

## A Vision of a Virtual Orchestra

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Originally published in *The Stage & Television Today* magazine, late 1987.

Regular Backstage readers will remember Soundman, whose literary lashing of the hi-tech, no-talent avant garde of theatrical sound became a collectors' item shortly before he was forced to pack his Dire Straits CDs into his metal pilot's case and flee the country for betraying trade secrets. Now his satirical baton (the one with the miniature motion sensors and accelerometers) has been picked up by MIXER who has a vision of Things To Come. Cartoon by Stewart Campbell.

**It was an early morning in late November. The accompanist rose blearily from her bed and wandered unsteadily to the bathroom. It was a hard life, living up to the image of a professional musician, and she had drunk more than usual last night in an attempt to prove that she was "one of the girls".**

She turned on the shower and tuned in the radio; Radio Three was running "Digital Re-Synthesis Week" and the sound that drifted from the speaker was a computer-generated version of Sheep May Safely Graze. It wasn't half bad, she reflected. Things had improved dramatically since the BBC had been forced to use the Radiophonic Workshop as a source for much of its classical music - that and the tie-up with the big Japanese electronics companies.

She finished her shower, dressed, had breakfast and made her way to the theatre. How she hated those pre-pantomime auditions, they were always so predictable. Singers who couldn't, comedians who weren't and acrobats and magicians whose acts relied more on the amounts of naked flesh available than any vestige of talent. And they were always so rude.

"What's the matter luv? Can't you find the right button? The accompanist in Scarborough never 'ad that problem." That last with a knowing leer and a wink.

She supposed it was just because they were nervous but it began to pall after the twentieth time.

She reached the theatre, signed in and made her way to the stage hoping that this lot would have at least got their parts in some sort of order. Yesterday had been a nightmare - disks of all different types and formats with none of them knowing where the song pointers that they needed were.

"Oh, I think you should find it about two thirds of the way down the opening menu, I called it AUDIT 7.SNG, I think. Well, there are so many that start with the same words, aren't there."

Time after time she would have to dig out the utilities disk and do a copy-and-search routine to look for the text string on the lyrics sheet and time after time she would dump the "Professionally Programmed Backing Track" into the processor only to hear the same version of My Way or Memory ooze nauseatingly out of the system. Somebody somewhere was making a fortune out of these programs, and she was not altogether sure she approved. It did,

after all, reduce her function to that of a mere button pusher and it wasn't for that that she had done four gruelling years at The Academy followed by a further four at Surrey studying Musical Computer Science as a post-graduate, to say nothing of the 12 early years entering all those competitions and practising endlessly. Still, it was work and, if she didn't do it, then there were plenty of others who would jump at the chance.

Everyone fancied themselves as an accompanist these days. They thought it was just a question of button pushing and using other people's software. But she scored a major triumph that morning, when a very old couple came in to do a speciality act and when she asked them for their music, they handed her some yellowed manuscript paper.

A silence fell as the rest of the company waited to see what would happen. They all remembered last year when the newly installed computer kept malfunctioning and it rapidly became apparent that the MD didn't have a clue how to operate the manual back-up. For her it was no problem. She typed in the instruction that put the system into manual, selected "Piano, bass and drums" from the instrument menu, called up the rhythm parts from the archive optical disk and took the cover from the piano-type keyboard that was leaning against the sound-generator racks.

All those years of practice and training paid off and she accompanied the couple faultlessly, ending to a spontaneous round of applause from the darkened auditorium. At the morning break, the MD who would be running the show came over and asked her if she would dep. for him during the run. She thanked him gratefully, agreed, and out came the diaries for one of those long, involved sessions.

Six weeks later, the musical director rose from his seat in the dressing room, brushed the dust from his DJ and, in response to the call "Overture and Beginners, please" made his way to the pit. He had taken over from the accompanist in the final week of rehearsals, taking note of all the little peculiarities that found their way into any variety show, and noting that she had done most of the programming necessary for the smooth running of the show.

But it was now, with the audience restless in their seats and that electric first night sensation in the air, that his moment of glory would come. Years of keeping the music tight to the action had served him in good stead when the SWET/MU agreement had been abandoned in the late eighties. The new technology had needed someone to tame it, and he was acknowledged as the master in that field.

In the orchestra pit was the music controller that would respond to his command and the rack that held the hundreds of musical instrument sound samples that replaced the musicians. Every instrument in the orchestra was represented in those racks; they were always in tune, they never complained about the draught or the seating, they didn't put in deps, they didn't turn up with hangovers and, most important of all, they didn't talk back.

