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“ In an era where fast technological advancements shorten the shelf life of skills, lifelong learning is mandatory. Workforces worldwide need to upskill and reskill. Digital transformation is not a buzzword any more but an imperative, for business & education. ”

Tony Sandberg, VP of Sales, Meeting and Learning Experience, APAC, Barco.



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In this issue, we look at AV technologies that enable a more experiential, interactive training space. Training and development remain a vital function of any institution that aims to leverage its candidates' inherent skill and productivity capabilities. Segments across the board – be it corporate, government, formal education, technical services, creative services or any other – now pay close attention to the training process, the training and development methods, and of course, the medium of delivery. And this has brought about specific key changes within the perception towards training and the approaches adopted in fostering more conducive training environments.



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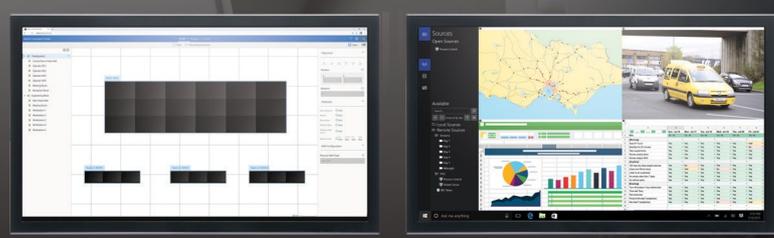


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Sennheiser on Workplace Audio, Metaverse and Collaboration



The COVID-19 pandemic has changed the way we work and look at work and there is no doubt that hybrid is now the new normal. Work, which used to largely relate to a physical space are now things to get done in front of a screen 10 steps from our bedroom. The work today is no longer bound by distance or space.

In a survey conducted by McKinsey¹, nine out of ten executives said that they envision a hybrid model moving forward. But despite this, 68% of those surveyed also said that their organizations have no detailed plan communicated or in place to materialize the hybrid workplace. Yet, with the long hours that employees dedicate to connecting virtually on a daily basis, companies now have a huge incentive to create a pleasant virtual work experience. Amongst many others, this involves providing the right technology and tools for smooth collaboration and connection.



SI Asia chats with **Petteri Murto, Vice President, Sales, Business Communications, Sennheiser Electronic Asia Pte Ltd** about the company's vision and strategy in the workplace environment.

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What is the role of audio in the new way of working?

“Can you hear me now?” is probably one of the most used phrases in recent times. It is undeniable that COVID-19 has fundamentally changed the way schools and organizations operate. In hybrid offices and classroom environment, video conferencing plays a huge role in ensuring that we can still carry out our daily tasks, uninterrupted. While meetings and classes can take place without visuals, it cannot happen without audio, which enables communication and discussion to take place. Clear and high-quality audio transmission allows us to stay connected and collaborate effectively wherever we are in the world. Technical problems such as loss of audio connection and conference calls interruption are common issues and have a huge impact on our productivity.

Can you tell us more about touchless audio and why it is so important today?

Touchless audio, which is also known as contactless audio and refers to audio technology that can be used to capture audio in spaces without having to pass microphones or any form of physical contact. This smart solution allows us to future proof our meeting spaces as it eliminates cable clutter and the need to physically handle or clean up any electronics and cables, creating a clean, minimalist work environment. Sennheiser delivers touchless audio solution through its Team Connect Ceiling 2 (TCC2), where a patented adaptive beamforming technology and TruVoiceLift functionality enables seamless speech intelligibility in a meeting or conference room, allowing all participants to be heard from every corner of the room. This allows speakers to move freely in a space without having to carry or pass any microphone. Another advantage of touchless audio and our beamforming technology is that it allows flexibility in the configuration of the room

and the number of attendees where any adjustments will not impair the audio quality. Over the past two years, touchless audio has become an integral part of any workplace set up as it allows for social distancing between participants and reduce the risk of spreading infection without having to suffer in terms of audibility.

Sennheiser recently launched a new product – the TeamConnect Intelligence Speaker. Tell us more about it.



The TeamConnect Intelligent Speaker (TCISP) is Sennheiser's first 100% UC solution optimized for mid-sized Microsoft Teams rooms for up to 10 people. It features an omnidirectional speaker that covers a 3.5m radius and seven integrated beamforming microphones to achieve excellent speech intelligibility and double-talk performance. The integration of Microsoft Cortana voice intelligence allows users to control the microphone verbally during meetings without having to fumble with equipment. Through the TCISP, Microsoft Teams also provide live transcription in real-time, with the transcription document being available right after the meeting. This provides an inclusive and highly collaborative environment for remote participants and those who are hard to hearing. Given the popularity of Sennheiser's TeamConnect Ceiling 2 microphone, we are extremely excited to have this new addition to the TeamConnect family that allows us to offer a smart, focused and inclusive solution for different sized meeting room at a very attractive price point.

The Metaverse has become a popular topic today. What is the metaverse and what do you think is audio's role in it?

Metaverse is really an exciting space where the ways in which we communicate and experience the world will not be bound by our physical space and reality. We are already seeing versions of metaverse in corporate, education and entertainment industry. Regardless of its application, it is clear that audio will continue to play a huge role in bringing to life this mixed reality and immersive experience. As with most virtual platforms, visual is only one component and audio plays an equally important role in drawing participants into this immersive experience. It is worthy to note that besides Facebook which recently announced that it has

changed its company name to Meta, Microsoft has also announced its version of AR/VR meetings via its Microsoft Mesh platform where spatial audio will help to create a sense of being in the same physical space in a multiuser scenario. Spatial audio will help create an immersive experience that allow participants to feel a sense of presence and reality in the virtual space. Metaverse is still in its infancy stage but over the next few years, we will definitely see organizations pouring investments into developing technological products and infrastructures to realize this mixed-reality. It is interesting and exciting to see where it will go from here. As one of the world's leading manufacturer of audio solutions, Sennheiser will keep a close eye on the developments in Metaverse as well as industry trends to stay on the edge of innovation. All I can say is, sit tight and watch this space.

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Unlike other brands which own the value chain from end to end, Sennheiser seem to have a different strategy when it comes to working with competing brands in the industry. Tell us more about Sennheiser's Global Alliance Programme and how it works.

Sennheiser takes a manufacturer-agnostic approach towards growing our partnerships with other brands. Under Sennheiser's Global Alliance Programme, we work with premium partners like Extron, Barco, Microsoft, Zoom and many others to deliver seamless integration to provide a superior user experience. We believe that our customers should be able to choose the best and most suitable product for their application. For example, we have customers who specifically requested for a QSC-Sennheiser bundle that was Zoom certified. Similarly, QSC had also received similar requests from the market for a Sennheiser bundle. With such demand, we aligned our engineering teams and approached Zoom about certifying a joint solution. This level of cooperation would not have been possible if our partners like QSC viewed Sennheiser as a competitor and vice versa. That is why we stand by our Manufacturer Agnostic approach and will continue to grow our partnerships to bring the best solutions to our customers.

In mid-2021, Sennheiser announced that it has sold off its consumer business to focus on Professional Audio and Business Communication in the future. Please share the company's vision for the future.

It has always been Sennheiser's vision to shape and build the future

of audio by continuously pushing boundaries to create unique sound experience for our customers. On the business communication front, remote work, hybrid environments are concepts that are here to stay. We want to continue to deliver audio solutions that can solve real problems associated with this "new normal" as well as advanced solutions for modern classrooms and workspaces. We want to create products that are easy to set up and use so that people will have more time for collaboration and productivity. Sennheiser will continue to invest into market research and product development to meet the needs of our customers and the changing industry and landscape and to continue to strengthen our capabilities to meet future demands.

¹ [McKinsey & Company. \(2021\). What executives are saying about the future of hybrid work.](#)

Sennheiser

“

We want to create products that are easy to set up and use so that people will have more time for collaboration and productivity.

”

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Roni Klein
EMEA President



Marc Rémond
APAC President

Kramer Appoints New Presidents in EMEA and APAC as it Scales up its Operation

APAC/EMEA: Kramer Electronics Ltd. is pleased to announce the appointment of two new executives to lead regional operations in EMEA (Europe, Middle East & Africa) and APAC (Asia-Pacific). This expansion of Kramer's executive team is a key step to support the company's rapid business growth and strengthen its customer-centric strategy.

It is also aligned with Kramer's shift toward a regional approach. As part of this, Kramer will establish a new EMEA regional headquarters in Amsterdam, The Netherlands, and will locate the APAC regional headquarters in its existing Singapore offices.

"Building on Kramer's strong performance, we are now strengthening our leadership team and laying a strong foundation to support exponential growth," said Gilad Yron, CEO Kramer Electronics. "This is an instrumental element in building a scalable organization that excels in providing solutions that meaningfully power the physical-digital world. As we shift our center of gravity towards the customer, having senior executives in the regions where our customers are will deepen our market intimacy and increase our responsiveness to customer needs."

New Kramer regional Presidents

Roni Klein, who was formerly Kramer VP of Strategic Accounts, has been promoted to Kramer EMEA President. With a proven track record of more than 25 years and experience across a broad base of technology, solutions and services, Roni is a veteran leader of regional and global teams, spearheading complex strategies in sales, marketing, service, and operations. Prior to joining Kramer, Roni served as

Global VP Sales at Pangea IT. He has held varied management and executive roles at IDE Technologies, Verint Asia-Pacific, and NUR Macroprinters, where he was instrumental in positioning the company for acquisition by HP.

Marc Rémond has been appointed Kramer APAC President. A seasoned international business executive and entrepreneur, Marc has 23 years of experience in selling and marketing IT and communications solutions and services to Enterprise, Government and Education institutions. He has extensive experience in the AV and collaboration field, including as a Regional VP of Sales, Meeting and Learning solutions at Barco,

and as a Global Senior Director at Polycom, now known as Poly, a leader in video, voice, and content solutions.

Marc Issan, Kramer VP Sales, added, "I am very pleased to welcome Roni and Marc to our executive team. We are all looking forward to working with them to accelerate the build-up of our regional operations and steer Kramer to a new level of growth.

