

ProAVLAsia

LIVE SOUND | LIGHTING | RECORDING | INSTALLATION | AV | BROADCAST | POSTPRODUCTION | September–October 2021

BY ROYAL APPOINTMENT

CST transforms Parkroyal Collection Marina Bay

**E&E CELEBRATES
70 YEARS**

**NEW SHIKI THEATRES
OPEN WITH MEYER**

**INFOCOMM BEIJING
SHOW REPORT**

**MARTIN AUDIO
ANNIVERSARY PROFILE**

Singapore: MICA (P) 001/06/2021 PPS 1604/05/2013(022953)

Powersoft

POWERSOFT.COM

DYNAMIC MUSIC DISTRIBUTION

High-quality music distribution in multi-zone / source applications



SCAN FOR MORE



ELECTRONICS & ENGINEERING PTE LTD

THE PROFESSIONAL SOUND & AV SPECIALIST SINCE 1951



ELECTRONICS & ENGINEERING PTE LTD Group of Companies wish to acknowledge the trust and support of our business associates and customers for the growth and expansion of our group of Companies.

E&E Services Pte Ltd
E&E Technologies Pte Ltd
Broadcast Professional Pte Ltd
Broadcast Professional Sdn Bhd

PT. ENE Indonesia
The Hi-Fi Company Pte Ltd
Eng Kong Engineering Works
Systems Electronics & Engineering Sdn Bhd

Celebrating

70 GLORIOUS YEARS

1 9 5 1 - 2 0 2 1

Thank You For Being On This Journey With Us



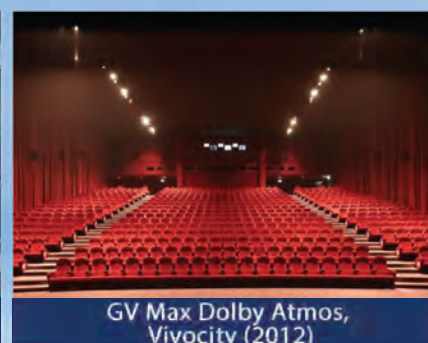
The National Theatre (1963)



National Stadium (1973)



Esplanade, Theatres By The Bay (2002)



GV Max Dolby Atmos,
Vivocity (2012)



Gardens By The Bay (2012)



Victoria Theatre & Concert Hall (2013)



Singapore Sports Hub (2014)



Wesley Methodist Church (2015)



Changi Airport Terminal 4,
Digital Immersive Wall (2017)



Zouk Clarke Quay (2017)



Netflix Singapore (2018)



The Bicentennial Experience (2019)

ELECTRONICS & ENGINEERING PTE LTD

285 Outram Road, Singapore 169069

Tel: +65 6223 5873 • Email: enepl@enepl.com.sg

www.enepl.com.sg



Visit www.enepl.com.sg to learn more about our history in the Professional Audio Visual Industry



L-R: Father and son Ronald and Gary Goh

Father to son

Reaching a 70-year milestone seems to have put an extra spring in the step of the Goh family. **Richard Lawn** reports on seven decades of Electronics & Engineering

MANY SUCCESSFUL BUSINESSES ARE FOUNDED BY

entrepreneurs who have built their own companies from scratch. However, continued growth cannot be guaranteed once the founder opts to retire and transfer responsibility to the next generation. For businesses choosing to honour a family tradition rather than serve its own needs, there is often trouble ahead. But the longest-established systems integrator and distributor in Southeast Asia, Electronics & Engineering Pte (E&E), is more than flourishing under the third generation of the Goh family.

Nestled on a small block of pre-war houses along Outram Road, E&E began a journey of discovery by sticking to the principles instated by its founder, Mr Goh Kiok Chuan. E&E has played a firm role in installing cutting-edge AV systems into landmarks – not only in the Lion State but as far and wide as Beijing and India. In parallel with Singapore itself, the company has forged its identity and heritage on a foundation of ingenuity and hard work.

