Control Freaks

As the revolutionary Stardraw Control software adds an NSCA award to its PLASA Award for Innovation, Sarah Rushton-Read talked to David Snipp and Rob Robinson of Stardraw.com . . .

Above, L-R: Kevin Harrison, symbols manager, Rob Robinson, marketing director, David Strawbridge, senior software engineer and David Snipp, CEO - collecting the Innovation in Technology Award at the NSCA 2005 exhibition.

It has to be said that the entertainment industry attracts some unusual characters, many of which have fallen into it entirely by accident, often with no specific training and for some reason unfathomable to themselves they have never managed to escape: so it is for David Snipp. Not only is he a most unique character, but he fell into this industry entirely by accident.

For the benefit of those unfamiliar with Snipp's company, Stardraw.com produces a variety of software solutions for the lighting, sound and AV industries, enabling design and documentation of systems for contractors, installers, consultants or rental houses. Its newest application, Stardraw Control has won numerous awards and accolades, most recently the PLASA Award for Innovation at last year's PLASA Show and an Innovation in Technology Award on the occasion of its worldwide launch at the recent NSCA 2005 exhibition.

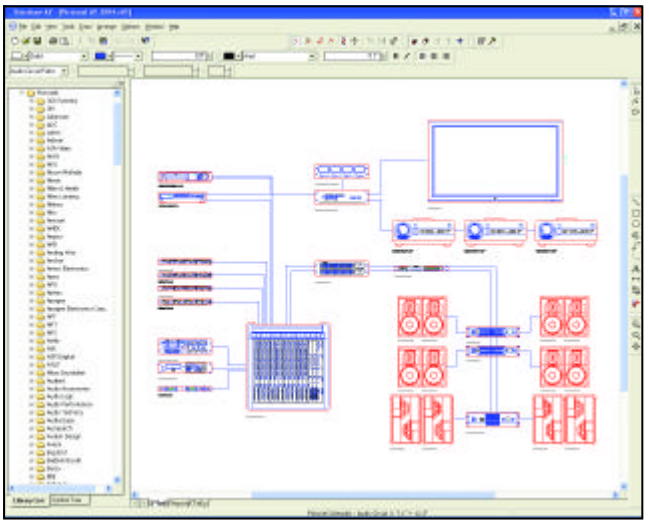
Snipp is a man who likes to be in control, he is a relentless self-promoter and is driven in a way that would exhaust most people. As a student he took a degree in mathematics and computing at the polytechnic of Wales and in the third year worked in industry as a COBOL programmer at the Ministry of Agriculture, Fisheries and Foods. He told me: "The only good thing about that job was I met my wife there!" In the concluding year of his degree he found his real passion in software design and for his final project wrote software for a local school for the physically handicapped, in the process taking them from an entirely inefficient mechanical system of communication to a far more effective computerized system. At the end of Snipp's placement, the headmaster gave him a cheque for £20. He recalls: "I thought 'My God - people pay you for this?' That was the start . . ."

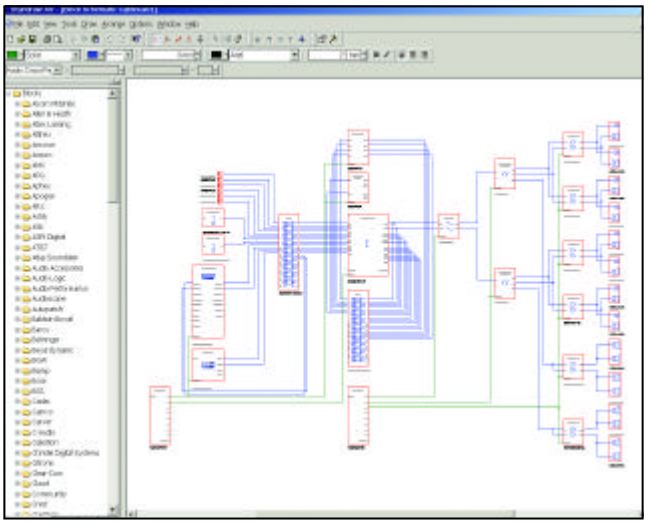
Having failed his degree by concentrating on the computer science side rather than the mathematics, Snipp held a variety of positions with software companies. However, for reasons beyond his control they did not last. During one particular period of applying for jobs, Snipp remembers: "I got a couple of offers including one at the computer company Research Machines and the other at Tasco - an entertainment lighting company, but I decided to take the more conventional position. Joe Brown, who was running Tasco at the time, demanded to know what it would take to get me on board, he said 'tell me what you want and you can have it.' I was 22/23 years old - what did I want? I chanced it, picked a salary, doubled it, added a car, BUPA and a pension and Brown said OK! I declined the other offer and started with Tasco on the Monday."