Kramer



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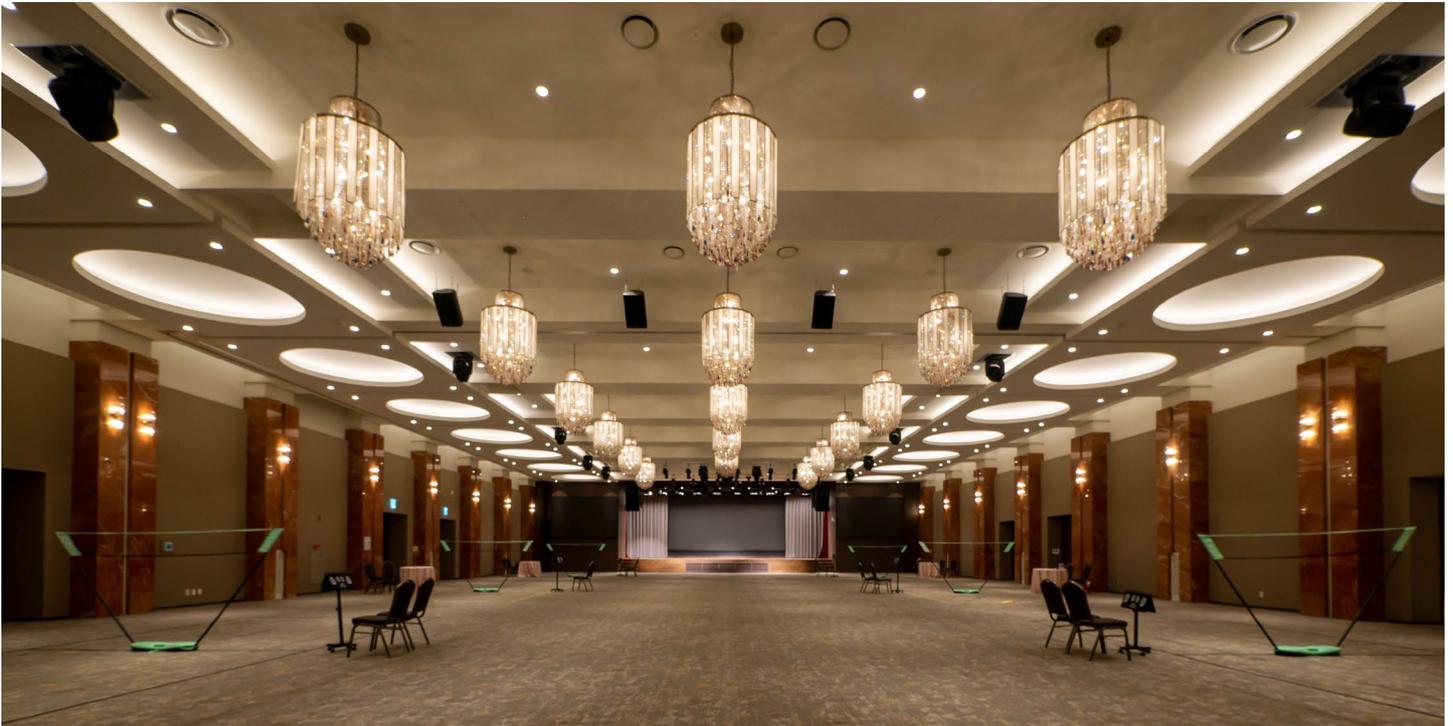
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Martin Audio WPC Specified for Upgraded Splas Resom

SOUTH KOREA: Back in 2018 South Korean construction company Hoban Co. began moves to take over Resom Resort from its creditors at a cost of \$224 million after being named as the preferred bidder. Resom owns three resorts in Chungcheong Province in Korea—including Splas Resom, a membership spa resort and Forest Resom, situated in a dense tree forest, which seeks to provide healing through nature and water.

A tender was issued for refurbishment of the existing Splas facility—as well as the construction of a new building—and Martin Audio distributor, Sama Sound, partnered with its dealer, Asea Sound, to submit the successful bid.

Sama Sound Product Manager, Edan Kwon, stated that the speakers had originally been specified with another brand. “And so we worked hard to get this changed to Martin Audio,” he explained. “With the help of a presentation we were able to show the company and its engineer the advantages of the new system design over other brands.”

Martin Audio’s Wavefront Precision Compact (WPC)—recently accoladed with the Queen’s Award for Innovation—was a perfect match for the previously specified system, meeting all the same performance criteria. “Therefore this system pretty much decided itself,” he said. “It was the same with our SXC118 subwoofer; since a cardioid subwoofer had been specified, we designed the system with SXC118.”

But from that point on, the scalable Wavefront Precision offered advantages that none of the other previously considered systems could. “The venue was constructed without regard for architectural acoustics, so there were consequently many sound reflections, especially from the venue back wall, as

well as from backstage. The Hard Avoid feature [in the proprietary DISPLAY software] helped us to control those reflections, while the customer was more than satisfied at how the SXC118 cardioid subwoofer reduced the radiation behind.”

The Martin Audio loudspeakers—including many from the CDD series—have been installed in a number of multipurpose banquet halls which are mainly used for corporate events, seminars, and workshops. The system needed to be sufficiently versatile to handle a number of source feeds, ranging from background music, voice announcements and occasionally live music.

Set in hangs of five elements a side in the main Juniper Hall, accompanied by four SXC118 subs in cardioid, WPC is driven in 2-box resolution from an iKON iK81 and four iK42 amplifiers. A pair of LE200 wedges have been provided for stage monitoring.

Elsewhere, in the Rosemary Hall the specification moves to a pair each of Martin Audio W8VDQ and SXC118 subs, with two further CDD8B acting as delay speakers—powered from a further four-channel iK42.

The Geranium Hall sees a pair each of CDD8B as main speakers and CDD5B as delays, with four CDD8B in the Iris & Marigold Hall, and a pair of the same speaker in each of the Sage Hall, Jasmine Hall and Verbena Hall spaces.

Overseeing the project for Sama Sound was sales manager, Jong Hwa Seo, while Seung Hwan Kim designed the system. Hong Geun Kim took charge of the speaker installations and system tunings.

Explaining his reasons for choosing Martin Audio, the engineer, Seung Hyuk Im, said, “Since the venue is mostly rented, I wanted to choose equipment that was familiar to visiting engineers. Martin Audio was one of my considerations from the beginning and it provided me with the best system solution. I have experienced [the brand], both from exhibitions and also when I was working in a rental company. The sound is so clear and punchy, and the balance extremely good. Engineers who came in to rent systems for their events were all 100% satisfied.”

The optimisation and Hard Avoid features had worked really well, he added. “I was also fully satisfied with the performance of the SXC118 cardioid subwoofer. Since we are a resort, the aesthetic was also important. Martin Audio speakers look classy and fabulous, but are also small enough to be fairly unobtrusive—particularly the cardioid subwoofer; it is not easy to find one this small.”

Following the commissioning, the contracting team moved on to Forest Resom, where a similar Martin Audio system was specified.

Martin Audio





Generation AV Takes On Sonance, James Loudspeaker and IPORT for Asia

ASIA: Sonance is pleased to announce the appointment of Generation AV as the representative agency for Sonance, James Loudspeaker, and IPORT in Asia. Generation AV was founded by audio-video veteran David McKinney, to serve the Asia Pacific market for the Professional & Residential Audio & Video industry.

With immediate effect, Generation AV, based in Singapore, will assume sales strategy, account management, and technical support duties for the Asian market.

“David McKinney and his team will be a great asset to our customers in Asia, serving both the commercial and residential markets,” says Kent Sheldon, VP

International Sales, Sonance. “As we were looking for a way to become closer to our customers in Asia, and to be able to provide better support, Generation AV was the obvious choice.

Their understanding of the unique market dynamics and their reputation for providing the highest levels of customer service makes them an exciting addition to our team.”

“We are very pleased to be adding Sonance, James Loudspeaker, and IPORT to Generation AV’s portfolio,” says David McKinney. “From a product, technology, and design perspective they have been leading the game in both the residential Custom Install market, and in the Commercial channel. We see great opportunity for all three brands and look forward to expanding the customer network in Asia. The Invisible Series has already experienced much success across various parts of Asia with many Luxury Retail and Hospitality installations, and the latest CONNECT PRO Series from IPORT is gathering a lot of attention. We look forward to ensuring customers across the region have easy and immediate access to all these products and providing a first-class level of support.”

Sheldon added “As Sonance, James Loudspeaker, and IPORT look at our rapid growth in Asia, we are delighted to have a firm with the capabilities of Generation AV as our partner to continue that growth and provide enhanced levels of support to our customers.”

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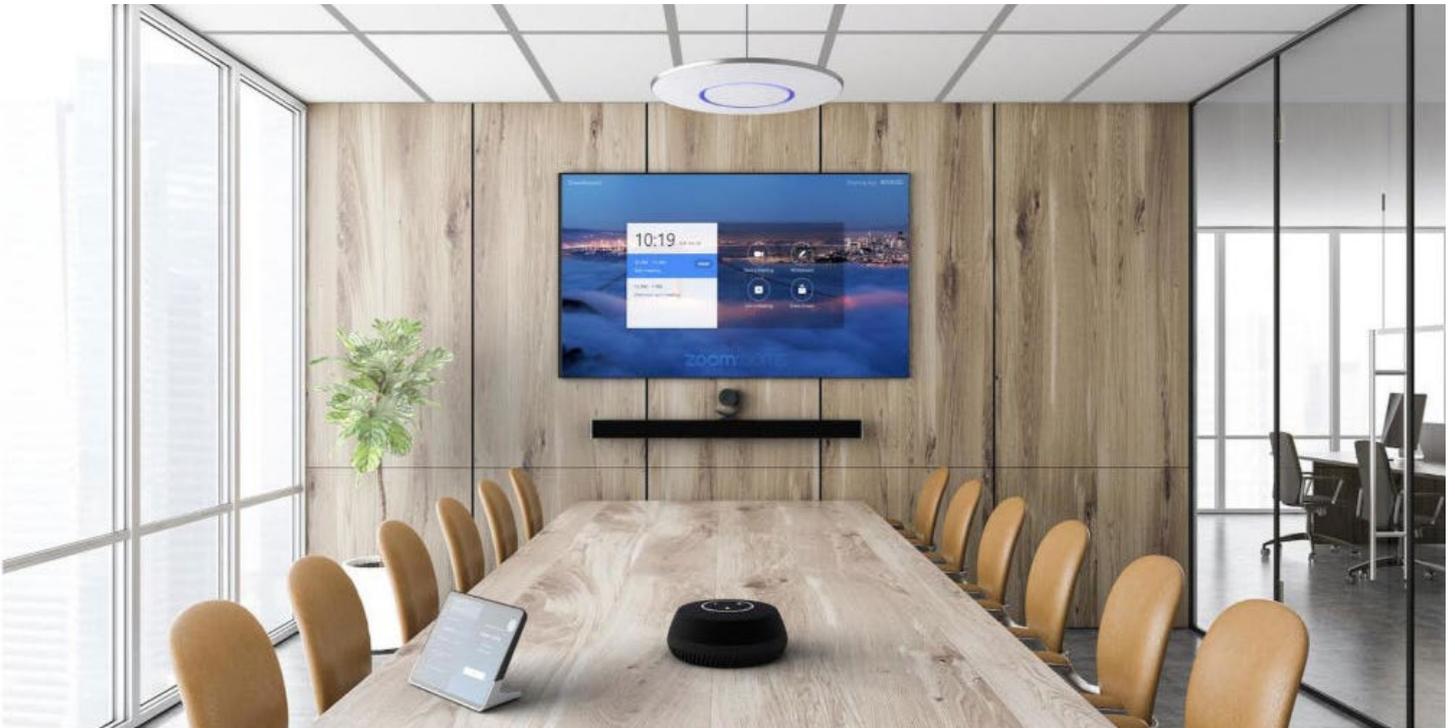
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Shure Appoints Mahajak Trio Electronic as Distributor for Stem Ecosystem in Malaysia

MALAYSIA: Shure, a leading global manufacturer of audio equipment, announces the launch of Stem Ecosystem, a new and cost-effective audio conferencing ecosystem that alleviates the major pains in virtual meetings currently experienced by IT professionals and everyday users, for the first time in Malaysia.

The new line of Stem Ecosystem products will be distributed by the newly appointed distributor, Mahajak Trio Electronic Sdn Bhd (MTE) in Malaysia. Incorporated in 2010, MTE is involved in the sourcing, sale and distribution of a wide and comprehensive

range of professional sound equipment such as loudspeakers, audio mixers, amplifiers, signal processors, microphones, video-audio control systems and entertainment lightings in addition to consultancy services, technical advice and conduct training on sound solutions, as well as testing and repair services.

