Filling in the *Dead Space*
Jason Graves composes music for the scariest game ever made.
Interview by Tim Curran

Jason Graves may be a relatively new name to film music fans, but he's been making quite a name for himself over the past few years in the video game industry. We asked him about his new score for the game *Dead Space*, and he revealed far more about the process than we ever expected. We hope you enjoy it.

FSMO: How did you get involved with *Dead Space*?

Jason Graves: Don Veca, the audio director for *Dead Space*, heard the demo music I submitted. The demo request was very specific, so the music was mostly custom stuff I composed just for *Dead Space*. One of those pieces ended up being the theme we recorded live for the game's credits, note-for-note, the way it was originally submitted.

FSMO: How early along were you brought in?

JG: First, let me say my experience with *Dead Space* has been anything but normal, and I mean that in a very positive way. I was brought in on the project much, much earlier than usual—about 1/4 of the way into the game's development. Normally I'm not even hired until at least 3/4 of a game has already been finished. As a result, I had a lot more time to learn the details of the gameplay and experiment with the music. Most game scores I've composed have a two- to four-month production cycle for the music (very similar to a film score) —I spent two years working on *Dead Space*.

At first, everyone focused on a small portion of the game and made it the scariest, coolest game possible—this included perfecting the music. After about a year of trial and error Don and I finally nailed down the [*"Dead Space* Sound"](#) (and the rest of the team had finalized the other aspects of the game). Then I dove into music production for the entire game while everyone else focused on the rest of the development. Normally, I'm brought in when the game is close to being finished, so I feel like I'm playing "catch up" the whole time. With *Dead Space*, I was working at the same pace as everybody else so there was a really nice balance and feeling of teamwork.

FSMO: Can you tell us a little about the game and what the musical directives were?

JG: EA's goal was to create the scariest game ever made. You play [the character] Isaac Clarke, an engineer stranded on a mining ship in space that's been overrun with an alien species. There are lots of dark corridors and lots of blood, not to mention some of the freakiest creatures I've ever seen in a film or game.

Dead Space needed more musical texture than musical themes. I approached a lot of the score more from a sound design standpoint than one of thematic composition. A lot of times the player may not even realize the orchestra is playing, especially during the quieter parts of the game.

The main direction I had from Don was to create a score that could seamlessly move from subtle and spooky to extreme tension in a moment's notice, depending on the gameplay. In order for a single piece of music to have this kind of flexibility, *Dead Space* needed an adaptive score, meaning music that actively changes with gameplay. Don had already determined we needed four individual levels of music to smoothly transition from the lowest to the highest intensity levels.

I approached the music one of two ways: I would compose a high intensity cue and then deconstruct it and brake it down into those four levels. This technique worked well for large creature battles—pieces that were fairly loud from the first level and simply got more rhythmically intense as the levels increased. The second technique was to compose the cue from the ground up, first creating a very creepy, quiet "level one" and building the whole piece up from there. This was the way most pieces were composed because it allowed for the entire dynamic range of the music.

Don also wanted lots of really creepy orchestra sounds, which are lacking in today's commercial sample libraries, so I knew I needed to record a live orchestra. Don asked how we could get four layers of really avant-garde, adaptive music into the game. I told him I would have to compose a cue on paper, deconstruct it into basic building blocks, record it with a live orchestra by section in multiple lengths and dynamics, edit the pieces back in my studio and then put it back together again. He simply said, "Okay, then—let's do that."

Of course, the "plan" I suggested to Don was more of a theory than a fully thought-out idea. At the time, I didn't think anyone would allow me to go through with it! Little did I know my off-the-cuff suggestion would launch me into a two-year production cycle with multiple recording sessions, multiple orchestras and months of post-production and editing.

As far as I know, no one has ever approached a game score this way—none of it would have been possible without Don's vision and his "this is just how we need to do it" attitude. As much fun as the music was to work on, for me it always

comes down to the relationship I have with the Audio Director. Don is an absolute blast to work with, a consummate musician himself and simply a really cool guy. He provided the perfect balance of freedom and feedback—the final score to *Dead Space* is due just as much to him as it is to me.

FSMO: Were you scoring to video through the process? Or storyboards and scripts?

JG: For the adaptive music I had "walkthroughs" for reference, which is a movie file of someone playing through each level from beginning to end. I also had many on-site visits with EA and sat down and played the game as much as I could over a two-year period. There were a lot of great scenes I was able to score to picture, like spooky reveals and creature encounters. The giant tentacle attacks are still some of my favorite "jump out of your seat" moments that I was able to score to picture.

FSMO: The cues I listened to sounded like they were exclusively live orchestra, which was refreshing. Does the score contain any electronic elements at all?