Tasco was in the early stages of creating Starlites, the first moving lights in Europe and second in the world after Vari-Lite. The company was using Z80 processors - very old, small, but pretty good processors. Snipp described them: "The Company had something it called a Tardis with all the Z80 processor boards stuck to the outside of it so that the engineers could tweak it if necessary. My first job was to fix the bugs in the software."

He remembers going out on the road for the first time: "The control software was full of bugs - I rewrote it all. We would be out with shows and the lights would start flickering and twitching - generally solved by an engineer working on the processor boards with a screwdriver, tweaking them to keep the noise level down."

In those days, the PC was just starting to take off and Snipp wrote a piece of software that ran on Windows 1.04 on a 286 processor. It had real time three-dimensional graphics and voice recognition - remember this was quarter of a century ago! The owner of Tasco sold the system to many tours before the software was actually finished - no, does that really happen? This of course meant that Snipp





Above, left: Stardraw AV schematic. Above, right: Stardraw AV block diagram. Page 68, left: Stardraw Control topology. Page 68, right: Stardraw Control panel.

had to go out on the road to sort out software glitches, often during the set up and performances. He commented: "That is real pressure: often I would be sitting in the middle of a field with a computer, the show would be due up in 20 mins and the software wasn't working. The philosophy of the saying the 'show must go on' taught me I had to do whatever it took even if it meant working all weekend and all night to hit a deadline."

After a couple of years, Snipp had done all he could with Tasco's software and was finished with it. As he so modestly claims: "Even today it would still beat everything out there!"

Then he got a call from IBM and was offered a position working on O/S2, at that time it was the next generation of operating system. He was very excited to be working for a 'real' computer company but he also still maintained the software at Tasco.

Snipp explained: "IBM is a hardware, not a software, manufacturer - so its solution when software was too slow was to buy some faster hardware, as opposed to rewriting the software. My task was to make the 'thumb' on the side of a list box proportional to the amount of data in that box." It was a brand new job, brand new operating system, brand new code and brand new development- Snipp was given a year to complete the task. In reality it took him two weeks to get into it and then two days to finish it!

He was then was offered a debugging job on a portion of the new as yet unreleased version of O/S2. However, having looked at it - Snipp claimed it was the worst piece of software he had ever seen and offered to rewrite it instead. Due to institutional politics this was a complete no-no - after all, they had spent 10,000 man-hours writing the software; it couldn't be just thrown away!

Snipp, being a wilful chap, of course ignored his instructions and rewrote it anyway. As he says: "I fully tested my solution and it was absolutely perfect, a tenth of the size of the original and I got rid of every bug. I finished the code and put it into the project and all of a sudden the operating system was infinitely more robust - it was booting 10% faster, because my code was now 10 times faster."

He just got away with this gamble, however it wasn't long before there were repercussions. As you can imagine the guy whose code he rewrote didn't take too kindly to Snipp's modifications and his creation started to get the blame for a variety of glitches in other parts of the operating system, Snipp was dispatched to the IBM laboratories in Boca Raton, Florida to fix the bugs. He had soon solved not only the mentioned inconsistencies but, "21 red hot show stopper bugs in O/S2 which had been preventing O/S2 from shipping." IBM kept him in the USA for another three months sorting out other bugs - he had only gone over for the weekend.

Just down the corridor in the same building was the Microsoft contingent working on the O/S2 software with IBM. As Snipp told me: "I started hanging out with them, they had the same mentality in respect of writing small, lean pieces of software."

Snipp wanted a job with Microsoft. He got on a plane to Seattle and asked for any job they could offer him. Having secured a position, he and his wife emigrated to the USA, where they remained for five years. "I was made responsible for all printing at Microsoft on O/S2. However, within six months of joining, the company said it was dumping O/S2 in favour of Windows NT."

Snipp became one of the original architects on NT, writing its printing software from the ground up. When Windows NT shipped it supported over 3000 printer drivers. Therefore, Snipp was responsible for designing a control software that supports over 3,000 printer drivers, made by numerous manufacturers - all, no doubt, running on different protocols - anything sound familiar?

Some years after, Snipp noticed some feverish activity in the office. He explains: "When I joined Microsoft I was given stock options, it was a small company then and I thought nothing of it. One day everyone was running around the corridors very excitedly, I asked what was going on and they asked if I'd seen the stock prices that day. When I checked out my options I found them to be worth just over one million dollars. I had no idea it was there. I was 30 years old."