Having initially established a photographic studio in the southern Malaysian town of Benut in the 1940s, Mr Goh's passion for cinema served as the catalyst for E&E's creation. Renting a 16mm movie and setting up benches and a bedsheet screen on a vacant lot near his shop, he could charge 20 cents per entry. Several years would pass before Mr Goh started a new company with two friends in radio and cinema. In 1951, Electronics & Engineering came of age importing portable radios, radio parts and WISI antennas from Germany. Although the radio business didn't perform to expectations, Mr Goh started his own projection equipment company once his two partners had sold their stakes in the business.

In 1963, his eldest son Ronald Goh entered the frame. "I was literally born into the business," recalls Ronald. "My father founded the principles of E&E, taught us to work smart, to think things through and be righteous." When Ronald was accepted into Raffles Institution, a premier school for his secondary education, his dad insisted he should go to a technical school



55 years after graduation, Ronald designed and donated an audio system to Queenstown Secondary School

as it had better prospects. Singapore was developing, shifting its focus towards engineering, and this would better equip him to assist in the family business.

Making the switch to Queenstown Secondary Technical School, Ronald then spent another three years at Singapore Polytechnic to gain his technical education. A passion for audio was in his DNA and he would often tinker with audio equipment after

school. Despite the sparks that sometimes blew into his face, he learnt quickly and was repairing and aligning Bell & Howell and RCA projectors and amplifiers at a young age.

In its formative years, E&E specialised in refurbishing cinema projection equipment, becoming a main supplier to local cinemas. However, it was during the 1960s, when new Dolby sound systems were being developed for the cinema together

with more complex public address systems, that E&E matured. Repairing amplifiers and loudspeakers paid young Ronald a humble wage, but it was his passion for setting up the sound system for his school's annual concerts that motivated him. A striking attribute – one that has never deserted him – is his supreme confidence in designing and installing sound systems. No project has ever been too difficult or too large for him to take on. Setting up the pro sound division of the company upon joining, there was just one brand that interested him at that time: Altec Lansing.

As the 1970s progressed, E&E did not shy from bigger projects, including the installation of a sound system for Singapore's National Theatre. Awarded the S\$780,000 tender to install a system at Singapore's new National Stadium, a 21-year-old E&E came of age in 1972. The stadium system was



An Altec Lansing PA system was installed in the original National Stadium in 1973



E&E installed AV technologies at the Singapore National Stadium and Sports Hub

designed by Boston-based acoustic consultants BB&N, and Ronald learned humbly from the engineer in charge, Dr Jacek Figwer. "Not only did we have to correctly install the whole Altec Lansing loudspeaker system, but we also had to learn everything about large-scale project management," he remembers. Critical acclaim was rewarded with high-profile projects including the Golden Million nightclubs. Singapore's rising star began to attract more opportunities overseas including a growing number of hotel chains such as Southeast Asia's Shangri La.

No peak was too high for Ronald during his formative years. A lot of his spare time was consumed studying electroacoustics including a paper by Richard Newman on sound systems. When E&E was commissioned to install a Richard Newman (BB&N) loudspeaker design at the Sultan's Auditorium in Kuala Lumpur, Ronald was undaunted by the sultan's appearance. "The architect was not happy with the size of the old Altec multicellular horns, but I stuck to my laurels. During the demonstration, the sultan listened for 10 minutes before silently leaving the room. I was relieved when the architect declared that the sultan was happy with the fidelity and intelligibility. This approval gave us a lot more leverage in Malaysia and allowed us to make decisions without having to refer to the consultant."

One of Ronald's biggest achievements came in September 1984 when the New York Philharmonic Orchestra performed a concert at the National Stadium. "We were commissioned by CitiBank to provide and design the sound system for this once-in-a-lifetime, one-night performance," recalls Ronald. "In the days leading up to the concert, most purists and critics insisted that the National Stadium was a poor selection of venue owing to its size and reverberation, and therefore the sound reproduction would not be good. Under the circumstances, I was interviewed on TV, and I had to assure the public that the sound system we were providing for the concert was as good as it could be."

