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RAMA JANMABHOOMI REGAINS PRIMACY BY DEFINITION AND DESIGN

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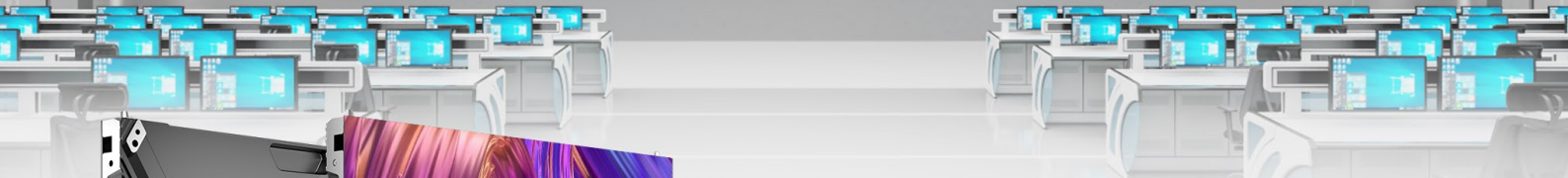
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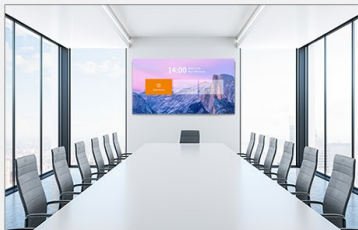
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"Working as AVL design consultant for the Ram Mandir at Ayodhya is like the Lord's blessing on us. It's like a divine ordain; perhaps the most fulfilling project we ever did for its sheer nature and vibe."

Narendra Naidu
Chairman-Managing Director
Rhino Engineers

Thomas Richard Prakasam

Publisher/Editorial Director
thomas@spinworkz.com

On January 22, 2024, a significant moment gripped almost all of India as Prime Minister Narendra Modi, alongside hundreds of revered seers, celebrated the grand Consecration Ceremony at the birthplace of Lord Ram—Rama Janambhoomi in Ayodhya. The majestic Ram Mandir, a temple dedicated to Lord Ram, stands as a remarkable fusion of tradition and technology, serving as the very essence of the divine presence. Amidst a vast array of consultants and integrators contributing to the cultural marvel's creation, the glory of the temple materialized in a breathtaking audio-visual spectacle. Among the distinguished contributors to this monumental project, Rhino Engineers from Ahmedabad proudly held the honour of crafting the AV and Lighting design for the Ram Mandir in Ayodhya. As we unveil the exclusive initial glimpse, witness the colossal work that has gone into creating a visual and auditory experience befitting the sanctity of this revered temple.

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ArtMorph by CECOCECO: Illuminating the Future of Design with Innovative Features and Cutting-Edge Technology

By Jason Lu, Founder, CECOCECO
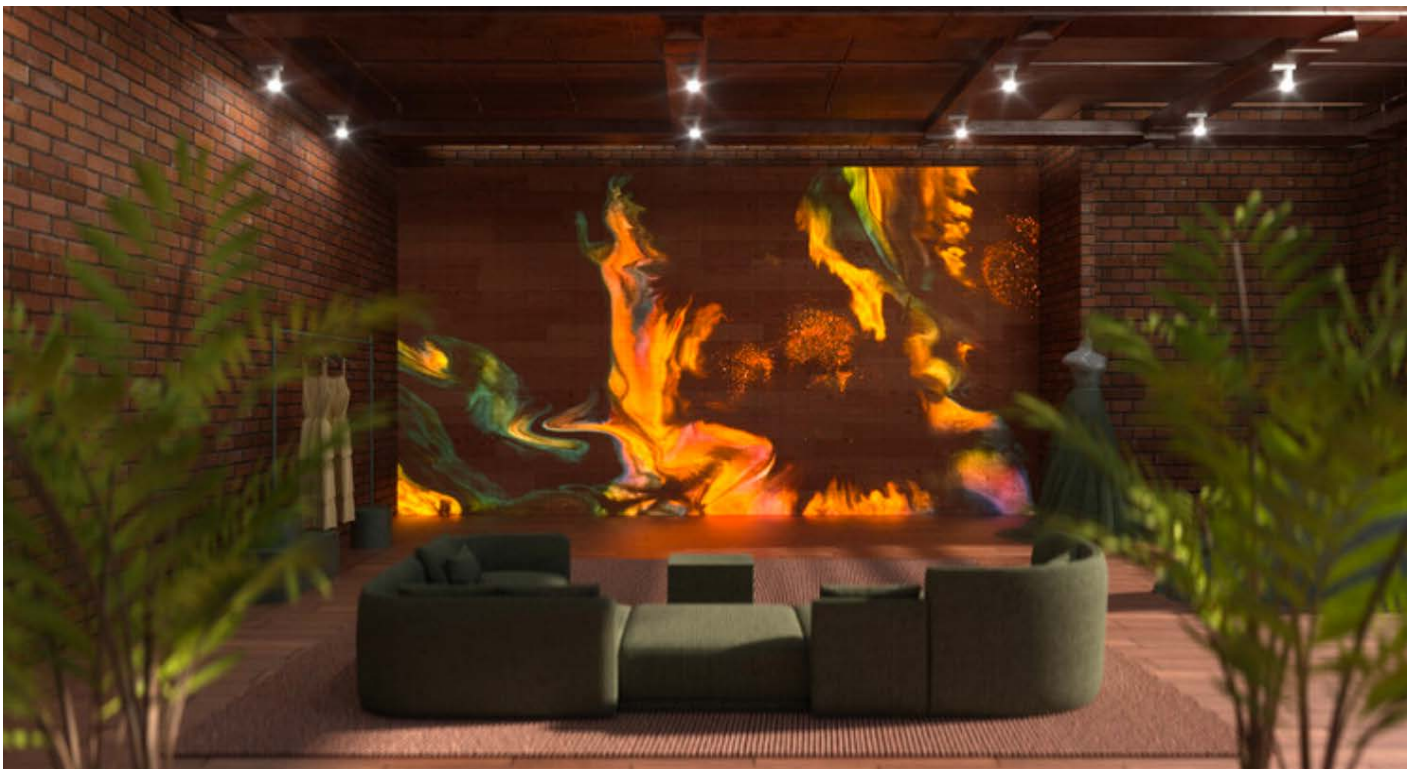
ArtMorph, CECOCECO's latest innovation, seamlessly merges artistic craftsmanship with cutting-edge technology, revolutionizing the lighting and display industry. Positioned strategically, ArtMorph effortlessly adapts to diverse environments, from the chic ambiance of hotel lobbies to dynamic retail backdrops. This adaptability is rooted in its unique strength—a harmonious merger of aesthetics and functionality, making ArtMorph transformative across various settings.

ArtMorph's Innovative Features and Technological Mastery

A pioneer in design, ArtMorph introduces the first LED display seamlessly integrated with an additional cover, departing from traditional black screens. Each ArtMorph tile comprises two components - a vibrant LED screen and a replaceable cover, elevating both visual appeal and functional versatility. The installation process is simplified and secure, featuring four

robust magnets in each tile's corner. This user-centric design philosophy ensures a seamless experience.

At the core of ArtMorph's technology is the ArtMorph Play controller, a meticulously designed interface with memory capabilities and customizable features. This sophisticated yet accessible controller empowers users to effortlessly manage intricate LED operations, with options to control and customize displays using phones, iPads, PCs or a handheld remote.

Beyond its innovative design, ArtMorph leverages advanced material engineering, offering a premium texture collection of over 150 options, including wood, stone, textile and metal varieties. This diversity ensures adaptability to any environment, blending aesthetics seamlessly. The high-resolution LED technology boasts 25,600 pixels per square meter, providing unparalleled visual clarity that redefines the viewing experience.

ArtMorph's commitment to innovation and quality is highlighted by patented excellence and unique designs, setting it apart in the competitive landscape. The unified control experience showcases sophistication while ensuring accessibility. The user-friendly installation process, lightweight materials and modular designs position ArtMorph as an industry standard for seamlessly integrating cutting-edge technology.

CECOCECO's Vision for Trends in 2024

Starting 2024, CECOCECO envisions a transformative shift within the design industry, where visual experiences transcend mere functionality. CECOCECO foresees a heightened demand for dynamic adaptability in lighting solutions, a trend aligned perfectly with ArtMorph's ability to blend perfectly into a wide arrange of environments.

Moreover, CECOCECO anticipates a growing emphasis on sustainable and energy-efficient technologies, echoing the eco-conscious ethos embedded in ArtMorph's design principles. The combination of innovation and sustainability aligns with conscientious consumers and businesses' evolving expectations. The company is poised to lead the charge, providing a product and a forward-looking solution that mirrors the societal shift toward more sustainable and eco-friendly practices.

Furthermore, CECECECO envisions a rising demand for personalized and immersive experiences, predicting that consumers and businesses will seek customizable solutions beyond traditional lighting concepts. ArtMorph, with its extensive collection of premium textures and stunning video displays, stands ready to meet this demand, offering a canvas for limitless creativity and personalization.

CECECECO

APAC Leading the GenAI Pack, What Take-aways for AV World

By Ram Bhavanashi

Image from Freepik

Generative AI – the new 'avatar' of Artificial Intelligence – is truly generating a lot of intelligence. Both naturally and artificially too- by mind and machine! Judging from what it appears at this juncture, it wouldn't be an overstatement to say 'there is hardly anything in human interfacing with life and business that wouldn't be influenced by Generative AI (GenAI). So would be our future, and our world.

The only uncertain thing now is how soon and on what scale human life and world would change. Interestingly, while the APAC is found to be the hottest market for GenAI, China and India

are said to be leading the world in this wonder technology expedition.

Sometime late last year, a very routine and generic media release from consulting giant Ernst & Young said something that actually showed a direction the world had been moving: Asia-Pacific emerges as the top destination for expansion as CEOs look to Generative AI to drive growth, gain competitive advantage.

APAC GenAI – Genuine, Aggressive, Inventive
The EY quarterly survey of 1,200 global CEOs, which provides insights on AI, capital allocation

Image from Freepik

and investment strategies, reflected the difficulties and the urgency that Asia-Pacific CEOs find themselves acting under when it came to emerging technology. While over two-thirds, i.e. 71 per cent of Asia-Pacific CEOs felt the need to act quickly on Generative AI (GenAI) to avoid giving their competitors a strategic advantage, a similar proportion also report being stymied by the uncertainty around this space, which makes it challenging to act quickly.

Conscious of its potential to disrupt their own business models, almost all Asia-Pacific CEOs – 98 per cent to be precise – were found to be making or planning significant investments in GenAI. To fund these investments, 74 per cent were estimated to be re-allocating capital from other investment projects or technology budgets. More- 15 per cent were found to be raising new capital- that's the intensity.

An evenly interesting finding of the E&Y survey revealed that Asia-Pacific CEOs continue to be on the offensive when investing for the future, with a clear majority of 84 per cent planning some kind of transaction for the following year- this even while the routinely solid intentions for mergers and acquisitions have dropped significantly. The focus clearly shifted towards investing in GenAI, deploy strategies to stay ahead of the 'competition that was threatening to take business away.'

Even IDC – which did its survey around the same time – came out with the finding: almost half of the companies surveyed were exploring potential GenAI use cases, and over 50 per cent of financial and telecom companies investing in GenAI.

According to the global IT, telecom market intelligence giant survey, not only the digital-first mindset has been gaining momentum in

Image from Freepik

Asia-Pacific businesses are seeking innovative solutions to enhance operations, and clearly GenAI stands out as a pivotal technology, offering companies the means to mitigate risks, boost efficiency, and improve overall productivity.

The region, which includes mature economies like Australia, Japan, and Singapore, and rapidly growing markets like India and China, has diverse IT requirements and issues. In growing economies, generative AI plays a vital role in facilitating scalable ITOps- stated the survey report.

Sarah Pereira, Regional Head of Technology-APAC at WE Communications, one of the world's largest, female-founded, female-led communications agencies, in a recent interview noted marketing and communications leaders in the APAC are more "fascinated than frightened" about the GenAI impact and role on businesses across the spectrum.

Citing research findings by other MNC firms, she observed that businesses across the APAC take GenAI as the critical differentiator for manpower crunch, skill updation, and improved and sustained work efficiency over a long time to come.

The intensity is such that Microsoft had commissioned global tech advisory body Access Partnership to work alongside local partners in Asian majors- Federation of Indian Chambers of Commerce & Industry (FICCI); Center for Global Communication (GLOCOM) in Japan; and Analytics & Artificial Intelligence Association of the Philippines (AAP) – besides others – to conduct country-level research on the potential economic impact of generative AI across Asia.

According to the WE Exec, the research estimates a potential boost to productive capacity of US$621 billion in India, US$1.1 trillion in Japan, and US$79.3 billion in the Philippines alone, with studies on going in Malaysia, Indonesia and South Korea.

According to a recent survey by the Japanese research aggregator Global Information Inc. (GII), for a period of seven years from 2022 to 2028, China continues to dominate the GenAI market in the APAC, and would aggregate over USS4 billion, followed by India with a CAGR of 33.9 per cent, and Japan with a CAGR of 32.3 per cent.

