

<b>Institution:</b> University of Chichester
<b>Unit of Assessment:</b> Music, Drama, Dance and Performing Arts
<b>Title of case study:</b> Impact in the games industry from practice based research in sound design and soundtrack
<p><b>1. Summary of the impact</b></p> <p>Baysted's creative research practice in composition and sound design culminated in a critically acclaimed and globally distributed commercial racing simulation game. The impacts of this research are worldwide commercial success, enhancement of the user (gamer) experience and the stimulation of public debate and discourse. Evidence is provided in terms of computer games sales, professional and amateur review.</p>
<p><b>2. Underpinning research</b></p> <p>Much of Baysted's practice as research operates within a commercial context. The commercial brief acts as a series of creative parameters stimulating and necessitating innovation and new insights into the particular genre or form being explored. These innovations and insights have been more widely disseminated as part of the growing sub-discipline of Ludomusicology.</p> <p>The underpinning research for the impacts described herein relates to <i>Shift 2: Unleashed</i> (2011), a multi-platform racing simulation game published and distributed worldwide by Electronic Arts. Baysted devised the original concept for the soundtrack as well as being audio director, lead sound designer and one of five composers on the project.</p> <p>In terms of composition Baysted's research explores how music can function, non-diegetically, to enhance the player's experience and depth of immersion when, in the simulation genre, music is never interactive and is very rarely heard during sequences of gameplay. Furthermore, Baysted conceived to re-imagine a range of popular song form material as a hybrid cinematic style score that would function as a cohesive, unifying force governing the player's emotional responses and deepening immersion. This innovative approach had never been used before in the genre. The score fuses contemporary cinematic orchestral language with 'distorted' electronica and sound design elements. Additionally, the output utilises and builds upon Baysted's novel approaches to realistic vehicle sound modelling which he has developed in previous projects.</p> <p>By operating outside the norms of the genre, the score seeks to address the research question by describing at once the 'real' racing driver's emotional and psychological journey and by enhancing the player's concomitant experiences. To this end Baysted explored the possibilities of using the 'menu' system as a primary interface for the gamer's experience of the score and experimenting with how the visceral and symbolic elements of the sound design might also be used to support the overall experience. Conventionally music and vehicular sound design never share the same signifying space. In <i>Shift 2</i>, however, the sonic and musical experience remains unbroken because layers of processed 'pit-to-car radio' transmissions and vehicular sounds are superimposed onto the music. This yields far deeper player immersion than other works in this genre. The outcome was a sonic experience combining innovative score and sound effects that functioned to prepare the player emotionally for the action that follows and to reward their success after it.</p> <p>Furthermore, the score references the musical and orchestrational vocabulary from key films and film genres, and this vocabulary informs and guides the transformation of the rock songs drawing on the intertextual relationship between games and the paramusical phenomena associated with popular music artists (Karen Collins (2008), <i>Game Sound</i>, MIT Press, Cambridge: MA, p.129). The compositional process itself involved finely deconstructing the original recorded song 'stems' using original instrumental audio files for each instrument in every song, identifying and isolating each song's 'genetic fingerprint', and subjecting the resultant material to a variety of transformational operations including: reharmonisation, reorchestration, metrical reframing, tempo alteration, resynthesis and resampling. These innovations – not before seen in any video game – have been picked up by award panels, reviewers and gamers alike.</p>

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In terms of sound design, Baysted's objective was to faithfully recreate the visceral nature of competitive motorsport by placing the game player at the centre of a racing driver's sonic experience. Experimentation with different techniques and tools of audio capture led to each car being recorded on chassis dynamometers or at a racing circuit using an array of specialist microphones positioned strategically internally and externally. Each sonic component was modelled and recreated in game: engine, transmission, surface noises, chassis noises, and impacts with tyre walls, Armco and concrete. The engine sounds were sampled at specific frequencies (RPM) under 'load' in order that an innovative crossfading audio model could be constructed in software. The game's physics engine, running at 200hz, 'plays' this model depending upon player input, thus the audio is fully and truly dynamic. Environmental sound effects (crowds, tannoy, helicopters) were designed to situate the player at the circuit itself and post-production effects such as reverberation, echo and filtering are deployed to allow the vehicle to interact with objects within its environment realistically.

