

HOME GROWN

What happens when you combine the voice behind the highest-selling debut album in musical history with one of the most prolific and adventurous minds in UK electronic music? A very appropriately named album: *Flavors of Entanglement*.

Text: Gavin Hammond

► Yes, Alanis Morissette – she of the 55 million worldwide album sales – is back! Last seen parodying The Black Eyed Peas' *My Humps* in a YouTube video released on April Fool's day in 2007 (13 million views and counting), it's perhaps no great surprise she's pushed the boat out on her fifth album.

Since her initial success with Glen Ballard and his ADAT-recorded *Jagged Little Pill* (1995) she's had sufficient dough to not care about her declining album sales (a 'mere' one or two million per outing). Plus, she's been busy taking more and more control of the creative reins – producing both her last two studio albums.

Still, it could be viewed as a brave departure that she's chosen to write and work with producer Guy Sigsworth, the sonic brains behind acts as diverse as Seal, Bomb The Bass, Björk, Lamb, Talvin Singh, Madonna, Britney Spears, and Frou Frou. *Flavors of Entanglement* sounds almost entirely electronic, 90% digital in creation, and well over a year in the making. Created in Guy's west London studio it's still undeniably Alanis, yet – and flying in the face to today's gritty musical landscape – it's precise, and polished to perfection.

And what's so 'home grown' about all this? Well, the man who helped shape most of the sounds and vocals behind this epic is Australian programmer/engineer/guitarist, Andy Page. I started our conversation by asking Andy about the process behind building up the songs...

FULL FLAVOURED

Andy Page: Alanis wanted to go in a different direction for this album – she wanted a more electronic, sonically expansive sound to contrast with her previous records. She heard *Let Go* by

Frou Frou and loved the production, and got in touch with Guy.

I wasn't there for the writing sessions, but from what Guy told me, things happened very quickly. They wrote 23 songs in less than a month. Alanis would come to the studio with her journals – she had a lot of lyrical ideas prepared. Guy had some basic sketches prepared, or he would come up with something on the spot. She would write a melody to suit, and fit some of her lyrics around the melody.

It was then a matter of building up the arrangements, bit by bit. We did that in a variety of ways depending on the song. Usually the guitars were worked on first, and we typically built up several songs at a time – there wasn't a set pattern for how we developed each song.

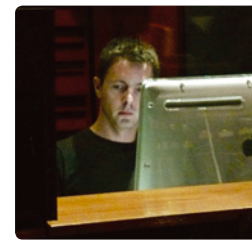
CHAIN OF COMMAND

Gavin Hammond: What's Alanis like to work with in the studio?

AP: She's fantastic to work with. As well as being an amazing artist, she's one of the nicest and funniest people I've ever met. As long as the production was true to the song, and she sounded good, she was happy. Her comments would address the vocal. If she sounded great, and the track supported her in the right way, she was happy.

GH: Was there a typical vocal signal chain?

AP: The vocal chain was quite simple. Alanis has used the same AKG C12 mic for years and this was connected to an Avalon 737 preamp, and from there fed into a UREI 1176 compressor, which just worked on the peaks a couple of dB. From the 1176 it was straight into ProTools via a Digidesign 192.



Vital Stats

Name: Andy Page

Occupation: Programmer/engineer in London

Claim to fame: Worked with producer Guy Sigsworth on Alanis Morissette's latest album *Flavors of Entanglement* and Bebel Gilberto's *Momento*. Helped Sasha produce his *Xpander* EP and Madonna's *Ray of Light* remixes. Collaborated with BT on *Movement in Still Life*, and GT on *Electifyin' Mojo*. Contributed to the soundtracks *Phone Booth* (with Harry Gregson-Williams) and *Go* (with BT).

