



Joe Bull

Founding director of SADiE and the guiding man behind the DAW manufacturer's technology talks about maintaining standards, the need for education, going native, and creative software.

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JOE BULL BEGAN his association with pro audio in the late 1970s as a recording engineer at Spaceward Studios in Cambridge. Spaceward was a leading independent recording studio initially specialising in punk and new wave and worked with artists as varied as Stiff Little Fingers, Gary Numan, The Stranglers, Scritti Politti, Dave Stewart and Barbara Gaskin and the Higsons.

As the role of independent recording labels diminished in the UK, the studio diversified into audio visual and audio for video work and this eventually led to the formation of Spaceward Microsystems, which developed Broadcast Computer Graphics equipment. This subsidiary grew from an initial staff of three with a tiny turnover to a multi-million dollar enterprise with a staff of around 100 in just over 5 years. However, things were too good to be true and a competitor, Quantel, claimed that Spaceward had

infringed some core patents of its Paintbox product and after a lengthy high court battle the company was forced to close. A subsequent battle with Adobe over the same patents saw Quantel lose all the claims.

Using the experience gained from developing high-tech solutions for the video graphics arena, five members of the Spaceward team formed Studio Audio and Video Ltd in 1991. After trying to establish a business as an OEM supplier of digital audio cards to a nascent digital audio industry, Joe decided the best route was to develop a simple editing application to show off the power of the hardware. The Studio Audio Disc Editor (where the acronym SADiE comes from) gained rapid acceptance within broadcasters and was followed by good markets in post and mastering as well.

As a founding director and MD Joe Bull continues to have a high level of input into the company's wide range of digital products.

What's special about Sadie products?

SADiE products are and always have been designed by people who understand the professional audio industry. We're not a bunch of frustrated musicians who want to change the world with our latest gizmo — we have all grown up in the pro-audio industry making our living from 'professional' audio. This gives us a unique insight into the way that machines need to be designed when they are to be operated by engineers and producers who also have to make their living from professional audio. This is rather different from products that have migrated across from a Music Industry application because their designers think that 'there can't be that much difference in pro-audio'.

Plus, we understand how important customer support is to the professional user.

How do you optimise a DAW for a particular application?

By carefully analysing the workflow and honing the machine's capabilities to maximise the operator's efficiency. This is the same for any form of ergonomic tool design whether it's designing a cockpit for an aircraft or a grip for a golf club. Far too many people make the assumption that a cheaper tool is better, ignoring the fact that they are spending much longer creating a worse sounding product than they would if they were using the appropriate tool. It's a question of analysing the real cost of a product and its operator over the lifetime of the equipment and working out whether a lower capital expenditure is really going to save money in the long term.

What are your opinions on the Mac versus PC issue?

It's only an issue for tiny minds. For professional applications where operators are using a tool to enhance their productivity you've got to be particularly anal-retentive to care. From my perspective, it's a bit like worrying over whether one should have a cheese or ham sandwich for lunch. Get a life! There are so many more important issues in the world than what host computer is used on the core tool of your trade. Once you have booted the system (and they all take time to load the operating system and all the popular operating systems are buggy if they are not maintained correctly) and loaded the program that you use to perform your job, then you are using a tool. That tool is either as useful to you as a chisel to a carpenter or a trowel to a gardener or it isn't. If it isn't as efficient as it can be then it's probably not the right tool. Who cares if the handle is colour coordinated?

I think that the recent excitement/trepidation caused by Apple's announcement that it will be moving over to Intel-based processing is a similar distraction. If you waste your time worrying about the colour of the furry dice in your car then you maybe ought to consider riding by bus. For anyone serious about audio (and by that I mean earning their living from it), the platform should be utterly irrelevant.

Do you believe that the future is native?

I haven't donned a grass skirt as yet but who knows, they may come into fashion again. Until they do, I'll probably continue to wear trousers — though cross dressing has a certain appeal... On the other hand, as host processors continue to become more powerful it is inevitable that general audio software with wide consumer appeal will move towards the native environment.

However, in more specialised application areas, such as professional audio where the marketplace cannot be measured in millions of units, it is debatable whether our industry is large enough to be able to afford to compensate developers for converting existing products to native applications. If it cannot, then it has to decide whether to accept amateur tools that may be cheaper to purchase by a factor of 100, but be far less productive or instead to invest in more specialised solutions that can generate its developers sufficient profits to concentrate on the small specialised market that is professional audio.

To give an example, it is unlikely that a product with a retail price of £100 (and I've seen some native products bundled for under £10) will properly cope with, say, the more esoteric frame rates that our customers encounter. The choice may therefore be audio that drifts out of sync or takes the operator

twice as long to conform, or a more expensive dedicated product that does the job properly and leaves the operator more time to polish his programme material. I know what I'd prefer to listen to when I get home from work, but it may be that I'm in the minority now.

Where are the current inadequacies or limitations in computer-based DAWs and how are they popularly concealed from the end user?

