THE ECHO

ASD
ASSOCIATION *of* SOUND DESIGNERS

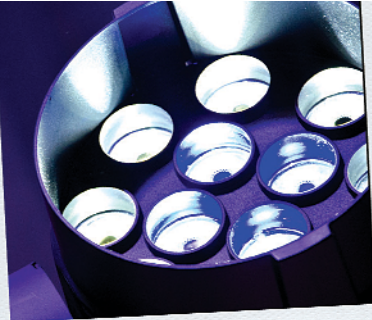## The future of theatre sound design

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Editorial

Welcome to the fifth issue of The Echo.

We have been a bit busy at the ASD these past few months, which is why you are receiving this a little later than planned. We have been putting a lot of energy into setting up a training programme for this year. By the time you read this we will have already run six courses this membership year and we have another five open for registration. We also have another six planned for later in the year too, ranging from product specific seminars on AutoCAD and d&b's ArrayCalc to more general seminars on sound effect design and how to design the perfect panto! Where possible we're creating online versions of these seminars for those who cannot attend and we have a couple of these online already.

We are also planning a range of show-based seminars, starting with *Charlie and the Chocolate Factory*, where sound designer Paul Arditti will be showing attendees around the system and revealing some of his trade secrets. We had a very successful New Year drinks social event in January, with support from our corporate members and the National Theatre. Expect to see more of these in the future.

This year we will also be exhibiting at PLASA Focus: Leeds for the first time. If you have not been before it is well worth a visit as it is a much more intimate affair and includes free lunch!

Gareth Fry
Chair, Association of Sound Designers

PLASA Focus
PLASA Focus: Leeds 2013, the leading event for pro audio and entertainment technology in the north of England, is taking place at the Royal Armouries Museum, Leeds, on Tuesday 30 April and Wednesday 1 May, 2013.

130 exhibitors will debut over 100 new products fresh from international launches at Prolight + Sound and a highly acclaimed PLASA Professional Development Programme will run alongside the event, providing visitors with access to over 20 free seminars, tutorials and product demonstrations.

The exhibition takes place across two halls, with exhibitors including Adam Hall, Amber Sound, Audio Logic, Audio–Technica, Bose, CUK Audio, d&b audiotechnik, db Technologies, JHS, KV2

Audio, Martin Audio, Midas & Klark Technik, MT Pro, Nexo, Orbital Sound, POLARaudio, RCF, Roland, Sennheiser, Shure Distribution and Yamaha, among others. Visitors can visit the ASD at stand; RA – B6.

Jon Burton (FOH for The Prodigy and Bombay Bicycle Club) will present *How to Soundcheck!* and Gareth Fry will be giving a talk entitled *Creative Manipulation of Sounds*. There will also be a very special keynote address from audio legend Tony Andrews. Product demonstrations from Sennheiser, Martin Audio, d&b audiotechnik and Audio-Technica will also form part of the programme.

PLASA Focus: Leeds is renowned for its friendly, informal atmosphere which attracts over 2000 members of the North's entertainment technology community each year that come to see new products, learn, network and do business. Registration is free and there is a free buffet – style lunch on both days of the show.

Visitors can register for free now which covers entry to the show and the Professional Development Programme:
www.plasafocus.com/leeds.

Showcase: Black Watch

Black Watch by Gregory Burke
Directed by John Tiffany
Associate Director (Music): Davey Anderson
Sound Designer: Gareth Fry
No.1: Andrew Elliot (2006-2007); Gideon Turner (2008); Chris Reid (2010 - 2012)
Opened: Edinburgh Drill Hall, 1st August 2006

2013 tour dates include:
SECC, Glasgow: 28th March – 13th April
UAE Sportspark, Norwich: 17th – 20th April
Paramount, Seattle: 25th April – 5th May
ACT at the Mission Armory, San Francisco: 9th May – 16th June

Black Watch first opened in a car park in Edinburgh in 2006. Since then the the production has played to 212,000 people, across four continents, winning 22 awards, including an Olivier award for sound designer Gareth Fry.

How did the show come about?
Gareth Fry: The show was born from two events which happened simultaneously: a suicide bombing in Iraq which killed three members of the Black Watch regiment; and the announcement that the regiment was to be amalgamated into the Scottish regiment, essentially disappearing in all but name. The show came out of interviews with ex-Black Watch soldiers who'd returned from Iraq and had left the army. The interviews form the basis of the show, with several scenes revolving around a writer interviewing soldiers in a pub in Fife. We've changed some of the names, but the show is a factual re-telling of the events leading up to the suicide bombing.

Why did you choose to perform the show in a car park?
One of the early decisions director John Tiffany made was that he wanted to incorporate elements of the Edinburgh Tattoo into the show. Finding venues in Edinburgh during the festival is always a nightmare, particularly if you want a large playing space. However, tucked away in

the centre of Edinburgh is an ex-drill hall that is now part of Edinburgh University and used as a car park. We went to take a look at it, with the notion that we wanted to perform in traverse like the Tattoo and not much more.