With cash on the hip, Snipp was looking for a new challenge. Within weeks, Ray French from Tasco told him that Tasco had gone bust and there was an opportunity to buy it. Snipp cashed some of his stocks and wired the money over so that French could buy Tasco. Originally there were three joint owners, but Snipp eventually bought out the third; he then owned two thirds of the company.

Tasco still had contracts to do the lighting for the Chippendales, who at the time had three troupes out every night. It was a cash-rich business from day one. He told me: "The business side was challenging; learning about accounts, marketing and admin made me realize the value of all the different divisions of a business working cohesively together - it's essential for the whole thing to succeed."

However, Snipp's real passion was the software, while French, his business partner ran the lighting side of the business. Over time, Snipp began to develop Stardraw 3D and in 1994 he released it at the PLASA Show. He told me: "It sold like hotcakes". In fact it did so well that the software part of the business kept growing, so he followed it up with a 2D version plus an upgraded 3D version.

It was also at the PLASA Show that Snipp first met Rob Robinson, now, marketing director of Stardraw.com. Snipp says: "Rob was working at Shuttlesound, which offered audio distribution and installation - the company was doing lots of construction drawings using an off-the-shelf CAD package for which they created numerous product drawings to drop into the diagrams. In 1993, it launched a commercial software package - ShuttleCAD."

Robinson looked after the sales and marketing. He recalls: “ShuttleCAD was a DOS-based application which sat on top of another engine called FastCAD, written by one of the original developers of AutoCAD. The software was extremely reliant on that DOS engine, however in ‘93 Microsoft released Windows 3.11 and we realized we needed a Windows engine; there was no generic CAD system out there that was affordable and fast enough to work with the kind of data we were using - that’s when I met David.”

Snipp continues: “They had a DOS-based system for audio design and I had a lighting program running on Windows.” Starlite wrote the engine for ShuttleCAD and its tens of thousands of existing symbols plus the software to read the CAD files into the Windows engine, then OEM’d it to Shuttlesound. It was finally launched in early 1996.

Two years later, Snipp bought ShuttleCAD in its entirety and renamed it Stardraw Audio. Robinson had left Shuttlesound and the industry, although he was still working with Snipp on a freelance basis: “One of Rob’s skills is he’s a creative, arty type,” says Snipp. “He is much more in tune with the user interface and what the customer needs, so I contracted him to write the help files and the manuals.”

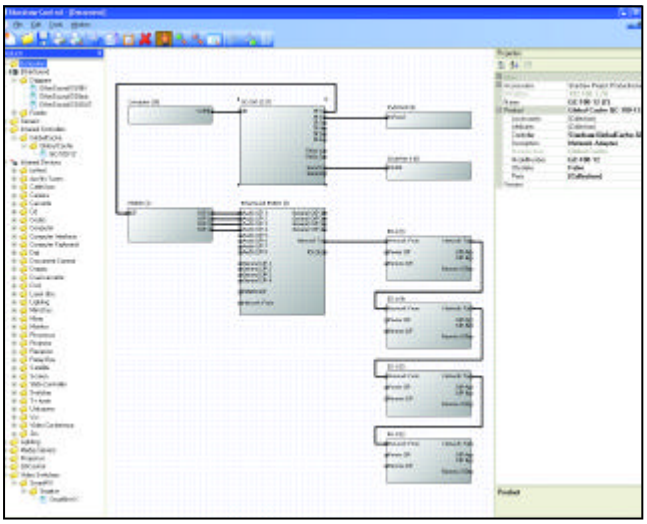
He continued: “In time we started to experience the problem that Starlite Systems Technology was a software and a lighting company under the same umbrella - customers got confused over what we were, while developing and manufacturing moving lights was becoming expensive - all the money made on the software was disappearing into the deep, dark void that was the lighting R&D. I decided to split the software part off and start a separate company - that was in March 2000 - right in the middle of the dotcom boom which, just after, went bang but, Stardraw.com survived.”

Of the new company’s early products, the most popular was Stardraw Professional which offered design, documentation and presentation features. This was aimed at audio, AV and lighting, all built into one software package. Paradoxically, trying to sell something that covered every sector as one general purpose solution presented a problem - what to put on the box? “We had a picture of a lighting rig on it, but show that to an audio guy and he says ‘It’s not for me’.”

They needed separate packages for each discipline: they produced an AV package, which has also sold like hotcakes and has been one of the company’s most successful products. This is what Stardraw describes as the ‘shrink-wrap’ side of the business: other income strings include OEM. Just as in the early days of Shuttlesound, the company builds engines for other companies, for example the PanelBuilder engine for panel manufacturer RCI. The software allows the design, costing and ordering of bespoke panels which can then go straight to the processing and manufacturing stage, bypassing expensive labour costs along the way. The client does all the design and specification online; as soon as they are happy with product and price, they click ‘Order’ - and job done.