There is some ambiguity about the projections of market value for GenAI over the next 10 years, as one modest survey puts it at a mere US$7.65 billion with a CAGR of nearly 24 per cent, while a very ambitious survey projected it to be a whopping US$1.3 trillion, with a CAGR of 42 per cent- something crazily incredible!

All this brings us to a fascination, if not a wondering: what is after all GenAI, and how it affects industries, and what industries per se to what extent!

Well, for those still uninitiated, GenAI, in the simplest sense of the term, is like our intro, the new avatar of AI.

AI – when it re-emerged onto the technology landscape in early 2020 – has been reckoned to be a revolutionary force redefining the parametrics of business and altering how people engage with technology in the modern world.

Even as it began spreading overwhelmingly, the tech explorers – for sheer convenience of easy mapping of the domain, bifurcated the AI domain into Traditional AI, and Generative AI. In the technical parlance of AI, it is reckoned as **Generative AI vs Machine Learning**.

Traditional AI, as the name suggests, is just conventional in that it works based on preset tasks using predetermined algorithms and rules. It is functionality is deterministic with rules and instructions set by human programmers.

Typical examples of this type of AI are the virtual assistants like Google Assistant and Siri; recommendation system mechanism for e-commerce platforms, social media platforms, and even web entities like LinkedIn and Pinterest. These apart, programmes like chess, and spam filters that come packaged with computers also symbolise this type of AI, simply because they work on preset programmes loaded into the system's architecture.

Generative AI, again, as the name suggests, generates content on its own. It will devise its own creative tools to generate new content that the users can express in a multiple ways. In essence, it goes beyond the limitations of presets and pre-defined guidelines, and generates entirely new content. More or less, thinks creatively like a human mind can, and therefore opens limitless opportunities.

Generative AI examples range from anything to everything. A generic example can be image generation- realistic images of objects, landscapes, and even human faces. It can create stories, write poems and novels, and even can compose musical scores- all looking original.

It can also perform video synthesis culling out entirely new life-like video content. A best example is the *deepfake technology* which can actually rise serious concerns of ethical application. An ironical but best exemplification of this *creativity* is the recent release of fake video of film stars and cricketers in India.

Another example can be for drug design and development. Companies can create/develop new drugs by designing new molecules with desired properties but again this can be both limitless opportunity for the good, and potentially dangerous to harm mankind.

In a nutshell, Traditional AI is rule-based, controlled and, and therefore can often be discriminative to favour the operator, and not the user. Against that, Generative AI is data-based, transcends all limitations and therefore can be limitlessly creative often giving fascinating results, if not benefits to both operators and users!

Which is why Sarah mentioned the participants of their survey as more fascinated than frightened. For, the daring explorers always want to transcend the limitations; they are not frightened to explore deep and deep; they are more fascinated as they delve deeper, or rise higher.

Based on component, the market is segmented into software and service. Based on technology, the market is segmented into Transformers, Generative Adversarial Networks (GANs), Variational Auto-encoders, and Diffusion

Networks. Based on End Use, the market is segmented into Media & Entertainment, BFSI, IT & Telecommunications, Healthcare, Automotive & Transportation, and Others.

Based on countries, the market is segmented into China, Japan, India, South Korea, Singapore, Malaysia, and Rest of Asia Pacific.

Now, what industry segments and businesses take what kind of impact due to either traditional or generative AI is almost out of perspective, simply because there appears practically none that is not impacted.

GenAI Vis-à-vis AV
Having long back converged into IT and ITES, and now in the COVID-created Hybrid world, AV segment got naturally pulled in by the power of GenAI. Almost every area of AV – manufacturing, design, development, even distribution logistics can undergo a transformation.
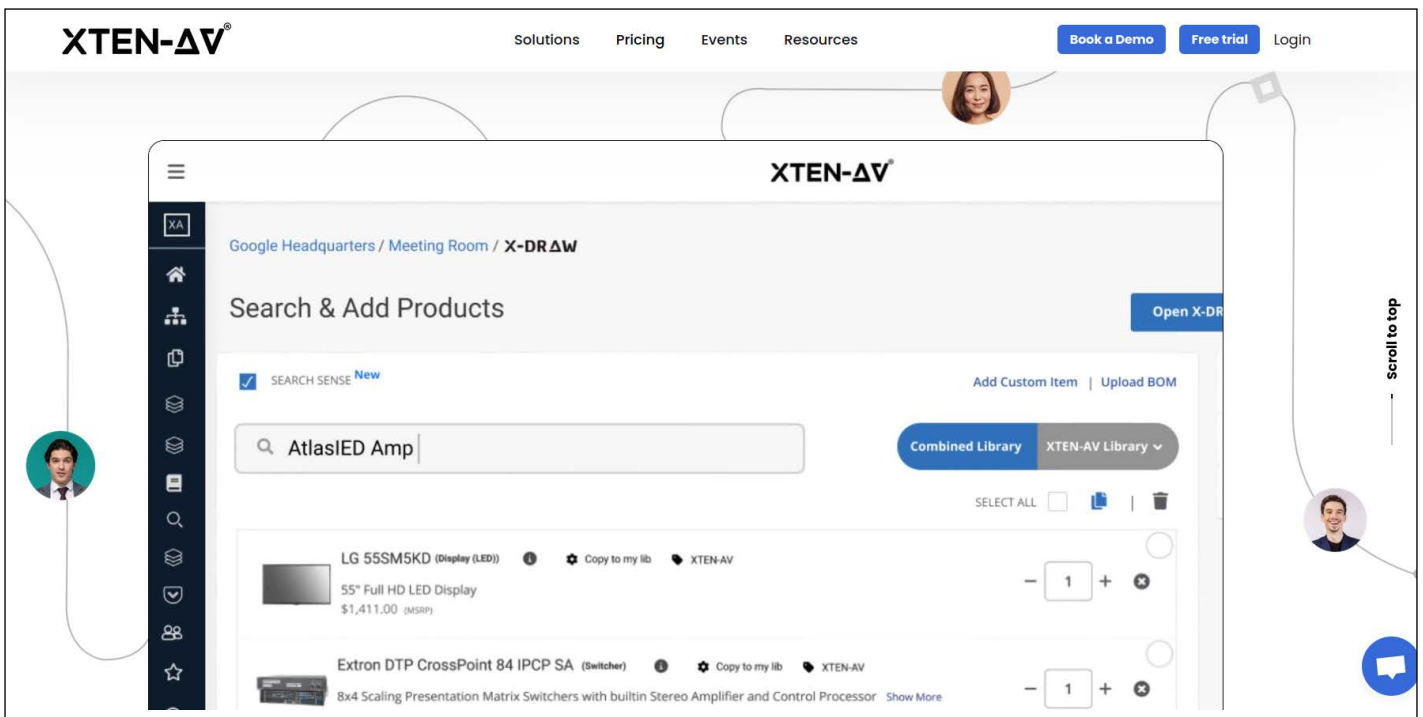
XTEN-AV made AI as the bedrock of its business.

The industry has already seen a metamorphosis from Microsoft Azure to 365 Copilot, Google Bard to Cloud DuetAI, Vertext AI, and ChatGPT, OpenAI GPT-4 and more coming in rapid motion. XTEN-AV, industry first, fully AI-powered professional AV design company made AI as the bedrock of its business is a big bet with GenAI applications, while AV industry's very own AVL-SPL prided offering Symphony has its own Systematic AI for sharpening its offering.

Last year, Harman Professional launched its HealthGPT, a dedicated GenAI platform focused on healthcare.

Accenture announced setting up GenAI studios in as many as nine countries in APAC that include China, India, Japan, Philippines, Singapore and Australia.

In India, the excitement is such that 2023 has seen as many as 60 GenAI start-ups raising as much as US$590 million funding in aggregate, and at least one-fourth of them are working on pure AV applications, while a good majority are focussed on Coding and Chatbots.

In a very generic assessment, GenAI can and would influence a significant part of AV manufacturing. From precision assemblage areas like projectors and display manufacturing to more common electrical companies engaged in cabling and lighting device development, GenAI can transform the very mechanism of manufacturing.

AV designers can both explore their design creative abilities as well as create exciting opportunities within the organization for a multitude of services. It can range from logistics to media material to case study development.

Those who are engaged in video production, VFX, animation, 3D modelling, or digital signage or projection mapping can employ the GenAI tools to make their content involving. Automation system designers can do a 'more-with-less' sort of designs wherein the GenAI will automate a slew of processes with a minimum time and expertise spent by the human designer.

The transformative potential of GenAI came demonstrative in a recent campaign in India. In a collaboration between WPP and Mondeleze on a GenAI-powered Cadbury campaign that involved Bollywood star Shar Rukh Khan the brands targeted small stores with personalized offering. Creating a microsite, the brands paved the way for small businesses and people to generate their own versions of the ad with the star. As a result, over 130,000 ads were created which attracted over 94 million views and engagement, accompanied by a more deeply engaged and loyal customer base.

The possibilities are simply limitless. The only limitation is the human imagination to explore. YES. GenAI still needs humans to initiate, propagate, and revel in its proliferation.

B-Tech AV Mounts Unveils New Logo and Brand Style

INTERNATIONAL: Maintaining a strong, recognisable identity has been pivotal in B-Tech's global growth, until now only two different B-Tech logos have been used since the company was formed in 1972. Now, the name is synonymous with pro AV mounting and is recognised as an A-tier brand by integrators and AV professionals at all levels.

Since the previous logo was introduced, every aspect of B-Tech's operations and its position in the market has evolved, and whilst recognising the enduring strength of the current brand, the new version symbolises the modern, progressive version of B-Tech AV Mounts, a forward-thinking innovator in a highly technical industry.

Attributes of the new logomark reflect the qualities that are expected of B-Tech products: strength, quality, precision, simplicity, and reliability. Products carrying this mark - either

the full version or just the "B" mark alone - come with all the reassurances expected of a design manufacturer with more than 50 years of experience, who are holistically dedicated to professional AV mounting.

The B logomark is formed of three components: upper and lower bowls and a vertical stem. Vertical lines placed in this stem give it an aesthetic that matches the aluminium profile of the quintessential B-Tech product range - the market leading "System X".

This is complimented by a three-colour palette featuring B-Tech's recognisable "deep blue" colour and newly introduced accent colours of mid-blue and cyan.

Whilst the brand evolves, B-Tech's core values remain and the three-shape, three-colour design represents the three overarching pillars of these values: a commitment to designing and manufacturing the highest quality products, unrivalled technical assistance, and focused, dedicated sales support. These three colours blend harmoniously in the logo, symbolising these values working together equally and seamlessly.

As B-Tech AV Mounts continues to grow, commitment to these values remains at the highest level and the B-Tech name and brand remains one of the first names that AV professionals think about when needing mounting systems.

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Christie Laser Projectors Deliver Stunning Visuals at 'Unique Dream of Red Mansions' Park
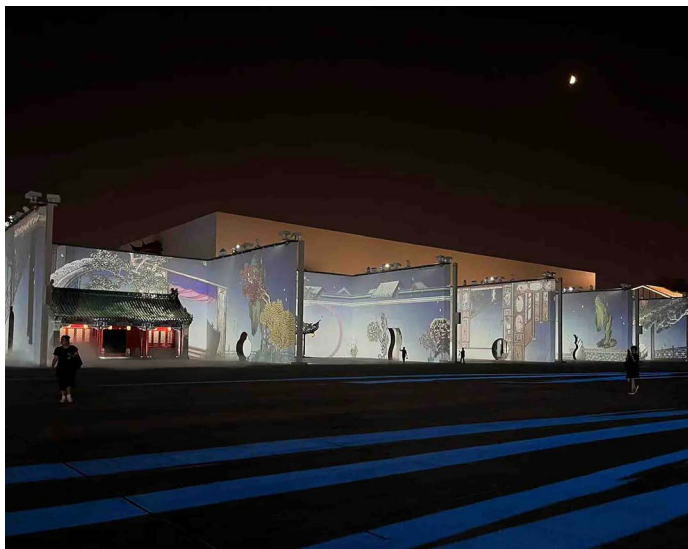
"Beidamen Light Show" is an outdoor projection mapping spectacle featuring 64 Christie DWU860-iS projectors.

CHINA: **Christie** is pleased to announce that its powerful **HS ,GS** and **Inspire Series** 1DLP laser projectors are illuminating a theatrical park based on the Chinese literary masterpiece, "Dream of the Red Mansions", with spectacular visuals.

Situated in Langfang, Hebei province, this expansive venue occupies a total area of 150,000 square meters and features five main theatres as well as 108 scenario spaces and outdoor theatres. Known as the "Unique Dream of Red Mansions," it is a cornerstone of the Dream Langfang Theme Park, a visionary project that took eight years to complete. All performances in the venue are directed by Chaoge Wang, a seasoned veteran known for her influential scenario performances and theatrical works that have significantly contributed to the tourism development of various locations.

In a dedicated effort to elevate the theatrical experience and connect the classic novel with a younger audience, the producers seamlessly integrated visual technologies into live performances, crafting an exceptionally engaging and immersive ambiance. Leading this technological enhancement, Christie's reliable partner, **Beijing Zhongqing Display Technology**, took on the responsibility of delivering projections across four distinct performance venues. A total of 84 projectors, including the HS Series **DWU1612-HS** , GS Series **DWU1082-GS** and **DWU1400-GS**, and the Inspire Series **DWU860-iS** were deployed at "Beidamen light show", "Dream of the Red Mansions Chapter 33", "Youhaiwu Theatre", and "Theatre of Beds".