The hall was pretty big, but very dirty from years of exhaust fumes and had quite fragile glass in the ceiling. One of the first things we did in the first sound check was see how loud we could go without any of the panes of glass smashing to the ground below! There were lots of other constraints with the venue, like ceiling rigging weight restrictions, but these constraints would later form the defining characteristics of the touring show. Of course the acoustics were pretty poor and being in traverse we knew we'd need to use radio mics. The performers are in
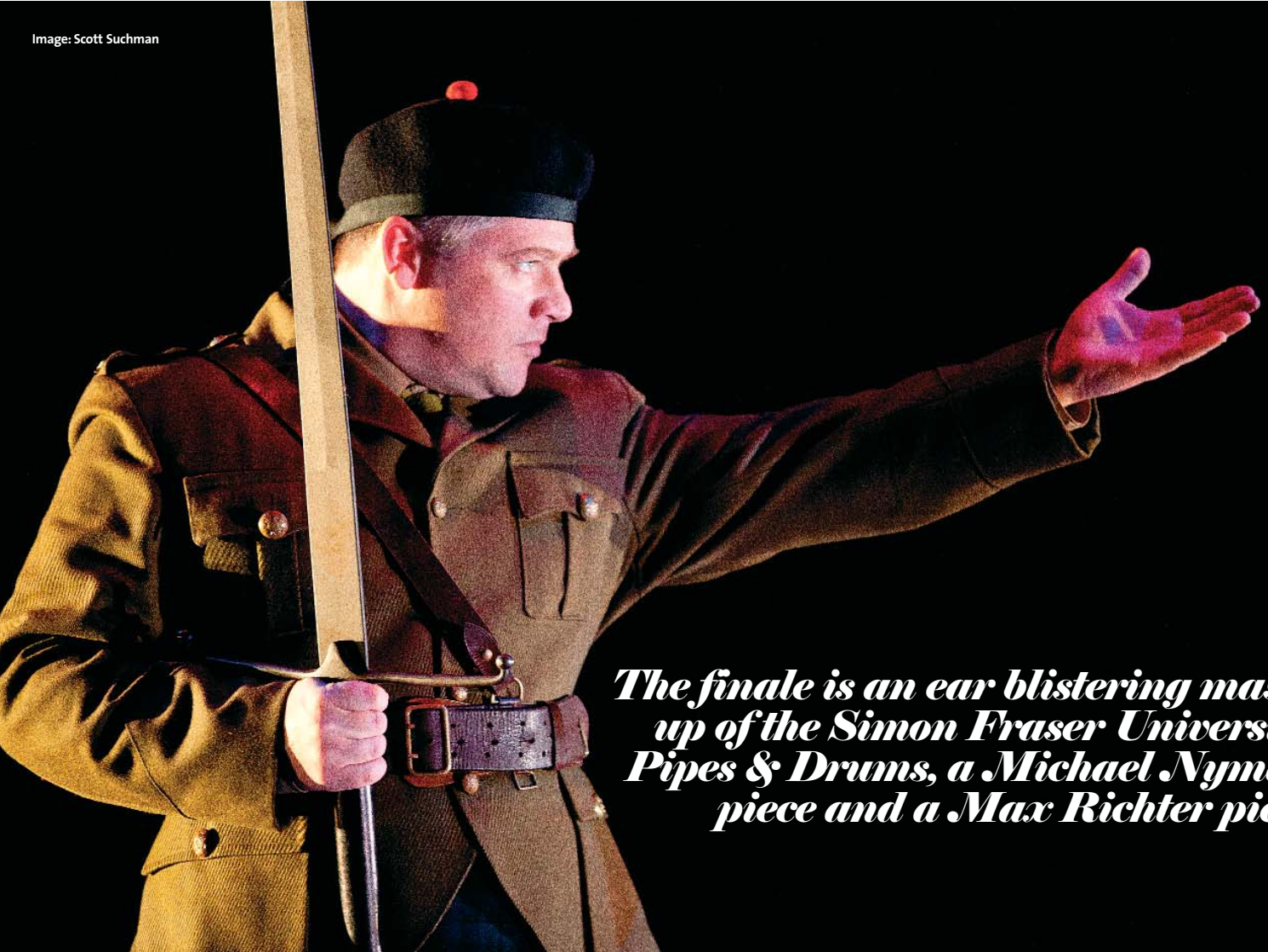
The finale is an ear blistering mash-up of the Simon Fraser University Pipes & Drums, a Michael Nyman piece and a Max Richter piece

the space between the two seating banks as well as under and on scaffold structures at either end so I knew imaging was going to be a nightmare.

How did you deal with these problems?
Acoustic treatment of the venue wasn't an option, as we didn't want to change the look of the venue by hanging big drapes everywhere. In the end I chose to go for a distributed system, with a row of EM Acoustics EMS81 speakers along the length of each seating bank, hanging low above the heads of the audience. This limits what you can do with imaging but gives the best results in terms of intelligibility in adverse acoustics. For effects speakers I went with d&b's C4s, which have a 40x40 degree dispersion, minimising the spill into the venue.