JG: First of all, my biggest goal was to have a "live orchestra" sound for the score. In fact, most of the score is entirely MIDI-based, triggered note-for-note with my keyboard. However, the notes and effects I'm using were all recorded specifically for *Dead Space*. Why didn't I record everything live in one go at the sessions? It was simply the most efficient way to have control over the four layers of adaptive music. I did conduct some of the slower, more epic-sounding pieces live because I knew ahead of time I wouldn't need the same amount of control over them.

Normally I would have demos, or mock-ups, of the score for a producer to hear and approve before the recording sessions took place. Not so with *Dead Space*— the avant-garde techniques and effects I wanted to use are not available in commercial sample libraries, so demos were not an option. As a result, no one from EA had heard a single note of music before we showed up on the sound stage to record.

I had at my disposal, literally, *anything* I could think of doing with a live orchestra. It was an amazing opportunity to either prove my theory and be the "uber-composer" of *Dead Space* or totally fall on my face. I kept calling Don and leaving messages about ideas or some cool technique I discovered. Finally he just said, "Hey man, whatever you do will sound great. I'll hear it at the scoring session." While it's nice to be trusted, that freedom brought with it an amazing amount of pressure. How much time do I need with the orchestra? How much music should I expect to record each hour? Should I get lots of variations of a few techniques or more techniques with fewer variations?

I researched and studied every piece of 20th-century experimental music I could find over a six- or seven-month period, completely immersing myself in these beautiful and horrific aleatoric techniques. Those techniques became the building blocks for the entire score. A "musical puzzle" to be put back together in different ways for different parts of the game.

For example, I take a sustained note that's slowly bending up and down, really creepy sounding, and record it loud and soft, short and long with the violins. Then I do the same thing with the other three sections of the strings. Now I've got

16 different combinations of that one effect available in any possible configuration, and that's just the strings. I took the same idea and applied it to the woodwinds, brass and percussion as well. There was definitely a lot of experimentation, both on and off the scoring stage.

I orchestrated everything thinking about how I would ultimately be using it in my studio, so there was a lot of "pre-arranged" material recorded. For example, all the brass clusters I recorded were already voiced exactly the way I would voice them if I were recording an entire orchestra together—I just recorded each instrument on its own (French horns, tenor trombones, bass trombones, cimbasso and tuba individually). So instead of being limited by just a single brass cluster, I could mix and match each brass instrument with each other for an amazing variety of combinations, with everything already balanced and properly voiced. I applied this idea to everything—and not just a single brass cluster. I had eight clusters for each brass instrument, all at four different lengths, multiple dynamics, swells, muted, etc.

There were experiments with electronic textures in the early stages of the score, but it made the music seem too "Hollywood"—more sci-fi adventure than horror. It was just too polished and just not organic enough. The score needed to be much more visceral and raw.

Instead of using the tried-and-true ambient synth pad or thumping synth bass, I tried to utilize the orchestra as a one big, organic synthesizer. For example, I would have all 48 string players sustain a random note on their highest string without any vibrato, which produces this amazingly wonderful, rich 48-note chord. It really sounds more like a synthesizer than an orchestra, but is so much more flexible and emotional, especially since the chord sounds completely different each time it's played.

I applied the same technique to simulate a short synth bass sound, using random pitched string staccatos to simulate the overtones of a synthesizer. The effect was one of the most versatile sounds I recorded—I could sit down and "play" the

entire string orchestra on my keyboard one chug at a time and it sounded exactly the way it did when I was standing in front of them conducting.

FSMO: The focus of the music seems to be to really enhance the darkness and desperation of the world of *Dead Space*. How did you approach writing thematic material for something this dark?

JG: The overall musical approach to *Dead Space* was one of texture and mood over traditional thematic scoring, but there are a few themes that pop up every now and then, specifically [Nicole's theme](#) (the most traditional sounding) and themes for some of the bigger creatures in the game. Kudos to EA for letting me play the game as much as possible. It's amazing how much information even five minutes of gameplay can relay compared to hours of conference calls or documentation. I would say playing the specific levels I was composing for was the biggest influence on my writing. That and lots of coffee!

In the absence of any major themes for most of the game, I used specific rhythms and meter changes the same way I would a melodic theme, so the music has some kind of identity without being too "in your face," melodically speaking. I carried these motifs through each variation and intensity level to give the score cohesion.

FSMO: In most cases video game music can't really be synched too tightly to specific scenes because of the interactivity of the scenes, or the options for the user. Do you think as the technology progresses that we'll see music synched more tightly to scenes, more like movies are?

JG: Definitely. A large part of truly adaptive and interactive game music is dependent on technology—RAM available, storage capacity, etc.—that aspect of a game score's potential will continue to grow along with its technology. However, the most important part of an adaptive score is the people who produce and develop games. They must realize the impact that adaptive music can have on their gameplay experience. Without the proper implementation, the best interactive score in the world will never be heard the way it was intended by the composer.