Talent, creativity and adequate training of the user seem to be the most significant limitations. In the same way that poets are not necessarily the best public speakers, composers and musicians do not necessarily make the best audio engineers and producers. The democratisation of audio production and delivery allied with the penny-pinching attitudes towards audio for video and film is dragging down the quality of recorded audio faster than anyone could have imagined ten years ago. I am all in favour of the girl who, having recently fallen out with her boyfriend, decides to use Windows XP to write a song about her experience as the adverts suggest she should, but let's not pretend that it's art. The same goes for Apple. It's all about big companies marketing their blunt-instrument products into an ever decreasing professional market. The net losers are the professionals trying to make a living out of creating quality audio for an increasingly disinterested population. Providing it's loud and the meters don't move off the end stops it must be good.

I fear that we'll look back in a decade or so and realise what we have collectively allowed to happen. I sincerely hope that before we completely degrade and eventually lose the skill sets that have been painstakingly built up over the last century, we will call a halt to the downward spiral that seems to have overtaken our industry, but I don't think it'll happen next year.

From a technical standpoint in what you do, what will be the next big thing?

Talking cornflake packets — soon everything will sound that good! Seriously, in such a competitive market where the major corporations are now fighting it out for the mass market, the best place for the professional industry is in niche markets that are hopefully too small for these corporations to be interested in. From this perspective, it becomes very important to play one's cards close to one's chest so that ideas we may be developing are not instantly taken up by competitors.

We have been developing more products for mobile recording and post — trying to take the back-breaking and tedious tasks out of the professional's working day to allow them more time to exercise their creative talents. This is the most productive way that we can help our customers to achieve their potential rather

than contributing to the malaise of poor quality sound. The fear is that as we enable our customers to do the tedious parts of their job (such as providing multiple stems in multiple formats to the next people in the postproduction process), their budgets get yet more squeezed and they still are not able to improve the quality of their output.

Do new processors and chips lead to new creative software or is software creativity a state of mind?

It's often a bit of both. New hardware can spark ideas in an equipment designer's mind. Sometimes you are just looking for more grunt processing power for example. There are also designers who will study the way that their customers work and devise new methods of making their lives easier or shortcutting tedious parts of their job to allow them more time for creativity. It's these workflow improvements that are often most sadly lacking in the cheap and cheerful products that are really designed as toys for the domestic market, but are increasingly co-opted into professional environments on capital cost grounds alone. At SADiE, we obviously will use new processors when we can see a specific advantage for our customers but we are not slaves to new technology. It's much more effective to analyse what our customers are trying to achieve and give them methods that will help them in that aim.

Sadie has recently released hardware control based systems, many end-users have been crying out for the return of hardware control for ages — why has it taken the industry so long to come around?

We have been selling the SADiE hardware control panels for our standard products for 12 years. The BB2-J was developed after consulting a number of our broadcast customers who wanted the speed of operation that a professional workstation provides combined with a physical interface to reduce the risk of repetitive strain injury caused by constant editing with a computer mouse. We have recently developed a new control surface for the H64 and we have the LRX which is a truly innovative product combining a portable workstation with an integrated control surface. I fully expect more products of this type from the SADiE camp in future.

Why it has taken the rest of the industry so long is anybody's guess. Maybe they don't listen to their customers carefully enough, or assume that providing hooks into an also-ran control surface will suffice.

Why do end-users tend to take audio quality for granted with DAWs?

Because it's no longer the big issue that it used to be. Being able to process audio sympathetically and accurately used to be a difficult task in the days when every single DSP cycle counted because

the processing power just didn't exist — now it's relatively straightforward in comparison because the techniques that were researched during previous decades are now well known. What is much more difficult is to combat the 'louder is better' culture that we are currently inhabiting and see ways of allowing people to experience the power of dynamics in audio again. This is an issue whether you are watching TV, listening to music on the radio or on your iPod or in your living room.

We need to establish real education for the masses to be able to experience the wonder of really dynamic audio and evoke the emotional responses that listening to such material can bring. TV sound has become more and more compressed to cope with the horrendous volume of the adverts and to keep the attention of the 'average' American viewer (and I'm not being xenophobic at all here). Meanwhile, the typical music listener relies on the melody and rhythm alone to keep their attention rather than expanding their horizons with dynamic music that truly adds another aural dimension.

Because we at SADiE have always been part of the professional audio industry, these matters come as second nature to us. I feel this is something that the colleges such as SAE could actively promote to keep the audio industry alive and healthy — it's their future as well, after all.

Windows — help or hindrance?

They make it easier to see while indoors. I can also look out of my office and see trees and grass and sky. Windows are typically more translucent than fruit, and too much fruit can play havoc with ones digestion. You'd have to be very cynical to think that windows were anything other than a boon to humanity. Surely you're not suggesting a return to the dark ages before windows, are you?

Microsoft Windows has been a huge help to SADiE. Every professional has to use a variety of tools and our customers typically need to multitask on MS Word, Excel, Outlook email, etc. From a commercial perspective therefore it has been vital to allow our customers to use these tools without having two computers on their desk. From a technical perspective, it is much more of a mixed blessing. There are certain software primitives we can use, especially on the user interface side, that we therefore don't have to write from scratch. However, there are also numerous assumptions in Windows that are based on less than professional methods of dealing with audio, which we have to work around to produce reliable high quality sound and over time we have become very adept at dealing with these issues. On balance, I'm glad that we opted for developing on the Windows platform 15 years ago. ■