How did you create the 'sound of war'?
We were lucky to get hold of some B-roll from the BBC (video/audio used to pad out news reports), which was really useful for what it really sounded like in Iraq, particularly the 'battle net', the military comms channel relaying reports and orders. I made a version of this that underlies a lot of the show. I took quite a few liberties though. I couldn't find any explosions which had the right impact – they were all too bass'y which didn't work well in the Drill Hall acoustics. I ended up using a recording taken at

the muzzle of a chieftain tank as it fired rounds. It has a spectacular attack to it. A few years later a group of officers from the army came to see the show and we had a chat with them afterwards – they'd returned from Basra the previous week and provided me with first hand descriptions of what an incoming mortar sounded like. They spotted the artistic license I'd taken with the sound of the Warrior 'tank' too, but they offered me the chance to go and record one on Salisbury Plain, which sadly I didn't have the time to take them up on.

Were you surprised by the success of the show?
What was most surprising was the show's popularity with those who were anti-war as it was with serving soldiers and officers. The acid test came when the soldiers who had been interviewed, and who we were representing on stage and whose friends had died, came to see it. They were very moved by the show and thanked us for giving them a voice.

We were told the show would never tour but the demand for it was so great that NTS decided it was worth doing.

How did you approach touring a site specific show?
Set designer Laura Hopkins created a touring set that mimics a lot of the structural features of

the Edinburgh Drill Hall, so a lot of the speakers we had around the building retained their relative positions to the stage. Where possible the show has toured into large found spaces, though these are often difficult to find so we do also perform in theatres too. The latter often involves quite a lot of work to create traverse seating. We still get a variety of acoustics, but because we created the show in the worst possible acoustics, everywhere else is better!

We also perform in radically different auditorium sizes: some venues may have four rows of seating per side, others 15 rows. And the width may change too. I've created an audio matrix that is scalable to accommodate different auditorium sizes initially using BSS Soundwebs and latterly Yamaha DMEs. We also introduced better imaging by using delay matrices and programming the cast blocking into the Yamaha M7CL desk.

Music forms a big part of the show. How did you work with musical director Davey Anderson?
Davey has adapted a number of traditional Black Watch songs into something really beautiful. I think there are quite a few things in Black Watch that people don't expect to see when watching a play about Iraq: one of them is hearing the soldiers break out into song! Davey

has managed to create some really amazing pieces that really integrate into the show, and are part of what gives the show its heart. The musical scoring for the songs is quite minimal. I asked Davey to provide me with the music as stems so we could send them to different sets of speakers to make the sound more three-dimensional. There's normally a 'natural' reverb to the acoustic so rarely a need for any artificial reverb.

There are a lot of movement sequences in the show using found music. Some of this is straight off CD and some not. The finale is an ear blistering mash-up of the Simon Fraser University Pipes & Drums, a Michael Nyman piece and a Max Richter piece. Davey made this using a rather old keyboard sampler synth and if you listen to the tracks in isolation the noise and time stretching artefacts are awful. Put it all together though and it sounds amazing and you just don't hear the noise.

There is a certain rough aesthetic to the whole show – was this a choice?

The show we first made was very rough around the edges in many respects. The audience sat on temporary seating in a venue covered in soot that didn't have any discernible heating or ventilation system, watching soldiers setting up camp in Iraq in similarly rough conditions. The

ramshackle setting, temporary seating, lack of masking is intrinsic to the show. When we came to remount *Black Watch* I was keen to re-make a lot of the sound effects, but somehow every time I made something cleaner it didn't feel right. In the end I refined a lot of things minimally but we decided to leave a lot of the show as we had first made it.

We spoke to Chris Reid who has been touring with the show since 2010.

What are the challenges of the show?

Chris Reid: The very physical nature of the performance constantly throws up challenges with regard to mic positioning, sweaty actors and damaged equipment. All before you consider the actual choreography of mixing the show, the sheer number of times you have to press that go button and the very fast paced dialogue. At various points in the show the text revolves around the sound effects to the point that the sound almost becomes the eleventh member of the cast. You have to adapt each button press depending on what you're triggering and how the cast are playing the scene that night, to keep it as realistic as possible whilst giving the cast something to play against.

How long have you spent touring with the show?

All together I've spent twelve months touring the show, with my first tour in 2010-11 taking up the first nine months of that time. We've been to Glasgow; Aberdeen; Belfast; London; Coventry; Glenrothes; Washington, DC, twice; Chicago, IL, twice; Austin, TX; Chapel Hill NC; New York, NY and Seoul, South Korea. During my time with the show we have played in very large

concert venues such as the SECC in Glasgow performing to an audience of 750 and small theatre spaces such as Memorial Hall, University of North Carolina performing to 240.

