma within the HDV compression process. To help this, I added a matte box to the camera with two filters - an ND Grad and a Polarizer. The extreme light conditions in the desert meant I needed to use both of the built-in ND filters and close off the aperture, but the results were stunning and the quality of the footage has surprised all who have seen it.

Camera shake was always going to be an issue. I had rented a suction camera mount but there were some restrictions on putting it on the car; after all, this was a classic model. I was confident that the stabiliser within DS Nitris would cope with most of the situations I would throw at it; it'll be fixed in post, as they always say.

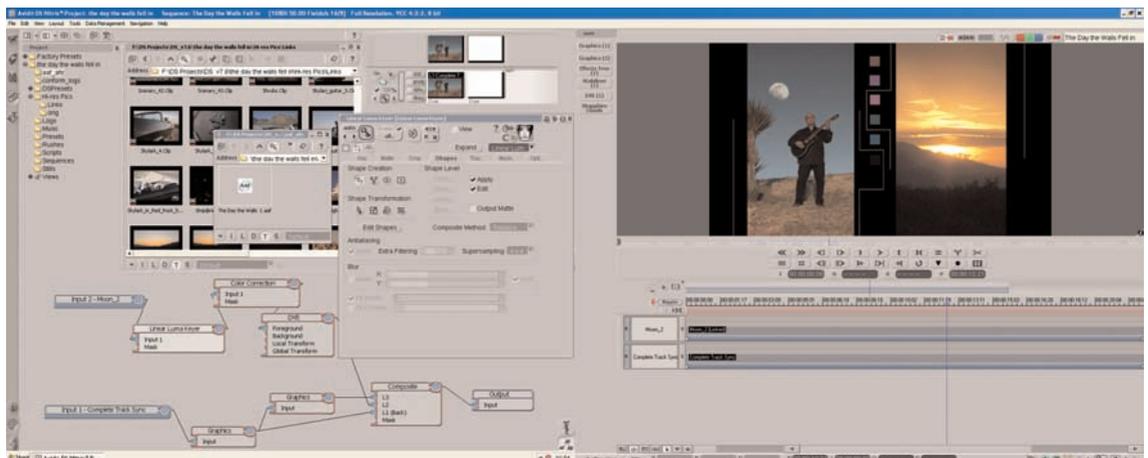
So the shoot was complete and the hard work of sifting through hours of footage could begin. I purposely shot more than I needed, since the HDV format is so cheap on stock, allowing for a high shooting ratio. Using a beta version of Avid Xpress Pro HD to acquire all the rushes, I digitised in native HDV, which would allow me to work at home on a laptop. Working in true 16:9 and at full-sized HD resolution is great as I could exactly work out DVE positioning, plus it was easy to see any shots that needed any clean-up in the online.

A limitation of the Sony HDV camera is not being able to record slaving to an incoming timecode, so I used a good old fashioned clapper board; this made it easy to collate all the lipsync shots into group clips to allow me to cut in multi-cam mode. I was a worried about drift over time but was pleasantly surprised at how accurate the free running record of the HVR-Z1E was. To complement the HDV footage, I took some hi-res stills using a 7 Mega-pixel digital camera which I would pan and scan with Xpress Pro HD's pan and zoom tool. Being able to use the true resolution of these digital shots added another level of quality to the sequence.



Once finished, the sequence needed to be onlined and some audio 'sweetening' was required. I exported an AAF sequence with audio and video references from within Xpress Pro HD, which would provide the backbone for Pro Tools HD and Avid DS Nitris to work from. I needed the full sequence within Pro Tools since the beginning and end of the video needed audio sweetening and some additional foley work.

The first task was to add atmosphere and sound effects, then some footsteps were added, along with dynamics effects on the audio as the video showed me getting in the car and starting the engine. I hadn't originally planned any sync sound on the video shoot but the idea of getting in and out of the car at the start and end of the video seemed a good one. As I hadn't prepared for location sound, I had to use the camera's built-in stereo microphone; this suffered from a slight camera motor pickup as well as wind noise. Within Pro Tools I had access to NoNOISE - an amazing de-noiser plug-in from Sonic Solutions - which allowed me to sample the camera motor noise and any wind ambience to use as a noise footprint., which could then be used against the full audio to reduce the unwanted noise. Finally, an alternative 5.1 surround sound mix was easy to add, as Pro Tools can have multiple mixes within the same session.



The video's storyboard required the edit to have lots of split screens throughout the sequence. These came across seamlessly from the exported AAF when loaded in to DS Nitris. Next task was to re-digitise the sequence, this time in uncompressed HD, but through the HD-SDI input going back to the original HDV tapes. To achieve this conversion, I used the HD-Bridge from Miranda, which allowed me to control the HDV deck through RS-422 and convert the video into HD-SDI. When all the footage was in, I could then start to stabilise most of the shots.

Between many of the split screen DVEs I wanted to have some form of graphic effect to complement the footage. In DS Nitris, there are many ways of key-framing graphics, so I decided that some sort of evolving graphic line would be ideal. The handwriting tool was perfect since it allows you to trace a brush stroke along any vector graphic at any desired speed. A few of the shots also needed some paint clean-up to remove cars in the distance, as I wanted the desert shots to only feature the Buick.

Three main shots within the video needed quite complex compositing; this was where the DS architecture really came into play. The first was in a section featuring the lyrics 'fading away'. I purposely double shot these sections to allow me to create a matte using a difference key; this then made it possible to have me featured on a separate layer to key-frame the opacity and the blur, creating the illusion of fading in and out. The second main composite was the split screen of the moon rising and the sun setting. The sun setting effect was achieved by filming the sunset for 45 minutes and then speeding it up by 7500%. The moon actually doesn't exist in the shot at all, but was a hi-res photo of the moon taken at night in the desert. By using a luma key, I was able to get the moon on its own. A DVE was added and this was then key-framed to create the moonrise. One added touch was to cut out the palm tree onto a different layer to allow the moon to pass behind. The final composite was the speed-up going into Las Vegas. The speed ramping had come across from the offline sequence but I needed to create the illusion of a 'light speed' crash zoom. Firstly I needed to create a matte of just the car and separate this into a separate layer, next, well back to plug-ins the crash zoom effect was from Tinder Tools, this was mixed with the frame averaging effect within DS to create the desired effect.

A lot of the shots needed a bit of grading just to match scenes and angles from different days; this was easy within the latest version of DS Nitris as I could grade a whole tape

Richard Hingley

Q&A



Richard is currently working on a new album, created using Avid and Digidesign software and hardware. >> www.richardhingley.com

What's the link to this video?

www.richardhingley.com/music/watch/pages/the_day_the_walls_fell_in.html

What's your favourite album?

It has to be Pink Floyd's *Dark Side of the Moon* as I hear something different each time I listen to it.

or master clip using source side effects. This would then be reflected throughout the complete sequence. To complete the finished look I created a timeline effects tree, containing a de-field to get rid of interlacing, a colour corrector to lift the contrast and chroma that is lost in HDV, and finally, a film effect to replicate a film stock. Once the online was finished, I loaded the final audio AAF from Pro Tools and job done! Well, nearly.

For delivery, as I was already in HD, an HD master was obviously simple to do. SD was equally so, since the Nitris hardware will down convert to SD in real-time with the added choice of choosing centre crop, anamorphic or letterbox outputs. I could also output in QuickTime or Windows Media.

So have a look at the final video on my site (link in panel above). I hope you've enjoyed reading about this project and it just goes to show that a lot of us working at Avid are really just users at heart.

