

GAME ON

Whether you're wrestling a three-eyed spectre inside the missile tube of an alien spacecraft or leaping from log to log as if you're life depends on it because you're a frog that can't swim, chances are your predicament is supported by a musical accompaniment. So who makes it and how?

Text: Graeme Hague



▶ Don't mess with me. I'm a pretty good shot with a Mark IV sniper rifle. I can show Biggles a thing or two in a Sopwith Camel, too. Now, if only I can stop a nasty sod called Bloodmarine from blowing me to pieces every few minutes...

Okay, I admit that I play computer games, but I'm not alone. Their popularity today is voraciously swallowing the disposable income of 'gamers' of all ages. It's big business – *big* business. In July this year a game called *Battlefield 1943* was released in a downloadable version for Xbox and PlayStation only (a PC version is coming), and within a week it notched up 600,000 downloads and achieved the one million mark by August. That's just *one* franchise game among hundreds that enjoy similar success and they all bow in reverence to the Godfather of games, *World of Warcraft* which requires a monthly subscription to play online and at last count had 11.5 million players.

Should we care? Yes, because it's an enormous audience for the musical scores that are created for these cyberspace adventures. From heavy metal to sweeping orchestral arrangements, all genres of music contribute to the playing experience, and at the cutting edge of game development the emphasis is on music produced to demanding standards. That's what we do, right? This is music that's clever, complex and entertaining. And for once it's not supposed to be mashed into an iPod – not at first, anyway.

TRY WHISTLING THIS

It's arguable just how much of an impact game music delivers. Some claim that game scores are supposed to be subliminal and not actually *listened to*, like film soundtracks perhaps. Now before you choke on your Bonnox, let me clarify that last statement by way of example. After seeing the movie, *Titanic*, no-one was

expected to leave the cinemas whistling the cheerful little melody James Horner put together for when the ship gurgled down under the Atlantic Ocean killing everyone. Who's going to hum the ripping, power-chords that announce the start of the Wake Island map in *Battlefield 2142*? You'd be surprised. The flipside is that in the same way film soundtracks are successfully sold on CD, so are the music scores of best-selling video games. There are even singles released on iTunes and the like that are made popular by games. There's that iPod again.

When I began digging deeper into this industry I figured I'd find that the musicians would be some kind of nerdy, bespectacled teenagers who were banished to a basement in Silicon Valley with an M-box and a Casio keyboard. I couldn't have been further off target if I'd been blindfolded.

Contemporary game composers have a list of credits to their names that include cinema box office smash hits, top-rating television shows and more than a few charting bands. Not surprisingly (when I bothered to think about it) the skills and experience required for scoring successful films and television are much sought-after by the gaming industry with a bit of *vice-versa* poaching going on, too.

CHANGING THE MIX

At first glance it appears that scoring music for games must be like to working to film and TV. It's just a process of creating musical cues that are synchronised to vision, albeit CGI (computer generated imagery). That's about where the similarities end. The big difference is that games aren't linear and at any moment a player can make choices, fail or win, and trigger events that drastically affect what happens next – results that might require one of several musical themes. There is no conventional timeline or plot progression. A

simple example is that at the end of a game's section a player may have won or lost, so the music will be either triumphant or mournful, before segueing into an introduction of whatever level awaits them. It becomes a complex task then to compose multiple cues of various lengths and themes that must also match more than one possible visual transition.

Then it gets harder. Games software is one of very few formats that require *simultaneously* playing back multiple files without being able to employ some kind of mixdown. A scene might need the sound of footsteps, gunshots, explosions, a voice-over *and* the music in the background – and all of these may or may not require playback depending on what's occurring in the game. It's a completely interactive environment and a far cry from Donkey Kong.

ASSET MANAGEMENT

The composers find themselves working very closely with the developers once the music is recorded to ensure that each scenario interacts smoothly not just with the vision, but also without interference from sound effects. For the record, cues are generally called “assets” and categorised by their situation: win music, lose music, battle music, scoreboard music, and so on.

Another tricky X-factor that composers try to allow for is the wide range of skill that players have. Some games are very puzzle-based meaning that someone might spend five or 10 minutes (or, like me, half the damned day!) figuring out the solution or it could take them 30 seconds (think music?). Creating a 10-minute opus for this part might be fun, but not practical – not for everyone's skill level anyway. At the same time the mood needs to be established reasonably quickly. Nothing is straightforward.