What was the most challenging venue?
The show is usually performed in traverse between two large arena seating banks. We were not allowed to build a seating bank into auditorium of Washington DC's Sidney Harman Hall, meaning we had a seating bank on stage facing the full auditorium of the theatre. This resulted in extra speakers being added to the vocal system and a re-design of the delay matrices to utilise some repositioned effects speakers as fills to increase the coverage to the far wider seating area. We also had to split what used to be duplicate signal sends to each side of the traverse to allow independent control for two vastly different loudspeaker systems and seating areas.

How do you adapt to the different acoustics you encounter?
Some venues come with a lengthy natural reverb time (The Broadway Armory, Chicago) that can add a new feeling to the very loud playback but can hamper the dialogue. In some of these instances we have had to hang additional blacks in the space in an attempt to combat this but ultimately we can't recreate the sound of a theatre auditorium in a Sports Hall. For this production the raw presentation can be enhanced by the natural acoustics of the room, it just takes a little getting used to when you're mixing.

How is the show for the No.2?
I think the No.2 experience on the show is a challenge. The cast have very physical movement and action sequences coupled with very fast quick changes and limited time offstage. So at times the No.2 is policing up to six quick changes simultaneously for mic positioning whilst possibly replacing sweated or broken microphones. The character Cammy wears two mics throughout the show as he carries up to 70 percent of the dialogue and narration of the show, and is only offstage once where he is not doing a 20 second quick change and re-entering. Monitoring his mics and knowing his every exit and entrance and the time between, is vital to decide how best to deal with any problems that may occur. I think it almost comes as a relief to the No.2 when they begin to learn the mix of the show because then they find out how busy a mix it is and appreciate just how vital all the running around they do backstage is to the person lifting the faders front of house.

Any interesting anecdotes to share?
Of course touring a show for so long with a company for 23 (ten cast, two understudies and eleven technical crew), where twelve of them are young men mostly from Scotland who are partial to a party on their days off will raise some very interesting anecdotes – none of which are repeatable in a magazine.

A FEW OF MY FAVOURITE THINGS

MIC POOL
Mic works internationally as a sound and video designer. In 2008 he won the first ever Tony award for sound design for the Broadway production of The 39 Steps. He was the first Head of Sound at the rebuilt Lyric Theatre Hammersmith, Head of Sound at the Royal Court in its 25th Anniversary year, toured extensively with with Ballet Rambert, and has designed sound for the RSC, The National and many West End and New York productions. For 23 years he was resident at West Yorkshire Playhouse, latterly as Director of Creative Technology. He is now freelance.

So what are his favourite things?

MacBook Pro (or other high spec laptop)
To me, it really is the most incredible thing that in a standard laptop bag I can carry a system built around a MacBook Pro which enables complete end to end production of sound (and video) designs from initial recordings, editing, post production and mastering through to final show control programming and output.

Twenty years ago the physical equipment that is so effectively virtualised in software on my laptop would not have fitted into a studio built on a 40-foot trailer bed and would have cost millions.

But what is more important is that it puts creative tools in the hands of everyone, liberating the means of production and, as has happened in the music recording industry, takes gatekeeping of access to these facilities out of the hands of a controlling elite.

It allows the imaginations of designers to directly connect with technologies, to allow their ideas to be shared with audiences. It enables talented people to do high quality work across the entire spectrum of theatrical endeavours and budgets, without any practical limit on what can be achieved.

And now through the most incredible piece of virtualisation yet, **Vienna Symphonic Library's MIR PRO 24** software, I can carry around simulations of first class concert halls, which go way beyond standard convolution reverbs, containing a full 9.1 Ambisonic based microphone array and place 24 sound sources within them and record the results.

Spotify Premium
The first thing I do if I am working on a show which references a lot of commercial recordings is make sure the director has a Spotify account, if necessary signing them up for a three month premium account. We can then access collaborative playlists and share ideas without any actual audio being transferred.

Having started music research activities in the days of vinyl, moving to CD in the early 1980s, amassing huge libraries at vast expense and then spending hours ripping these libraries into iTunes, each advance made the music research workflow easier and the outcomes better.

The arrival of Spotify took things to another level entirely. Instant access to such a huge library of music in all genres and in some cases really

obscure material is just incredible. Being able to find the perfect piece of music for a scene, and then instantly to be able to audition and compare many recorded versions, (and in the case of iconic period recordings, quite often several different versions of re-mastering for CD release) really refines the process of music selection. The dramatic impact that can be made on a production just by substituting a recording by a different conductor, or a different period of recording technology, cannot be overstated.

There are a few downsides. The indexing is really, really, basic, and you can no longer buy and download tracks so you do have to locate the original elsewhere. Additionally some artists are not available at all.

Mainstage 2

This used to be part of Logic but is now a separate application for Apple Mac. It allows mixing and control of audio plug-ins, instruments and effects in a live environment. For £21 it contains the most ridiculous amount of high quality instrument and effect plug-ins and samples.