For *Dead Space*, Don invented a "Fear Emitter" that the music reacts to on scalar level, from 1 to 4. Maybe there's a Necromorph waiting just around a corner that has a Fear Emitter attached to it. As you get closer to the corner the music builds, until it's in full frenzy mode when you're right about to turn the corner. However, you change your mind and walk away—the music begins to calm down. But then

you stop halfway down the hall and just listen—at that point the music isn't building *or* getting quieter. It's still really creepy, but it's a stagnant creepy, a "sitting still and not moving" creepy, because that's exactly what the player is doing at that time.

There's an easter-egg-type hidden feature that makes it easy to hear the adaptive score: Hold down the joystick/arrow key on the main menu for three or four seconds. The longer you hold it down, the higher the level of intensity music that's playing (10 seconds or so should get you up to the highest level). It's the perfect place to experiment and hear how the music changes intensity levels.

FSMO: The dissonance in this score is a lot of fun, and the music is [very active in parts](#). Was the active writing something the producers wanted, or was it your choice?

JG: The only direction I had was for the fourth level of music to be very tense. There are lots of different ways you can compose music to sound "tense"—tempo, pitch, rhythm, harmony, etc. I tried to utilize all of these elements to change things up, musically, so every cue didn't have the same, "Oh, here's another creature attacking and now the screechy strings are playing again" sound for each encounter. I settled into this active, bubbly, crazy-metered groove on my own after the first few cues and it just naturally progressed from there. I set the bar pretty high for myself at the beginning, but to me the action in the game dictated a frenetic score.

FSMO: What were the specifics of the recording sessions?

JG: There were two recording sessions, almost a year to the day apart from each other. The first one was in Seattle with the Northwest Sinfonia, about 65 players total. The second one was at Skywalker Sound with another 65-piece orchestra, plus a 20-member choir.

FSMO: Did you orchestrate it yourself?

JG: I orchestrated all the final game music myself, but I did have a lot of help with score preparation and orchestration for the recording sessions from my orchestrator, Paul Taylor. Paul's a terrific composer himself and was a key factor in organizing and planning the sessions with me so I could record as much music with the least amount of explanation to the orchestra. There was so much experimentation and non-traditional music—I was constantly talking to Paul about specific details, like how low I could write for French horns, or the best way to notate 42 individual string parts that are all different from each other.

Most recording sessions result in three to five minutes of finished music completed each hour. With Paul's help, I planned out all the techniques and notes ahead of time, grouped into 5- to 10-minute "cues." Then I simply started each cue and we rolled until the end, recording everything as we went with hardly any explanation to the orchestra needed, despite the unusual techniques I had notated.

As a result, I averaged 40 minutes of finished music each hour. After a full day of recording, I had five-and-a-half hours of material recorded, and that was just one

of the two recording sessions. The preparation time alone was six to eight weeks for each session, and the post-session editing and creation of instruments was at least three times that. The idea I had was to plan everything so that by the time I was composing with all these custom sounds, everything was already 90% of the way there, mix-wise. It was more a choice of orchestration and simple balance than "mixing" each piece.

FSMO: You've certainly found a niche in scoring video games over the last several years. Was that career path a conscious decision?

JG: Not at first. My background is in classical composition and scoring for film and television. I was approached about seven years ago for my first game due to my experience composing and conducting for live orchestra. There was a decent budget for the orchestra and I ended up having a blast composing the score.

After that first title I was hooked. I switched my career focus from film and television to video games. I still compose for film and television, it's just not the work I actively pursue. Most non-game work I do now is with folks I've known for a long time.

FSMO: Many composers credit video games with allowing them more creative freedom than they might have in other media—specifically film and TV. Would you agree?

JG: Absolutely. There's definitely a lot more freedom than working on a film. For a game I get descriptions like "Creepy Boss Fight" or "Ambient Exploration" and a five-minute movie of the gameplay. Other than general instrument/mood guidelines I've already discussed with the audio director, I have total freedom to create whatever music I think would work the best for that specific scene in the game.

On the other hand, I have to work harder to keep up the excitement and "cinematic" quality of the music since I'm not constantly scoring to picture and being fed guidelines as I would with a film. There's a wonderful instant

gratification I get when scoring to film, since the picture is right in front of me and I can see/hear the results of my score as I compose. With games, I may have a screen-capture of the gameplay, but I have to wait until the music is implemented into the game to hear the final results.

FSMO: What's coming up next for you?

JG: I just finished scoring a thriller and the producer's already into his next film, so I'll be working on that in about six months. I've got some other big games I'm working on but unfortunately can't talk about yet—developers like keeping things secret until the big announcement.

The two I can mention are coming out in 2009: The first one is *Alpha Protocol*, a really cool James-Bond-type game with a fun score—lots of espionage and intrigue. The second is a game based on the *Alien* franchise. The developer is going for a feeling that incorporates the horror aspects of Scott's *Alien* with the action from Cameron's *Aliens*. Needless to say, I'm really excited to be involved!

—FSM