"The "Unique Dream of Red Mansions" park stands as China's inaugural attraction inspired by a literary masterpiece," said Qing Zhu, general manager, Beijing Zhongqing Display Technology. "For this monumental project, we selected the Christie HS, GS, and Inspire Series laser projectors based on their robust quality, reliability and exceptional colour performance demonstrated in prior installations. Despite navigating challenges such as pandemic lockdowns, the two-year installation journey culminated in results that we take great pride in. The projections have successfully captured the dreamlike and illusory essence of this classic novel."

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Among the anticipated highlights in the theatrical park is the "Beidamen Light Show", a captivating projection mapping spectacle featuring 16 ancient-style gates adorned with various designs in a sprawling outdoor courtyard. Gloriously lit by 64 Christie DWU860-iS projectors, these gates come alive with spectacular images, offering visitors a mesmerizing and visually stunning display to enjoy.

In the "Youhaiwu Theatre", audiences can enjoy a compelling hour-long live performance showcasing a talented cast, exquisite sets, and props, including 36 intricately carved wooden doors. The spectacle is further enhanced by vivid projections on the floor and screens surrounding the stage, brought to life by 15 Christie DWU1082-GS projectors. This performance stands as the main highlight of the "Unique Dream of Red Mansions" park and remains the most watched and celebrated show within the entire venue.

Meanwhile, in the "Dream of the Red Mansions Chapter 33" theatre, visitors experience an engaging enactment of one of the novel's most memorable scenes. The narrative unfolds on a massive, curved screen, illuminated by three Christie DWU1400-GS projectors, providing an immersive viewing experience. On the other hand, the "Theatre of Beds" offers an experimental twist, inviting the audience to recline on beds while interacting with lifelike imagery displayed on a large, tilted screen, powered by two Christie DWU1612-GS projectors.

April Qin, senior sales director for China, Enterprise, Christie, commented, "As a company dedicated to delivering unparalleled visual experiences, the major installation at the "Unique Dream of Red Mansions" park stands as a testament to Christie's commitment to innovation and excellence. Our projection solutions, including the HS, GS, and Inspire Series, have embraced the aesthetic and philosophical essence of this Chinese literary masterpiece while delighting audiences and redefining the boundaries of immersive storytelling."

Christie DWU1082-GS projectors illuminate the "Youhaiwu Theatre" featuring live performers Images courtesy of Beijing Zhongqing Display Technology.

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By Hyve

Discrete Syva and X Series from L-Acoustics Create Soothing Nature-Inspired Space in Made Lim CaféW

SOUTH KOREA: For Made Lim Café, architects None Space reimagined a 120-year-old church, transforming it into a five-storey art, dining, and performance space inspired by natural elements such as water, light, sky, garden, and darkness. Retaining the original brick and stained-glass elements of the house of worship, None Space chose to embrace the history of the space while establishing a new brand story based on
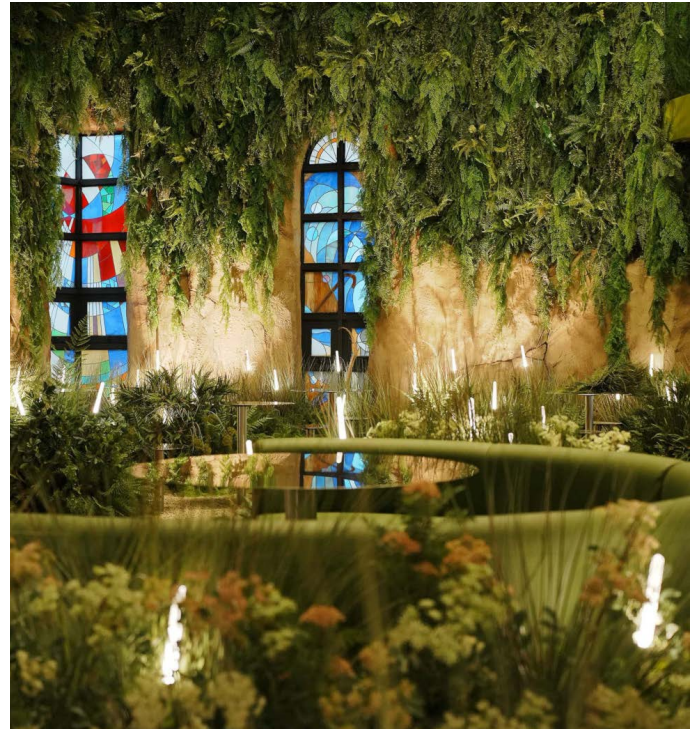
restfulness and nature. Over the venue's five floors, visitors can now enjoy exhibition spaces, dining, a bakery/café, and a performance space where musicians play jazz, classical, and pop weekly.

With each floor offering a unique nature-inspired theme, the Made Lim design team wanted to offer natural, clear, non-intrusive sound to enhance and deepen the feeling of rest and immersion. With an audio program comprised of nature-themed sound effects and calming background music in addition to the dedicated performance space, the Made Lim team sought the expertise of **L-Acoustics** Certified Partner Integrator **Dreamsystec** to design a professional audio system throughout the venue.

Dreamsystec proposed a solution based around powerful yet discrete Syva and X Series models that would provide even coverage with audio clarity while melting into the decor. Following a listening demonstration, the Made Lim team
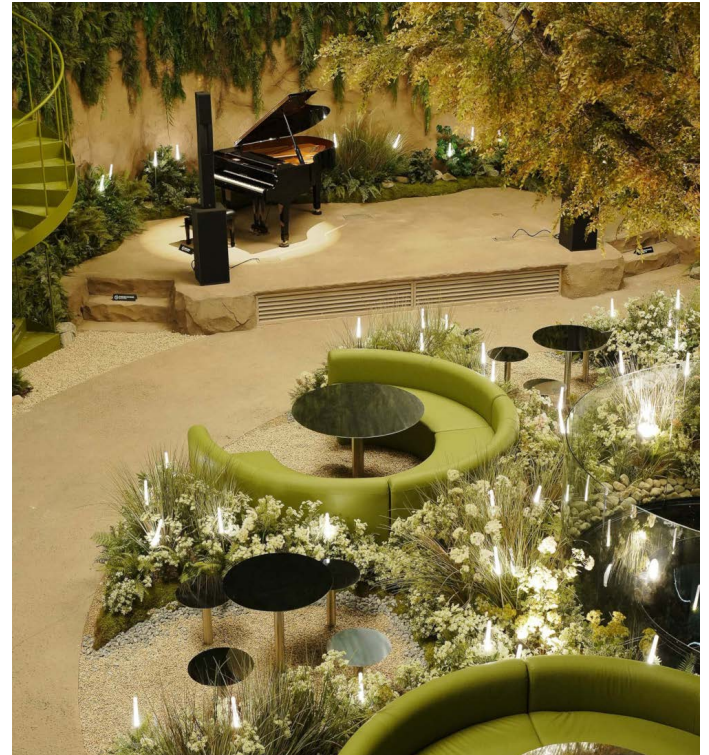
agreed this was the right solution for their objectives.

Dreamsystec, led by project manager Yang Jin Seok, worked with the experienced system designers from L-Acoustics Certified Partner Distributor **Klausys** to plot the various interior spaces and seating positions in L-Acoustics Soundvision 3D audio modelling software. Their design for the Forest Hall dining and performance space comprised a pair of L-Acoustics Syva and Syva Low positioned on stage, with four X4i coaxial boxes dotted throughout the room for fill. One LA4X amplified controller drives the on-stage system. Twenty-three compact X4i speakers are installed and distributed evenly throughout the other exhibition areas, driven by six LA2Xi amplified controllers.

"The compact X4i delivers pristine and dynamic sound with minimal visual interference, which

is exactly what we need in these elaborately designed rooms," says Mr. Yang. "On stage, Syva features a luxury-infused design that perfectly matches the performance hall's interiors while delivering unrivalled live audio sound."

Dreamsystec worked closely with the Made Lim technical team from system design through commissioning. During the opening performances, they provided system and workflow training to familiarise engineers with their newly installed L-Acoustics professional sound system. "I am very pleased with the results of this project. Syva and X Series blend in well with the aesthetic while fulfilling the technical objectives of the beautiful Made Lim space," says Mr. Yang. "We are proud to have integrated an L-Acoustics system which welcomes the rebirth of a magnificent century-old church building with a new brand story," he concludes.

Growth Continues as PSNI Global Alliance Adds New Certified Solution Providers in Southeast Asia to Amplify Worldwide Expertise

SEA: PSNI Global Alliance, the global network of premier technology integrators and service providers, continues its strong growth momentum with the announcement of new Certified Solution Providers (CSPs) to reinforce its worldwide influence for higher AV standards.

PSNI is now established as the largest professional AV alliance in the world by territory and revenue, with the latest additions reinforcing their presence across Southeast Asia.

John Fuchs, Director of membership for the Alliance states: "Since its inception in 1986, The Alliance has been focused on aligning the best and brightest of the AV industry, for the benefit of customers and their customers' customers."

He adds: "These latest additions are the result of many months of face-to-face meetings and ensuring The Alliance's high standards of membership criteria is met. We are delighted to have been able to strengthen our Global offering with their expertise and for other Certified Solution Providers that can benefit from their knowledge and experience."

The new CSPs from Southeast Asia to join the Alliance are:

* **Design Live**. One of the key players in the audiovisual space in Vietnam – Number 48 in Global GDP market, with their offices based in Ho Chi Minh City.

* **Cetech**. Established in 2016, Cetech is another leading AV solutions provider in Vietnam, with over 50 trained consultants and technical staff based in Hanoi.

* **Microdata Systems & Management, Inc**. Established in 1980 in the Philippines, Microdata's mission is to be the country's leading and trusted provider of innovative AV, Auxiliary and ICT Infrastructure solutions from its Manilla HQ.

* **Electronics and Engineering**. Celebrating 70 years in business, E&E operate throughout Singapore, Kuala Lumpur, Malaysia, and Jakarta, Indonesia. E&E bring their vast experience to design and install AV solutions of any scale.

According to PSNI Executive Director, Chris Miller, "We are excited to continue our growth alongside the addition of these new CSPs, who bring an added layer of expertise to their respected territory. Each brings its own unique

specialist knowledge, whether that be in audio critical environments, workplace design and, of course, local nuances and we look forward to absorbing this knowledge and expertise into the Alliance."

The latest announcements crown an exciting period for PSNI, who recently announced the launch of its Global Service and Support Network Operations Center (NOC) and Global Help Desk at ISE 2024. The PSNI Service and Support NOC subscription is available through its Certified Solution Providers (CSPs)

worldwide. For on-site support, licensed CSPs participate in the global dispatch program of over 250+ locations worldwide, providing total peace of mind that global projects receive support wherever they are in the world.

PSNI represents licensed service and integration offices in 61 countries spanning across 6 continents. Affiliation with The Alliance is a commitment to embrace standardization, best-practices, global support, and client satisfaction as one unified voice in the audiovisual industry.

PSNI

Brompton Technology Powers Largest LED Volume in Southeast Asia from L&E Beyond

SOUTHEAST ASIA: **L&E Beyond**, a division of the Bangkok-based Lighting and Equipment Co. Ltd. (L&E), established by industry professionals over three decades ago, has unveiled the largest LED Volume in Southeast Asia (ASEAN). Elevating the region's virtual production experience to world-class standards, and by using familiar, high-calibre equipment, it aims to attract both local audiences and international clients. Contributing to its appeal are Brompton's Tessera LED video processing solutions, which offer unprecedented colour management capabilities and an ultra-realistic visual experience, thus supporting the production of creative content such as music videos, live shows, events, award ceremonies, films and product launches, amongst other projects.

Measuring an impressive 18m wide by 7m high, with a curvature adjustment of up to five degrees, the LED Volume is powered by four 4K Tessera SX40 LED processors in conjunction with eight Tessera XD 10G data distribution units, plus two Tessera S8 LED processors. The LED panels comprise AOTO RM 2.3 for the LED wall and AOTO MH 3.7 for the ceiling and movable panels, totalling 30m2. All LED panels have been meticulously calibrated with Brompton's advanced Hydra measurement tool to maximise colour saturation, brightness, and balance to deliver the best possible image quality and make the LED panels Brompton HDR-ready.

"The ASEAN region's largest LED Volume, equipped with top-notch specs and maximum resolution, is finally here," says Arocha Kittivittayakul, Manager of the Entertainment Lighting Department at Lighting and Equipment Co., Ltd. "This will elevate Thai Virtual Production to new heights by providing an internationally standardised system for global-level production, eliminating challenges in shooting with an LED screen."

Kittivittayakul emphasises that given virtual production's popularity as a filmmaking format in regions like America, Europe, China, Japan, and South Korea, the demand for high-quality content displayed on LED Volumes is exceedingly high. "L&E Beyond offers content creation services for LED screens, collaborating with Infinite Reality Studio, a highly respected visual effects (VFX) company with a Hollywood reputation. Having established offices in Singapore and Vietnam, they have expanded into Thailand and will utilise our LED Volume," she adds.