I do most of the research and development of

my designs in Pro Tools using a huge armoury of plug ins. It used to be really frustrating then trying to put together an affordable system of hardware effects to get similar results in the theatre. Some effects just don't exist in usable hardware, particularly real-time granular effects which I particularly like for extreme vocal modifications.

Hardware reverbs are often difficult to program and rarely match the sound quality of the convolution reverbs I use in software particularly when, as in the Tim Piggot-Smith *King Lear* in Leeds, I wanted extremely high quality 40 second reverb times to effect thunder sheets played live on stage.

A Mac Mini, an 8-channel audio interface, and

Mainstage is, straight out of the box, the most incredibly versatile effects unit with over 120 instruments and effects. Samplers, compressors, limiters, synths, loop recorders, reverbs and guitar effects racks, and a fully featured mixer are all included.

Add in your specific requirements as AU plug-ins and you can create an effects rack perfectly tailored for your show. It's just a pain that it only has stereo output busses.

On *The King's Speech* at Wyndham's Theatre we used Mainstage to host three plug-ins which were key components of the show's sound: Speakerphone, for public address and radio broadcast simulations, and Altiverb for acoustic simulation of Westminster Abbey and other live spaces.

Quite bizarrely I did a search for a mic modeller to emulate microphones of the 1920s and 1930s and the first search result was a Waves plug in called 'The King's Microphones' which emulates the silver plated and royal crested EMI microphones that were used for recordings of royal speeches by George V and George VI, which worked really nicely.

The future of theatre sound design

A regular column looking at how our jobs and technologies will evolve in the future. This issue: PROCEDURAL AUDIO

We are on the cusp of some radical changes to how we can play back sound, and we have the computer games industry to thank for it. Game Audio shares a lot of similarities with theatre sound – it rarely locks to timecode, there is a performer (the player) who will act differently each time, and cues need to be flexible and fluid to respond to the differences in each performance (each time the game is played). Sound designers for games often have to create naturalistic or highly stylised landscapes with multiple locations and perspectives. In many games, the player is free to explore a world with different sound-generating objects and changes of time and weather. As the player may wander in any direction, the sound design has to be able to respond with incredible flexibility.

The tools and techniques for creating game audio are significantly different to theatre sound though. Rather than having a linear playlist of cues, game playback engines are programmed to take a more logical set of input parameters. Let's take, for example, a game world consisting simply of a kitchen, containing a fridge and an avatar of our player. The playback engine would take the input parameters of the player's distance and angle from the fridge, and use them to set the volume, panning, EQ and reverb dry/wet mix of the fridge sound effect. As the distance to the fridge increases, the level of the fridge decreases, some of the top end might be rolled off, and the sound is made more reverberant. A fourth input parameter might be whether the fridge door is open or closed. This fridge model is built by the sound designer, using a few fridge recordings, and defining a few mixes, and the playback engine takes care of the transitions based on the input parameters.

We can imagine using this in a theatrical context by replacing the player's input parameters with MIDI from our show control software. (Yes, I think MIDI will still be around long into the future!) So we have our show computer running our fridge sound effect model – we can then send MIDI from our show control software to set the level/distance appropriate to our scene. Not the most exciting thing in the world when you apply it to a fridge sound effect, but it has vast potential.

These models of the world are built up by sound designers using tools such as FMOD (http://fmod.org) and WWise (http://www.audiokinetic.com), and then rendered out into a playback engine, hosted within the computer game. These tools are honed towards delivering game audio, and are often quite daunting to use, belying their computer programming origins. But each new version of the software is becoming easier to use and more familiar to the average DAW user, whilst delivering more advanced forms of audio manipulation. Insomniac Games, for example, have built a crowd generator into their engine that builds up, in real time, variable size crowd sound effects using short clips of dialogue. A recent version of FMOD introduced the Engine Designer module, which allows the designer to build a basic model of a vehicle's engine, using a few simple recordings of the engine at different speeds. The module then allows input parameters, such as throttle, to control the speed of the engine. This largely automates a lot of painstaking crossfading and looping of sound effects, and the programming of how they are played back.

I worked on a show recently that was entirely set in the compartments and corridors of a train. The train had to depart and arrive at stations, seamlessly slowing down and speeding

up, and go through tunnels and under bridges. It was incredibly faffy to design using the tools we have available now. Imagine a tool where I could feed in a few choice recordings of a train and then send it parameters of how fast or slow it should be going, whether we're in a compartment, corridor or outside the window. I'd spend a lot less time doing faffy programming and have a lot more time to focus on how it sounds. The comparison I would make is to lighting desks and moving lights – ten years ago they were incredibly time-consuming to program, having to edit a single parameter at a time, but with the advent of dedicated tools, they are now much faster to program.

