Tino Fibaek

The man behind the technology of Fairlight has done time at Steinberg and, most significantly, Amek. He discusses workflow, asset management, server based media and how to design a worksurface.

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BORN IN DENMARK and introduced to travelling by his parents who were volunteer teachers in various parts of the world, Tino Fibaek spent his teenage years in the company of ZX81 and ZX Spectrum computers. He studied computer science and electronics during the day in Aarhus and worked as a club-DJ at nights, then went to work for Steinberg in Germany. In the late 1980s he started working for Amek in Manchester originally as a software engineer, then chief software engineer, R&D manager, and finally on the company's management team. During the ten years there he helped develop Supertrue automation, Virtual Dynamics, Showtime automation, the DMS digital console, and, in collaboration with Fairlight, the Fame and Prodigy Mixer/Editor systems.

He moved to Australia and to Fairlight in 1999 as team leader, Dream mixer/editor products and is now chief technical officer with recent contributions including the Pyxis NLV system, version 19.1 software for the Fairlight editing platform, and version 4.0 software for the mixing platform. He describes it as 'working with a great bunch of people, doing a job that I absolutely love'.

Out of hours, he spends time with his wife, listens to a wide range of music on his homemade KEF-based active speakers, sails, cooks and repairs/restores/extends their cottage in northern Sydney.

What is special about Fairlight products?

They're fast — the editing-model is probably the fastest and most intuitive in the industry, and our mixing and automation compliments it well with a really solid set of sensible and useful tools. They just sound good — superb convertors coupled to 40-bit floating-point DSP algorithms. They are solid and reliable. They are a safe investment, with a historically proven hardware and software upgrade path. They are innovative yet very functional, giving the operators tools to allow them to concentrate on and expand their creative function. They represent an unmatched price/performance ratio.

What is different in your all-in-one production system approach compared to other designs?

A Fairlight production system is not a closed product; yes, it does a lot out of the box, but so much more power can be leveraged from the high degree of customisation that can be done on-site. It is this customisation that allows the system to truly fit into the customer's workflow, and be the tool that they need, rather than just the tool that we thought they wanted. This customisation comes at a variety of levels.

At the most basic level, for instance, we accommodate many user-defined monitor sources and destinations, each of any format up to 7.1, either digital or analogue formats, and preprogrammed levels. We allow the operator to define the bus formats to the session at hand (e.g. stereo mixdown or multiformat mixdown or maybe ADR), and then save these setups as templates for future sessions.

At the other end of the scale, we have a complete programming language built in, with a comprehensive triggering and mapping system. Typically done during installation and commissioning, this system allows functions on the surface to be remapped or duplicated, according to the operator's preferences. Furthermore, completely new functionality can be created, triggered directly from the control surface, and integrated completely with the mixer.

Examples of this include one facility where a very comprehensive talkback system was designed, complete with remote talkback trigger via GPIs, visual feedback via LEDs driven from GPOs, and programmable talkback groups. Another facility features very tight integration of a Dolby encoder/decoder system, with single-key configuration from the control surface for a variety of operational modes, including external machine setups, busing structure and formats, and monitor formats and modes.

How have attitudes towards controller/desk surfaces changed in the time you have been working on them and to what do you attribute this change?

Initially, there was a very strong demand for digital technology to be controlled in a familiar 'knob-per-function' way with one control channel per audio channel. This early model left the user feeling at ease through the transition into digital audio, with the digital desk largely looking and behaving like its analogue counterpart. However, most manufacturers offered new assignable style control surfaces and were asking operators to leap outside their comfort zone.

As time went by, operators became familiar with the new digital technology and wanted a control paradigm that allowed them to exploit more of the power offered by digital processing with less of the costs associated with large format knob-per-function designs. Control surfaces then started to get 'softer', and the first designs employing a mixture of tactile controls and touch-enabled displays began appearing.

Similarly, two levels of assignability (assignable channel strips, with assignable controls) began gaining acceptance, allowing a more compact surface to control a larger number of channels, each with a larger number of parameters.

However, this higher degree of assignability did not suit all user types, and a number of current designs offer the best of both worlds, i.e. a number of assignable knobs per channel strip, and a full, dedicated channel control panel. This is the approach we favour at Fairlight and you can see how this is implemented when you look at Constellation-XT.

Most recently, I think that operators are beginning to really appreciate the value that touch-sensitive controls can add to a good automation system. Many operations that previously required complex key-press sequences now flow naturally. This development is still ongoing. Processing systems are becoming even more and more configurable, with a corresponding increase in flexibility and variety in their control.

What is different in the approach you adopt when designing a mixing console surface and a DAW control surface?

Good question — I think it is a combination of many things. The key to it all is to listen to the operators — these are the people who actually know what tools they

need and who will ultimately end up using the designs. It's so important to listen to them and understand as thoroughly as possible what they do, why they do it, and the processes they carry out to achieve these aims. Once we have gathered as much of this information as we possibly can, we then start looking for ways to make their jobs easier for them. We achieve this by carefully analysing what they've told us to find out what the key operations are and which ones are most frequently used — these then become the operations that we optimise the design to accomplish.