The new LED Volume will be part of the earlier announced Virtual Studio in Bangkok, offering end-to-end services in Extended Reality (XR) production. The studio has received positive responses from customers, resulting in continued utilisation of their services which now also includes handling XR projects. "This is particularly beneficial for projects that do not require a large space," Kittivittayakul explains. "The latest adaptation is tailored to the new era of the Metaverse or Virtual Reality, where users can interact, engage in activities, and make transactions without a physical presence, utilising VR, AR, MR, and XR technologies."

The studio has already been used for the creation of high-level Thai productions and several Netflix shows, with the LED Volume introducing new possibilities to the team. "We're providing the audience with an unparalleled experience by partnering with a leading international TV show and integrating virtual reality innovation to craft an exciting, novel project for the audience," Kittivittayakul notes. "With Brompton Technology LED processing on board, we've observed a significant enhancement in colour and visual quality compared to other market competitors."

"We are delighted to see L&E Beyond utilising Brompton LED processing to establish world-class virtual production standards in their studio facility," concludes Elijah Ebo, Director of APAC Operations at Brompton Technology. "This raises the bar for virtual production, not only in Thailand but across Southeast Asia, offering exceptional visual experiences for a wide variety of applications. We're excited to witness all the productions that will emerge from L&E Virtual Studio in 2024!"

Brompton Technology

One Space Joins Forces with S&techs
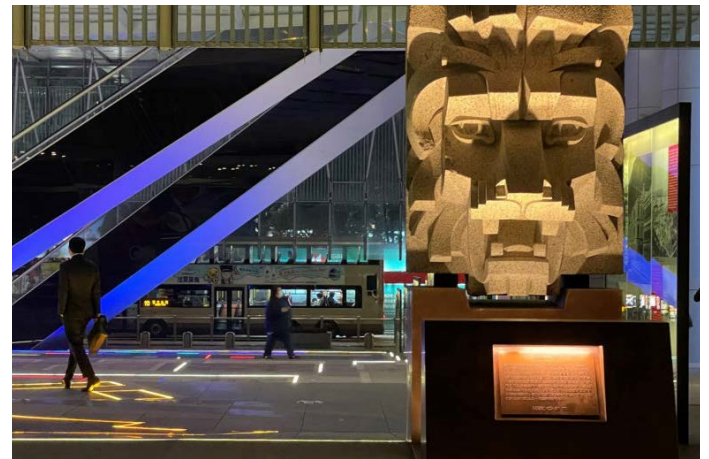
Heritage Plaza in Queen's Road Centre, Hong Kong, designed by One Space + Urbis and built by S&techs.

Hong Kong & Singapore: One of Asia's leading main contractor and construction management company **S&techs** has acquired a majority stake in **One Space** , an acclaimed interdisciplinary design firm specialising in commercial interiors based in Hong Kong and Singapore.

S&techs' strategic acquisition secures a majority share in One Space Limited, which has studios in Hong Kong, Macau and Singapore. One Space's Co-founder and Director **James Oliver** will retire from his role, whilst Co-founder **Greg Pearce** will continue his position as Managing Director, leading the company's regional businesses, including S&techs' newly established design unit in Singapore, focusing on the region's burgeoning design-and-build market. In addition to his leadership role at One Space, Pearce will become a shareholder of S&techs' Singapore business.

"It's our pleasure to welcome the One Space team into the S&techs family. This acquisition exemplifies our commitment to continuous innovation and the integration of wider industry expertise that truly adds value for our clients," said **Nobuo Shigemitsu, CEO of S&techs**.

Prior to this investment in One Space, Shigemitsu founded Shenzhen- and Singapore-based REMOC Inc, an IT company specialising in AI and IoT product development for construction site safety management, in 2020. S&techs now applies a technology by REMOC to monitor building site safety round-the-clock.

Shigemitsu continues: "Under Greg's leadership, our design team will bolster S&techs' design-and-build capability in Southeast Asia, whilst broadening our market share in Hong Kong and Macau. We look forward to presenting these best-in-class design-and-build services to our clients."

"Having worked alongside One Space on a number of extraordinary projects over the years, this newly structured partnership is the next logical step in our journey," added **Mike Kavanagh, COO of S&techs**. "Together, we are driven by our shared commitment to establish a more customer-centric model for delivering turnkey projects in response to increasing demand by our clients. It's an exciting moment for our industry in Asia, and we are superbly positioned to build on the new opportunities we foresee."

One Space was established in 2004 by James Oliver, a technology specialist from a Wall Street global investment bank, and Greg Pearce, a licenced architect. The company was founded as the only integrated architecture and technology solutions provider in Asia, designing transformational commercial and business interiors. Its diverse clientele ranges from start-up enterprises to established global brands such as KPMG, Bank of China, The New York Stock Exchange, Zegna, Bank Julius Baer, Hang Seng Bank, Estée Lauder, Citibank, MetLife, Tencent, and several other multinational, regional and local companies.

"We are thrilled to join the S&techs family, with whom we have collaborated over the past 12 years to deliver bespoke, award-winning projects for our multinational clients across consumer, financial and professional services sectors," said **Greg Pearce, One Space's Co-founder**. "Interdisciplinary design is at our core, and this partnership takes our mission to the next level. As part of the S&techs team, we are empowered by the region's best construction talent to deliver seamless end-to-end services to our customers seeking effective architectural and interior solutions, all whilst bringing 'design' back to the forefront of the design-and-build procurement model."

MAXHUB

MAXHUB INTERACTIVE FLAT PANEL
U3 SERIES

Open up a new world of learning

Lightware Unveils a Bold Corporate Identity Update, Reflecting 25 Years of Innovation

INTERNATIONAL: **Lightware** , a pioneering force in the audio-visual solutions industry, has recently revealed a significant update to its corporate identity, marking a pivotal moment in the company's 25-year evolution. The decision to undergo a re-branding initiative is a testament to Lightware's dedication to continuous innovation and a strategic move to align its visual representation with its position as a technology innovator in the global market.

A Modern Facelift

The refreshed design and logo maintain a link to Lightware's rich history while embracing a more modern and streamlined appearance. The updated colour scheme, accompanied by a new slogan highlighting the core values of innovation, reliability, and European origin, aims to convey a contemporary and forward-thinking image. This re-branding effort underscores the company's commitment to staying at the forefront of the AV solutions industry.

Pioneering Technologies

Throughout its history, Lightware has consistently led the way in AV solutions, introducing groundbreaking technologies that have reshaped the industry landscape. From the EDID manager to Hybrid Matrix switchers, transmitters and receivers, and the award-winning Taurus UCX collaboration solution, Lightware has consistently demonstrated a commitment to pushing the boundaries of what is possible in AV technology. The company's pledge to innovation remains steadfast, with a strategic focus on adapting to emerging market needs in both hardware and software.

Made in Europe, Thriving Globally

Originating as a small Hungarian company, Lightware has grown into a prominent European AV manufacturer. Despite its global expansion, the heart of the company's development and manufacturing processes remains in Budapest. The emphasis on "Made in Europe" within the new brand identity signifies a commitment to quality and highlights the company's roots while thriving on the global stage.

A Vision for the Future

Gergely Vida, CEO of Lightware Visual Engineering, expressed enthusiasm about the re-branding strategy and the upcoming launch of revolutionary products in 2024. He stated, "This re-branding strategy, coupled with the launch of our revolutionary products in 2024, reflects our evolution and ongoing commitment to excellence in the AV industry. Our new identity respects our rich history while boldly stating our readiness to face future challenges and opportunities."

Prysm Systems Appoints Frank DeMartin as Head of Product Marketing

PRYSM SYSTEMS®

INTERNATIONAL: **Prysm Systems Inc.**, a leading provider of large-format laser phosphor displays (LPD) that create unrivalled immersion and engagement, has appointed Frank DeMartin as Head of Product Marketing. In this role, DeMartin will strengthen the company's market strategy, support new product development, drive product positioning, and broaden business relationships.

DeMartin brings a wealth of success in product marketing, product management, go-to-market strategy, as well as sales and new business development. He has worked with highly qualified, cross-functional teams throughout his successful career. With more than 20 years of industry experience, DeMartin has been responsible for accelerating revenue growth through innovative strategies and unique value propositions. He has played an integral role in developing new product lines and businesses for diverse organizations, including Mitsubishi, Sony, Sharp and Samsung.

"This is a great period of growth for Prysm Systems, and we're excited to welcome Frank," said Amit Jain, President and Chief Executive officer for Prysm Systems.

"Frank's wealth of experience and expertise are assets for Prysm Systems, and we are confident his insights will be invaluable as we continue to grow. With a significant track record of success in product marketing, Frank will be integral in guiding Prysm Systems' product positioning, future product launches, and overall marketing strategy."

DeMartin states, "Prysm Systems delivers immersive LFP systems that empower greater employee connectivity and collaboration. The company is unrivalled when it comes to innovation and the value it generates for customers. I was immediately drawn to Prysm Systems' potential with its unique portfolio of enterprise and commercial solutions. I'm excited to work closely with the Prysm Systems team to develop and execute effective marketing strategies that will drive the company's future success."

Prysm Systems continues to transform the large-format display industry with the world's largest single-panel displays, while providing low power consumption and scalability. Prysm Systems allows presenters to step away from standard flat meetings and singular presentations by gathering various content platforms and applications into one display. Users can simultaneously share presentations, connect with outside team members through video conferencing, watch a video or share other content.

d&b Appoints Marco Baumgärtner as New Asia-Pacific Territory Manager

APAC: **d&b audiotechnik** has announced the appointment of Marco Baumgärtner to the role of Territory Manager for the Asia-Pacific (APAC) region. Baumgärtner has been with d&b since 2017, and previously held the position of Director Corporate Development, based at the company's Head Office. Before joining d&b, Baumgärtner worked in a range of corporate and consulting roles and brings his extensive experience in the areas of transaction advisory and strategy execution to the region.

In the role of Territory Manager APAC, a primary management role for d&b's future operations in the APAC region, Baumgärtner will take responsibility for the company's subsidiary in Singapore as Managing Director and oversee operations across Southeast Asia, South Korea, Australia, New Zealand, and Japan.

The appointment of Baumgärtner signifies d&b's commitment to APAC, supporting the growth of significant new business opportunities across both developed and emerging markets. This enhanced focus on the territory aligns seamlessly with the escalating demand for immersive experiences and the swift adoption of d&b Soundscape across the entire region. "We are delighted that Marco has moved into this important role. With his leadership skills and commercial experience, we know he will bring new perspectives and drive to APAC," commented Phill Coe, Vice President of Global Sales.

Commenting on his promotion, Baumgärtner said: "I am very excited to join our APAC Team and to contribute to the further development of the territory. We have a strong presence in the region, thanks to a highly motivated team that works closely together with our dedicated partners. Together, we will continue to provide uncompromised sound experiences through our market-leading technology."

ETC Asia Announces Alva Wong as General Manager, Asia

ASIA: **ETC Asia** is pleased to announce the promotion of Alva Wong as General Manager, Asia. Wong, an accomplished engineer with over two decades of experience in the lighting industry, graduated from the University of Leeds in the United Kingdom with a Bachelor of Engineering (Electronic & Electrical). He joined ETC Asia in 1999 as an Electronic Engineer after working at Strand Lighting for several years.

Wong has been integral to ETC Asia's growth and success, taking on increasingly senior roles in the company. He served as the Manager of Project Management in 2012. He was instrumental in setting up the Customer Service Department and Pricing & Quotation Department under the Project Management Department in 2015 and 2017, respectively.

Wong has successfully supported several high-profile projects, including Marina Bay Sands Singapore and West Kowloon Cultural District - Xiqu Centre. His expertise and leadership have been critical in the success of these projects.

"We are thrilled to announce the appointment of Alva Wong as the new General Manager of ETC Asia." says Durrell Ramer, Vice President of ETC International Operations. "It has been my pleasure to work with Alva over the years. Alva has successfully piloted some of the largest entertainment lighting projects on the planet and his skills and good humor will be an excellent guide for both our customers but also ETC's employee owners."

As the General Manager, Wong will oversee ETC Asia's operations and drive the company's continued success. His promotion is a testament to his hard work, dedication, and exceptional leadership skills; ETC Asia looks forward to his continued contributions.

# Nureva Joins Q-SYS Technology Partner Programme

CANADA: **Nureva** Inc., an innovator of advanced audio-conferencing solutions, announces it has joined the **Q-SYS Technology Partner Program** . The program enables technology companies to create market-ready solutions that integrate seamlessly with **Q-SYS**/, a cloud-manageable audio, video, and control platform. Nureva has developed a Q-SYS-certified plugin for its **HDL310** and **HDL410** audio conferencing systems (the HDL pro series) to deliver audio control that will enhance and simplify the remote experience.

The Q-SYS plugin enables customers to adjust the HDL pro series systems from the Q-SYS audio, video and control platform. They can recalibrate the microphone system and adjust the speaker volume, microphone mute and EQ. The HDL pro series systems' sound location

data is also included in the plugin and can be used to automate Q-SYS cameras without additional programming. The microphone status can also be monitored inside the plugin and connected to a monitoring proxy to enable monitoring and management with Q-SYS Reflect Enterprise Manager.

"We are proud to have Nureva join our program and work collaboratively with us on a plugin integration that will enable elevated experiences across our shared customers," said Geno Zaharie, principal, alliances & ecosystem at Q-SYS.