Imagine that rather than trawling through your sfx library to find the right rain sound effect, you could just insert a plug-in that could synthetically generate rain on a variety of surfaces at a variety of intensities. This is the next step along – Procedural Audio – generating sound effects the way a synth generates musical notes. Of course we've all heard those not-so-great rain and sea synth patches from the 1980s, but procedural audio is aiming higher than this. It is synthesis in a form closer to the techniques used to computer-generate the images in your average Pixar movie. It involves
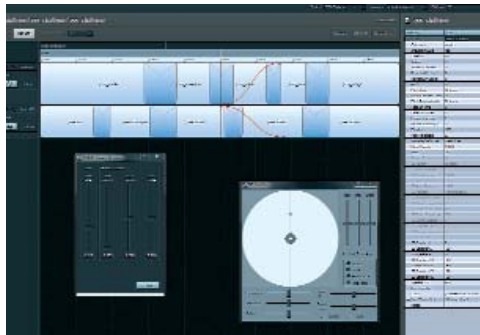
specifying the acoustic properties of sound generators and surfaces and accurately modelling the wavefronts of sound interacting. And it is already becoming a reality: http://tinyurl.com/SoundseedWindGenerator

Of course it may well often be easier and produce better results to go out and record something we want for a show, but often there are times when we need something we can't record for reasons of finances, logistics or those pesky laws of physics! Sadly time travelling with a location recorder to the 18th Century to get that perfect Italian street scene remains out of reach; and everyone must have at some point been onboard a stalled jet plane as it plummets to the ground, survived, only to find out that you forgot to press Record! Of course we can create these sounds currently, using a degree of imagination. There are also plenty of sounds that are difficult to record with enough isolation to be usable. But if you can model it... And of course, modelling offers the opportunity to

create places that have never existed, machines yet to be invented, objects that defy reality. But of course, simulating reality or otherwise is not a straightforward task. The more complex a sound generator is, the more complex it is to simulate. Consider all the separate parts of an internal combustion engine that combine to make the sound of an engine and you begin to see why this is still a little way off at present. Time must be taken by people to build these models. But these are hardly obstacles of substance. Perhaps, in less time than we think, we will be creating and buying sound models rather than painstakingly stitching them together from existing recordings.

We can learn from how players interact with a game too – increasingly players are using much more than a couple of buttons to allow a greater degree of interactivity and control: accelerometers, voice control, gestural control, and video capture are all in common use. Perhaps sound operators of the future will be using a lot more than a Go button?

FURTHER READING
http://tinyurl.com/3m76uoz
http://tinyurl.com/btxnwnh
http://tinyurl.com/c5mfnrv
http://tinyurl.com/82wzr4p

Mini profiles

ADRIENNE QUARTLY
Adrienne studied Music at University, was previously a Radio Producer and following a Masters at CSSD, began work as a sound designer/composer for theatre. Her work has appeared all over the world.

What is your current project and role?
Sound Designer on *The Vortex* at the Rose Kingston.

What is the favourite part of your work/process?
Devising with companies like Told By an Idiot, and working with music to create emotive responses to the work.

What would you change about your work / the industry?
More clarity in the fees structure and more understanding of the differing job specification from potential employers.

Top trick / tip?
I enjoy manipulating the existing music tracks in the show, creating tones and so on for underscores which help keep the same feel and timbre across the sound world of the play.

What are you listening to at the moment?
I'm revisiting an old, but brilliant album *Rossz Csillag Alatt Született* by the Venetian Snares.

PETER RICE
Peter is a freelance Sound Designer and Engineer for theatre. He has a long-standing association with the Royal Exchange in Manchester latterly as a Sound Designer and previously as Deputy Head of Sound.

What is your current project and role?
Sound Designer on *Cannibals* (Royal Exchange), *Manchester Sounds* (Library Theatre, site-specific), *The Masque of Anarchy* (Manchester International Festival).

What is your favourite part of your work/process?
The collaboration with actors, directors and creatives in the rehearsal and production periods building a show – at its most democratic it can't be beaten as a way to earn a living!

What would you change about your work / the industry?
In an ideal world that theatre, and therefore my work, would be less London-centric.

Top trick / tip?
Always do some work on a project as soon as possible, get the creative process going so that it can percolate in the background whilst working on other things. Being in a situation with limited time pressures can compromise the end result.

What are you listening to at the moment?
Nick Cave *Push the Sky Away*; Bastille *Bad Blood*; and Atoms for Peace *AMOK*.

Freelancing - VAT

In the latest in our regular series on the business of being a freelancer, we look at the intricacies of VAT.

VAT is a complex topic, and a lot of people don't realise that you have to be VAT registered if you earn a certain amount of money, nor that there are different types of VAT. Whilst being VAT registered adds a huge amount of hassle to your life there are actual 'cash flow benefits' to be gained.

This article has been fact checked by a chartered accountant but is for general guidance only and is not a substitute for professional advice where specific circumstances can be considered. Whilst every effort has been made to ensure the information contained within this publication is correct, the ASD does not accept any liability for any errors or omissions contained herein or any action taken or not taken in reliance upon the information provided in these articles.