History: Grew up in Hobart. Started playing guitar and piano. Began using computers and recording at high school where there was a basic studio. Played in various bands, wrote his own music, wrote for theatre, played in the pit, and did some session work. Moved to Sydney. A mutual friend recommended him to the DJ Sasha in 1997, and he flew him up to Port Douglas to spend two weeks writing on a mobile studio setup. Sasha liked the fact that "I knew my way around the machines, and that I was good at coming up with musical ideas quickly." After that he flew to London, where they did the *Xpander* EP, and a month later they were flown to LA to remix Madonna's *Ray of Light*. One thing led to another from there: "It really was a case of being thrown into the deep end – I didn't really have any 'professional' studio experience before – I had to learn quickly."

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The biggest problem I encountered was spill from her headphones. She likes it *loud*. At one point, I put on a second pair of headphones to hear Alanis' mix, and I almost leaped out of my chair. The thing is, when her monitor mix in the 'phones was right, she sang beautifully – we didn't need to do heaps of takes. If the mix wasn't right, she didn't give the best performance. Early on, I worked out what she likes – which is everything bloody loud, her vocal even louder, and lots of reverb!

JAGGED LITTLE SPILL

GH: How did you deal with the spill?

AP: The spill was fairly easy to deal with: I'd put a low-pass filter on the output bus to reduce the high frequency spill, and during mixing I'd ride the volume down in between phrases so it wasn't audible. The real problem was feedback through the cans, especially on songs where the vocals were more exposed. I worked out what frequency the feedback was occurring at, and used a Waves Q2 EQ to notch out that specific frequency – two bands of 18dB cut at around 6k, with a really narrow Q. This tamed it, but didn't eradicate it completely. Later on, I did volume rides and more Q10 notching to make it inaudible.

GH: What other equipment did you use to make the album?

AP: This album is unashamedly digital – I'd say it was 90 percent ProTools. Once the acoustic sources were recorded, such as vocals, guitars, strings, they didn't leave the digital realm. A great deal of the instrumentation is electronic, made either inside ProTools or with soft synths.

I see ProTools as being far more than just a hard disk recording/editing/mixing system. I

see it as a huge modular synth that you can use in whatever way you want. I love the sound of ProTools – I would much rather work with just a shtonking 'Tools rig and a good set of monitors, than a big console and lots of outboard gear. I think the sound is cleaner, tighter, and more accurate. I love the fact that the attack transients are completely preserved. The creative potential is massive – particularly what you can do with plug-ins and automation. We'd never have done this album with a console and hardware outboard processing.

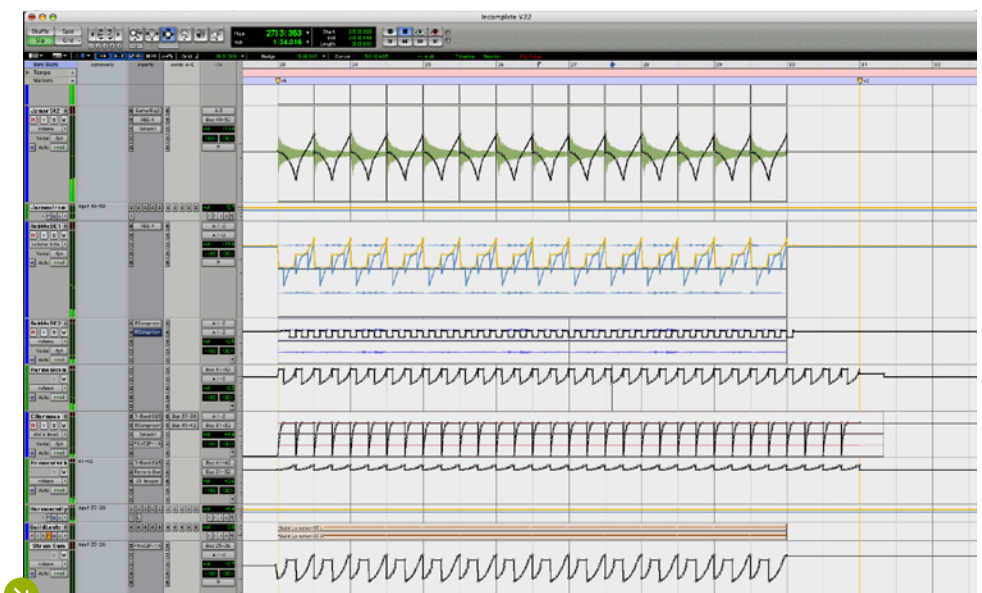
GH: What are the secret weapons on a session like this?