"We are delighted to be a member of the Q-SYS Technology Partner Program with a Q-SYS-certified plugin that integrates with the audio systems in our HDL pro series," said Nancy Knowlton, Nureva's CEO. "This will open the door to broader deployments by our mutual customers to deliver the enhanced audio and video experience essential for effective collaboration."
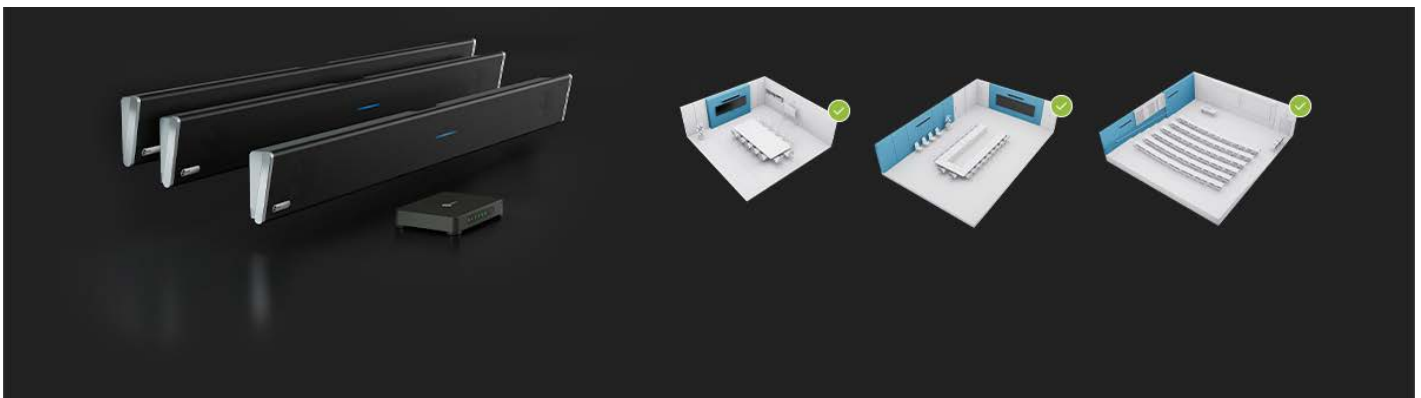
NIPA KoVAC Studio Expands with Brompton Technology as Preferred LED Processing Solution
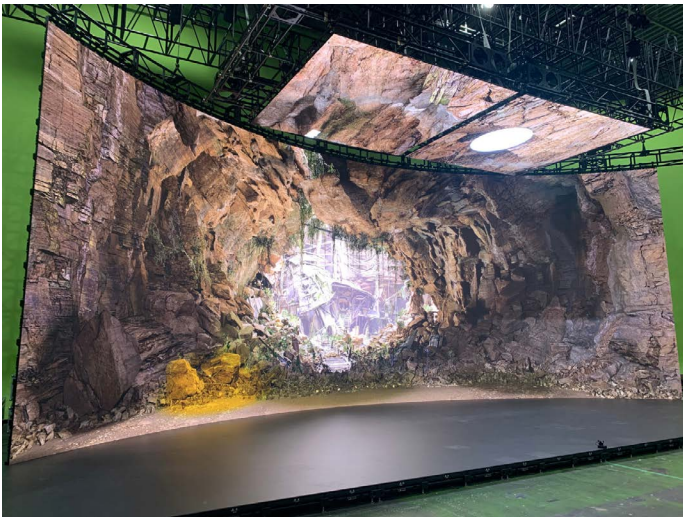
SOUTH KOREA: After the successful launch of an **innovative LED stage** last year, the **National IT Industry Promotion Agency (NIPA)** has once more enlisted the expertise of South Korean XR specialists, ARK Ventures Inc, to elevate the NIPA KoVAC XR STAGE into a state-of-the-art hybrid facility. This transformation introduces LED ceiling enhancements and effects side walls, all powered by **Brompton Technology** LED processing. The upgrade enables the seamless, simultaneous execution of XR and ICVFX, setting a new benchmark amongst government-affiliated studios.

Situated within the South Korean VR AR Complex (KoVAC) in Mapo-gu, Seoul, the studio now boasts a vast 16m by 6m ROE Visual BP2V2 LED wall, a 16.6m by 6.7m ROE Visual

BM4V2 LED floor, two sets of 3.6m by 3.6m LED ceilings, and a 2.4m by 3.6m side effects wall, the latter two composed of ROE Visual CB5L MKII panels. The setup is powered by four 4K Tessera SX40 LED processors and nine Tessera 10G data distribution units. Additionally, the system incorporates disguise vx 4+ media server and nDisplay by Unreal Engine.

The NIPA team maximises the studio capabilities by leveraging long-standing Tessera software features such as Frame Remapping, ShutterSync and Studio Mode, alongside the latest Extended Bit Depth, Stacking, and PureTone in their groundbreaking projects.

"I firmly believe that integrating globally recognised products into our expanded NIPA studio will significantly advance South Korea's virtual production industry," shares Lee Jin Seo, Deputy Director of NIPA.

David Oh, Exclusive Director at Ark Ventures Inc., agrees, "The incorporation of cutting-edge technologies from industry leaders such as Brompton, ROE Visual, disguise, and ARRI, combined with the presence of NIPA's highly skilled creative and technical teams, elevates the NIPA KOVAC XR STAGE to one of South Korea's most advanced integrated studio facilities, capable of realising any type of creative project by harnessing a meticulously planned blend of XR and ICVFX capabilities."

"We're thrilled to witness the growth trajectory the NIPA team has embarked on with their XR STAGE, upgrading the facility and transforming it into a high-tech hybrid space," concludes Elijah Ebo, Director of APAC Operations at Brompton.

MAXHUB and Nureva Team up to Offer Certified Bundles for Large Microsoft Teams Rooms

INTERNATIONAL: **MAXHUB** , an award-winning provider of advanced audio-visual technologies, and **Nureva** , an innovator of advanced audio-conferencing solutions, have teamed up to offer two plug and play bundles fully certified for Microsoft Teams Rooms. The bundles deliver uncompromised audio and video performance that is easy and cost-effective to deploy, operate and manage across virtually any number of spaces.

The **MAXHUB**−Nureva bundle certified for medium and large Microsoft Teams Rooms

consists of the following components:

* The Nureva **HDL310** audio conferencing system, which delivers pro AV performance without the cost and complexity of a custom pro AV system. It combines a powerful connect module with an integrated microphone and speaker bar to deliver full-room microphone pickup and advanced features in spaces up to 30' x 30' (9.1 x 9.1 m).

* The MAXHUB ND75CMA (**CMA-T Series**) 75" diagonal 4K UHD display for front of room placement.

* The **MAXHUB XCore Kit** for Microsoft Teams Rooms, which enables organizations to make the leap to Microsoft Teams Rooms smart spaces in BYOD scenarios, enhancing Teams-native audio and video experiences while accommodating cost-balance requirements.

* The **MAXHUB UC W31** 4K 120-degree FOV USB Camera for front of room placement. The camera boasts a 12MP 5x zoom Sony image sensor with incredible image quality—leveraging Ultra HD 4K resolution for an exceptional video conferencing experience.

The MAXHUB−Nureva bundle certified for Signature Microsoft Teams Rooms consists of the following components:

* The Nureva HDL310 audio conferencing system, which supports Teams' spatial audio feature to deliver a better hybrid experience without the cost and complexity of a custom pro AV system.

* The MAXHUB UW105NA (**UW Series**) for front of room placement with an ultra-wide display. Featuring a 21:9 aspect ratio for an ultra-wide panoramic view, this 5K display provides a highly immersive experience.

* The MAXHUB XCore Kit for Microsoft Teams Rooms.

* The MAXHUB UC W31 4K 120-degree FOV USB Camera for front of room placement.

The MAXHUB–Nureva bundles combine technologies to deliver a flexible AV setup with exceptional video, presentation and full-room audio performance. With one-touch start, this plug and play audio and video solution is easy to deploy, use and manage, regardless of the meeting type or room setup. The result? Meeting participants enjoy an engaging and inclusive experience.

Nureva CEO Nancy Knowlton commented on the company's new relationship with MAXHUB: "We are thrilled to collaborate with MAXHUB on Teams-certified bundles that are easy to deploy and cost-effective to scale across a wide range of spaces. Customers have been asking for this type of simplified, full-room solution as they strive to deliver the Teams Room experience throughout their organizations."

Sam Malik, Vice President of Sales and Marketing for MAXHUB, shares Knowlton's enthusiasm: "The MAXHUB–Nureva collaboration offers two terrific system packages for getting the most out of presentations and training sessions in larger spaces. The products in each bundle combine to offer state-of-the-art technology and, equally important, an intuitive setup and management experience. The result is a system that makes any type of presentation highly engaging for all participants."

Read a brochure to learn more about the MAXHUB-Nureva bundles.

Martin Audio Keys in a Sublime Soundscape in Pune

INDIA: Nestled in the burgeoning city of Pune, Maharashtra, 2 BHK Diner and Key Club, is a unique and multifaceted entertainment venue that caters to a wide range of preferences and occasions. An ideal setting for those seeking a memorable dining experience with a diverse menu to explore, the venue provides a cozy and inviting dining experience where patrons can savor a delightful array of culinary offerings that encompass both international and local cuisines.

And armed with a unique combination of a vibrant dining experience and an ambience that mimics a lively nightclub – all under one roof – 2 BHK Diner and Key Club's dexterous charm has made it an appealing choice for various occasions that range from intimate romantic dinners, to chirpy social gatherings with friends, and also a night filled with high-octane entertainment and dancing.

Working on the ultimate vision of creating a 'consortium of world-class nightlife experiences that would efficiently cater to the whims and fancies of a diverse target audience, the owners and management of 2 BHK Diner and Key Club realized that the venue's success would be dependent on factors that stretched beyond the metrics of FnB and service. The venue demanded top-tier audio and lighting solutions to ensure that they treat their patrons to a truly unforgettable experience; and to address the unique needs of space, the management team called on the service and expertise of **Crispin Kinny** – a reputed system integration and solution provider in the region.

Following a detailed study of the venue which reviewed the space layout and several other architectural and design facets; the design and integration team identified certain key challenges that needed overcoming in order to deliver the desired exceptional sound quality throughout the venue's diverse spaces. To meet this challenge, the team selected premium audio solutions from reputed pro audio brand Martin Audio, with loudspeakers from the CDD and Blackline series coming into the spotlight.

"Martin Audio Products have been instrumental in enhancing the audio experiences at 2 BHK Diner and Key Club, ensuring that the venue consistently delivers outstanding quality. We decided to deploy multiple units of the Martin Audio CDD 15B and CDD 10B passive two-way loudspeakers that utilize coaxial differential technology, along with Blackline X15 passive two-way portable loudspeakers – each of which have been thoughtfully distributed across the expanse of the vast venue to ensure a pristine sound experience even in the most challenging corners of the venue. The meticulous positioning of the loudspeakers offers an absolutely balanced high-quality soundscape

that perfectly meets the aural needs of each of the respective sections at the venue; while also ensuring that patrons enjoy a consistent sonic experience as they move from one section to another. Furthermore, Martin Audio's compact yet seriously powerful Blackline X118 passive portable subwoofers and SX218 passive subwoofers provide deep and uniform distribution of high-quality low-frequency fidelity, which undoubtedly elevates the overall listening experience. I highly commend Martin Audio for their continued dedication to quality and excellent performance" commented Crispin, as he provided an insight into the loudspeaker design at 2 BHK Diner and Key Club.

Once the design and integration team had assuredly secured a world-class soundscape at the venue with the Martin Audio sound system,

they recognized that the second challenge involved coordinating dynamic lighting effects that would complement the sound experience seamlessly. "To achieve this, we turned to Wolfmix's innovative lighting solutions", informs Crispin as he shares that the team utilized the Wolfmix W1 standalone DMX lighting controller designed for creating captivating light shows on the fly, without the need for a computer. The decision to include the W1 as a key part of the lighting architecture at the venue has apparently been a key turning point, especially when 2 BHK Diner and Key Club hosts high-energy music nights, which is when the audio and lighting systems perform in seamless synchronicity to deliver an unequivocally world-class nightlife experience.

"I'm delighted with the success that we've enjoyed and it just goes to show what an xceptional venue we have here. The outstanding sound installation, complementing 2 BHK Diner's dining excellence and the vibrant nightlife at Key Club, creates a truly unique and unforgettable experience for our patrons, and we honestly couldn't be more pleased. On a personal note, I highly recommend Martin Audio," commented Heramb Shelke, Director, 2 BHK Diner and Key Club.

Martin Audio

Barco Partners with Unitech Computer to Expand Visualization Solution Footprint in Taiwan

Jasline Tay (Asia Pacific Regional Sales Head, Immersive Experiences at Barco) and Andy Chueh (Vice President, Unitech Computer)

TAIWAN: Barco, has announced a new strategic partnership with **Unitech Computer Co., Ltd** , a leading national distributor in Taiwan.
This appointment will elevate Unitech as an official agent for Barco's range of projection and image processing solutions in the country. Unitech will also be the exclusive distributor of the **G50 projectors**. Unitech Computer, a leading distributor of IT products and services in Taiwan, has never stopped expanding the markets to meet the needs of their clients. With its recently

established business, Unitech Computer has ventured into the ProAV field, leveraging the company's expertise in information technology to provide clients with a wider range of products and services. Barco's range of ProAV solutions including **installation projectors** and **image processing** will enrich Unitech's existing portfolio and offer partners and end-users a range of advanced projection solutions for any application.