There was even a Heavenly Choir that didn't need dressing room space, nor did it have affairs with itself and conduct savagely whispered conversations in the wings. True, there were a few disadvantages. The sound was still rather stilted and artificial, but people had got used to that through constant exposure to popular music and, now that the major orchestras had been disbanded, very few members of the public actually knew what real

instruments looked like, let alone sounded like. Keeping time with the live act on stage had been a major problem for a while, with the performer having to follow the rigid tempi produced by the electronics. That had been solved by the first of a series of inventions in this field, the MIDI baton.

Connected to the Musical Instrumental Digital Interface of the system controller by an infrastructure-red link, the MIDI baton used miniature motion sensors and accelerometers to control the replay tempo and dynamic of the system. The early models had needed careful handling, and more than one MD with a flamboyant hand had come to grief in a most spectacular way with songs speeding up and slowing down at random. The second invention was one that he found extremely useful in variety, particularly for comics and acrobats whose acts hardly ever ran to fixed patterns.

He would need it for the first act on the bill - the comedian/comper of the show who was waiting in the wings for the show to start.

Ducking into the pit, he did his pre-show drill; checking that all the status lights showed green, and that the back-up computer was tagging the main performance machine. The two ran in tandem with multiple redundancy the norm on each machine, so it would have to be something pretty catastrophic to halt his end of the show. Even the power supplies were battery backed and would carry the system for 90 minutes.

This was all academic of course as, in the event of a power failure, nothing else would work and he would be reduced to producing cheerful music until the technicians could fix the fault.

He loaded the two compact discs into their player for the bottom-of-the-bill act who couldn't afford the services of the computer programmer/arranger and had to rely on off-the-shelf backing racks, glanced through the running order on the VDU, acknowledged the cue light from corner, the applause from the audience, raised his baton and dropped the system in with a tap on the foot switch. A roll of the impeccably sampled timpani filled the theatre and they were off. The strings soared and dipped for the finale of the comedian's first number, and then the "band" swung into the underscore for the comic patter that preceded the first specialty act.

This was where the VTR function came in. the VTR, or Vamp Till Ready, function was the breakthrough that had enabled the MD to cope with any eventuality in a live stage act. When you invoked it, either in simple or complex mode, it took note of the music that had been playing and produced either a simple four bar round-and-round - handy for all those "I say, I say, I say" routines - or a complex vamp that would repeat with almost limitless variations until the MD put the system back into continuous mode, at which point the music would resume from exactly the same point at which it left off.

This year, a software update allowed you to overlay orchestral stings and buttons for the punchlines and the illusion was complete. The show ran its course, the audience was delighted and the MD controlled his electronic orchestra with grace and artistry, complementing the acts with a subtlety that had not been possible since the days of real musicians.

After the show, walking out of the stage door on his way to a pub, he heard the haunting sound of a violin being played. Peering round the corner of the theatre, he saw the erstwhile leader of one of the big symphony orchestras playing to the departing crowds, the exquisite sounds liquidly filling the cold night air.

The MD hunted in his bag, finally unearthing his Digital Audio Tape Recorder and the miniature microphone that went with it.

“Waste not, want not,” he muttered to himself as he quietly sidled up to the down-at-heel musician. In a few minutes he had a recording that would clean up nicely using the digital signal processor and would find its way into the show in a few weeks time. People were tired of hearing the same old violin sound and he had been meaning to do something about it for some time now.

Dropping a few coins into the violin case he strolled off into the December night, the final notes of *My Way* issuing from his pursed lips, plaintively echoed by the gentle sound of the violin.

A cautionary tale for a new year? A fantastical glance into the future? I shall leave that for you to decide, but with a few final thoughts to mull over during dog days of winter.

Has your pit seen the gradual replacement of musicians with synthesizers?

Where there used to be a string section, is there now a sampling keyboard which doubles on harp, guitar and brass? Did a live band really sound like that? And can you name any other part of a theatre’s creative team whose members are nearly all graduates with many years of study behind them, who practise regularly in order to keep their particular skill alive and who are treated with scorn and disdain, mostly by people who couldn’t carry a tune in a bucket, asked to work in conditions that even the lowliest actor would jib at, and dismissed generically as a bunch of drunken troublemakers.

Answers, please, on a postcard to - Mixer, c/o *The Stage*.