KICK OF DOOM

The genre and style of the music can be a foregone conclusion if the game's subject has a blatant historical or geographical theme. Also, some games are a franchised progression, such as *Call of Duty 4* or *Duke Nukem 3* and the previous incarnations set a precedent. On occasions when a game is a whole new project things can get interesting. In-house

composers will usually get a chance to actually play the game during its formative stages, giving them a feel for the music that's required. Freelance composers aren't so lucky. They get their first taste of the action much later in the game's build versions and it's sometimes just videos of gameplay provided for inspiration. Which isn't to say that freelancers are an untrustworthy mob of scoundrels. Beta versions of games in their early stages of development can involve a massive amount of data and coding. They're not something that can be zipped onto a flash drive and popped in a postbag. Mind you, in this multi-million dollar industry security *is* a serious issue and new software is fiercely guarded.

Interestingly, the job of a video game composer does closely share *one* thing in common with film and television soundtrack scoring. Providing any 'temp' or 'placeholder' music to produce a demo always opens a can of worms. The developers invariably get attached to the temporary music and it's a nightmare weaning them off it again!

In an ideal world composers are given decent budgets that allow them a wide, creative palette including studio time with skilled musicians. However, that's rare. The foibles of writing computer code makes the progress of a game's development about as predictable as the game itself, and mostly it's too hard to reliably book studio session times, even if the money is there. This is the main reason game scores rely so heavily on synthesized and sequenced music. A computer game's content and continuity can be utterly and radically changed at any time rendering recordings almost useless. MIDI and sequencing can save the day. The only other solution is for the composer to be a multi-instrumentalist, like Frank Klepacki (below)... or married to one.

Ultimately, the nuts-and-bolts result for all the game's assets are MP3 files (and sometimes OGG) at the highest sample and bit rate allowable. A best-selling game can require maybe 40 full tracks, plus dozens of cinematic and incidental cues as well. Every game is different, but how much data space is allocated to music is a contentious subject. In the

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final stages of production most composers will be in the developer's office trying to keep their files at the highest quality they can.

HARRY MACK

Harry Mack has seen a lot of both sides of the games industry, first starting work as what many novice game audio designers would consider the dream job to aspire to: "an in-house gig with a fully equipped sound studio." It's a bit like hoping – at best – to be a teaboy at your local radio station and instead landing a job assisting Bob Clearmountain at Abbey Road Studio while he records the Coors naked (the Coors being naked, not Bob, and just the girls... never mind).

After five years Harry left his role as Lead Audio Designer for a company in the heart of the Silicon Valley to pursue an active role in the indie-game community. He created a studio in a turn-of-the-century loft conversion near Toronto, Canada. Harry employs a minimalist approach to mixing and mastering hardware in order to focus his resources on remaining technologically cutting-edge in a rapidly advancing field. His DAW weapon of choice is also Sonar 8 Producer's Edition with Sound Forge 10 on hand for fine editing, mastering duties and sound effects design.

While he misses being closely integrated into a development team, freelance work offers many creative benefits. Providing full audio design services for smaller projects allows him to shape a more cohesive audio soundscape, making sure both the music and sound effects work excellently together. Faced with the 'MIDI-versus live musicians' debate Harry has the same answer. It's all about budgets and time – luxuries that are rarely available – and being able to make changes on-the-fly, which is inevitable.

And one of the real joys of Harry's situation is finding himself catching the wave of an exciting new game community that's been started by developers in Southern Ontario, Canada. It seems the centre of the gaming universe isn't quite in Silicon Valley after all.

FRANK KLEPACKI

In the past he's composed for several game publishers including Lucas Arts, Sega and Disney, but Frank Klepacki now enjoys the role of Audio Director at Petroglyph, a games development company with a long list of successful releases. Which means he's involved in creating the music from an early stage, rather than being further down the food-chain like those freelance composers. In addition to his impressive portfolio as a composer, Frank is also the producer of several bands in the

Las Vegas area, and working as a live audio engineer he's also mixed performances by groups such as Bad Religion and Kings of Leon. Frank is determined to keep his high, real-world musical values in his work with games scores, but it's not easy and he has a fight on his hands. The preferred media for first-release computer games (rather than update patches) is still DVD and all the creative departments in the company always want more than their fair share of that 4.7GB pie. Unfortunately, audio is seen as the easiest data to compress or edit down. The developer's mantra towards audio is all too often "as small as possible" and Frank is one of those who often has to barricade the studio doors, weapons drawn and loaded, to protect his quota of the DVD package.