On top of being the national distributor for Barco's range of projection and image processing solutions, Unitech Computer is also the exclusive distributor of Barco's G50 smart projector series in Taiwan. The company's professional services will complement Barco's commitment to deliver high-quality visualization solutions that meet the needs of the domestic market. As a professional distributor in the ProAV market, Unitech Computer will meticulously design the best possible visual experience for users with Barco's equipment.

"This partnership signifies a key milestone for us in expanding Barco's footprint in Taiwan's visualization landscape and strengthen our long-term growth strategy in this region," said Jasline Tay, Asia-Pacific Regional Sales Head Immersive Experiences at Barco. She added: "We are pleased to team up with Unitech to bring our advanced range of ProAV solutions to more end-users and partners. Museums, retailers, theme parks, corporates and education institutions across Taiwan will have greater access to our best-in-class technology to enhance and transform visual experiences for their customers."

Barco

Yamaha Prescribes the Best Conferencing Solution for Chugai Pharmaceutical

JAPAN: Chugai Pharmaceutical Co., a prominent Japanese developer and manufacturer of prescription drugs headquartered in Tokyo, Japan, recently upgraded its conference and meeting room facility with cutting-edge AV capabilities from globally renowned audio brand, Yamaha Pro Audio. Adhering to the company's motto, "Innovation Beyond Imagination," Chugai Pharmaceutical Co. prioritized top-notch remote conferencing capabilities at its Tokyo headquarters. And having previously installed Yamaha's YVC-200, YVC-300, and YVC-1000 speakerphones for remote conferencing, the company was already familiar with the exceptional sound quality, reliability, and Yamaha's outstanding reputation for pre and after-sales support; thereby making Yamaha an obvious choice for the continual upgrade.

Addressing the specific requirements of Chugai Pharmaceutical Co., Yamaha's latest offering, the CS-800 Video Sound Bar, proved to be a comprehensive solution; as the unit incorporates a 4K camera with smart framing and a beamforming hexa microphone, generating a three-dimensional pickup beam to precisely capture speech. Simultaneously, the camera dynamically tracks the physical positions of participants. This advanced technology distinguishes human voices from other sounds, focusing solely on voices within the camera frame. It effectively minimizes background noise, automatically framing the video for remote participants, ensuring a seamless and immersive tracking experience with precise, harmonized pickup of all participants.

Additionally, the CS-800's versatility allows it to function optimally within Chugai Pharam's conference room without requiring an extension microphone; as its simplified setup, facilitated by a single USB cable connection, expedites the initiation of meetings, while also supporting teleconferencing through Bluetooth connectivity with smartphones (thereby eliminating the need for a landline). The system's benefits include reduced preparation time, elevated audio quality, and automatic volume adjustment – all of which enabling participants to focus more on the meeting – with the absence of an extension microphone ensuring clear audio transmission to remote parties, even from speakers positioned at the rear of the conference room, contributing to a more efficient use of desk space.

The management at Chugai Pharma affirm that this comprehensive AV upgrade aligns seamlessly with their company's commitment to innovation, as it provides a technologically advanced and user-friendly conferencing solution for their HQ operations.

Yamaha Pro Audio

Baptist Church of Mizoram in Lunglei and Lawngtlai Elevates Audio Experience with Thoughtful Audio Architectures from Beta Three
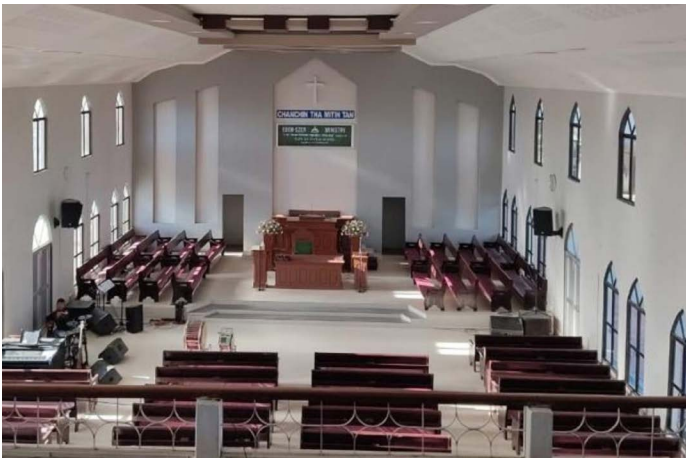
Baptist Church Of Mizoram in Sethlun, Lunglei

INDIA: For over a century, the Baptist World Alliance has been fostering a global Baptist community dedicated to spreading the teachings of Christ and contributing to the development of societies worldwide. And in the vibrant state of Mizoram in India, the Baptist Church Of Mizoram has embraced a vision of enhancing worship experiences, leading them to invest in cutting-edge audio technologies. Among the array of options, Beta Three, a renowned Indian pro audio technologies manufacturer, emerged as the preferred partner for multiple church venues.

One such example is the Baptist Church Of Mizoram in Sethlun, Lunglei; which stands as a

testament to the commitment of providing an immersive worship experience, as the church recently adopted a state-of-the-art audio architecture from Beta Three, centered around the acclaimed N series loudspeakers.

To ensure comprehensive coverage at the venue, the design and integration team meticulously selected a combination of multiple units of the N12 and N10 two-way full-range loudspeakers to create a harmonious audioscape that envelopes every seat on the ground floor and mezzanine with high-quality sound thanks to a thoughtfully crafted design that features the loudspeakers mounted at precise placements. Furthermore, recognizing the importance of a consistent audio experience, the team extended their design to the outer foyer; with multiple units of N series loudspeakers strategically placed to ensure that the sound resonates uniformly in every corner of the church premises. The attention to detail with this thoughtful loudspeaker deployment results in an environment where worshipers can seamlessly transition between spaces without losing the immersive quality of the audio. And to ensure uninterrupted power supply to the entire loudspeaker system, multiple units of the DT series class-D amplifiers have been employed, which not only guarantees ample power but also aligns with Beta Three's commitment to efficiency and reliability.

A similar attention to detail is amply evident at the Baptist Church Of Mizoram in Lawngtlai, Vengpui; wherein the venue has embraced a primary PA solution that revolves around the VR112 full-range line array modules. According to the design and integration team, the venue's ceiling height allowed them to deploy a stereo hang of four VR112 units each, flanking the altar

section; with the system being meticulously aligned and tuned to ensure optimal coverage of the seated audience area and deliver crystal-clear sound that resonates throughout the sanctuary. Furthermore, acknowledging the possibility of 'low-intensity audio zones' in the balcony section and parts of the under-balcony, the design and integration team have equipped these areas with an assortment of loudspeakers carefully selected from Beta Three's N series of products. This versatile solution precisely addresses the unique needs of these areas, while providing an immersive audio experience to every devotee seated within these sections.

Enriching the already pristine overall soundscape, the system includes strategically placed TW118B subwoofers which deliver impactful low-frequency response that resonates throughout the space and allows devotees to be completely immersed in a truly 'divine' atmosphere that accurately reproduces every minute detail of the spoken word and music alike. And just like in Lunglei, the design and integration team once again relied on multiple units of the DT series class-D amplifiers to power the entire loudspeaker system at

Lawngtlai; with the decision to do so not only guaranteeing uninterrupted power but further underscoring the brand's focus on efficiency and reliability, no matter the kind of venue.

"The Baptist Church Of Mizoram's investment in world-class audio architectures stands as a testament to our commitment to providing an unparalleled worship experience; and the transformative impact of Beta Three's cutting-edge audio technologies is evident in both Lunglei and Lawngtlai, where congregants are now immersed in a divine atmosphere, experiencing sermons, praise, and worship with unparalleled clarity and depth. The refined audio architecture at both venues, which have been designed by the team after thorough spatial analysis, really does spotlight the brand's versatility in catering to diverse needs within the worship space; and as the churches continue to contribute to the community, these audio enhancements serve as a beacon, guiding the way for future worship experiences" commented an official on behalf of the Baptist Church Of Mizoram.

Beta Three
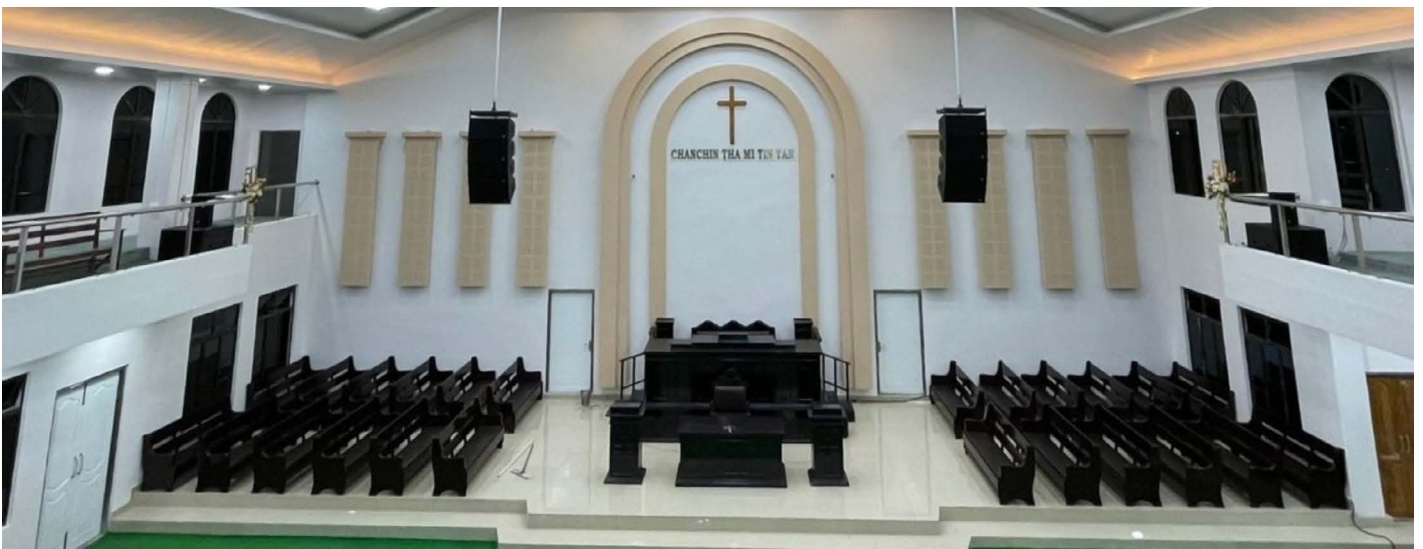
Baptist Church Of Mizoram in Lawngtlai, Vengpui

TechOne's First AV 'Contribution' to Ayodhya Ram Temple
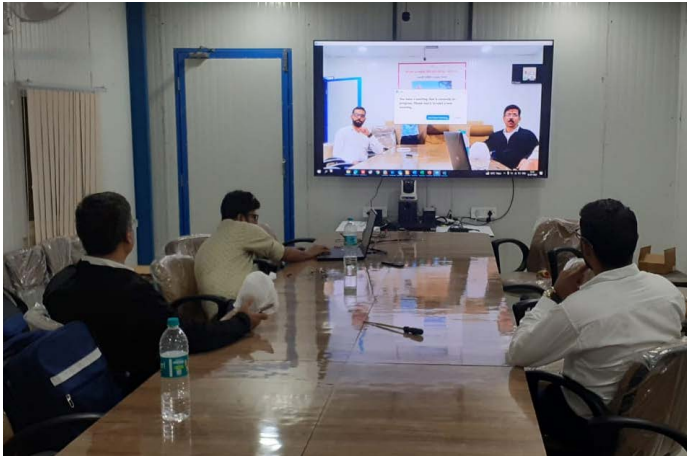
The video-conferencing set-up at the Camp Office of Shree Rama Janmabhoomi Teerth Ksherta Trust.

INDIA: While the construction of Ram Temple at Rama Janmabhoomi in Ayodhya had been taking every possible space across the global media, and even high-profile techno ranks, there'd been working – albeit silently – a pure AV technology framework, connecting different coordinates with the temple's Construction Committee.

A video-conferencing set-up at the Camp Office of the *Shree Ram Janmabhoomi Teerth Kshetra*, the apex body heralding the temple construction. Taking the honour humbly is Hyderabad-based TechOne Innovation OPC Pvt Ltd.

About 18 months ago, sometime in mid-2022, when the deliberations on construction of much-awaited temple at *Rama Janmabhoomi* in Ayodhya was reaching their intensive crescendo, the Committee members felt a

serious lacking- they did not have a proper communication set-up to coordinate amongst their connects, particularly with New Delhi, and stakeholders from various parts of the country involved in the multitude of activities relating to temple construction.

They pondered over a solution that could enable them connect and coordinate with relevant people over an easy, and hassle-free communication network. The Committee approached one of their solution vendors, the New Delhi-based ITES solution provider Regard Network Solution Pvt Ltd, for setting up a feasible video-conferencing solution for the purpose.

Regard Network, realising the criticality of the requirement wanted the job to be done by a specialist domain expert. It, therefore, roped in their Hyderabad connect TechOne Innovations Pvt Ltd to design and install the solution needed by the client. For TechOne – which had been making a humble and modest name with its AV gear manufacturing unit at Hyderabad - set up under the Make-in-India initiative – it was like a divine opportunity, and it took it with 'dedication.'