Calm on the outside, the added pressure nevertheless tortured Ronald with sleepless nights. In his drive for perfection, he revisited his design and included five delay systems. "That evening came and the Altec Lansing system sounded so natural and clear from the front seats all the way to the back of the stadium galleries. The next day, I received the ultimate compliment anybody can give to a sound reinforcement



E&E staff outside the branch office in Jakarta, Indonesia

system from Violet Oon, a reviewer for the *Sunday Times*: 'It was a combination of informality, of drama, of pizzazz and of professionalism. I am no technician, but the music must have been amplified. The wonder of it was that we did not notice it – an indication of a perfect marriage of art and artifice.'

Sadly, following an earlier accident, Mr Goh Senior passed away in 1992. "During those final three years, my father was beginning to pass more knowledge to me and had it recorded in a file," explains Ronald. "The file includes important dates and milestones including a Chinese slogan that translates to 'always be wary of people around you' and 'don't have harmful thoughts in your mind'. My dad taught me too as a businessman to pay all your invoices, that a handshake is a commitment and to honour all your commitments. I have taught my son, Gary, to do the same."

Having graduated from the Royal Melbourne Institute of Technology in 2003, Gary Goh has worked tirelessly to earn



Ronald Goh and the E&E team scale Mount Kota Kinabalu to celebrate the company's 55th anniversary

the respect of his colleagues, customers, consultants and principals. With the same work ethic in his DNA, Gary's limitless ambition twinned with an academic knowledge is taking E&E into new market sectors including prosumer and e-sports. "I was exposed to audio at a very young age, which was possibly intentional," acknowledges Gary with a smile. "My father has always been a light to the pro audio community here in Singapore and I was fortunate enough to be mentored by him. He works incredibly hard like my grandfather did and that is why we have accomplished so much. Therefore, returning to the family business following my studies was a natural thing rather than an obligation."

E&E's rollcall of success in systems integration is undoubted, but a great deal of turnover and profit also comes from its distribution model which includes Harman Professional, Neutrik and Shure. Gary and Ronald insist that both entities operate independently as two distinct businesses that carry equal importance. "We want both businesses to succeed, so it is important to strike some sort of balance," explains Gary. "The great relationships we maintain with our partners and suppliers cannot be taken for granted. This was demonstrated when E&E and Harman Pro parted company in 2011, and E&E had to transition seven brands at once."

The major disruption that followed, however, turned into one of Gary's most rewarding and accomplished periods. "Our customers reassured us that they did business with E&E and not the brands that we represent. I think we proved to ourselves and the market that E&E exists not because of the products we sell, but rather the solutions we can provide."

Following the acquisition of Harman Professional by Samsung, relationships were renewed in 2018. "There is no point taking on a brand for a project," comments Gary. "Distribution was never about box moving or using products for your own installations. We have always provided servicing, system design and other expertise for our customers and dealers. Ultimately, we value the customer as the most important person and strive to deliver to the best of our abilities, distinguishing ourselves based on our credibility and customer satisfaction. We place equal emphasis on providing all clients, whether a reseller or end user, with the same level of service."

Since 2000, E&E has regularly upgraded the audio systems at leading Singaporean performing arts venue, University Cultural Centre (UCC). Repeat business is seemingly earned and never taken for granted, or perhaps – according to the venue’s then head of production, K Shyam – E&E realises more than others that the show must go on. “There is more to E&E than just providing natural-sounding audio and precisely reproduced tones from an L-C-R solution,” he comments. “We encountered a fault with one of our amplifiers a few years ago, so naturally I called E&E as I expected them to solve the problem. What I didn’t expect was to see Gary walking into the hall 30 minutes later with a replacement amplifier, which he installed. That’s service.”

