



Audio at the heart of the games phenomenon

Next generation games consoles and new game genres make music and audio more important than ever for the world's best-selling entertainment medium. **NIGEL JOPSON** looks at the business of games and identifies a new rich seam of opportunity for the young and adventurous at heart.

AT THE BEGINNING OF 2003 it seemed surprising to announce in these pages that UK sales of video games had surpassed music sales, and fairly radical to suggest an eclipse of US music by games was imminent. By 2004, the US game market had achieved US\$11b in sales, putting music at \$10.5b and movie box office at \$9.3b in the shade. Today, the UK games market is Europe's largest, worth £2bn in 2005, with an installed base of more than 25 million devices — an equivalent of 11 games in every household.

With a new generation of advanced consoles hitting the shops, it's not a trend that looks like slowing, in July total game sales rose 29% year-on-year. Unlike movies or television, a video game is a high involvement activity and players spend multiple hours playing and re-playing. 'Gamers get totally immersed in games,' says Richard Jacques, a former Sega composer who recently scored *Starship Troopers* for Empire Interactive. 'In games you control the action, so in my opinion game audio is even more important than film audio. You [the player] are the character, the director and the centre of the action, so

the audio needs to revolve around you.'

I first saw the potential of games for song placement when I noticed my son starting a PlayStation game, then lying on the floor to read a magazine: 'Why aren't you playing the game?' — 'Oh, I'm just listening to the music!' Soon publishers were setting up specialised games sync teams. 'We've moved into the next era,' says Charlie Pinder, MD at Sony ATV Music Publishing. 'Any new development is quite small compared to the big one we've all made over the past three years. It's like — Oh, we get it now — let's get in there and get involved.' Record labels are keen to match their artists with hit games. Def Jam, a division of Universal, even has two games published by Electronic Arts (EA) that enable players to fight cartoon versions of its tougher Urban artists — such as *Ludacris*, *Method Man* and *Ice-T*. 'We look at the portfolio of games coming out in the next year and map out which artists we are going to pair to which games,' says Greg Thompson, Def Jam's executive vice-president of marketing. The long lead time to develop games ties in well with the artist recording cycle. 'When the opportunity is right, it's a great

association between artists and video games because we market to the same consumer.'

EA, the world's biggest games publisher, now has an entire division devoted to acquiring music. Competition is high and deciding which songs get placed is the job of Steve Schnur, world-wide executive of music and audio. 'The impact of musical introduction that MTV and radio have had, video games now have,' he observes. Music travels in the opposite direction as well, as the underscore for very popular titles is released on CD and online. Top games sell in numbers that music artists can only dream of — *GTA:San Andreas* shifted an amazing 677,000 copies in its first weekend of release in the UK. With those audience numbers, it was a no-brainer for Rockstar Games to release an eight CD box set of music from the game, for the *San Andreas* faithful.

The use of music follows several patterns, depending on the type of game play. A common solution now involves key songs licensed from labels, with an underscore commissioned from a composer — a familiar structure derived from feature films. In the case of sports games with a constant spoken commentary — like the UEFA football games, for example — the underscore can be dispensed with, and the player may choose from a jukebox-style menu of licensed tracks to play when the sports action is not in progress. With NexGen consoles featuring Internet connectivity, record labels would love to capture the opportunity of updating the jukebox song selection. 'If you play some of these titles, the soundtracks can become tedious,' thinks Adam Klein, EMI Music's executive vice-president of strategy and business development. 'How do you update that? This is becoming increasingly possible technologically and we are actively looking into doing that.'

A more challenging form of game music is the so-called 'interactive' score. At the simplest level the interaction is intensity based, with different mixes supplied by the underscore composer. If the player is just limping through the game, the mix would be weak and dry, if the player is doing well the mix would become bombastic and up-tempo, a trick to double the score might drench the mix with reverb. This variation is achieved through crossfades during play to different mixes of the same track. A recent development involves stems, where the sound designer is able to introduce or eliminate different elements of a composer's work based on the player's success — won some wings? Fade up the strings!

Perhaps the hardest type of interactive music to compose is for adventure odyssey games: the timing of the cues is indeterminate, as a player might be investigating a virtual landscape for a while. Music is essential, but must give the impression of constantly changing. Marty O'Donnell, composer of the 11 million-selling adventure *Myst* for Bungie Studios, explains how he builds ambient, chordal and percussive beds that will be triggered at random by the playback engine. The elements have to fit together in any combination: 'I have ambient music, I have rhythmic and percussive, I have stingers ... because it's the Xbox I can play back as many tracks as I want,' explains Marty. 'Music is very malleable, more than you would think, the important thing is that the sting happens with the action!'

A new genre of game has recently emerged, where music IS the game, and the graphics are somewhat secondary. Examples of these are Sony's *Singstar* and RedOctane's *Guitar Hero*. *Singstar* comes with two USB-equipped microphones, it's essentially a Karaoke game where two players sing along to a genre-spanning range of tracks, from Madonna to Motorhead. The game has an Autotune-like function

that scores players on how well they hit and hold notes. Gold notes held for the correct time give extra points. So, when Madonna yelps an ear-piercing 'hey!', you go with her for the extra score. If you have an Eyetoy (camera) plugged in your face will replace the face on the video clips.