"We took the opportunity with folded hands," recalls **P. S. Tiwari, Founder-Director of TechOne Innovations**. "It was as if the blessing from the Lord."

Tiwari visited the Camp Office of the Committee near the temple construction site that was meant for setting up the intended VC solution. That the stone

masonry for the temple work was in full swing at the time, it was a noisy, dusty ambience all over the temple site premises 'untenable for a video-conferencing set-up per se.'

However, considering the compelling conditions, they decided to set it up within the Camp Office only, with required structural treatment.

"We had to do some vital acoustic treatment there with gypsum panelling to the ceiling and other tweakings to the wall surfaces to enable the facility has its deliberations without any acoustic issue," recalls Tiwari.

The temple site also suffered from another challenge from the monkey menace, as the town of Ayodhya as it is, and the temple site in particular has a large population of primates that roam around freely.

"We had the risk of monkeys pulling out cables, and tampering with the network at places difficult to reach for people," Tiwari recalls. "But we went ahead with a spirited mind."

TechOne team, and Regard Networks, with support from the temple Trust, created a 16-20-seater video-conferencing set-up that featured the AV gear fully indigenously designed and developed at its Hyderabad factory. The solution comprised:

• One unit of AV Link 12X PTZ Optical camera
• One unit of CSM 20 ceiling microphone
• Four units of CT6 6-inch, 12-driver ceiling speakers
• One unit of DSI 100 DSP that comes with built-in 35W amplifier
• One unit of 75-inch Samsung display- supplied by Regard Networks
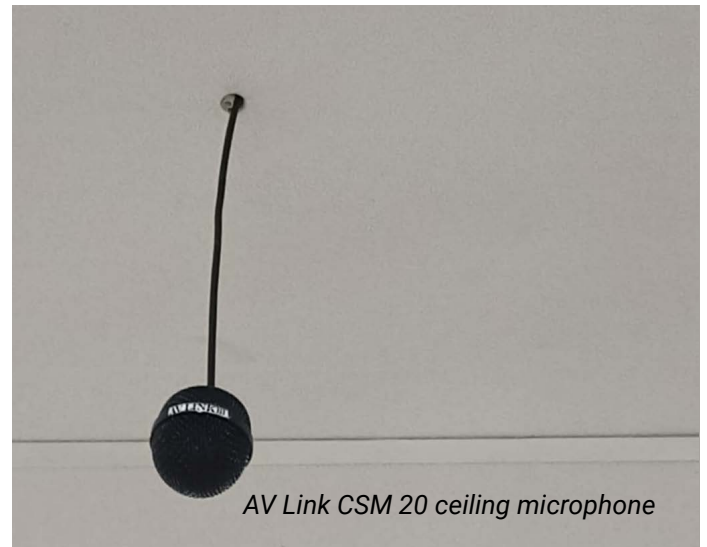
AV Link CSM 20 ceiling microphone

"We had just manufactured our first ceiling microphone CSM 20 at the time, and the first unit went into the service of Lord Ram's temple construction," recalls a prideful Tiwari. "It was one of most fulfilling moments for us."

Devout as he is, Tiwari decided not to charge any fee for the job done at the Camp Office of Ayodhya temple Trust. He, instead billed the Trust the auspicious number of ₹101 for the service.

As an added contribution, TechOne offered a lifetime free service to the set-up it created for the Trust.

The facility thus created in mid-2022 has played a vital role in connecting various sources and stakeholders towards coordinating the construction job tasks from time to time, till it crossed the finish line on 22 Jan 2022.
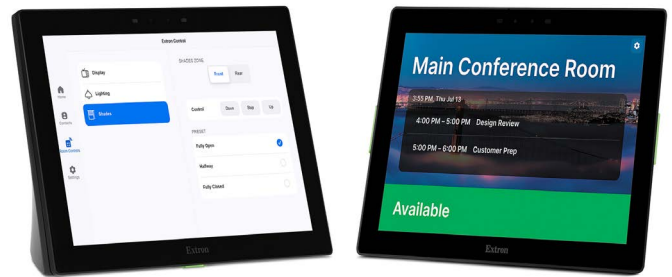"It is still running, and the client is quite happy with the functionality of the set-up," Tiwari quoted the Regard Network source as saying.

TechOne   **AVLink**

Regard Network

Extron Releases New Zoom Rooms Touchpanels for AV Control and Room Scheduling

Extron is pleased to announce the immediate availability of their ZRTP Pro 1025 Series and ZRTP Pro 725 Series of 10" and 7" Zoom-certified touchpanels. These versatile Zoom Rooms touchpanels can operate as either a Zoom Rooms controller or a Zoom Scheduling panel. As a Zoom Rooms controller, these touchpanels let users manage the Zoom Rooms meeting experience. You can expand touchpanel capabilities to include full featured AV system and room control by adding the new Extron Control for Zoom Rooms App and an Extron IPCP Pro xi control processor. The App works with any Zoom Rooms controller to add powerful and fully customizable AV system and room control. Run the ZRTP Pro 1025 or ZRTP Pro 725 touchpanel in Zoom Rooms scheduling display mode and they become dynamic room scheduling devices, ready to offer easy scheduling options and at-a-glance room occupancy status.

According to Casey Hall, Extron's Chief Marketing Officer, their continuing work with Zoom brings their customers many new ways to add conferencing, control, and room scheduling to more spaces than ever before. As a result, the combination of the Extron Control for Zoom Rooms App and any Zoom Rooms controller takes Extron's control integration to the next level.

ZRTP Pro Series touchpanels and the Extron Control for Zoom Rooms App enable the deployment of the familiar, easy-to-use Zoom collaboration experience combined with the power of Extron control. They work together to create a fully integrated conference and control solution. Now, from the same easy-to-use interface, you can host a video conference and simply tap the screen for full control of lighting, shades, display power, cameras, and more. When used for Zoom Rooms scheduling, the ZRTP Pro Series can be used for any space. Run the touchpanels in the Zoom Rooms scheduling display mode and place them outside of a conference room for room reservations and room occupancy status.

For more information on the ZRTP Pro Series touchpanels and the Extron Control for Zoom Rooms App, **click here**.

Snap One Next-Gen Binary 960 Series MoIP Solutions Now Shipping Globally

Snap One today announced that its innovative Binary 960 Series MoIP solutions, the latest addition to the Snap One MoIP Ecosystem that provides Partners and end users with advanced video-distribution capabilities for both residential and commercial projects, is now shipping both in the U.S. and internationally.

The Binary 960 Series extends capabilities beyond AV/IP solutions into media and surveillance integrations, enabling Partners to design and install more MoIP-based solutions in a wide range of projects. The new series enables distribution of 4K60 video content, video tiling for up to 16 sources, simplified setup through OvrC, and reduced video compression for 10G-capable networks.

Snap One received highly positive feedback from their partners about the Snap One MoIP Ecosystem and the Binary 960 Series in that it allows them to leverage MoIP's simplicity and flexibility to improve video distribution capabilities through a connected suite of solutions. With the addition of this series to the Ecosystem, the Binary 960 Series offers major improvements for video quality as well as benefits with OvrC integration that improve system monitoring and simplify set-up.

The 960 Series includes three products: the B-960-MOIP-4K-TX-A transmitter that enables audio downmixing, the net new B-960-MOIP-4K-TR transceiver that can simultaneously send and receive, and the B-960-MOIP-4K-RX receiver with video tiling and Picture-in-Picture capability.

Together, these products let Partners take advantage of the increased bandwidth of modern 10G networks – particularly the Araknis 920-Series L3 Managed 10G PoE++ Switch with OvrC integration – to provide 4K60 HDR video and fast switching to ensure smooth operations for demanding use cases. The 960 series also offers more integrations with other Snap One brands to build the MoIP ecosystem, including surveillance integrations with Luma x20 cameras and the Control4 Chime Video Doorbell, among others.

The series also creates new efficiencies and end-user benefits by providing a less-centralized system that integrates Video Tiling, Picture-in-Picture, and Video Wall applications without the need for any additional hardware.

Snap One looks forward to offering Partners simple, flexible, and enhanced video distribution capabilities across the globe.

CONTRIK Extends Power Multicore Cable Series

The Neutrik Group's CONTRIK brand has expanded its CKPE series range of power multicore cable assemblies. The Harting E16 and Socapex SL 419 compatible Power Multicore connection cables, and Socapex SL 419 compatible single-phase powerCON TRUE1 Power Multicore Split cable configurations enable the streamlining and increased cost-efficiency of cabling processes.

The rewireable power multicore cable assemblies are specified for use in video wall, lighting, and audio applications, in indoor and outdoor event, theatre, and other media production environments. Complementing CONTRIK's portable power distribution systems, CKPE series Power Multicore and Power Multicore Split cable assemblies are DIN 15765 standard-compliant for mobile event production.

The cables feature improved levels of reliability because of an increased PE-conductor cross-section. The improved reliability extends to operation at very low temperatures, with cables operable across a range of -5 °C to +70°C. Reduced weight and increased ease of handling,

enable reductions in cabling effort, complexity, and cost.

The expanded Power Multicore cable range offers 6 channels and 8 channels Harting E16 connector variants, and a 6 channels LKS 19 (Socapex SL 419 compatible) connector variant, while the Power Multicore Split cable features an LKS 19 male to 6x single-phase powerCON TRUE1 female connectors. The cable assemblies offer high IP protection ratings in mated condition: IP65 in the case of Harting E16 connectors and IP68 in for LKS 19 connector. Featuring high quality TITANEX rubber cable, they are available in various standard lengths from 5 to 40 meters.

CONTRIK Socapex 419 compatible powerCON breakout Power Multicore

CONTRIK power multicore cables optimally complement the brand's range of professional power distribution systems that offer highest levels of quality, safety, and reliability for mobile entertainment production applications. The extensive portfolio of rugged and durable distribution boxes, comprising Power Container, Power Rack and Power Turtle systems, is designed and precision manufactured within the EU, using state-of-the-art production automation and high quality electrical and electronic components. With levels of high mechanical (IK) and environmental (IP) protection, conforming to relevant

industry standards, across the product range, an XO designated series of products offers enhanced levels of protection for 'Xtreme Outdoor' environment applications including IP65 protection against particulate and liquid ingression, with CEE / cPot in mated condition. All products feature CONTRIK's proprietary Easylen housing material, ensuring the highest levels of flame retardancy, temperature resistance, UV protection, corrosion insensitivity, non-conductivity, and protection from mechanical impact (up to IK 10+).

The Neutrik Group

Q-SYS Expands PL Series Performance Installation Loudspeakers

Q-SYS , a division of QSC LLC, expands its **PL Series** performance loudspeaker portfolio with the introduction of **PL-CA** full-range coaxial loudspeakers. This launch enhances the delivery of premium sound anywhere in an entertainment, corporate or higher ed venue that requires higher performance audio as part of a **Q-SYS** system.

With five new models ranging from 5-inch to 15-inch, PL-CA models offer wide, symmetrical coverage in a compact enclosure, making them

ideal for applications where they are closer to the listener and/or controlled coverage is not a requirement. They also offer extended bass response compared to point-source models of similar size, ensuring full-range audio coverage for a broad range of applications.

The introduction of the PL-CA models ensures the premium sound performance for Q-SYS systems that Q-SYS customers have come to expect. This release expands the array of selections in the PL Series, providing a comprehensive range of choices to meet the specific high-performance audio needs within any venue utilizing the Q-SYS system.

To learn more about the new PL-CA and the entire PL Series portfolio of performance installation loudspeakers, please visit: **qsys.com/plseries**

Equipson Launches the Integra Series for Advanced Digital Signal Processing

EQUIPSON GROUP

A new digital signal processing matrix that gives users full control of their audio output across multiple zones has been launched by **Equipson** under its WORK PRO brand.

Aimed at the professional installation market, the Integra Series offers configurable per-channel DSP architecture, adjust gains, EQ, compression, limiting and much more. Offering unparalleled flexibility, the Integra Series allows users to set parameters and fine-tune every aspect of the sound, thus optimising the listening experience and providing exceptional results in any environment.

There are three different Integra Series products offering 8, 16 or 32 input/output configurations. The flexibility of the range ensures that the right product can be chosen for any application, from the smallest installation with very few areas to process to larger installations with a variety

of different areas, such as department stores, supermarkets, gyms, conference rooms and hospitality.

According to Juan Jose Vila, CEO of Equipson, the main purpose of the Integra Series is to give professional installation customers advanced technology that opens a world of creative possibilities. These products give users the ability to individually configure and correct audio in multiple zones depending on what audio processing is required to produce the best sound.

The 8-channel Integra is delivered with Integra 8S, a free and powerful native parameter management software offering function control on inputs and outputs and configurable DSP architecture for each channel. The software includes controls for input and output gains, expander, compressor, parametric equalisation, limiter, and anti-feedback on each channel. Its visual matrix and automix module ensure that it is adaptable for many different types of installation.

The more advanced 16-channel Integra 16+ and the 32-channel Integra 32+ both feature DANTE digital inputs. These versions are supported by Integra Plus native parameter management software, which is also free and incorporates all the features of Integra 8S, along with additional functions such as noise gate, parametric equalisation up to 31 bands, Ducker and Voice Tracking for synchronising video cameras.