While the high retention of skilled long-term employees creates a happy workplace, Ronald acknowledges that many of his brightest have gone on to become headline acts in their own right. “I take pride that they’ve built their careers after E&E, but I also take pride in the fact that we gave the right start to so much of this talent. For our staff to get it right first time, we emphasise meticulous workmanship and an attention to detail. Training for all our 150 staff is vital and we have always invested heavily in our personnel, including scholarships. The better you equip your staff, the better they can perform and get it right the first time. They accept the demands we place on them for the benefit and satisfaction of our clients.”

Seventy years on and the original shophouse continues to serve as the main office and operational nerve centre. “This



From Beijing to Bali, E&E has designed and installed the audio systems in many of APAC’s Hard Rock Cafes

In the late 1990s, a number of upcoming venues including Kallang Theatre, Victoria Theatre and Concert Hall, the National University Cultural Centre and smaller educational theatres called upon E&E to install sound systems. When the Esplanade – Theatres on the Bay project was announced in 1999, E&E assumed responsibility to install the Concert Hall, Lyric Theatre and studios at the prestigious venue. E&E’s recently appointed COO Joe Fong recalls the project fondly: “To get the sound right, the project enticed many professionals from around the world. Technically, the Esplanade was very difficult to perfect, but ultimately it was really rewarding and took E&E to the next level.”

The Esplanade and the Formula One circuit surrounding Marina Bay are notable E&E landmarks. The company continued its journey around the waterfront to the Marina Bay Sands integrated resort, where it was tasked to deliver the MATV/AV systems and site-wide BGM systems under the iconic three-tower structure in addition to the main sound and communications systems of the two Sands theatres. To take on the enormous two-year project, which was delayed by 18 months owing to the unstable marina clay foundations, E&E assembled a specialised team of over 70 technicians, engineers and project managers. Today, Gary experiences nostalgia on passing the landmark: “It was a hugely demanding project and our team worked tirelessly to meet deadlines, yet we all felt a sense of excitement working on this once-in-a-lifetime project. More than a decade later, I still feel enormously proud of the achievements we accomplished there.”



Image courtesy of Marina Bay Sands

Marina Bay Sands was a colossal engineering project for E&E



The Changi T4 project highlighted E&E’s video expertise

is where my dad started and it will always be the root of our business,” explains Ronald. “This is the neighbourhood in which I was born, and the continued sense of belonging remains important to me.” Having invested heavily in personnel in recent years, the company has duly expanded from its Singaporean nerve centre. In 2016, a traditional dragon dance ceremony marked a new chapter for E&E’s engineering workshop division Eng Kong Engineering Works with a purpose-built 2,766m² warehouse and logistics centre in Tuas. A year later in 2017, a 380m² service centre opened its doors just five minutes’ walk from the shophouse headquarters. Equipped with the latest bench test equipment, portable field audio analysers, processors and spectrum analysers, the authorised repair centre incorporates a double-walled speaker-testing chamber, re-coning section and conference room for team meetings. The previous service centre was converted into the ENEXC experience centre for special functions, meetings, demonstrations and promotions.

E&E’s motto of “Getting it Right the First Time” served the company well in the 1990s as it was awarded an increasing number of regional contracts, including the Hard Rock Cafe chain throughout Greater China in Beijing, Guangzhou, Hong Kong, Kowloon, Shanghai and Shenzhen. Having taken on Harman Professional in 1993, high-profile contracts were perfect for a new generation of JBL loudspeakers including the Control and Eon series. The rapid rise in Singaporean church congregations has been a blessing to E&E, with a glowing reference list of over 160 Singaporean churches including St Andrews Cathedral, Wesley Methodist, Faith Community Baptist Church and Trinity.