AP: Apart from ProTools, the other weapons were software. All the electric guitars were DI'd straight into the computer, and all the guitar sounds were crafted with Native Instrument's Guitar Rig 3. Initially, we were using a Line6 Pod Pro, and we recorded a DI, with the intention of re-amping later on. But once we got Guitar Rig, there was no looking back. Right up until the mix stage, I was still adjusting amp and cabinet settings, to give each guitar part its own sonic character to sit perfectly in context.

I also used a lot of processing software, like Soundhack, Metasynth, Reaktor and Spektral Delay. There are quite a few 'whiz-bang' sound design moments on the album – often I'd design these sounds using material from the multitrack.

GH: Listening to parts of the album, it's incredibly open and clean sounding, yet very original – how so?

AP: It's a combination of things. As far as it being clean and open, I think it's a combination of ultra-detailed editing of each musical part, subtractive EQ, and ultra-detailed volume



Andy Page: Here's a bunch of guitars in the chorus of the song *Incomplete*. The top part shows sustained chords, one per bar. I'm using volume automation to dip the level after the initial attack, and then the volume swells back up towards the end of each

chord to a few dB higher than the initial level. I'm also automating the gain on a distortion effect from Guitar Rig 3, making the swell more dramatic, increasing the gain toward the end of each chord.

On the bottom part, which is an open string

strummed acoustic part, I've created a ducking effect – as if it was being ducked from another source, like you would hear in a modern dance track. This creates a kind of negative attack – by reducing the level suddenly on beats one and

three, then coming back up to normal level, you can draw the listener's ear to the part without increasing its overall level.



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riding. I've been using digital EQ pretty much exclusively for 10 years now, and back then digital EQ wasn't anywhere near as good as it is now. I figured out early on that the best way to use them was to only cut, not boost – which always messes with the transients.

I still work this way – I very rarely boost. I always get rid of any unwanted bottom end, and then I shape the midrange – that's the crucial area, where all the 'mud' is. I'll often reduce or completely remove resonances, and certain harmonics in individual sounds with the Waves Q10 – and I'll often automate the amount of cut. Some of the EQ curves I apply are ridiculous, where I carve out heaps of the spectral content, sometimes with quite a few bands... ultimately you have to trust your ears and do whatever it takes to make a given sound work in context.

Getting to know the volume automation in ProTools was quite a revelation for me. It's a really basic thing, volume, but it's such a powerful tool, particularly with the level of detail that you can get with ProTools. I use it to shape parts in a mix in a way that you can never do with a compressor or volume rides on a desk. It lets me squeeze as much musical information out of each part, to make it sit perfectly in context with the other instruments. You're also able to get right down to the micro level to shape attack transients, and make ducking effects.

I have a general approach of being extreme, to make the most of every sound on the track-sheet. Attack transients are extremely important – I love making them really 'pop'. I always set the attack times on compressors quite slow to let the transients through untouched. If I'm increasing the stereo image, I'll make it *really* stereo; if I'm making something dry and in your face, I'll do my best to make it painfully so; if I want to space something out and make it trippy, I'll make it *really* spaced out and trippy. It's easier to have a heap of really strong colours, then carve away the excess.

DEVIL IN THE DETAIL

GH: Can you describe the vocal production techniques in some detail?

AP: It's a pretty extensive process. Guy has been refining his methods for a number of years, but I bought some new things to the table.