Virtual meetings have become essential for businesses globally and are expected to continue in its importance as organizations move towards a hybrid work arrangement and less business travel. Even before the recent shift to virtual meetings, a **2019 survey Shure conducted with Illuminas** (<https://effortless.shure.com/content-hub/posts/every-voice-has-its-moment/>) found that two-thirds of business professionals believe their employers lack the right conferencing technology. One-third of enterprise meetings have technical issues and users often face challenges when working with conferencing technology.

But better audio doesn't have to be complicated.

With the launch of award-winning Stem Ecosystem solutions, anyone has the freedom to mix and match devices to create the perfect audio pickup in any collaboration space. Stem Ecosystem solutions deliver high-quality audio products backed by the award-winning industry support infrastructure that Shure is known for. From small collaborative spaces to large enterprises or local colleges, Stem Ecosystem solutions scale to the needs of any sized institution.

“The solution is suitable for organizations of any size seeking a straightforward and customizable experience that can help users save cost through its effortless, no-programming approach,” shared Eric Ong, Director of Sales, Southeast Asia. “Now, Shure can offer a more diverse array of audio conferencing solutions for a wider variety of customers. This is in line with our Southeast Asia (SEA) growth strategy to bring quality audio to the work environment. With Malaysia being an important market in SEA with strong growth potential for professional audio conferencing solutions, we are happy to appoint MTE as our distributor for Stem Ecosystem. We believe that having MTE as our distributor, will expand our reach and make Stem Ecosystem even more accessible to the Malaysian market. Our partnership leverages Shure’s expertise as a professional audio manufacturer and MTE’s strong network in providing audio solutions to their customers.” “We are absolutely excited about Stem Ecosystem. Our coming onboard and working together with Shure at this time couldn’t be more perfect. The pandemic has created a huge vacuum for upgrades in audio conferencing solutions where businesses are eagerly searching for flexible, plug and play options. As most enterprises are transforming away from the old rigid office design, we are confident that Stem Ecosystem is the ideal and effortless solution moving forward. SMEs (small, medium enterprises) will be particularly delighted to have a solution that doesn’t

require heavy capital outlay and technical resources to set it up,” says Edwin Lau, Executive Director of MTE.

Stem Ecosystem solutions include wall and table speakerphones, along with a ceiling microphone that blends into any room and syncs with networked loudspeakers, as well as dedicated control systems for a complete audio package:

Stem Table: Optimised for tabletops and flat surfaces, the Stem Table is equipped with nine microphones that perform real beamforming and a downward-facing speaker for superior performance.

Stem Speaker: Built to give users the freedom to expand the sound to anywhere in the room, the Stem Speaker product is an external speaker with three mounting options and a powerful driver for exceptional sound in any meeting space.

Stem Wall: Equipped with 15 microphones that perform beamforming, plus full-range speakers and subwoofers, the Stem Wall product ensures that everybody has a voice.

Stem Ceiling: A 100-microphone ceiling array comes with two mounting options (low profile or chandelier mode) and three-beam options for exceptional coverage in any meeting room.

Stem Hub: When more than one Stem Ecosystem device is used in a room, the Stem Hub product enables multiple units to communicate with each other in the room and function more effectively as a solution. With USB Type B, ethernet, Dante, VoIP connectivity, and pluggable terminal blocks for external speakers, the Stem Hub product has all bases covered.

Stem Control: A dedicated touch controller that connects to the network with a single ethernet

connection. The Stem Control product allows access to the Stem Ecosystem platform and remote management of an organisation or can be used as an in-meeting controller with video conferencing platforms.

All Stem Ecosystem devices are networked PoE+ powered products. They are easy to install for IT professionals and systems integrators looking for the

ideal scalable audio solution specifically in standard meeting rooms or educational spaces that do not have any special requirements.

In Malaysia, Shure Stem Ecosystem is available through Mahajak Trio Electronic Sdn Bhd, from March 2022.

Mahajak Trio Electronic



iMAG AV over IP System Features at The Kent Ridge Guild House

SINGAPORE: The Kent Ridge Guild House is the largest of the three guild houses managed by the National University of Singapore Society (NUSS).

It offers a plethora of facilities including a fitness centre, a swimming pool, squash and tennis courts, restaurants, bar, karaoke room, and billiard and function rooms. Situated within the NUS campus, it is a great place to unwind and meet up with fellow friends and graduates.

It has been over 10 years since the last AV upgrade at the Kent Ridge Guild House, and so whilst many restrictions were in place due to COVID-19, the

Management Committee decided to make use of the window of opportunity to upgrade the AV system at the Della & Seng Gee Guild Hall, the main ballroom, to provide members and guests with a stylish and elegant ballroom for corporate and private events.

Sylvester Fok of Media Systems has worked with the Kent Ridge Guild House team for many years and so Media Systems was chosen as the trusted system integrator to design and implement the system. The team was looking for something future-proof, simple to operate, reliable and within the stipulated budget. For the video matrix and distribution system they turned to iMAGsystems to provide the AV over IP system for the venue. iMAG's Thunder 1g AV over IP system was chosen as the right solution using 6 Wall plate encoders, 1 standard encoder and 5 decoders creating a 7x5 video matrix and complete flexibility for the in-house AV team.

Once the Media Systems team started to implement the system, they started to experiment with iMAG's new CONTROL UI, which is a full touch screen control system built into the Director software in Thunder. Once they realised how simple and quick it was to programme, they decided to replace the in-house control system with iMAGsystems and have a full system implementation.

iMAG's CONTROL UI enables the operators to control lighting, audio, screens, and projectors all from the

touch screens in the venue. One touch screen is positioned in the main ballroom, and a second in the control room. Any user can plug into one of the 6 HDMI inputs around the room, whether it is operating as one large room, or two separate function rooms when the centre partition is in place.

Gerry Raffaut, President of iMAGsystems, commented on the system, "It is great to work with Media Systems and NUSS on this project. Media Systems was one of the first system integrators to implement our new CONTROL UI software and it worked perfectly. Sylvester and his programmers provided great feedback and we added in a couple of features they required to make the installation run seamlessly. It was a great partnership. Big thanks to NUSS and Media Systems for putting their trust in iMAGsystems"

Sylvester Fok, MD of Media Systems commented, "We have been working closely with NUSS and the Kent Ridge Guild House team for many years, it was an honour to be asked to look after this project. iMAG's Thunder system worked well, and the CONTROL UI touch screen software enabled us to meet the budget whilst ensuring no compromises were made on the client's requirements. Big thanks to the iMAG team in Australia, and the Generation AV team here in Singapore."

Generation AV represents iMAG in the region.

Generation AV





Ravi Sharma
Senior Manager
South Asia

Shure Welcomes New Senior Manager for South Asia

SOUTH ASIA: Shure Incorporated has announced that Ravi Sharma has joined the company's team in South Asia as Senior Manager. In this role, Sharma will manage and develop the business channels across India and the rest of South Asia. Sharma has 15 years of experience in the industry, previously working for companies

such as Bose Professional India and Yamaha Music India. He will also be responsible for leading the go-to-market team who are instrumental in bringing new products to the market and creating demand for solutions from Shure across markets and the region. He will identify and execute sales and marketing strategies to address the growth potential in India and the region of South Asia.

"We are delighted to have Ravi on the team. He will help us drive the next phase of our Market Development presence in the region. With his strong experience in the industry and being based in India, he will be closer to the market to identify and act on opportunities together with the existing team in place," said Chicco Hiranandani, Director of Shure for Middle East, Africa and South Asia.

"I am very excited to be appointed as Senior Manager, and I can already count on an exceptional team and channel partners to help us achieve our goals, in step with the constantly changing needs of our customers and today's rapidly transforming markets," said Ravi Sharma.

Shure

Matsumoto Performing Arts Centre Upgrades with CHAUVET Professional

JAPAN: With its flowing, curving, abstract form, the Matsumoto Performing Arts Centre presents a fitting architectural testimony to the poetic beauty

of the Japanese theatrical tradition. Widely regarded as the masterpieces of internationally renowned architect, Toyo Ito, the inherent beauty of the 18-year old structure, is characterized by a speckled pattern of 20,000 pieces of glass adorning the façade.

Inside the venue's 1,800 capacity main theatre, the continuation of the flowing contours and curves provides a perfect platform for the venue's eclectic program of traditional and contemporary theatrical performances. As part of a recent lighting upgrade by Hibino Lighting, a total of 17 CHAUVET Professional



Maverick Silens 2 Profile fixtures were added to the theatre's lighting rig to provide multifaceted looks in support of the myriad of stage performances which the venue is renowned for.

Whilst some traditional disciplines rely on sound and light to transport metaphor and feeling, often times the direction will call upon visual and sonic restraint to underline various parts of a performance. As a result, it was a necessity to ensure that the new selection of luminaries would not detract from the poetry of the theatre with unwanted mechanical operational sounds.

Having absolutely no fans or noisy moving parts, the Maverick Silens 2 Profile fixtures, which boast a 560-watt LED engine capable of producing over 10,000 lumens, was deemed to be an essential addition for the auditorium. As a result of the fixture's silent operation, the theatre's lighting team is able to guarantee the execution of spectacular visuals whilst avoiding potentially fourth wall disrupting noises.

In addition to the fixture's silent operation, the team were also quick to appreciate the versatility of the fixture's multifunctional features. After initially looking

into specifying a separate profile and wash fixture, the Maverick Silens 2 Profile was determined to be also suitable to be used as a wash light, thus saving the need to specify separate fixtures for the stage area.

Positioned in a central line hung from trussing above the stage, the Maverick's homogenous wash and accurate spot capabilities are entrusted with performing a variety of functions. Aside from the impressive combination of additive and subtractive colour mixing, other

features such as variable frost and interchangeable gobo filters give the in-house lighting technicians the ability to award the Matsumoto stage with numerous looks with which to underline any number of performances with tailored visual atmosphere.

Although skepticism was initially lodged by the orchestra's conductor regarding potential glare from the positioning of the luminaires, initial feedback was overwhelmingly positive thanks in part to the fixture's 10:1 linear zoom ratio, which helps reduce unsightly glare to an absolute minimum thanks to a soft spot light effect.

Ultimately, however, the biggest compliment of the Maverick Silens 2 fixtures can be seen with regards to the experience of theatregoers within the venue. Whilst the importance of having vivid colours and sharp spot effects to underline the performances cannot be underestimated, the fact that the audience can enjoy the visuals free from the distraction of noise ensures that this venue's inspiring architecture remains in the foreground of the theatrical experience.

Chauvet Professional

G&D Unveils VisionXS High-end Extender Product Series



Sometimes less is more: the new high-end extender product series VisionXS produced by German KVM manufacturer Guntermann & Drunck GmbH (G&D) comes with a small housing and big performance. Following the motto “smaller, more compact, more powerful”, G&D developed a new compact multi-purpose KVM tool. The high-performance KVM-over-IP extender is now available with high performant video transmission for resolutions up to 4K60.

Compared to its previous models, the VisionXS uses standard networks at up to 10Gbit/s, opening up a new dimension of possibilities: Especially fast videos and frequently changing image content now require significantly less compression thus improving the user experience many times over.

Versatile signals for the best video experience

In a first step, a high-end IP system for DisplayPort UHR will be launched, followed by devices for HDMI and DVI-I. For the VisionXS series, the manufacturer also relies on its proven, lossless compression bluedec™, which enables authentic, pixel-perfect video experiences.

