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The PA Person

From teen electrician to leading a global integration company, Chris Dodds of The PA People has had a remarkable career, as **Richard Lawn** reports

PA People director Chris Dodds at Sydney's ANZ Stadium, which the company has installed, managed and operated since 1999

LOCATED AT THE PERCEIVED END of the world, Australian audio technicians have long been admired for their pioneering skills and resilience in ensuring the show goes on. Just like a driver in the Outback suffering an engine breakdown, the audio engineers from this part of the southern hemisphere have long had to overcome challenges in order to survive. Today's digital breed of engineers may share little in common with the equipment manufacturers and production companies that sprung from the 1970s, but there is much to be admired within this dwindling generation of audiophiles. Some, like Chris Dodds, continue to be

> *We were always striving for clarity and intelligibility. We wanted our systems to reproduce the source as closely as possible*

fascinated by the challenges they thrust themselves into.

Mr Dodds learnt the fundamentals of electrical and audio engineering from the ground up. Coming of age in the days when professional equipment was either unavailable or prohibitively expensive in Australia, he is part of a generation of audio practitioners who often built the tools they required by hand. Since the 1980s, Mr Dodds has been involved in the development of a series of ground-breaking audio systems and communications technologies. Whether he is creating the perfect system for use in event production or satisfying a customer's specific need, his experience has shaped a design philosophy that blends a capable pragmatism with the goal of being 'fit for purpose'.

Growing up in Canberra in the 1960s, Mr Dodds was born into electrical engineering – his father managed an electronic component supply business. Building a PA out of JBL components, a young Mr Dodds cut his audio teeth providing the sound and lights for high school

functions before he could drive. This passion led him to study Electronic Engineering firstly in Canberra, before moving to Sydney to further his studies at UNSW. However, the actual practice of building and using PA equipment always took precedence and he started working part time for CS Services in 1979. Working out of a quad garage in a western suburb of Sydney, CS was like every other Australian audio company in that it did everything in-house, from building mixing consoles, speaker systems and multicore cables to spraying and printing metal housings in addition to building its own circuit for live production and installations.

Such a thriving cottage industry in electronics is hard to imagine in today's Australia. 'It was a much more restrictive trade environment,' recalls Mr Dodds. 'There were import margins of 100 per cent and sales tax was 27 per cent for most items, though if it was designated as 'professional equipment', the rate was 15 per cent. This was why Australians and New Zealanders had to build things. It was an era when Jands were touring ABBA with a 20,000W system that they built themselves with JBL components.'

Other extracurricular activities for Mr Dodds included a tour of duty on the NSW clubs circuit with Don Lane. 'We did about 15 shows a year in the Sydney clubs like Rooty Hill and Revesby. Don brought along his musical director and some musicians from Melbourne, and also picked up some local players. I was hired to carry bags, organise sheet music and operate the sound system.'

When US manufacturer Bose Corporation set up in Australia, Mr Dodds, with his hands-on experience in componentry, was hired to service products for the newly established

subsidiary. This included installing Bose's expensive car stereo systems into luxury vehicles. Relocating back to Canberra in 1982 to continue his education, Mr Dodds revived his PA business as a partnership with what had now become The PA People in Sydney, took premises and opened a line in pro audio retail. A typical gig at this time was the Australia Day festivities, where he would mix with a 16-channel Allen & Heath mixer, four pairs of Bose 802 loudspeakers and Foster subwoofers. 'In the Canberra Festival's heyday we would be providing 30 or 40 PA systems over two weeks,' he recalls. 'In 1982, we were mixing a series of concerts on the lawn in front of the old Parliament House.'
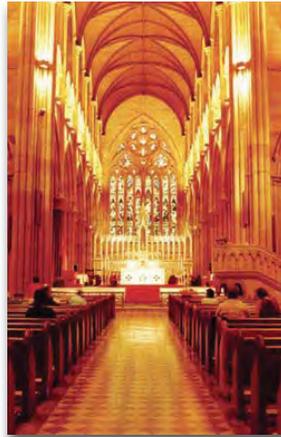
Mr Dodd's company attracted the attention of Opera Australia, who staged annual amplified outdoor performances in Canberra but had never been happy with the results. He was given the opportunity to tackle the gig in March 1984, using what they called the 'Bose Tree', consisting of 16 Bose 802s per side on custom-made metal structures so each box could be steered. It delighted

The Australian Formula 1 Grand Prix - another PA People project

critics and Opera Australia alike. Close relationships between Opera Australia and Carols in the Domain in Sydney ensured that The PA People was appointed as PA provider in 1985, building two 14m tall Bose Trees each carrying 48 Bose 802s. 'We tried to run the delays off 18-foot winch-ups, which didn't work. Two weeks later we had manufactured eight 28-foot high delay structures and we went on to hold the Carols in the Domain contract for 10 years.' Major event experience brought The PA People to a new level in the production market. Whilst touring with the Sydney Symphony Orchestra with two trucks full of sound and lighting equipment, the company found the demands for this scale of live production were not being met by existing products, and so often had to invent or build solutions.