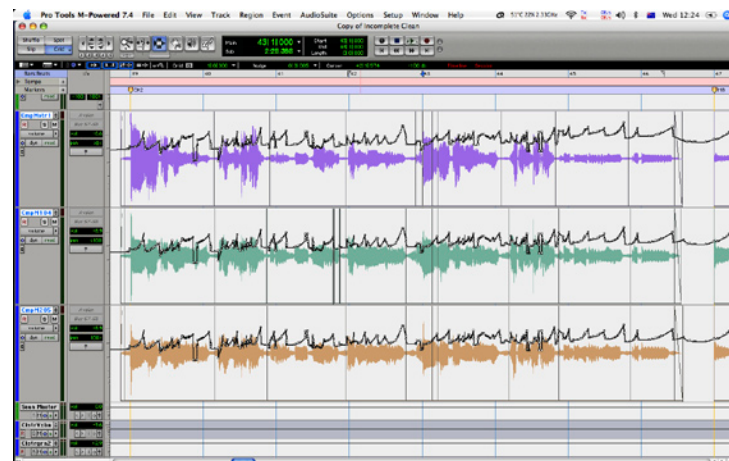
After tracking, the first thing to be done is the comp. I actually find it easier to break up each phrase into small pieces – when you focus in on smaller chunks, it becomes really obvious which is the best take to choose for each given line.

After the comp, comes editing and tuning. Sometimes I'd edit the timing one syllable at a time, otherwise I'd only edit the timing of certain words. It's always contextual. Sometimes, when there wasn't a great deal going on rhythmically, I'd make sure the vocal timing was spot on, so the vocal was the component in the mix that gave the 'head nod' factor. Other times, I'd leave the timing looser, like on *Moratorium*, where she sings it almost in 12:8. Often there were sections that were double- or triple-tracked. Those sections were always aligned really tightly – and I'd clone the double and triple to the lead track. It's the oldest trick in the book, but it's such a powerful sound when there are three Alanis's in unison.

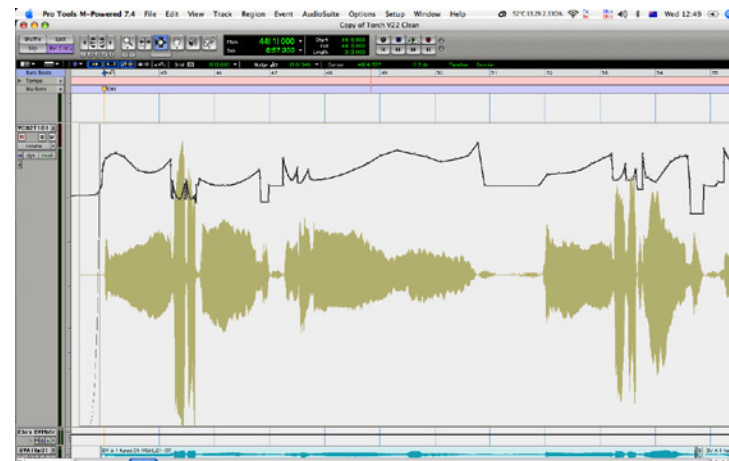
After that, comes the tuning. One basic rule here: I never ever use Autotune in Automatic mode. I think it's the most horrible sound. I hate the way people set it to 'kill' and quantise the pitches. The trick is to always use it in graphical mode, and use your ears – never be ruled by what the graph tells you. The other rule here is that it should *never* sound like it has been tuned – the process must be completely transparent.

After that, the effects sends are prepared. The rule here is: never ever let any sibilance, plosives, or 'G' and 'V' sounds pass to the sends. The send level was automated to only let the actual 'note' components through – the send level is constantly changing between 0dB and no send at all. This probably sounds like a lot of work, but I can whiz through it in half an hour, and the result makes such a big difference – 'T's or 'S's sent to the reverbs and delays are really distracting. Then you can push the returns quite high, still have ambience around the vocals, and it will still sound 'close'.

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After the sends are sorted, volume rides are next. I love what you can do with the automation in ProTools – the control you have is amazing. I used to use compressors to control volume but not any more. Once I realised how detailed you could be with volume automation, that was it!

The vocal rides are super-detailed – I'm using rides to shape every note, every syllable. I didn't use a separate de-ess process – the volume automation is so accurate that you can de-ess simply by reducing the sibilance by a few dB. You don't get any of the artefacts of the compressor, and you can hold the level of the vocal perfectly on top of everything else in the mix.