Space-saving

The size of the modules is an important difference that stands out at first glance. The console modules of the VisionXS series are significantly smaller now and thus require less space. With their smaller size, the products can also be used in applications where space is a critical factor.

Integrated switch functionality

One of the highlights of the new VisionXS is the integrated “IP-MUX” feature. With this function, one console manages several target IP addresses of up to 20 computer sources without the need for additional hardware. For simple applications, the on-screen display can be used to switch to the different sources. The advantages: low effort, fewer devices, smart application. Since the switching process is not seamless in the IP-MUX application due to security measures such as VPN setup and encryption structure, customers whose applications have higher requirements, can use the KVM-over-IP matrix system ControlCenter-IP to enable instant switching.

Safety feature transmission redundancy

As an additional safety feature, each device is equipped with two transmission ports. This enables fast switching to the fallback transmission line. No additional hardware is required to use the transmission redundancy, because the second port can be enabled via software key - even at a later date. If the product is connected to the KVM network via both transmission ports, switching quickly between both transmission interfaces is possible thanks to link aggregation.

Universal compatibility enables a high degree of flexibility

An important advantage of VisionXS extenders is the ability to combine them with G&D's matrix systems. For customers, this means even more flexibility, because VisionXS products can either be operated in pairs as an extender line or they can also be integrated into matrix installations. Thus, users will also have one hardware for everything in the future. Like any other G&D product, the new devices are fully compatible with existing models. The extensive combinability of the KVM systems ensures solutions that are suitable for all applications. This makes it even easier to plan and expand installations, even at a later date.

With these powerful expansions to the portfolio, G&D caters to the growing complexity of KVM applications by providing a smaller solution with a large selection of powerful features. Thanks to versatile KVM products that can be combined, the best possible solutions, which considers the application, the existing IT structures and the requirements of the projects is always right on hand.

G&D



DICENTIS Flush

Bosch adds modular product range with installation convenience to its IP-based conference portfolio

- ▶ **Attractive, modular flush-mounted design** allows easy system scalability with the option of cost-saving dual-seat setups with microphone sharing
- ▶ **Offers installation convenience** by using existing IP-infrastructure and Power-over-Ethernet (PoE), and by sharing a similar footprint as Bosch DCN devices
- ▶ **Delivers best-in-class user experience** – superior audio quality and large microphone button design with possible-to-speak indication

For more information visit [boschsecurity.com](https://www.boschsecurity.com)



Kramer's New Collaboration Devices Enrich end-to-end Solutions for Enterprise and Education Applications



Kramer Electronics Ltd. releases its new Collaboration Devices, the latest addition to its end-to-end Pro AV solutions for Enterprise and Education applications. The new product line, which includes advanced cameras, a communication bar and a speakerphone, offers outstanding AV quality, flexibility and simplicity. Kramer's complete solutions for Enterprise meeting spaces, schools and universities meet customers' needs for complete, integrated solutions from a single, trusted partner that provides certified solutions, market-leading warranties and end-to-end support, all under one roof. Offering simple setup and seamless use, it is agnostic to all UC applications, and supports multiple conferencing platforms.

Kramer Collaboration Devices are designed for varied spaces from small huddle rooms up to large boardrooms, classrooms and auditoriums. They ensure all participants, whether in the room or connecting remotely, consistently enjoy superb interactions, with an immersive audio and video experience. With Kramer Collaboration Devices, all participants can see and be seen as well as hear and be heard clearly – enabling meaningful and effective collaboration. Kramer Collaboration Devices are fast and simple to deploy. They can easily be combined with Kramer's in-room A/V signal management

and control products for a complete collaborative, hybrid experience.

The new Kramer Collaboration Devices product line includes:

K-Speak – A compact speakerphone with 360° omnidirectional audio pickup

that enhances the audio experience for everyone. Perfect for any room size where additional audio coverage is needed.

K-Bar – An all-in-one video and audio communication bar that allows participants to quickly start collaborating. Ideal for small to mid-sized spaces where an all-in-one device saves space and cable clutter.

K-180Mini – A smart, 4K wall-mount panoramic camera with integrated microphone, that captures clear video across a full 180° field of view. Designed for small rooms and huddle rooms.

K-CamHD – A professional HD PTZ camera for versatile video capture that ensures a clear view of all meeting attendees, with special attention wherever needed. Ideal for varied spaces and use cases, ranging from medium sized rooms up to board rooms, classrooms and auditoriums.

K-Cam4K – An ultra-HD PTZ camera for premium-clarity video in large spaces that puts every meeting in sharp focus, with crystal-clear, ultra-high-definition video capture. Supports the most advanced and challenging setups in large meeting rooms and educational spaces.

Kramer

LEA Professional Now Offers Speaker Tunings for Renkus-Heinz CX and TX Series loudspeakers



RENKUS-HEINZ

LEA

PROFESSIONAL

LEA Professional, manufacturer of innovative, high-quality, pro-audio amplifiers with cloud- and IoT-based technologies, is pleased to announce the immediate availability of Connect Series amplifier speaker tuning data for Renkus-Heinz CX and TX Series loudspeakers. LEA Connect Series speaker tunings are an easy and fast way to provide integrators with the DSP settings they need to optimize system performance for speakers that pair with LEA amplifiers.

The LEA Professional Connect Series amplifiers use a Web UI to configure speaker tunings on a per-channel basis. This includes all DSP settings for each individual channel, such as input settings, Smart Power Bridge, HiZ and LowZ, Signal Generator settings, crossover settings, EQ settings, limiter information, and load monitoring settings. Once the DSP settings are complete, users can export the data as a speaker tuning file which can be saved and loaded onto any other channel or other Connect Series amplifiers.

The Connect Series from LEA Professional is a commercial-grade audio amplifier family perfectly suited for small to medium-scale installations. Featuring three ways to connect, users can engage the built-in Wi-Fi access point, connect to the venue's Wi-Fi, or use the FAST Ethernet to connect to any local area network via Cat5 or Cat6 cable.

LEA Professional offers free, customized, downloadable speaker tunings for many of the most recognized and commonly-used speakers on the market. The growing list of speaker manufacturers supported includes Audac, Bose, Community, Danley, DAS, Ecler, JBL, Martin Audio, One-Systems, Yamaha and Renkus-Heinz.

LEA Professional speaker tunings for Renkus-Heinz loudspeakers include:

CX Series: CX61, CX62, CX81, CX82, CX121, CX151
TX Series: TX61, TX62, TX81, TX82, TX121, TX151

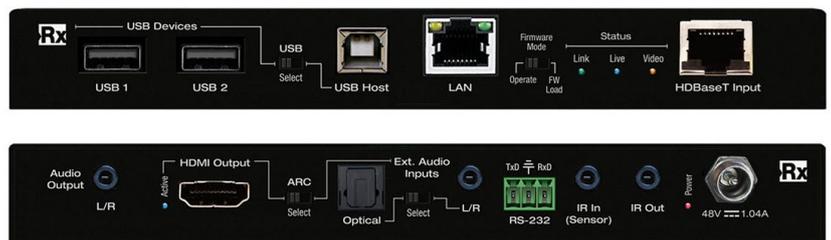
For more information or to access downloads, click [HERE](#).

Key Digital Offers KD-XPS22U 4K 18G Smart Extender Kit



Key Digital, a leading innovator in AV over IP solutions, announces the availability of a new product bundle: the KD-XPS22U 4K 18G Smart Extender Kit. For installations where a display or projector is distanced from HDMI sources, the KD-XPS22U delivers uncompromised signal extension along with full-featured system control by bundling together the KD-PS22UTx Switcher / Transmitter – with integral HDBaseT signal transmission capabilities – and the KD-X100MRx Receiver. The KD-XPS22U is suited for applications in conference, training and lecture rooms, huddle spaces and even in home theaters.

HDBaseT provides the bandwidth for delivery of uncompressed 10.2Gbps signals, which the KD-XPS22U extends with visually lossless compression by way of its 18G enabling technology to UHD signals up to 4096x2160. Key Digital's soft-codec and KVM enabling system leverages HDBaseT's bidirectionality to create a connectivity hub for professional USB cameras and microphones, audio DSP, keyboard, mouse or touchscreen display. Displays and projectors can be controlled directly by way of IR and RS-232 extension, or via CEC control of power and volume via



the KD App or KDMS Pro software. eARC is supported for HDMI and optical audio, with audio de-embedding. Either unit can be powered from its partner Tx/Rx, increasing flexibility of where the units may be located.

The KD-XPS22U supports an expansive list of content standards, including the HDCP 2.2 anti-piracy protocol; the HDR10 standard for high-dynamic-range video; and EDID management for display recognition. It also offers deep color support up to UHD/4K 30Hz 4:4:4/12-bit or 60Hz 4:4:4/8-bit and has a full buffer system to manage HDCP authentication, EDID control handshakes and TMDS re-clocking / signal regeneration for serial data optimization.

Key Digital

Cameo Introduces ZENIT W600i Architectural Wash Light



on the ZENIT W600i make it an extremely versatile tool for professional architectural lighting.

With its IP67 protection rating, the ZENIT W600i is optimally protected, including against temporary immersion, and is ideally equipped for marine applications with its C5-M certification. DMX and RDM control are conveniently managed over a network, as the ZENIT W600i dispenses with plug-in DMX sockets in favor of waterproof PG cable glands.

Cameo presents the ZENIT W600i, a new outdoor LED wash light for architectural lighting and fixed installation. Designed specifically for lighting and fixed installations, this version of the successful ZENIT W600 Wash Light offers architects, planners, lighting designers, and rental outlets an IP67-certified spotlight that impresses with its generous light output, quality of color, and reliability in a wide variety of applications and environments.

No matter whether it's on to modern buildings, rough facades or impressive monuments, the ZENIT W600i powerfully and precisely projects up to 21,000 lm of light from a total of 40 15-watt RGBW LEDs on to any shape. Advanced 16-bit technology for high-resolution colour mixing and dimming enables lighting designers to produce intense, homogeneous colour and white surfaces that immerse even the largest buildings in perfect light. Combined with integrated colour temperature correction (CTC) and LED colour calibration, the selectable dimmer curves and optional simulated halogen lamp dimming behavior available

The ZENIT W600i can be combined with a variety of specially developed accessories, which not only make the spotlight more versatile, but also protect it against external influences. In addition to symmetrical and asymmetrical diffusion filters (25°, 45°, 100°, 60°x10°) with tool-protected mounting and full and half anti-glare shields against unwanted stray light, the new, wired ZENIT display remote control enables full on-site control when configuring ZENIT installation devices. The ZENIT display remote control is connected using the supplied cable and has the same touch-sensitive controls known from the display of the original ZENIT W600.

To accompany the release of the ZENIT W600i, Cameo is also introducing an extended 5-year warranty on all installation products. This allows customers and users from a wide range of fields to benefit from the comprehensive Cameo quality promise.

Cameo

RGB Spectrum's New Leading-Edge Video Wall Processor for the Most Demanding Applications



RGB Spectrum is pleased to introduce the innovative Galileo GO80 4K video wall processor, packed with unique capabilities for viewing and collaboration. Designed for mission-critical applications, it offers exceptional video performance, reliability and advanced features.

The Galileo GO80 processor consolidates critical visual information and data to provide a centralized, correlated view on an array of LCD monitors or seamless LED walls. Source signals are displayed in windows of any size, anywhere on the video wall. Operators can instantly switch and route sources, choose preset display layouts, and pan and zoom to view particular items of interest.