Under the banner Creative Audio, Mr Dodds and the team addressed one of the production issues that would become a speciality – communications. They designed and built the Creative

Audio partyline system, which contained innovations including monitor loop through, enabling audio engineers to connect their show communications to their monitor loudspeakers, freeing them from wearing communications headsets that detracted from their work. The PA People became an expert in integrating wired communications systems with wireless technologies such as walkie-talkies for large scale events. Over the years, the company has built on this in-depth knowledge of radio communications, becoming the world's leading wireless event communications company. As a result, its skills have been deployed on international stages including the Olympics and Commonwealth Games.

Catering to demand, Mr Dodds often delved into loudspeaker modification or manufacture. Together with electro-acoustic engineer Glenn Leembruggen, Creative Audio designed and built its own three-way monitor wedge in 1986. As The PA People moved into major touring production, arena-filling artists like Diana Ross, James Taylor

and Gloria Estefan used both the company's services and its products. 'We were always striving for clarity and intelligibility. We wanted our systems to reproduce the source as closely as possible'.

As the age of digital audio technology began in the late 1980s, Creative Audio expanded its engineering capacity to embrace these new possibilities. In 1989, a new facility was established in Brisbane, headed by a broadcast engineer from MTE, Neil Packer, to deliver customised digital solutions to a growing range of installation clients. Three years on, an innovative message store solution for NSW State Rail had been designed and built. This followed the need to have announcements automatically delivered from a central office and broadcast to remote platforms. The digital message storage box could receive and store data, which was then transmitted when scheduled from a standard telephone line from central control to the stations.

Having attended the 1994

Sydney's Eternity Playhouse Theatre

The PA People has enjoyed great success in the house of worship market, including St Marys Cathedral

Hillsong Chapel is among the PA People's highest profile house of worship projects

NSCA exhibition in the US, Mr Dodds recognised the power of MediaMatrix. 'When I witnessed this, I knew that digital had arrived and there was no market for custom analogue,' he explains. He decided to use this as the core of the vast stage management and paging system in The Sydney Opera House. Over three years, Creative Audio created the code that turned a host of third-party controllers and the MediaMatrix core into a highly flexible, networked paging system. It became a commercial product in itself named ControlMatrix.

As the Sydney 2000 Olympics approached, The PA People was awarded the tender to outfit Stadium Australia and the surrounding arenas for the games. By 1999, all the PA, paging and ancillary systems were in place, including a MediaMatrix/ControlMatrix solution that covered the whole Olympic Park Authority site. The signal was distributed via an Ethernet network running CobraNet – a technology still relatively unknown in Australia at the time. 'We built all the hardware and controllers,' says Mr Dodds. 'Having adopted a 3.3v (silicon) design for the CobraNet cards, we solved the problem of heat dissipation for the amplifiers, making them the first CobraNet-enabled amplifiers in the world. Crown released the first commercial unit two and a half years later. In reality, we had created a CobraNet network 10 years before it was widely practised.'

The Olympics marked the beginning of a long relationship with Stadium Australia, now known as ANZ Stadium. 'We have maintained the system and operated every event for 15 years. We reconfigured and updated it once in 2003, making new additions and upgrades. We then replaced it in 2013.' ANZ Stadium now boasts an immense d&b audiotechnik loudspeaker system designed by stadium acoustics expert Scott Willsallen.

'A lot of systems integrators are shy of such challenges and rely on consultants, whilst many rely on the products supplied by certain distributors to make things work,' Mr Dodds reflects. 'For example, we have always enjoyed a healthy relationship with Paul Mulholland and Jands. Business relationships are just as important as good product. But we have to maintain good relationships with all the other suppliers in Australia otherwise our designs could be compromised.'

Not content with merely installing

A/V solutions, The PA People wants operators to have a positive experience, whilst supporting the client in the long-term until an upgrade is required. 'When assessing a product or system design, the philosophy asks 'Is it appropriate? Is it serviceable?' These are key questions often overlooked in the quest for technical solutions. While a product may exceed all desired performance criteria, its cost or maintenance requirements may render it a poor choice. Another product may be attractive in price, but will ultimately be too difficult to use or fail to live up to the customer's expectations. It's vital to conduct lots of research, balance all factors from the outset and think laterally.'

In 2008, the 14-man team at Creative Audio was acquired by Biamp Systems. This instantly provided the US manufacturer with a highly experienced engineering development team, which has gone on to accelerate Biamp's R&D programmes in digital audio networking technologies. For example, the successful Vocia

Sydney's famous ANZ Stadium

platform was initially developed by Creative Audio as ControlMatrix 2, prior to the acquisition. The unique paging system was successfully installed as an upgrade to the Olympic Park site-wide system for Beta testing in 2010 and can now be found in the Aquatic Centre, the RAS Arena and the new RAS Exhibition Halls five and six.

Mr Dodds firmly believes in the value of having an experienced integrator involved in the design and deployment of any A/V solution. The PA People's history of finding often unique solutions to live production and installation challenges means the company is aware of many pitfalls that may not be obvious at the outset of a project. 'An intelligent approach is to know what you don't know. An intelligent design is one that states a system's goals, the volume required, its intelligibility and the area it must cover, without specifying one particular solution. That is truly understanding design and capturing what the customer needs.' The ability to find the perfect balance between utility, quality, serviceability and attainability is only learned through years of real-world experience. 'Fundamentally, "Fit for Purpose" is an engineering approach - it's all about what's best for the job.'