Based on this research, we generally end up with a very long list of what we think we would like to do. We then rework and refine this list, trying to bring it back into line with technical, ergonomic and commercial realities.

Once we feel that we have captured the basics, the fun really starts. We happily spend hours evaluating cardboard models, complete with photo-realistic faceplate printouts. Where possible, we create early working mock-ups for key concepts or technologies. And again, we include operator feedback wherever possible.

Generally, this process goes through a number of iterations, before the real hardware design finally starts.

Is the design approach we take vastly different between a mixing console and a DAW control surface? No, I don't think so. Most of our designs implement support for both disciplines anyway; some are biased more towards editing, while others are biased more towards mixing. One of the strengths of Fairlight is that we offer an integrated DAW and mixing surface design and so by default we are considerate of the way these two parts work together. Our designs have evolved to optimise all aspects of what you can now see as a 'system' surface rather than a discrete mixing or DAW surface. From the one surface you can now accomplish most aspects of the production process including recording, editing, mixing and video control as well as controlling the movement of digital content around audio and video networks.

Are you restricted by the availability of different controls in your designs and are users ready for more radical methods of control?
Fairlight has often pioneered unique or non-standard approaches to tactile user interfaces; just think about the light-pen used on the early samplers! This trend is still upheld today, with the Dream product range featuring custom-designed switches and motorised knobs, as we could not source off-the-shelf technology that satisfied our requirements.

Although all systems use controls in different ways, fundamentally they are all built around some combination of the same key components: linear faders, rotary controls, pushbutton switches, touchscreens and LED indicators. There has certainly been evolution in the controller technology, but not really much revolution.

I think that the changes that have taken place in the audio production world, and the wide acceptance of the DAW in general, clearly show that the operators will happily adapt to new ideas. The important thing is that the change must be a real improvement, rather than a gimmick backed by clever marketing.

Working methods dictate the shape of tools, what change in operational methods can take advantage of available technology?
Workflow. I think we need more than just asset management. With the IT technology that is available now, it ought to easily be possible to implement a customised facility-wide workflow.

This would isolate the operators from the tedious issues of moving files from A to B, would ensure that backups are done, that the correct final is sent to the correct client for approval (in the right format), and that the relevant entries are logged in the accounting system. Included in here should be a version-control system (similar to what has been used in the software development process for many years), which would allow an operator to tag a production at any stage, and which would allow them at a later day to completely revert back to that state — complete with all plug-ins, the current automation pass, all patching information.

Asset management? Yes please, but maybe more than just media. Virtually all facilities today have a large amount of often under-used or redundant equipment, such as I-O, voice booths, video recorders, and DSP power, to name a few. I would like to think that, based on some of the emerging technology, we can in the future find a way to share these resources effectively. To be really beneficial to the end-user, this should be a vendor-independent system, and should cover physical and virtual assets. For example, I would be able to buy one hundred hours of plug-in X, and then use them on-demand in studios around the facility as and when needed.

Server-based media. We're not quite there yet, but with the pricing and performance direction that disk drive, Raid controller, and networking technology have taken, I don't think we're that far away from being able move even large and complex productions from the local drives back onto server-based storage instead. This in turn speeds up the workflow, and makes asset management simpler. The challenge here is to deliver the functionality at a commercially acceptable price point.

Given that processing power and performance in general terms is similar across the leading DAW brands, what differentiates them?
I think performance is very subjective when you talk about DAWs and this is reflected in how manufacturers differentiate their products. For example, some systems focus more on the hardcore daily tasks, i.e.

editing and mixing, and are therefore more suited to production environments where throughput and efficiency are more important. Other systems place more emphasis on flexibility and variety, offering the user more choice, which is a real plus in situations where there is less commercial pressure.

In addition, some systems entice the operator to put everything into the one box, whereas other systems invite collaboration and integration with other equipment.

What defines the word 'professional' when used in the context of DAWs?
Any DAW that earns its operator an income. We all know that it's possible to produce a hit record in a bedroom with shareware and a CD burner so even that basic use of DAWs could be classed as professional. However, that's the exception. For most people the path to commercial success in employing DAWs is a combination of many things not least the ability to extract the maximum benefits from the technology that is available.

Where are the current technological bottlenecks in DAWs?
There are a number of very capable systems available, but once you start configuring them for serious multiformat work, the cost can be prohibitive, especially for smaller facilities. It's not that the technology is a bottleneck, it's just expensive to build.

Audio processing has evolved at an amazing pace. We have more channels than ever before; each with more parameters than ever before. There are fantastic plug-ins available for any task you can think of, yet again with large numbers of controls. However, control surfaces have not developed at the same pace, with most controllers today employing technology similar to that of many years ago.

There is only very limited support for collaborative productions. The application here would be large format, hierarchical productions for film and the larger TV projects. There are some early attempts being made at this, however, I think this is an area where much more can be achieved. ■