RedOctane's Guitar Hero comes with a small plastic 'guitar' controller, equipped with a virtual strum-trigger and a tremolo arm. Five coloured buttons on the neck trigger guitar samples that are played in time to an on-screen band. At the easy level it seems like a cheap game for kids as you ham along to Smoke On The Water, but switch to expert mode and you'll find rapid hammer-ons and pull-offs obligatory as you riff to Crossroads and try to play chords on the plastic buttons for Killer Queen. These games are addictive because they can be seriously challenging, and having two controllers adds a vital social element to game-play. In recording terms, my mind boggles just thinking of how many samples had to be perfectly played and recorded for Guitar Hero — and I'm a tape-veteran who remembers managing superstar albums with 90 plus reels strewn around a control room. Of course the music is not by the original artists, it has been very, very carefully re-played by good session musicians, so the only license involved is for publishing. The fact that you can almost run a complete virtual recording studio in the background of a game on the new Sony PS3 gives a clue as to where this game genre may be headed — and not with plastic controllers.

It's easy to look at the numbers in the games industry — The Sims 16 million, Myst 11m, Gran Turismo 10.8m — and assume that the production tools must look just as slick as, or be even more sophisticated than, the tools we use to record music.



In fact, game programming tools bear comparison to the state of business software in the early eighties: not for their technical abilities, but for the fact that it's quite normal for each game studio to write its own development tools in-house from scratch. At one time this may have delivered some competitive advantage, but, with increasing team size on sophisticated games, this means primitive interfaces and a huge learning curve for new programmers joining the company. It means sound designers either require some programming knowledge, or they need to go and explain to a programmer: 'look — I want a doppler effect on this sample, so I need a frequency

shifter and maybe a couple of 80ms delay lines ...' It bears comparison to the 1960s and early 1970s in the recording industry, when studios still built their own mixers and recorders. As composer Inon Zur (Lineage II, Warhammer, Pirates of the Caribbean) wishes: 'If only I had a bridge between Cubase and the audio engine — meaning I could in real time shoot stuff into an Xbox and see how it works — then I wouldn't need to pay a salary to someone to sit with me. I sit with guys and help them place the music with maps and flags — it's a waste of time. When I'm scoring film, I look at the picture and spotting notes, and do it. Why not in games?'



Richard Jacques, the composer for *Headhunter: Redemption* and *Sega Rally 2006* believes audio budgets must be understood better, as development studios frequently impose unrealistic limits on the audio, while simultaneously demanding unscheduled surround mixes and live musicians. 'If they don't push the resources forward, their games are just going to sound worse than the rest of the titles on the shelf, and that equals bad reviews, which can be the kiss of death to the sales,' Jacques maintains. 'They need to know what good audio really needs in terms of budget. It cost £250,000 for *Headhunter's* sound — and this included compelling features like live newscast recordings, multiple voice actors, Foley artists, and the orchestra. Films have huge audio budgets, around a minimum of 5% of the total film budget, and we have to make the players' experience even more immersive than that of a film,' he added. 'There is no denying that quality audio costs, but why should we have to try and better the production quality of a film in a tenth of the budget?'

However, composer Marc Canham of Nimrod Productions makes an interesting point about the failure rate of game titles: 'With games, the break-even ratio on projects is remarkably low, as low as it is for major label CD projects, less than 20:1. But a music album costs a lot less to make — games cost about \$5m — the really big titles are around \$10-12m including the marketing. Games publishers do scrutinise every spend and music, whether we like it or not, is always the bolt-on component. Of course there are producers who are savvy and like to involve composers early on, Henrik Strandberg of Atari got us involved when the graphic artists were still coming up with concepts, but that is still the exception rather than the rule.'

There's a definite learning curve for the games industry to climb to achieve its audio ambition, at every level from budgets to recording. The tradition of do-it-yourself-for-everything is still quite ingrained. Despite being a very experienced sound designer at EA, Nick Laviers seemed quite surprised when explaining he had obtained better results for the voices of Harry, Ron and Hermione in the *Harry Potter* games by employing a casting director and agent. I was myself surprised that a top studio would even attempt to hold their own auditions for actors (which EA did, initially). Laviers thought £8000 for a casting director was rather expensive — I was impressed with the good deal! Nick presented the idea of maintaining an open mic from control room to recording talent as a discovery — I wondered which music recording engineer didn't do this as a matter of routine! Despite the big sales, it's still an industry that's growing up.

Around 55% of European games development studios are in the UK. Titles such as Eidos' *Tomb Raider* and Rockstar's *Grand Theft Auto* have become global brands. There is currently such a shortage of skills that headhunting and talent-poaching have become a bitter issue. Already recruiters are looking outside the games field for experienced artists and animators working in high-end CGI from other media sectors.

With the NextGen range of consoles, audio has finally thrown off its Cinderella role. Sony's new PS3 lacks dedicated sound hardware, everything is done in software. So Sony has built an engine called Multistream with the ability to play any sample at any rate, up to 8 different DSP effects on each stream, and the capability of handling 512 audio channels on one processor. The many effects include IR reverbs, and all the DSP functions are being converted to VST format — looks like a huge opportunity to me — as audio for games finally gets its party dress. It's a fantastic chance for young audio engineers to work in a world where imagination knows no bounds. ■