As with all things relating to HMRC, multiple caveats and conditions apply to everything below, but this guide will cover most freelance sound designers.

VAT basics

It is mandatory to register for VAT if your turnover (all your income before expenses) goes over the VAT registration threshold: currently £77,000. You don't have to be a business to be VAT registered. VAT is an additional tax to income tax, and works in quite a different way. Being VAT registered is a pain in the arse, but does offer several advantages depending on the flavour, and can actually save you money!

There are two forms of VAT you can opt for: normal VAT and Flat Rate VAT. Which form you choose depends on your individual circumstances, but as a rough guide, Flat Rate VAT is good if you don't buy a lot of VAT-reclaimable items, whilst ordinary VAT is good if you purchase a lot of goods that you can reclaim the VAT on.

Normal VAT

With standard VAT, you add VAT at 20% to the value of the goods and services you provide in the UK when you invoice. In filling out your VAT return, you declare the amount of deductible goods and services you've bought that you have been charged VAT on. The difference between these two is the foundation of the amount of

VAT you'll pay. Confusingly though, a different set of conditions apply for what is deductible for VAT purposes than for what is deductible for income tax purposes. Typically the rules for reclaiming VAT on things you've bought are much stricter than for income tax, particularly for anything that has dual use, i.e. is also used for non-business activities. There are quite a few things that you buy that don't have 20% VAT added to their price, so you can't claim VAT back on them: stamps, train tickets, books, magazines, water utilities, to name a few. If you buy a lot of items that have VAT applied to them, then this system works to your favour. If you reclaim more VAT than you invoice for, you will receive a rebate from HMRC.

For example: During one financial quarter, you design a show for £2,000. You invoice the theatre £2,000 + 20% VAT = £2,400. You receive £2,400 from the theatre when they pay you. You purchase £1,200 (including VAT) of goods and services. You would pay HMRC £200: £400 VAT you received from the theatre minus the £200 VAT you paid on goods and services. The remaining £200 from the £400 VAT you charged the theatre is yours to keep and is effectively a reclaim on the VAT you have been charged from

other VAT registered businesses.

Normally you complete VAT returns every quarter, relating to the months just prior, so you have to be very prompt and organised with your bookkeeping and have time to produce the returns. You can reduce this to one return by applying for the Annual Accounting Scheme, but nine payments must still be made through the year.
http://www.hmrc.gov.uk/vat/start/schemes/annual.htm

Flat Rate VAT
Is a much simpler form of VAT and is consequently favoured by a lot of freelancers. You add VAT at 20% to your invoices as with normal VAT, but you don't claim the VAT on your purchases (except capital assets over £2,000).

Instead you pay HMRC a percentage of your gross turnover (your total income, including the VAT you charge), currently 12.5% for those working in the entertainment sector (there is a 1% discount down to 11.5% the first 12 months you register). Bookkeeping is considerably simpler as your receipts are irrelevant to your VAT return, and you get to keep the difference between the 20% VAT you invoice for and the amount you pay to HMRC. This difference is to account for the fact that you don't get to claim

the VAT on your purchases. If you don't buy a lot of goods or services that you could reclaim the VAT on, then this scheme is great and can also show a cash flow benefit.
http://www.hmrc.gov.uk/manuals/bimmanual/bim31585.htm
http://www.hmrc.gov.uk/vat/start/schemes/flat-rate.htm

For example: During one financial quarter, you design a show for £2,000. You invoice the theatre £2,000 + 20% VAT = £2,400. You receive £2,400 from the theatre when they pay you. You would only pay HMRC £300: 12.5% of the £2,400 you invoiced the theatre. The remaining £100 is yours to keep. You purchase £1,200 (including VAT) of goods and services but the purchases you made are irrelevant.
Help: The HMRC runs a VAT Helpline: 0845 010 9000.

Working for non-VAT registered companies
If you are VAT registered and regularly have to negotiate for a design fee, be clear that the fee you are negotiating is excluding VAT, not including VAT. This is only really an issue if you are working for a company that is not VAT registered as they can't claim the 20% VAT back.

VAT invoices
HMRC is much stricter with people who are VAT

registered about the information they must include on their invoice. Your invoice should include your VAT number, your trading address, a sequential reference number, the date you supplied the goods or services, and the name and trading address of the company you're invoicing. You also need to itemise your bill with the net value (before VAT), the VAT rate (currently 20%), the amount of VAT added (i.e. 20% of the net value) and the gross value (the net value plus the VAT).

A sample invoice you can use is available to download from the ASD website at:
http://www.associationofsounddesigners.com/vat

Expenses and disbursements
We've all offered to buy a bit of kit we've wanted to get on a show, and then the producer has paid us back for it. **Disbursements** is the official HMRC term for these items. It's important to separate them out on your invoices in a separate category. You don't charge VAT on disbursements, nor do you claim VAT for the items you buy. You pass on the VAT receipt for the item to the producer so they can claim the VAT for themselves. As far as your VAT and self-assessment returns go, it's as if you never bought or invoiced anything.
http://www.hmrc.gov.uk/vat/managing/chargin

g/disbursements.htm

Expenses however tend to be things that you buy, consume and then charge your client for, such as petrol or accommodation. You keep these receipts for your financial records and claim VAT on them, where you were charged VAT: tube, train and plane tickets, for example, do not have VAT added to the price, so you cannot claim VAT back.