For optimum viewing and decision-making capability, your video wall requires a processor that offers the highest level of video processing performance, and the Galileo GO80 model delivers. It provides a superior video wall viewing experience with real-time throughput and exceptional 4K image quality, unlike

lesser systems that can drop frames or cause image tearing.

It's about more than just display. Being able to communicate and collaborate with local and remote colleagues is often a key requirement in the decision support process. The Galileo GO80 allows operators to push video content to anyone, anywhere in the world.

Advanced features include:

...A single processor can drive multiple video walls or individual displays. One Galileo GO80 can power multiple video walls within the same or other rooms or feed both a video wall and individual displays interspersed throughout a facility. The output fed to multiple display surfaces can be the same or different. Imagine the possibilities.

...Operators can select the entire video wall or any region of interest to be encoded as an IP stream for transmission across an Ethernet network.

...The Galileo GO80 can even encode a baseband signal, whether or not displayed on the wall, and distribute it to remote recipients.

...The processor supports an extensive range of baseband and IP-based inputs, including analog, AV-over-IP streams, DVI/HDMI, and 3G/HD-SDI.

...Scripting is available for third party system control.

The Galileo GO80 is tightly integrated with RGB Spectrum's Zio enterprise AV-over-IP platform. Zio technology provides enterprise-wide AV control and distribution of video content over any size network.

And with the Zio Mobile App users can view these video wall streams remotely even on a mobile phone or tablet. The Galileo GO80 powers big video walls, with up to 16 outputs at 4Kp60 resolution or 64 at 1080p60 without compromise. PCIe Gen 3 technology offers the highest backplane bandwidth on the market,

with the fastest available data transfer amongst I/O cards as well as to and from the CPU. That's the open secret of its raw power. And since rack space is often limited, it comes in a compact 4RU chassis, a smaller form factor than near peer processors.

[RGB Spectrum](#)

Extron SuperSpeed 5Gbps USB-C 3.2 Cables for Long Distance Transmission of AV, Data, and Power



Extron is pleased to announce that they are taking orders for the high-performance USBC Pro Series active, hybrid optical-copper USB-C cables. The cables are USB 3.2 compliant and are compatible with previous USB standards. They reliably transmit video, audio, data, and power over long distances. These USB cables support data rates up to 5 Gbps, 4K/30 DisplayPort video, and audio signals simultaneously, as well as facilitate power delivery up to 60 watts. For easy integration, this ultra-flexible cable with a diameter of 0.26" (6.5 mm) has a narrow bend radius that allows for installation in tight spaces. Also, it can be powered by either the host or the display. Available in popular lengths from 12 feet to 30 feet (3.6 meters

to 9.1 meters), USBC Pro Series cables are ideal for professional applications that require reliable USB-C cable connection.

The USBC Pro Series offers the benefits of fiber optics with the simplicity of traditional copper cables, providing the best combination of price and performance. The cables use glass, multimode optical fiber to transmit bidirectional USB 3.2 data, 4K/30 DisplayPort video, and embedded audio signals. The cable circuitry draws minimal power which it receives from either the USB host or peripheral device. All other non-bandwidth intensive or low-speed signals are carried on the integrated copper wires, including EDID, HDCP, and power.

[Extron/USBC Pro Series](#)

New Improved Projectors Expand the Barco Portfolio for Fixed Installs



Barco is expanding its portfolio with two new G-series projectors to enable improved creativity from simple day-to-day needs to more advanced installations. The G62s are a new choice for consistency enabling a broad Barco portfolio for the ProAV market with solutions for every budget.

With the introduction of the G60s in 2019, Barco enlarged its offering to a wider range of market segments. The single-chip laser projectors were designed to answer the needs of day-to-day projects without compromising on the quality. The new G62s complement this existing platform with two brighter and improved projectors for even better results.

Thanks to their higher bandwidth and upgraded input support (HDMI2.0 and 3D SYNC), the new additions to the Barco portfolio are now compatible for 4K input sources and provide HD 3D stereo capabilities. What's more, the G62s bring enhanced and OSD embedded warping and blending capabilities, which makes it ideally suited to be used in combination with other projectors in a multi-channel set-up. In addition, an

improved interface enables user-friendly operation and efficient workflows.

Having all this at a very competitive pricing, is what makes both the G60 and G62 an attractive package for all customers.

G62 projector (white version)The G60 and G62 projectors are the perfect match for a compact installation. Next to the compact format of the G-projectors, there's also the possibility of working with the familiar G-series short-throw lenses. Also: in order to blend in with different environments, the G2 models will also be available in both black and a fully (!) white chassis.

Users can always rely on all the proven benefits of Barco's service program and global support. With the additional EssentialCare service options, customers can access an existing pool of G-series swap units with comparable brightness and lifetime to reduce response and replacement time.

Barco

Sennheiser Introduces TeamConnect Intelligent Speaker for Microsoft Teams Rooms



Sennheiser is pleased to announce an intelligent speaker certified for Microsoft Teams, the TeamConnect Intelligent Speaker.

With the TeamConnect Intelligent Speaker, Sennheiser is delivering a solution to support smart, focused and inclusive meetings for up to 10 people, whether participants join remotely or are in the room. It features an omnidirectional speaker that covers a 3.5m radius and seven integrated beamforming microphones to achieve impeccable sound quality. Through this Intelligent speaker, Microsoft Teams provides an automatic meeting transcript in real-time, identifying the individual people speaking by name, in case they have enrolled their voices.

This provides an inclusive meeting experience for remote and hard-of-hearing participants. "Sennheiser is known for our industry-leading TeamConnect Ceiling 2 microphone with TruVoicelift," said Anne Guhn, Product Manager at Sennheiser. "This addition to our TeamConnect family offers an opportunity for us

to expand into a different sized meeting room, at a price point that some might not expect from Sennheiser."

Intelligent solutions, such as the integrated Cortana voice recognition software and automatic meeting notes, make an inclusive meeting experience possible for remote and hard-of-hearing participants. With multiple mounting options, long

cables and a variety of country-specific power plug adapters, the TeamConnect Intelligent Speaker offers an easy and flexible installation experience.

"Video conferencing tools like Microsoft Teams have become the communication backbone for many businesses and education institutions," Albert Kooiman, Senior Director of Microsoft Teams Devices Partner Engineering and Certification, said. "The Sennheiser TeamConnect Intelligent Speaker does not only provide excellent meeting room audio, but also unlocks the best speech technology. Only Intelligent Speakers offer the best speech transcripts."

Microsoft Teams Rooms combines the virtual workspace of Microsoft Teams with real-world meeting rooms that feature AV equipment from Microsoft-certified hardware partners.

Sennheiser

QSC Launches First Network Microphone and Loudspeakers Native to Q-SYS



QSC announces the NM Series tabletop network microphone and the NL Series network loudspeakers for the Q-SYS cloud-manageable audio, video and control platform. Powered by the Q-SYS OS, these new products join the recently introduced Q-SYS NC Series conference cameras and Q-SYS TSC Series Gen 3 network touch screen controllers to provide a complete suite of native IP-based Q-SYS collaboration products for designers, consultants, integrators and IT end users.

Q-SYS NM Series network microphones

The Q-SYS NM Series NM-T1 is a tabletop PoE network microphone that features advanced beamforming technology with four software-configurable zones and up to 360° coverage, allowing designers to minimize noise and refine intelligibility for optimal collaboration experiences. The NM-T1 enables users to easily manage meetings with a fully programmable RGB LED light ring for visual indication of microphone mute state. For touchless operation, it includes an integrated

proximity sensor that is activated with a simple hand wave over the microphone.

All processing on the NM-T1 is centralized on the Q-SYS Core processor, providing processing flexibility and headroom for additional field-deployable microphone enhancements via software now and into the future. For example, the new Q-SYS Collaboration Bundle scaling licenses for the Q-SYS

Core Nano or Core 8 Flex enables users to scale up and scale out their Q-SYS installation unlocking processing resources to allow for additional NM-T1 microphones and/or other software-based features.

Q-SYS NL Series network loudspeakers

The NL Series loudspeakers for Q-SYS offer three enclosure types, all delivering optimal speech and music reproduction to any modern collaboration space. As the first QSC soundbar, the Q-SYS NL-SB42 is a 4-inch, two-way network PoE soundbar optimized for front-of-room audio in either horizontal or vertical orientations. The Q-SYS NL-P4 is a 4-inch full-range pendant-mount PoE network loudspeaker to accommodate open-ceiling installations, and the Q-SYS NL-C4 is a 4-inch ceiling-mount PoE network loudspeaker for blind-mount finished ceiling applications.

The NL Series models feature sleek, elegant designs with complimentary sonic characteristics making it possible for users to mix-and-match form factors to fit

the unique needs of any space. In addition, integrators can utilize QSC's Intrinsic Correction™ to simplify the tuning process using built-in custom QSC loudspeaker voicings delivered by Q-SYS. All NL Series models are PoE and PoE+ capable, delivering audio data, power and control over a single network connection, greatly reducing traditional cabling infrastructure costs and complexity while expediting deployment.

Q-SYS Call Sync

As native Q-SYS Products designed to work seamlessly together, the NM Series microphone, NL Series soundbar and TSC Series Gen 3 touch

screen controllers benefit from the new Q-SYS Call Sync technology. This automatically syncs mute state, call controls and LED status indicators across compatible Q-SYS Products, major UC platforms and calling systems (VoIP/POTS) enabling a simplified collaboration experience without the need for complicated programming. Q-SYS Call Sync will be available in the upcoming Q-SYS Designer Software v9.5.

QSC/NM Series

QSC/NL Series

Lightware's VINX – AV-over-IP System for Gigabit Ethernet Networks



Lightware's VINX product family brings lightning-fast switching, Dante Audio support and enhanced versatility to a wide range of AV operations from classrooms and auditoriums to digital signage applications. This compact yet powerful device offers a wide-range of tried and tested features from advanced EDID management to USB 2.0 support to remote powering. The built-in USB 2.0 ports support KVM function and can also handle USB mass storage.

Smart Bandwidth Management allows users to choose between Variable Bitrate, Video and Graphics modes to further optimize signal management and AV system performance. VINX can be expanded from a simple

point-to-point application to unlimited endpoints for the ultimate in virtual matrix switching, digital signage and signal extension. The extenders include Lightware's Advanced EDID Management system and decoders are capable of scaling the video signal up to 4K UHD @ 30 Hz. RS-232 and IR control channels are supported.

The units are HDCP compliant and their streaming maximum bit rate is variable between 10 Mbps and 800 Mbps. The feature options include gap and bezel adjustment and cropping which can be performed in batch.

Lightware/VINX

C2G Announces New 4K 60Hz HDMI Distribution Amplifier Splitters



C2G is expanding its family of HDMI Distribution Amplifier Splitters with the two-port C2G41600 and the four-port C2G41601 4K 60Hz models. Supporting resolutions up to 4K (4096 x 2160) at 60Hz 4:4:4, the HDMI 2.0 and HDCP 2.2 compliant splitters are equipped with HDMI outputs that can supply 5V at 150mA to two or four sink devices (displays) and handle total HDMI data rates up to 18Gbps with plug-and-play convenience.

"HDMI applications today demand more flexibility and capabilities to meet user needs," said Jennifer Crotinger, Product Manager, C2G, a brand of Legrand. "Our new 4K 60Hz HDMI distribution amplifier splitters reflect C2G's exhaustive commitment to continuous HDMI analysis, state-of-the-art testing techniques, and product development. These dependable, predictable, and efficient solutions deliver UHD signal quality from source to multiple sinks."