**3. References to the research**

*Need for Speed Shift 2: Unleashed*, published and distributed worldwide by Electronic Arts Inc., Redwood, California, 2011. ASIN: B004GNGB00 The game was released globally in April 2011 in 3 DVD formats: Microsoft Xbox 360, Sony Playstation 3 and Windows PC. A mobile version of the game for iOS devices was released globally in November 2011.

Since the game's launch in April 2011, Baysted has given papers about the score at conferences and colloquia in Oxford (Royal Musical Association Study Day, St Catherine's College, 2012), Utrecht (2013) and Falmouth (2012) universities, and has presented the work to industry peers at a masterclass at the British Film Institute in London (2012).

The score and game has received a variety of prestigious international peer award nominations (Joystick, Game Audio Network Guild, Golden Reel).

Other projects in which elements of the work that culminate in *Shift 2* include:

*GTR: FIA Racing Simulation* (2005), *GTR2: FIA Racing Simulation* (2006), *GT Legends* (2007), *BMW M3 Challenge* (2007), *Need for Speed: Shift* (2009), and latterly *Ferrari Racing Legends* (2012).

**4. Details of the impact**

The impacts of Baysted's innovative research into sound design and soundtrack composition in racing simulation achieved primarily through a commercial pathway are threefold:

- Commercial success of the *Shift 2* game;
- Enhanced enjoyment of gamesplayers;
- Debate, discourse and commentary in and around the games industry.

These impacts, which are materially and distinctly linked to Baysted's specific and innovative contribution to the simulation games are to some extent inter-dependent and are described in detail below.

**Commercial success of the N4S Shift and Shift2 games**

Need for Speed is the most successful racing video game series in the world, and one of the most successful video game franchises of all time. Baysted's contribution came to the third generation of the series (releases no. 13 and 17, termed herein as *Shift* (2009) and *Shift2* (2011)); the research described in 2). Relates to the second of these two games. *Shift 2* has sold 3.75M units globally and a key factor in the commercial success of this game is the sound design and soundtrack as indicated by these reviews from IGN (the largest games news site in the world, ranked 326 in the world for web traffic of all sites; <http://www.alex.com/siteinfo/ign.com>). About the sound design: "*The excellent audio visual feeds into this; the cars growl with purpose and they're finely modelled too*", and "*Shift 2 Unleashed's a violent and immersive racer that recreates the driving experience like no other game on the market...*"; and about the soundtrack "*This is a totally unique approach to videogame scores*," said Steve Schnur, Worldwide Executive of Music and Marketing for EA. The score and game has received a prestigious international peer award nominations (Golden Joystick, Game Audio Network Guild).

### Enhanced enjoyment of gamers

Over 3.75M people worldwide have played the game (not including multi-players per unit and second hand sales) plus many millions more have experienced the score through TV, Cinema and online advertising campaigns. Evidence that the soundtrack makes a substantive contribution to the gamer's experience and enjoyment is provided in the millions of views of YouTube videos of the game featuring its sound design and soundtrack. A search on YouTube for "shift 2 unleashed soundtrack" (in quotes) provides 1550 results, each are video clips from the game. A total of 658 of these are YouTube video clips from Shift 2 game menu screen i.e. no gameplay just sound. The top 10 of the 658 'menu only' clips are clearly downloaded by people just wanting to hear the soundtrack total 611,541 views alone (18/10/13). Comments posted on YouTube in reaction to these re-imagined tracks further underpin the importance of the soundtrack to the quality and intensity of the overall experience, the majority, but not all are positive (quotes, colloquialisms & typos are quoted verbatim) : *"this was the best thing off the game!"*, *"Did you know that Rise Against used this mix in one of their Concerts? I don't care if people said this is bad. For me, this is just pure awesomeness."*, *"...this song and the soundtracks are pretty damn dope, it fits the game perfectly"*, *"The specifically composed soundtracks from Need for Speed 2 and 3 are on another level altogether"*, *"this song reminds me that im in the final GT1 world championship"*, *"It's scary! This is game has been turned into a horror film compared to the 1st one.."*.