His preferred audio workstation consists of a high-end PC running Cubase 5 and Kontakt as the primary software for composition and sound design. He's used Cubase since making the jump from the Atari ST to the PC... ah, that'd be a while ago. Favorite virtual instruments are the East-West Symphony Orchestra, Stormdrum, and Omnisphere.

As an accomplished guitarist and drummer, Frank explains: "I'm probably the only game composer to have his own signature guitar and bass custom-made. As far as amps go, I use a Mesa Boogie DC-5 for all things metal and a Peavey Classic 30 for warm, classic sounds. My old Traynor head from the '70s has a nice alternative vintage tone. I always mic my amps with a Royer 122V tube ribbon. For jotting down quick ideas when an amp's not available, I dial up the Peavey Revalver Mk III. For bass guitar, it's an Ampeg B2-R through a 4x12-inch Hartke cabinet, mic'd with an AKG D112, or alternatively I have favorite settings on the Bass Pod and a Korg AX300 Bass processor. I play DW maple drums with Sennheiser 421s on all toms and the snare, the Yamaha Subkick and a Shure beta 91 on the kick, and an Electro-Voice RE27 on the floor tom. A Royer SF12 is a great stereo overhead or a pair of Audio-Technica 4041s gives you some nice immediate high frequencies. I don't even bother with a hi-hat mic or a bottom snare mic if I can help it. When using a virtual orchestra on the computer, I use Kontakt 3 and I've handpicked several instruments over the years to get it how I want it."

Obviously, he's not taking things seriously at all...

HANGIN' WITH MICHAEL HUANG

Michael Huang is a composer and sound designer based in Los Angeles, who specialises in audio post production services for film, television and creating scores for computer games. His primary software for writing and recording music is Sonar 8 after he started using Cakewalk products way back in the

dark ol' days of Windows 95 and upgraded through the various versions of Sonar when it became Cakewalk's flagship sequencer. For sound design and post production Michael has begun using ProTools 8 LE, but for composing he's stayed faithful to Sonar.

Like Frank Klepacki and Harry Mack Michael would love – every time – to have the budget and time to use live musicians as much as possible, but the flexibility demanded by the industry and the tasks at hand makes it next to impossible, not to mention that the costs incurred would probably terrify some of his clients, many of whom are smaller indie developers. As a freelance operator Michael is one of those composers who is brought in more towards the end of a project and gets asked to make sense of a pile of demos, sketchy concepts and ideas – that's a skill on its own. This invariably culminates in a shopping list of cues to create. The upside is he doesn't often get deeply involved in integrating his music into the game's coding. Once his cues are delivered to the programmer, Michael gets to move on.

All his work is done in his own studio and at the top of his virtual instrument list is also East-West's Quantum Leap Symphony Orchestra. In 10 short years Michael has built a solid reputation with more than 100 video games and multimedia projects to his credit.

GAME OVER – WE WIN

Although the final product gamers hear is often an MP3 file of music stems generated by a lot of MIDI sequencing and triggered samples, it's heartening to find a sector of the music industry that's focused on improving the audio experience and delivering it that way. Computer games are not meant to be listened to with an iPod and earbud headphones that Virgin Airlines gives away in the hundreds every day. Game developers want you to hook up the 5.1 home theatre, crank the volume to 11 and hear every bang, crash and boom – and yes, every instrument's note – in clear high-fidelity. Some of these musical scores are works of arts in their own right and deserve an audience. In fact, several world tours have taken place with full orchestras playing popular tunes from games – a clever way of bringing classical music to younger people.

It's a subtle industry, one that we take for granted like the music we hear on TV every day. But it has some in-your-face credibility and production values we've been missing lately.

Talking of subtle, I'm going to log online now and kick Bloodmarine's arse. ■