The C2G two-port C2G41600 and four-port C2G41601 HDMI Distribution Amplifier Splitters offer one-input along with a two-output or four-output splitter, supporting up to 4K video. Both splitters utilize the HDMI 2.0 standard and are the perfect solution for connecting a computer, Blu-ray™ player, gaming console, media server, or AV receiver to two or four HDMI displays. They support multiple HDR formats, including HDR10 and Dolby Vision, and PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD master audio, and DTS:X audio.

C2G

tvONE Releases Powerful CORIOmaster 4K60 Capabilities



tvONE, the world-class developer and manufacturer of video conversion and AV signal distribution technology, releases a new 4K60 output module for CORIOmaster, CORIOmaster mini and CORIOmaster micro. New versions of firmware and software are also available, continuing the evolution of the CORIOmaster family of multi-window video processors.

The new 4K60 output module (CM-HDMI-4K-SC-2OUT) gives a smoother, more immersive video experience for up to 14 outputs for high-end LED installations, projection edge blends or monitor walls. Other new output choices using the new module include 4K60 output cloning or for dual, independent, 4K30 outputs. Our dual 4K30 outputs double the amount of 4K outputs available, to allow connection to up to 28 4K displays, while the new cloning feature makes setting up repeat displays, duplicated side screens, and screen recording much simpler and more efficient to use.

In addition, the CORIOgrapher setup and control software for the CORIOmaster family has been updated to version 3.3. The latest version includes enhanced preset management, and a cleaner look and feel for simpler creation of display layouts. CORIOgrapher version 3.3 is available for CORIOmaster2, CORIOmaster, CORIOmaster mini, and CORIOmaster micro.

To download the new firmware, visit <https://tvone.com/tech-support/firmware>.

To download the new software, visit <https://tvone.com/tech-support/software>.

tvONE

The Transfiguration of Training Ecosystems

by Elton Noronha



A training room installation by AllWave AV.

An in-depth look at how state-of-the-art technologies – both physical and virtual – have fuelled the rapid evolution of training ecosystems across applications like corporate, government, formal education, and more.

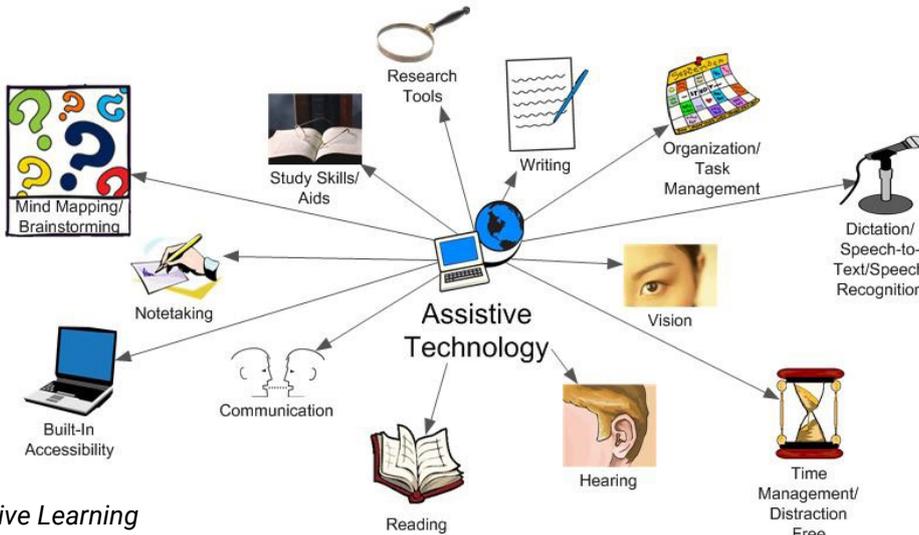
Training and development remains a vital function of any institution that aims to leverage its candidates' inherent skill and productivity capabilities. Segments across the board – be it corporate, government, formal education, technical services, creative services or any other – now pay close attention to the training process, the training and development methods, and of course, the medium of delivery. And this has brought about certain key changes within the perception towards training, and the approaches adopted in fostering more conducive training environments.

A New Approach to Training

Shifting the focus of the education and training system from what students learn to how they learn is crucial for improving learnability. There is growing advocacy for adopting inquiry-based approach and holistic approaches to learning. In 2016, Finland is said to have adopted phenomenon-based learning in its education system, wherein learners examine a phenomenon through an interdisciplinary lens and apply content learned in specific subjects.

On the other hand, another emerging delivery mode in early education stages has been learning through play. Neuroscience research has produced growing evidence on how joyful experiences can stimulate motivation, curiosity, and higher cognitive functions; with further suggestive evidence that joyful experience

At the same time, it is noted that assistive learning can actually promote learning equity, unlike traditional special-needs teaching. Special-needs students in such classroom models may feel more included when using assistive technology, as everyone is using individual tools to learn the same material, albeit



Assistive Learning

can influence the brain’s plasticity, which means it can enhance the ability to adapt to new information. A parallel aspect of education is that of assistive learning, which takes into account the fact that individuals learn in different ways. It allows all incumbents in a classroom to work at their own pace using tools that support their specific needs. This is especially beneficial in training organizations with larger class sizes, where it can be harder to cater to each individual in a personalized and meaningful way. Such methodology also empowers teachers with a deeper understanding of each individual’s needs. This is because many assistive technology tools offer data on how each incumbent is performing, and arms teachers with greater insight into which individual needs special attention in specific areas. It also tells teachers which topics might be challenging for all – and where a classroom-wide review could support everyone.

in different ways; which in-turn allows for better collaborations and more meaningful discussions, and ensures that special-needs individuals of all levels have the opportunity to learn real-world communication and teamwork skills. From simple timers to complex voice recognition tools, there are a variety of assistive technologies available to

the modern classroom, where in different tools, apps, and devices can support nearly all learning challenges and abilities. For example, Frequency modulation (FM) systems help individuals with impaired hearing better understand the teacher. FM tools require that the teacher wear a microphone, which directs information either through classroom-wide speakers or directly into students’ earphones. They reduce background noise so students with auditory impairments, attention deficits, language processing issues, and autism can better hear what the teacher is saying.

Veering into the professional / corporate domain – when it comes to workforce development, the onus is not entirely on educators. In order to leverage workforce capacity, firms must be strategic about staying competitive through improved talent management. Enhancing employees’ learnability skills is critical to transition successfully to increased productivity across an organization’s hierarchal

operational levels. The typical workforce in a firm has evolved into a mixture of full-time employees, short-term contractors, and freelancers; with the intention of leveraging collective skills, abilities and expertise to create firm-specific competencies in response to advanced market needs.

With work and learning now being increasingly integrated, employees are required to be able and willing to learn more effectively on the job. Moreover, the term corporate training has become somewhat obsolete and work-based learning has become a more widely accepted approach. Back in the day, as firms acquired new machines or computer applications, they adopted learning technologies such as computer-based training to upgrade employee skill-set. The evolution of workplace communication, collaboration, information, and learning technologies reflects a gradual transition from learning away from work (e.g., traditional classroom-based training or online courses) toward collaborative problem solving and a seamless integration of learning and work (e.g., online communities or instant messengers). Also emphasized is the potential efficacy of combining informal learning with formal learning on the provision of proper organizational support and practices adopted in developed countries reflect the changing shift from structured training to in-time and on-demand learning.

Role of Technology in Modern Day Training

One particular certainty is that training and development is not a one-stop shop for any kind of learning. And in today's world, perhaps the most crucial aspect of any level of the training ambit is maintaining engagement.



A simulation training room like the above hospital scenario offers high engagement for learners.

Engagement not only helps keep incumbents happy, but also helps them stay productive as well. The manner in which individuals are trained plays a big part in the engagement process. Do they feel supported? Are they receiving the information they need to learn a particular skill efficiently? Are training processes interesting, interactive, and fun?

Modern technology can facilitate engagement in multiple ways. First, it provides the mix of approaches and learning styles that can keep an individual engaged and interested. A solid training and development program, using mixed learning styles and media, connects with employees in multiple ways so they get the most out of it.

Second, it improves the potential types of engagement that an organization has with their incumbents by providing multiple, flexible feedback channels. Surveys, questionnaires, and performance data are all available through modern training technologies to help you better assess the needs of your employees. Furthermore, with the increasingly social nature of technology, organizations can communicate with trainees during their training to help them retain and act on the information they receive.



Collaborative training for remote learners is made possible with Barco solutions. Photo courtesy of Barco.

Third, new technologies provide multiple ways to incorporate training into a group or workgroup style of organization. So, instead of simply providing basic training completed by an individual, you can also build team exercises that tie together remote participants, or leverage simulations to get trainees thinking and working through more collaborative means.

Technology-driven delivery has become more common in the field of formal education and corporate contexts. Examples of technology-based approaches in some forms of education range from provision of equipment and access to information and communication technology, scripted lesson plans to aid teaching, and the use of adaptive learning software that fosters personalized learning. And such advancements have enabled new modes of learning delivery; wherein globally, educational technology has been introduced at various stages of education.

For example, several locations the world over have adopted approaches such as design-thinking and

makerspaces in the case of early education, which manifest principles of learning through problem-solving, discovery, experimentation, and authentic learning environments. At the same time, in the case of higher education and training, provision of pure online courses and blended approaches whereby online courses are combined with face-to-face instruction have increased over time. Furthermore, a new breed of online courses called massive open online courses (MOOCs) has proliferated in recent years.

The number of MOOCs and their participants have proliferated in a short span of time, with vocational training systems in several countries using Open University platforms and MOOCs to expand their outreach. MOOCs offer the potential to play a critical role in expanding access at a lower cost. This is particularly important for countries that face resource constraints in delivering in-person education especially to individuals located in areas that are harder to reach. MOOCs' potential advantage also lies in the flexibility they offer in terms of where, how, and when to learn.

For example, MOOCs provide modular courses that are shorter in length and can be taken over time, as opposed to a longer course covering more content. Micro-credits offered by providers such as Udacity and edX also can offer meaningful incentives for reskilling.

With open source technologies providing greater access to platforms for innovation and value creation at reduced costs, the successful adoption of such technologies is contingent upon the absorption capacity of the respective organizations. While there is wide access to powerful software, technology selection must be anchored on core competencies and enhancing them. At the same time, there must be a thorough evaluation of the readiness and maturation of technologies together with business goals and strategies, and then implement them to improve learning and performance.

An Increasing 'Connected' Ecospace

The prevalence of remote and virtual teams in today's world has placed even more responsibility on the virtual trainer to bring teams together regularly and enable meaningful interaction between members. With virtual training and access to classroom teaching all within the same ecospace - incumbents can take advantage of a variety of learning methods that potentially match their learning styles. For example, new advances in e-learning have emphasized "gamification," or using gameplay concepts to encourage learning.

There are various aspects of technology that can be used effectively to make the training experience more streamlined, while also boosting overall team performance in the process. The rise in the number of people working remotely means that teams are not necessarily working alongside one another. The use of technology in the workplace can help team members

stay in touch. When it comes to training, response technology, online virtual lab environments and the likes, enable teams to learn together and share ideas in a meaningful way.