### Debate, discourse and commentary in and around the games industry

The game has generated much debate across awards panels fora, blogs, news sites, YouTube and music sales and share sites. The innovation in the game were critical in nomination for Game Audio Network Guild 2012 annual awards: Shift 2 nominated for Best Use Of Licensed Music; and also a factor in the nomination for Best Racing Game in the 2011 Golden Joystick Awards. Some of the sound design techniques for the realistic recreation of engine noise also featured in an earlier instance of the Need for Speed Series (Shift; 2009) leading to a nomination for Best Sound Editing: Computer Entertainment in the 57<sup>th</sup> annual Golden Reel awards (2010). Reviews by professional critics and amateurs are often sites of debate; there are myriad such reviews online; a Google search of "'need for speed shift" and review' yields 15,100,000 results. Many reviews refer to the audio experience, many citing it as an important feature of the game and the gaming experience (see IGN link above) and others less positive; nevertheless public debate is evidenced; other illustrative reviews are provided in the corroborating sources. The gamers engage in debate too as indicated above; a Google search of "engine sound" "need for speed shift" returns 1,220,00 results. Whilst not always so eloquent as the reviews gamers often pick up on (and argue about) aspects of the sound design and soundtrack, the re-imagined pop/rock hits are either described as awesome or irritating, the engine sounds as realistic or not.

## 5. Sources to corroborate the impact

Website for Need for Speed: Shift 2 unleashed:

[http://www.needforspeed.com/en\\_UK/shift-2-unleashed](http://www.needforspeed.com/en_UK/shift-2-unleashed)

Confirmation of Baysted as Audio director and composer on Need for Speed: Shift 2 Unleashed

<http://www.slightlymadstudios.com/team.html>

Illustrative reviews of Need for Speed: Shift 2 unleashed:

- (<http://uk.ign.com/articles/2011/03/29/shift-2-unleashed-review;> )
- <http://uk.ign.com/articles/2011/03/23/experience-the-drivers-emotional-journey-with-the-shift-2-unleashed-soundtrack>
- <http://www.gamespot.com/shift-2-unleashed/>
- [http://www.youtube.com/results?search\\_query=%22shift+2+unleashed+soundtrack%22+and+menu&search\\_sort=video\\_view\\_count](http://www.youtube.com/results?search_query=%22shift+2+unleashed+soundtrack%22+and+menu&search_sort=video_view_count)
- <http://www.metacritic.com/game/pc/shift-2-unleashed/>

Comments taken from YouTube clips for:

- Need for Speed Shift 2 Unleashed menu song Rise Against - Help Is On The Way (87,600

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- views). <http://www.youtube.com/watch?v=mB6X3LGIT30>
- Biffy Clyro - Mountains (NFS SHIFT 2 'Gladiator Remix' Menu Anthem) (77,745 views)
  - <http://www.youtube.com/watch?v=O0mZldBbO1k> and 30 Seconds To Mars - Night Of The Hunter (NFS SHIFT 2 'Gladiator Remix' Menu Anthem) (70,059 views)

Golden Joystick Awards 2011 (Nomination for Best Use Of Licensed Music)

<http://www.vgchartz.com/article/87820/golden-joystick-2011-nominees-announced-vote-now/>

Golden Reel Awards 2010 (Best Sound Editing – Shift)

<http://latimesblogs.latimes.com/awards/2010/01/golden-reel-award-nominees-announced.html>