Ronald Goh (centre) wins at the APEA 2017 awards

As the decade rolled on, the projects didn't diminish in importance. Forty years on from the original National Stadium Altec Lansing fit-out, E&E equipped the main stadium with a sophisticated EAW QX system in addition to audio systems throughout the Singapore Sports Hub. Gary likes to reflect on the company's achievements at Changi Airport's terminal four (T4). "E&E is always associated with pro audio, but the T4 project served as a declaration of our video expertise. T4 was a hard-won project with intense competition, following many interviews and proofs of concept. E&E has become synonymous with great-sounding audio that so many forget our huge commitment to video. I always make a point of flying out of T4 just to see the LED walls we installed."

While Ronald acknowledges that he spent a lot of time and energy convincing clients to install audio systems as mono, stereo or L-C-R configurations, Gary is more open to compromise. "The form-over-function battle will continue until the end of time; therefore, a compromise must always be made wherever a system is intruding into an architect's design. However, I much prefer to work with designers who listen and accept a blend of form and function. The technology has evolved sufficiently and there is a wider choice available such as smaller, networked, powerful columns and discreet ceiling fixtures."

Gary has spent the last decade since E&E's 60th anniversary as deputy managing director, continuing to strengthen commitment to customers and pushing new boundaries by expanding the portfolio with product innovation and engineering. As the company celebrates its 70th anniversary, it has shifted into a new phase of growth, with Ronald assuming the role of chairman of the E&E group of companies and Gary as CEO.



Chairman Ronald Goh surrounded by the E&E team

"This transition has been years in the making," reflects Ronald. "Gary's leadership has been instrumental in both evolving and driving E&E's growth strategy over the last decade, and I am confident that his knowledge, experience and dedication will carry E&E into the future, securing its success in the years to come."

Over the years, E&E has accumulated numerous industry awards, with several cabinets at 285 Outram Road filled with trophies and

plaques from Asia Pacific Enterprise, Friends of Heritage and Small-Medium Enterprises (SME) 500 Award in addition to accolades recognising countless sales accomplishments. However, Ronald's most cherished acknowledgement followed a school reunion. Academic institutions rarely receive a return visit from students to repay the debt of gratitude for having provided knowledge and skills to set them up for life. However, having graduated 55 years earlier, Ronald got to balance the books and give something back to Queenstown Secondary School. Following an audio consultation, he designed and donated a full-range loudspeaker system for the large multipurpose school hall, meriting a ceremony in his honour. "I was so happy that my small gesture brought so much joy to so many people," he says. "This is in line with one of my philosophies in life whereby it is better to seek joy in giving rather than in receiving."

The father-to-son heritage instilled in the highly respected business that Ronald has steadily built since 1963 does not daunt Gary: "E&E is built on the values that have shaped us for the past 70 years, and these same values will continue to guide us for the years to come. Our success would not have been possible without our clients, partners and immensely dedicated team. I am grateful for the friendships and partnerships that we've built and maintained, and look forward to guiding my team on the next lap of our journey with the same level of passion and commitment that has taken us this far."

E&E's success has drawn many imitators and competitors to the fore. However, the company's patent-pending passion, dynamism, professionalism and ingenuity is seemingly impossible to duplicate.

www.enepl.com.sg



The new service centre was officially opened in 2017

TASCAM®

All-in-one Encoder/Decoder/Streamer/Recorder AV over IP Appliances

- H.264/H.265 video encoder/decoder for live streaming
- Records to SD/USB and simultaneously uploads files to FTP servers for archiving
- Versatile audio I/O connection for AV over IP environments
- Compliant with standard live streaming protocols
- Dedicated web-browser based management application

New firmware V2 features

- Recordings to internal storage supported
- MP4 added to the recording file format



**4K/UHD STREAMER/RECORDER
VS-R265**



**FULL HD STREAMER/RECORDER
VS-R264**

TASCAM
50th
ANNIVERSARY

For more information visit <http://tascam.jp/int/>