Response Technology: A large number of organizations today allow incumbents to use personal mobile devices for work purposes. This can be helpful for training methods such as response technology. This involves trainers posing questions within a presentation and trainees responding via a tablet or smartphone. Results can then be shown on the screen for everyone to see, opening the way for further discussion among the team. This sort of technology empowers the trainees by allowing them to participate more actively in the training, helping to keep them more engaged. It also enables the trainer to assess more accurately the levels of understanding and any areas that may need more clarification. The latter is enhanced by the fact that it is far more likely that all trainees will respond to end-of-course review questions on mobile devices than on paper. This gives trainers useful feedback about how to tweak training in future.

Online Virtual Labs: To enhance the training experience, many training courses often incorporate practical labs, in order to allow students to work through real-world scenarios and cement their knowledge. Online virtual lab platforms such as CloudShare are particularly prominent in this area. They allow learners, whether in the room or remotely, to log into a computer environment via a web browser. This means that all of the processing power and physical hardware required is taken care of by the virtual lab provider. Learners simply need a device with a browser to participate in the virtual labs. Plus, the development of apps such as Popplet means that teams can generate, share and save ideas online. The benefits are that it enables team members to

collaborate even if they are not in the same building, and that ideas will not be lost i.e. they can be referred back to and built on as new ideas emerge.

AV Technologies at the Fore

With online learning platforms asserting its impact and effectiveness across the globe over the past two years; it has now evolved to a stage where it allows both corporates and the government to deliver state-of-the-art training to company personnel, students, academicians, researchers and home workers, and enable them to create the kind of skilled computer workforce required for the next millennium. Consequently, learning with technology has been realized by organizations as an innovative form of training. While organizations need to weigh the cost and benefits in order to make use of the latest form of training, and research implications for policy formulation on part of the government, planners, academicians, technocrats and other stakeholders is also crucial in this aspect – developments in the field of AV technologies has certainly made integration of such capabilities a distinct certainty.

Widening the scope of learning opportunities in present day scenarios, now involves utilizing all formal and informal, and physical and virtual spaces for learning – with the integration of key AV technologies in such processes playing a vital role to the successful implementation of such initiatives. Whether its innovation in delivery, expanding continuing learning initiatives, or effectively providing training at high volumes, organizations across industry sectors have begun investing time and resources to build a solid grasp on the use of technology in training and development. And it is undeniable that there has been an increasing impact of professional AV technologies within the information and communication technologies (ICT) domain and the associated rise

in E learning which is now recognized world over for transforming training and learning.



Speaking about modern day training scenarios and the role of technologies within this ever-evolving landscape, **Kuldip Kamat – Director of AllWave AV** informs, “The pandemic has truly

been a game-changer for the training and learning space. Teachers and students have been working remotely. The new technologies enable existing rooms to take on a hybrid working environment where some students (including some additional instructors) work remotely, whereas within the in-person space, a lot of classrooms are now equipped with more modern AV technologies to enable this transition to take place. A lot of solutions have moved to software such as Zoom and Teams, which includes a host of cameras and microphones. Form factor PCs, ceiling microphones, as well as annotation devices, are now used to enable remote training rooms. And the future of training rooms will only continue to evolve with time. It will be hybrid and agile. The providers of Zoom and teams are adding a lot of interesting solutions to their software, including telepresence style themes, webinar recording, webcasting, etc. These are, and will continue to be, very useful for modern-day training rooms.”

Keeping up with times, several leading manufacturers of professional AV equipment have delved into in-depth analysis of prevailing market trends with the view to offer enhanced user experiences through their latest offerings in products and technologies.



David Wang, Vice President of Sales APAC Region, ClearOne, explains, "The biggest trend in training rooms currently is the 'hybrid room' – a room that can function both as an

in-person training room and a remote training room, often at the same time. And because of Covid, we have learned to better utilize the full array of conferencing capabilities that our industry has developed with the result being that we can now train more people in more locations, utilizing systems that can engage learners in the training room and far beyond the room. In fact, we now refer to this new business and training model as "HyFlex", which is now the most in-demand approach for the education, corporate, and government verticals. It provides a choice to both learners and instructors to attend and deliver the classes in face-to-face or online modalities, by equipping training rooms with the required technologies to support their evolved training needs.

The first step in bringing together a 'HyFlex' room involves identifying an intuitive conferencing platform software that provides connectivity through computers and mobile devices to meet their video conferencing connectivity through cloud, Zoom, Google meet, Microsoft Teams, and Collaborate Space. The next involves selecting an industry-proven, easy to install, and easy to use audio conferencing system that works with the software platforms mentioned above. 'Beamforming' ceiling microphone arrays have proven to be the most in-demand due to professional-quality audio capture, touchless audio, consistent audio pick up regardless of the instructor and student location, whether seated or standing.



ClearOne Beamforming ceiling microphone arrays installed at Taif University.

Having a multi-channel amplifier built-in to these ceiling tile arrays dramatically reduces the overall cost and deployment time. Placement of the microphone also plays a crucial role in achieving consistent audio delivery as ceiling microphone arrays provide great flexibility for placement compared to solutions that can only be placed on walls. According to David, the ClearOne differentiator in such cases, is the core technologies such as acoustic echo cancellation, noise cancellation, adaptive acoustic processing, and adaptive steering (think of it as smart switching) are built in to the microphone arrays to provide natural-sounding, full-duplex audio. Also, when choosing the camera, a Hyflex training room considers a minimum of two cameras, one to capture the lecturer area and a second camera aiming at the student's view inside the classroom. An automatic camera switching and tracking solution based on an active talker greatly reduces fatigue and provides an interactive learning experience with close-up views of the lecturer and students.

According to David – HyFlex represents what training rooms can and would look like in the future, as he informs that many ClearOne products and system solutions, the likes of which include the

BMA 360 beamforming ceiling microphone array, the CONVERGE huddle and CONVERGE Pro 2 family of DSPs; the WS800, DIALOG 10 and DIALOG 20 wireless microphone systems; and the family of UNITE cameras, are being deployed in these new hybrid training room environments to maximize each room's capabilities to the fullest. He also affirms that administrators look at cloud-based remote management and monitoring solutions such as CONVERGENCE AV Cloud to maintain such systems, as it offers a choice for the IT/AV practitioners to manage the deployment from wherever they are.

Considering the hybrid nature of several modern-day training setups, in addition to several health and safety considerations in place for on-site environments – automation has emerged as a key capability that has proved to be essential in seamlessly integrating various pro AV components and other related platforms to offer a truly optimized training architecture.



Kurt Loh, Business Director, Atlona Asia-Pacific,

elaborates on this, stating, "Automation technologies are increasingly specified, with the common thread being 'ease of use'.

This is driven by the need to include remote locations, to assure stronger productivity, and to help the trainer conduct smooth training sessions. Atlona's product portfolio for training room systems is extensive in the areas of collaboration, connectivity and control. The Atlona AT-OME-MS52W represents one of our latest innovations in the collaboration and presentation platform area. It supports multiple wired and wireless

inputs and USB integration, and automatically switches on displays by simply connecting a video cable. We also offer the AT-OME-SW21-TX-WPC wall plate transmitter to support both USB-C and USB peripherals in a compact form factor. For wireless presentation, our versatile AT-WAVE-101 enables up to four concurrent wireless users to share screens. Additionally, we now offer a room occupancy sensor, the AT-OCS-900N, to support the room automation trends that are increasingly requirements for training rooms and other collaboration rooms. And finally, our Velocity AV control, room scheduling and asset management solutions are a core part of our overall solutions for collaboration spaces, including training rooms. Velocity's IP architecture can serve multiple AV systems that include Atlona and third-party products simultaneously from a single networked processor."



The Atlona AT-OME-MS52W supports multiple wired and wireless inputs and USB integration, and automatically switches on displays by simply connecting a video cable.

Coherently, professional AV equipment and services manufacturers have noted that their contributions to the training segment must extend far beyond facilitating enhanced integrated hardware-software capabilities – with a few looking to offer smart ecosystems that will adapt to users' evolving needs as time progresses.



Tony Sandberg, VP of Sales, Meeting and Learning Experience, APAC, BARCO reveals

more on this, saying “In an era where fast technological advancements shorten the

shelf life of skills, lifelong learning is mandatory.

Workforces worldwide need to upskill and reskill.

Digital transformation is not a buzzword anymore but an imperative, for business & education. At Barco, we are here to deliver transformative business education, by enabling innovative, immersive, engaging learning experiences and bright outcomes for your students, employees and organization. Barco weConnect is a software solution that supports any organization’s digital transformation by enabling engaging, successful teaching and training experiences, online, hybrid or onsite, on any device. Our platform allows users to design lifelong learning programs that are flexible, engaging and that fit the requirements and busy lives of lifelong learners. weConnect allows for quality collaboration and networking via tools such as whiteboards or enhanced breakout rooms”

Experts believe that in the future, training rooms will continue to adopt flexibility as their core approach to how they function to be equally capable of delivering in person or remote training, one that is scalable from a single room to enterprise-level multiroom deployment.

And perhaps the most promising technology platform of all that holds the capacity to transform the training segment in total – from conceptualization to execution to delivery and subsequent consumption – is that of Virtual Reality, Augmented Reality and Artificial Intelligence.

“In 2022 and in the years to come, all eyes will be on AI. In industries like education, corporate and Government sector, the training room/centres will be dominated by artificial intelligence, a key tech trend transforming the industries to become more efficient, impactful, and tailored to individual needs. For businesses AI will allow to automate tedious, time-consuming tasks and simplify complex processes such as sign-up, registration or stellar customer service at all stages of customer journey for instance chatbot enabled chat options etc” asserts Tony.

New advances in virtual and augmented reality are providing training specialists with new ways to present information and training materials to users, including classroom lectures and tests. There are new responsive interfaces that allow trainers to better engage with trainees through cutting-edge training methods that improve engagement and improve productivity, while keeping incumbents well-educated and invested in the future.

Virtual reality is an emerging education tool that holds a lot of promise for special-needs students. For example, mixed reality headsets can support students who struggle with reading by walking them through a text step-by-step, adding highlights and notes along the way. Teachers can also join students in virtual reality scenarios to walk students through specific instructions or lessons. Mixed reality headsets can provide students with a more personalized learning experience, even in a large class where other students are progressing at a different pace.

Affirming the distinct possibility of training rooms of the future playing to the favour of adopting VR/AR technologies, Kurt comments, “We think that VR/AR technology will increasingly become a part of the training room ecosystem. This is a creative opportunity to deliver virtual representations of objects



Virtual reality is an emerging education tool.

that are essential to the training content. There will be some interesting integration opportunities of the two technologies in the future, which will be supported by concurrent advances in IP network technology”

Another effective training and development strategy is simulation training powered by artificial intelligence, where trainees can work on seemingly real-life problems through virtual interfaces. With advancements in technology, training processes will be able to incorporate simulation training remotely, sometimes on site (for example, through a computer at a point of sale in a retail environment) and present incumbents with concrete, hands-on experience that is as close to the “real-deal” as possible. At the same time, AI is thought to become more prevalent in the physical pro AV equipment installed within training rooms, aimed at enhancing the overall training experience for all stakeholders actively involved within the training room.