Stardraw is a powerful design and control engine that can be used to contsruct any kind of system - after all a system is just a collection of parts be it a model railway, hotel media system or even a fitted kitchen. Therefore a market has to be decided upon, after which, how do you then approach sell into it - do you attend all the trade shows for that industry around the world, which would be a huge ramp up of the operation and costly. What Stardraw found early on - the key to success is to find partners in relevant industries such as RCI - the panel builders.

Snipp explains: “The biggest problem by far is focus and resources. We had been focusing on the shrinkwrap business for audio, AV and lighting. That’s been the company’s bread and butter, so we want to look after it. But what really turns us on is control side of the business. We are now a



victim of our own success: in the shrink-wrap business, where each piece of software is sold for a one-off price, some customers have owned it for anything up to 10 years, and they still want any problems fixed for free. Snipp realized that if he had a dime for every time someone had completed a project using his software over those 10 years he would have made a great deal more money.

This approach and a chance conversation with a manufacturer at ISE 2004 inspired Stardraw Control's creation. "The company felt that we had a nice bit of software that with a few modifications they could use. They also had loads of customers they felt would also make good use of it."

Stardraw quickly produced a prototype and a business model and showed it at PLASA 2004 where the company also entered it for the PLASA Awards for Innovation, and it won. Snipp told me: "As the judges read out the preamble for the Award, we were stood in the audience thinking 'oh, that sounds interesting, I wonder what that is' - it was us. Afterwards I asked the judges why; they said they had been waiting for software like this for years. We were thrilled to win and it has added great kudos to our product."

Snipp believes that part of Stardraw's success is that it is quite simply a software company: it doesn't manufacture hardware, so doesn't compete with hardware manufacturers. This creates an opportunity for partnership with hardware manufacturers - a symbiotic relationship with one adding value to the other. As a result, hardware companies actively promote the software to their customers and supply it free of charge. Manufacturers authorize and endorse the software not only because it controls their product, but everyone else's as well, offering designers and specifiers greater diversity in system design.

Snipp explains that what makes Stardraw unique is "the relationship the company has with its customers, it knows and understands what a pre-amp is, it understands lighting and how designs are put together, therefore we can engender this expertise in our applications and the software is both powerful and intuitive to use."

So why, I wonder, has no one done it before? "Because supporting every manufacturer when each product may run on a different protocol is not simple. Manufacturers want their products to be unique and to try and get them all together to agree on a protocol would be near enough impossible - Stardraw ensures they don't have to."

David Snipp.

Stardraw supports thousands of products and is adding more all the time; it has also developed a software development kit to allow manufacturers to write their own drivers for their own hardware. Every manufacturer should accept that a system will have to contain something they do not make themselves.

Snipp says: "Systems integrators need to have as much choice as possible and that is why Stardraw also supports infra red, TCP/IP UDP, DMX, RS-232, CobraNet, EtherSound and QSC Control, some of which you might consider to be competing standards - it's not there to replace them, but to add value to them all."

So why give the software away for free? "Years ago we realized two things. Firstly, being exclusively a software company, the product has to work, it has to be reliable, robust and intuitive; if it's too complicated then people won't use it and Stardraw won't make any money. The second thing we realized is the only way we are going to make real money is when our clients make money. Clients are only going to use the software if it enables them to make more money, more efficiently. If you take those two things to an extreme and we offer the software for free, clients have nothing to loose. They use it, play with it, win a job with it and, once that job is won and commissioned, the client pays us a small amount of money."

Robinson says: "Basically, it's the D'Day mentality: you don't just set out to invade France, first you take a beach, then another and another, then you go in a couple of miles - it's slowly, slowly. We're already active in our target market and there is ample room to move into other sectors."

Just as the PLASA awards judges said they had been waiting for this for years and the manufacturers echo this. It means they can give their customers what they want without having to develop it themselves. What Snipp likes about all this, of course, is that ultimately the manufacturers will become Stardraw's distributors. In addition, some manufacturers have agreed to put copies of Stardraw control into the boxed hardware.

Snipp loves the software business because of its scalability. He clarifies: "Once you have a package with features and benefits that people like, it doesn't matter if you were to sell a hundred or ten thousand copies in the following week, you would not need to hire a hundred more people. In fact, now you can freely download it from a website: nothing needs to be shipped, no manufacturing is required, no warehouse needed for storage - it's all done virtually. And what Snipp likes most of all is that he has complete control over all the processes from writing the code to selling the product.

Sarah Rushton-Read

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