MIXING FLAVORS

GH: What about mixing? Can you explain your methods?

AP: The big thing I learnt from Guy was to sort the vocals out first. Previously, I had worked on the 'frame' first, then I worked on fitting the vocals in to the track. Guy told me the story of when Spike Stent mixed *Unravelled* by Bjork, which Guy produced. Guy said that the first thing Spike did was to push the lead vocal fader up and start doing volume rides, then he worked up everything else around it, which makes complete sense – the vocal has to command the song.

Fortunately, though, Guy and I had a similar approach to mixing; and that approach is not to have a separate mixing stage. I've always had the

approach of mixing as I go along – I've never subscribed to the 'fix it in the mix' fallback. As new parts are added to the arrangement, I always do whatever editing, processing and volume riding is needed to make those parts sit in context. I like to make it sound 'like a record' as soon as possible.

And we both love digital mixing. At the Village in LA, there was a '70s Neve console in Studio A, but it was basically used as a very expensive computer table and volume knob. Sure, those consoles have a sound, which can be very desirable in certain circumstances, but it wasn't what we required for this album. I think there is a certain romance that you get sitting down at a big console – it does make an engineer feel quite important! But I'm not interested in that. I think mixing consoles and hardware control surfaces only represent a fraction of what can be achieved with ProTools. I didn't use a hardware controller for ProTools either – I dislike devices that pretend to be mixing consoles as much as I dislike real consoles. I see most control surfaces as an anachronism – forcing an old school interface onto a system that is much more powerful.

LITTLE CHOICE

GH: And mastering? Why did you do it yourselves and what did you do?

AP: There has been a lot of talk of late of the 'loudness wars' and associated evil! I completely empathise with the general consensus that slamming everything to death is having a negative effect on music. That said, for the



SECRET WEAPONS

For Alanis's vocals: an AKG C12 into an Avalon 737 preamp, into a UREI 1176. Almost everything else is digital. ProTools with Waves plug-ins, Autotune, NI's Guitar Rig 3, Soundhack, Metasynth, Reaktor, Spektral Delay, a massive sound-library and many hours of automating volume and send information.



What have we learned?

Always stay positive and try to find new and creative ways to solve old problems. Near enough is never, ever even close to good enough. Why not make it perfect if you can? If the songs and the performances are brilliant – the process is like a beauty treatment: taking something that is already great, and making it absolutely perfect. Consoles and analogue equipment are irrelevant: a max'ed-out ProTools rig, some great monitors, a keyboard and a track ball are all you need.



Alanis record we simply had to compete with other records coming out in terms of volume.

Initially, I decided to master just the B-sides, not realising how the process would develop. We hired a Crane Song STC-8 compressor, a Manley Massive Passive EQ, and a Prism ADA-8 converter. There is a song called *Incomplete* which we knew could be released as a single, so we decided to make it 'loud and proud'. I started mastering just from the two-track mix. As I started pushing the compression, the way the vocals were sitting changed dramatically – all the work I had done shaping the vocals was destroyed. So, I bounced stems, separating the vocals from the track. I went back and refined the vocal rides, bringing down any sibilance, shaping the vocals to work more with the compression. But, separating the vocals from the track wasn't enough – the compression and limiting were affecting other aspects of the mix, guitars and drums, in particular. So I went back and made separate stems of nearly everything, so I could have complete control over all aspects of the mix. I always used a medium-to-slow attack time on the Crane Song, to let the transients through as much as possible.

The process evolved into a secondary mixdown – it also gave me the chance to really get as much as possible out of everything in the mix. I did more volume riding, more EQ... I also did quite a bit of automation of the final limiting. In a few songs there was quite a disparity in volume between verses and choruses, so I automated the limiter's threshold to come down during the verses.

GH: At the end of the project, what do you think you learnt as an engineer?

AP: Buckets of stuff. Apart from all the technical breakthroughs there was a lot of non-musical stuff that I learnt from Guy. He has a very positive, 'anything is possible' attitude – which always pleases the artist. And if the artist is happy, the job is done. ■