Then you invoice your client for the receipt total (i.e. including the VAT charged by the petrol station) and you **add VAT on top of that**. Some clients are not so used to dealing with VAT registered individuals and may ask for the receipts, but you need to keep them for your records – they can get copies to prove the expense existed, but they can't use them to claim VAT back as you have already claimed the VAT back on that receipt.
http://www.hmrc.gov.uk/vat/managing/reclaiming/reclaim.htm

For example: You have a £20 petrol receipt (for £16.66 plus £3.33 VAT). You would claim back the £3.33 VAT in your VAT return. You would invoice your client £20 plus £4 VAT = £24. They would claim back the £4 VAT in their VAT return.

For example: You have a £20 train ticket (for £20 plus £0 VAT). You would not claim anything back in your VAT return (but you might in your self-assessment tax return). You would invoice your client £20 plus £4 VAT = £24. They would claim back the £4 VAT in their VAT return.

Fees and sales – goods and services
HMRC tend to refer to things in terms of Goods and Services. As a general rule **Goods** might be things we sell (selling sound effects, software, custom built bits and bobs) and **Services** might often be the fees we receive for sound design.

Working abroad
VAT is relatively straightforward when working in the UK. Things get complicated fast when you work abroad though.

Europe
When you work in Europe, what you invoice for and apply VAT to varies considerably, and different rules apply to goods and services.

An important concept in the world of VAT is the 'place of supply', and this often determines whether you charge VAT. If you are supplying goods to an EU company then you normally have to charge VAT on those goods. If that company is VAT registered in their country and provides you with a valid VAT number and meets other criteria, you can zero-rate the goods you supply to them.

If you are supplying services to an EU company, and you perform them in that EU country then the 'place of supply' is outside the UK and is therefore considered outside the scope of the UK VAT system and you would not add VAT to your fees.

You would not add VAT to services performed in the UK if you are working for a company not based in the UK.

For our line of work you generally do not need to complete an EC Sales List.

References:
http://www.hmrc.gov.uk/vat/managing/international/exports/services.htm
http://www.hmrc.gov.uk/vat/managing/international/exports/goods.htm
http://www.hmrc.gov.uk/vat/managing/international/esl/reporting-esl.htm
http://customs.hmrc.gov.uk/channelsPortalWebApp/channelsPortalWebApp.portal?_nfpb=true&_pageLabel=pageImport_ShowContent&id=HMCE_CL_000152&propertyType=document

The purchases you make in Europe will often include VAT, but the rate of VAT (and what it is referred to as) varies from country to country. If you buy goods online you will often find that you have been charged at the UK rate of VAT,

rather than the rate of the country you bought it from. Your supplier may also ask for your VAT number and then zero-rate the supplies to you, that is, they won't charge you VAT on your purchases. In both these cases you would account for these acquisitions on your VAT return, though in the latter case you would pay the VAT that you would have been charged in one box of the return and reclaim it back in another! You would enter the transaction into boxes 2, 4, 7 and 9 of your VAT return!

If you physically buy something in another country you will be charged VAT at the local rate. You cannot reclaim VAT on these purchases from HMRC.
http://www.hmrc.gov.uk/vat/managing/international/imports/importing.htm

Non-EU countries, like the USA
If you work for a US-based company in the US then the 'place of supply' is again outside the UK, and you would not charge VAT. If you are working for a UK-based company in the US, then you would charge the UK company VAT.

You cannot claim VAT back on purchases you have made in non-EU countries because the purchases you made there do not include VAT. However you may find yourself buying goods from abroad, particularly by mail order, and

being charged Customs Duty, Excise Duty and/or Import VAT by Customs. You can claim any Import VAT back, subject to the normal conditions of whether it is claimable, but you cannot claim any Duties paid.

If you work abroad a lot, you may find yourself being taxed in the country you work in. You may also find yourself having to fill out a variety of tax forms for the country you work in. This can often result in you being unsure how much you will eventually be paid, and getting paid considerably less than you thought you would be paid, once various mysterious taxes have been deducted. You may want to consider setting up a company in this case. This means that the theatre will employ your company, rather than you, to provide services. This means you will not be an employee in that country, and hence you will not have to pay taxes in that country - you will be employed by your company, and only subject to UK tax and VAT laws. This all sounds great, but of course it brings with it a whole new raft of financial rigmarole. We'll look at company law in a later issue.

MORE INFO
Visit www.associationofsounddesigners.com/ freelancing to read more about this topic, get updates and leave comments.

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www.audioalliance.com

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www.digico.biz

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EM Acoustics
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Figure 53
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