Both software versions are highly intuitive and easy to use thanks to a highly visual interface that allows user to see configurations in real time.

In addition to a plethora of useful control features, all the products in the Integra Series have USB ports for play/record, API for third party management and can be controlled from mobile devices via an APP for iOs and Android.

The series is also supported by a WC 3U Wall Control unit with an OLED screen and built-in rotary button/push button, which is designed for simple and complete programming through the INTEGRA 8S and INTEGRA Plus software. Housed in an elegant aluminium casing, the Wall Control unit also features TCP/IP and UDP communication capabilities, making it easy to integrate into a variety of systems. Additionally, it is powered via PoE (Power over Ethernet), which simplifies installation.

INDIA

Rama Janmabhoomi Regains Primacy by Definition and Design

Rhino Engineers Prides Designing AV & Lighting of the Most Awaited Temple Ever

by Ram Bhavanashi

Simulation of lighting and projection mapping by Rhino Engineers.

Ayodhya... and Rama Janambhoomi... the two names that have influenced the most populous geography on the planet earth like nothing for decades; attracted the attention of global media; and spoken about by both commoners and connoisseurs alike.

On 22 Jan, 2022 – even as the whole world watched in awe – after centuries of poignancy, the two names have regained the primacy they had for ages before. While the country – led by Prime Minister Narendra Modi, and hundreds of seers – basked in the glory of the Epical name Ram, at the Consecration Ceremony at

His birthplace, there worked a great, ambitious deal of technology that made the primacy all the more significant.

Amidst the galactic expanse of consultants and integrators that cultural colossus had in its making, the glory evidently come out manifesting in its audio-visual extravaganza.

Perhaps, the most prideful of its illustrious credentials, Ahmedbad-based consultancy firm Rhino Engineers had this honour of designing AV and Lighting for the Ram Mandir at Ayodhya.

SI Asia presents an account:

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FACT FILE

Project name: Construction of Shri Ram Mandir at Rama Janmabhoomi, Ayodhya

Project location: Ayodhya, Uttar Pradesh

Project segment: Place of Worship/Cultural Tourism

Project owner: Shri Rama Janmabhoomi Teerth Khetra Trust

Project Management Consultant: M/S Tata Consulting Engineers

Project AV&L Design Consultants: M/S Rhino Engineers Pvt Ltd

Project Architects/Interior Designers: M/S C.B. Sompura Architects

Project Acoustic Consultants: M/S Rhino Engineers Pvt Ltd

Project Systems Integrator: (Multiple vendors)

Project overall budget: ₹ 1800 crore (over USS216.5 million)

</div>

Twenty second day of Jan, 2024, even as the nation called Bharat (India) reverberated with the name it bore as its most primal identity at the Consecration Ceremony of Ram Mandir (Temple of Lord Ram) at His birthplace (*Rama Janmabhoomi*) in Ayodhya, there is a greatly ambitious blend of tradition and technology that played substratum to the sum called Ram.

Perhaps, like the pervasive nature of the name Ram, technology took a pervasive role to define and design practically every element of the architectural marvel that the temple ensemble is, even while enlivening a grand tradition.

Amidst the oceanic extent of technology ambit, here are some nuggets that outline the audio-visual, lighting, IoT, and security/surveillance part of the magnificent mandir complex:

* Design advisors for structural strength: IIT Guwahati, IIT Chennai, IIT Bombay, NIT Surat, Indian Institute of Astrophysics, Central Building Research Institute Roorkee, National Geo Research Institute Hyderabad, and the National Institute of Rock Mechanics.

- 200 KA light arresters have been installed over the temple structure to protect it from lightning (design by Rhino Engineers).

- Electrical circuit with electronic sensors, and warning systems integrated with IT framework to activate remedial action in the event of short circuit, and/or other fire fighting mechanism- as per international standards.

- The temple is an earthquake-resistant structure with an estimated age of 2,500 years as per international standards; it can withstand up to a magnitude of 8.

* Optical Exploit for Project Surya Tilak: Bangalore-based Optics and Allied Engineering

Pvt Ltd (OPTICA), in collaboration with Indian Institute of Astrophysics (IIA) Bengaluru, and CBRI Roorkee, has designed and developed a special focal lens mechanism to illuminate the forehead of the Lord's idol in the sanctum sanctorum- at mid-day of *Sri Rama Navami* (the Lord's birthday occurring on the ninth day of first month of Hindu calendar.)

- The process involved design and development of precision lenses and mirrors, and creation of reflective optical path from the third floor down to the sanctum sanctorum where the Lord Ram's idol is enshrined.

- CBRI Roorkie designed the mechanism while IIA provided the critical details of astronomical movements as per lunar year.

Audio-Visual Extravaganza: The Rhino Rhapsody
A very notable aspect of all that the ₹1800 crore (over USS216.5 million) mega project had in its making is an underlying framework for making spiritual superstructure an audio-visual extravaganza.

While the structure is done only partially, with some very key elements still in the making – estimated to take at least one more year for completion – the vision is truly ambitious as detailed in its design expanse.

As for AV&L, the design for the entire complex is complete, and installation is going on across all the three floors, informs an executive from Rhino Engineers Pvt Ltd, the Ayodhya Ram Mandir's design consultant for AV and Lighting.

"Working as AVL design consultant for the Ram Mandir at Ayodhya is like the Lord's blessing on us," says Narendra Naidu, Chairman-Managing Director of Rhino Engineers. "It's like a divine ordain; perhaps the most fulfilling project we ever did for its sheer nature and vibe."

The Ahmedabad-based design consultancy firm was actually taken onboard the project along with C.B. Sompura Architects who are famed for their temple architecture specialisation. While Sompura had their task cut out - to design the temple as per the Nagara style, the most common style in the North, West and Eastern India - Rhino Engineer's job was an integrated service package of MEPF - mechanical, electrical, plumbing and fire safety, besides AV and lighting (temple illumination). It also included protection again lightning, and video surveillance and public address system.

Shri Ram Janmabhoomi Teerth Kshetra Trust - the governing body of the temple construction - had two more important stakeholders on its board: L&T as the main contractor, and Tata Consulting Engineers as the project management consultants. Given the multiplicity of its work scope, as well as the high-profile nature of the job, team Rhino worked hard in tandem with other stakeholders, as also with various vendors and integrators to bring to life what the temple Trust had envisioned.

The AV system design, therefore, comprised:
• PA/VA system
• Video surveillance system
• Digital display system
• Lighting (temple illumination)

That apart, Rhino is also onboard the project for all the more immersive 3D projection mapping- an activity that is like almost an independent project, though being an integral part of the mega AV ensemble.

PA/VA System: The public address /voice announcement system is designed to be divide the entire complex into multiple number of zones, and programmed to voice the communication selectively to the required zones as per the need. While the generic use of PA/VA is for beaming important communications, at Ayodhya Ram Mandir it's also meant for playing ritual chants to contribute to the spiritual ambience of the place.

The design specification for the task included installation of as many as 133 IP speakers from German audio major Fohhn Audio, whose output is augmented by 13 units of Fohhn Audio amplifiers that are actually powered by a Symmetrix DSP, and a wall mount Controller from Symmetrix.

For capturing the audio from the temple priests and other presenters, four units of microphones from Audio-Technica are specified to be integrated.

The PA/VA set-up as well as background music featuring Fohhn Audio had been installed by TSG Optimus India.

The video surveillance: The video management system has been designed as one of the most sophisticated systems in the world. Apart from a slew of built-in features like recording; redundancy/back-up; failover management; advanced SDK with APIs to provide monitoring and control, it is designed to record and stream 4K, H.265 formats, and compatible for interactive HTML maps, and integration with Google Earth.

It is also scalable to add as many as 10,000 cameras in single management system.

As many as 268 surveillance cameras from American security and surveillance solutions major Pelco Incorporated (till now) are installed. The cameras comprised all the three varieties of bullet, dome, and PTZ.

"The design objective was to position the AV devices discretely, so that they do not protrude out," informs Yash Mevada, Rhino's Project Manager for the Ayodhya Ram Mandir. "That the temple is an ensemble of intricate sculptures all over, particularly the ceiling and pillars, any audio or video device protruding out from its position would affect the aesthetic appeal of the place," he explains.

However, there are certain areas where the integrators struggled to fit into the requirement, and some of the AV gear have come visible.

Digital Display System: Keeping in view the client's vision to make the spiritual activity

pervasive by beaming the devotional content all across the temple complex, the design consultant proposed placement of ceiling-mount displays in the *Parikrama* path of the *Parkota* area.

These display devices, while, essentially broadcast live the daily *Aarti* (camphor light prayers) for the visual pleasure of those moving through the *Parikrama* path, would also beam other devotional content to accentuate the spiritual ambience, besides playing the route guide support.

"They can even be used for gwweneral announcements, or speeches/messages from important personalities," explains Mevada. "They can also be employed for various promotional content that contributes to better the temple and social harmony."

According to the project manager, the digital display system can also act as emergency broadcast display in any demanding situation.

The digital signage and video display element is tasked to as many as 31 units of Samsung 55-inch 4K displays that are placed across the temple premises at as many vantage points. It is also scalable to accommodate for any additional displays that may be required in future.

The AV over IP job is tasked to as many as 13 units from Lightware Visual Engineering.

Lighting (temple illumination): Another massive visual delight at Ayodhya Ram Mandir, the lighting design as vivid as it can get, and challenging as well, remarks the Project Manager. For, an intricately sculptured ensemble

Clever ceiling lighting help showcase the excellent craftsmanship.

that the temple is, its structural components are generically not in sync with the shape and size of a wall, ceiling or pillar mountable lighting device. It required the design consultant to be incredibly ingenious with the lighting solution that syncs with the architectural brilliance, and accentuates the spiritual ambience.

"The intent for the lighting design is to contribute to the aesthetic appeal of the place, without being seen," Mevada discloses. "In essence, the fixtures had to fit into the structure; flexible enough to fit into even very small spaces," he elaborates. "That was challenging."

In accordance with the intent, the lighting design proposed fixation of:

• 10W 3000K In-ground burials with asymmetric light distribution, for flooring around pillars,

Simulation of lighting and projection mapping by Rhino Engineers.

keeping nine inches distance from their base.

• 24W Linear wall washer ground burial for sanctum sanctorum illumination.

• Spotlight 10W for ceiling profile.

• 2-way customised light for ceiling and wall grazer.

• 10W per meter LED profile lights for handrails.

• 5W per meter LED profile lights for ramp lighting.

• Spotlight 20W for illuminating the idol of Lord Ram in the sanctum sanctorum.

• Spotlight 4 W for the smaller idol of the Lord at the bottom.

• Mono 10W flexible lighting for the dome.

• Mono 15W flexible lighting for the dome.

• Mono 7W flexible lighting for the dome.

• 5W Washer lighting for recessed pathway step illumination.

Projection Lighting: a New Exploit

Challenges are often met with innovation, and more so in AV world.

Keeping in view the textural and structural challenges of running long cables through and / or along the hard and intricately sculpted stone pillars and walled surfaces, the think-tank at Rhino Engineers came up with an innovation. For the entire external façades and exterior pillars, they proposed replacing conventional lighting of cables and irregular lighting fixtures with laser projectors.

According to Mevada, the projectors would be placed above the Parkota structure, and at least 40 feet away from the projection spot/ surface, and will beam the visual content onto the surface. That the projector, by its sheer

functional nature of make and scale, will come with myriad possibilities for creating vividly engaging illumination.

"While they vastly enhance the experience of illumination, they help avoid running long cables and associated metal ware, which, in a conventional lighting would impact the aesthetics of the spaces," explains Mevada. "It is also quite challenging fitting lighting fixtures on stone surfaces, more so when they are intricately sculpted."

Says Narendra Naidu: "The challenges posed by the temple structure and specs were in fact more energising, and they stimulated our expertise. For the very nature of the project was like an illumination from inside. We're trying to express it out."

According to the Rhino Project Manager, the exploit would require anywhere around 50 projectors, which is much lesser count than the actual projection mapping.

"Actually, it will look like projection mapping; except that the content would be different in tune with the lighting" adds Mevada. "For the projection mapping in the strict sense of the format, the content would be different with animations, graphics etc."

While all this is about the AV story being scripted on the temple and the parkota, the temple Trust has also contemplated creation of a museum on the temple premises. Showcasing artefacts related to the Lord and His story, the *Ramayana*, with the spirit of human perfection and evolution to an exalted living in harmony with the world, it is ideated to be much more than just a spiritual centre. It is envisioned to be a cultural and educational centre.

Rhino Engineers

Ram Temple to Double Up Tourism Fortunes

"Tourism potential of Ayodhya would increase by 10 times when the construction of Ram temple is complete, and open to people," Uttar Pradesh Chief Minister Yogi Adityanath said on Sunday, 21st Jan, one day before the Consecration Ceremony.

Post-Ram temple's inauguration, the tourism revenues in the State could double up, observed a report released by State Bank of India. According to the report, the State's tourism revenues which were ₹2.21 lakh crore (US$24 billion) in 2022, could rake up to over ₹4 lakh crore (US$48 billion approx) in 2024.

"Given the completion of Ram Mandir in Ayodhya and initiatives taken by the UP government to promote tourism, we believe that the total expenditure by tourists in UP may cross Rs 4 lakh crore mark by end of this year," the report noted.