David apprises, saying “We will see more and more artificial intelligent technologies used in the future training rooms. The comprehensive system solution can provide the best performance based on the advanced audio processing capabilities to adopt to the real time change in each training room environment and the individual participants’ meeting

habits. ClearOne has already made great progress in this new and important area of technology. One example is the use of adaptive steering (smart-switching) technology in our ceiling beamforming microphones. ClearOne will continue to incorporate advanced technologies such as adaptive processing, audio intelligence, machine-learning, and AI in its HyFlex training room solutions,”

Closing Notes

From the above details, it is clear that rapid technological advancements have a two-fold implication on the gambit of training and education. First, demand for specialized skills is likely to change more quickly; and adapting successfully to disruptions from technological advancements will require being able to unlearn old technologies and practices and relearning new ones. At the same time, new technologies offer innovative mediums and platforms for education and delivery of learning that can keep pace with the rapidly changing demands of skillsets. Basically, new technologies themselves can offer an antidote to the challenges they present. To better facilitate such an ecosystem, however, it is imperative to nurture an uncomplicated environment that is more conducive to learning – irrespective of the means and methodologies adopted or the specific needs of each individual incumbent. Learning needs to be continuous and must be undertaken by all stakeholders.

Allwave AV

Atlona

Barco

ClearOne

Cali Beach Club Offers Luxury Oceanside Experiences with Top-notch Sound

MadisonAV and Prestige Group equip the unique open-air beach club with cutting-edge audio solutions from HARMAN



The DJ area featuring left and right JBL CBT70J-1 and 70JE-1 column speakers with highly weather-resistant AWC15LF loudspeakers on the circular truss.

FACTFILE

Project Name: Cali Beach Club

Project Location: Gold Coast, Australia

Project Segment: Hospitality

Systems Designers and Integrators: Madison AV and Prestige Group

Project AV Highlight: To provide outdoor intelligible, immersive and full-coverage audio without spilling to the neighbours

Project AV Brands: JBL, Crown and BSS

HARMAN Professional Solutions recently partnered with Prestige Group and MadisonAV to outfit Cali Beach Club with state-of-the-art weather-resistant audio solutions for top-notch sound in outdoor conditions.

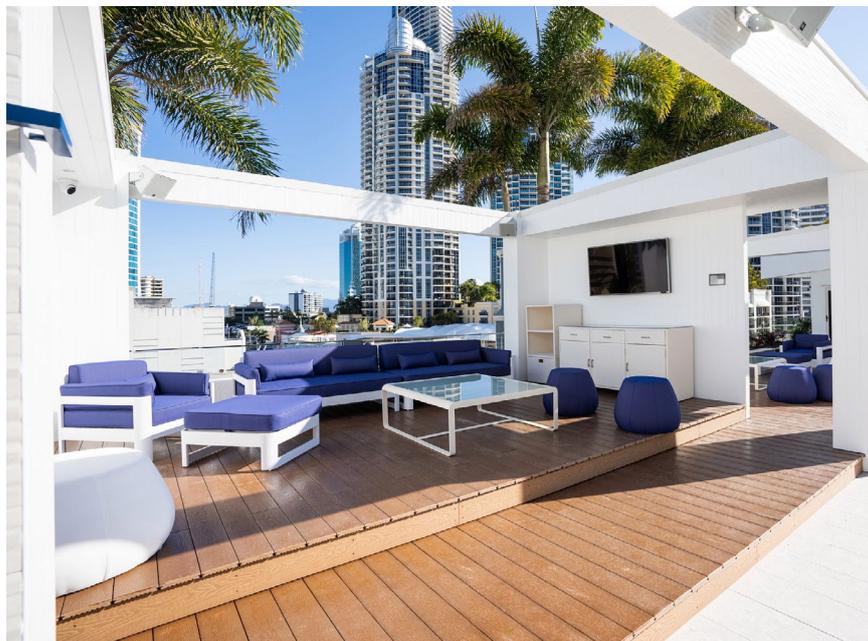
Cali Beach Club is a \$10 million Ibiza-inspired beach club in the heart of Surfers Paradise. Surrounded by residential development, the venue showcases a new type of beach club with pools, open-air spaces, outdoor deck areas and cabanas overlooking the picturesque Gold Coast beach. In order to deliver immersive audio experiences for its guests while minimizing noise pollution for its neighbours, Cali Beach hired MadisonAV and the Prestige Group to design and install a complete HARMAN audio

distribution system consisting of JBL Professional loudspeakers and Crown amplifiers.

“Cali Beach is the first of its kind,” said Matthew Keegan, Partner, Artesian Hospitality. “It offers multiple restaurant options, a beach volleyball court, an outdoor cinema and more. The club has neighbours right next door, and there are no walls or roofs to assist in managing noise levels. We needed a sound system that would mitigate unwanted dispersion while maximizing the quality of the sound within the venue. We’ve been very happy with the JBL system. It’s been an extremely smooth experience working with both Prestige and MadisonAV. They faced a challenging task, and we’re very happy with the results.”

Prestige Group and MadisonAV designed a unique, open-air audio setup that included 80 loudspeakers, including many in nearfield positions to minimize spill outside the venue. The team outfitted the outdoor cinema and main DJ area with left and right arrays of JBL CBT70J-1 and 70JE-1 column speakers to achieve high output levels with decent pattern control and extended bass response. They also installed highly weather-resistant AWC15LF loudspeakers below the screen in the cinema area and on a circular truss in the DJ area. Additionally, the team included AWC82 speakers as rear fills in the DJ area to deliver excellent clarity for speech and music.

In the cabanas, MadisonAV and Prestige installed JBL AWC62 full-range loudspeakers, while JBL AWC82 all-weather loudspeakers occupy the bars and booths. In the pool area, JBL-CBT-1000 loudspeakers provide asymmetrical vertical coverage. Crown CDi Series amplifiers power the entire system, and BSS signal



The cabanas feature JBL AWC62 full-range loudspeakers.

processors with BLU Link networking offer low-latency operation and responsive controls.

“The three most crucial goals were weatherproofing, achieving tight pattern control and making it sound great—given that we’re right next to the beach,” said Nathan Wright, General Manager, Prestige Group. “JBL ticked all the boxes. JBL’s weatherproof speakers have the right SPL specifications for the project, including the speaker dimensions, dispersion characteristics and frequency responses that we needed. We used a combination of CBT column speakers and AWC full-range coaxial speakers. They worked seamlessly to create the right audio experience for everyone.”

“A one-of-a-kind venue like Cali Beach Club requires an audio solution that gives the venue an edge,” said Amar Subash, Director, Channel Management and Audio Solutions, HARMAN Professional Solutions, APAC.

“We thank Prestige Group and MadisonAV for meeting the challenges of the venue and ensuring elevated experiences for everyone who visits the club.”

HARMAN Professional

L-Acoustics A Series a Perfect Fit For GII Cornerstone Church's New Build

PT Berkat Mitra Swara's A10i installation matches building and budget needs for live music performances and sermons



Installation consists of four A10i Focus and one A10i Wide down per side. A stack of six KS21i subwoofers flown in the centre provided low-end rumble.

FACTFILE

Project Name: GII Cornerstone Church

Project Location: West Java, Indonesia

Project Segment: Worship

Acoustic Design Consultant: JMAkustik

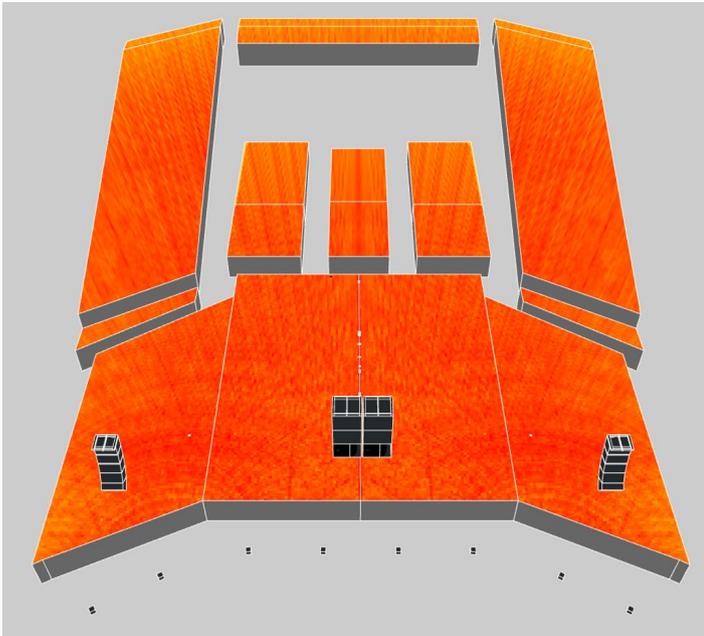
Solution Supplier and Integrator: PT Berkat Mitra Swara

Project AV Highlight: Flexible audio system to cater to worship services and diverse events

Key AV Brand: L-Acoustic

Upon settling into new premises in West Java, GII Cornerstone Church also needed to usher in a flexible new sound system that would serve its congregation for worship services as well as for diverse events. The brand new, multifunctional auditorium, with a seating capacity of 800, hosts GII Cornerstone's regular worship services, while also welcoming various events such as pop and rock concerts, musicals, networking conferences, and e-sports events.

To respond to the challenge, church management asked acoustical design consultants & system integrator JMAkustik to manage the AV installation. After discussions regarding acoustic treatment and system design with church committee members, Joseph Manurung, founder and managing director of



Mechanics, SPL distribution and speaker positioning were visually plotted and calculated in Soundvision 3D Modelling and system building software.

JMAkustik, proposed an L-Acoustics A Series solution that would both look and sound good in the space.

L-Acoustics Certified Provider for Indonesia, PT Berkat Mitra Swara was appointed to handle design and to supply and install the audio system. PT Berkat Mitra Swara proposed a listening session of L-Acoustics A10i in the church's previous space, so that the committee could hear how the system sounded. With the church committee convinced that A Series was the right combination of power, flexibility and form factor, PT Berkat Mitra Swara began the process of designing a system for the new space, which was in construction.

"Using Soundvision, we were able to design a system that we knew would achieve highly accurate results in the new venue," explains Mr Manurung. His team, with the help of PT Berkat Mitra Swara, leaned on the flexible horizontal directivity of A Series to ensure consistent sound to all worshippers, without exciting the bare, concrete walls. "The design also proved that A Series would meet the client's performance

requirements, while also adhering to their budget," he reveals.

Through constant communication and the technical support of L-Acoustics Application Engineer Chung Wah Khiew, the team finalised a system design consisting of four A10i Focus and one A10i Wide down per side. A stack of six KS21i subwoofers flown in the centre provides low-end reinforcement. Eight 5XT placed on the edge of the performance stage provide front-fill while four LA4X amplified controllers drive the whole system.

Upon completion, the worship team and congregants were pleasantly surprised with the power of the system, and how easily its sleek design melts into the architecture of the auditorium. "We are all delighted with how the brand new system looks and sounds in the space. The small footprint of the A10i array provides excellent coverage throughout the auditorium," explains says Mr Manurung. "The flown subwoofers provide power and definition in the low end while still allowing for clear sightlines of the stage, and the LED screens which are so important to worship engagement."

After several worship services with the new system, the sound engineering team appreciated the ease of mixing on the system, and the church committee loved how it sounds. "Now, our congregation can focus on the pastors' sermons, the devotional live music, and the visual displays, all accompanied by clear, dynamic sound," concludes Mr Manurung.

PT Berkat Mitra Swara

L-Acoustics

Birsa Munda Museum: A Tribute to a Tribal Hero

An AV fare of Infotainment elevating the celebrations of 75 years of Independence

by Ram Bhavanashi



FACTFILE

Project Name: Birsa Munda Museum

Project Location: Ranchi, Jharkhand, India

Project Segment: Attraction

AV Consultant: AB Design Habit & Co. Pvt Ltd

Systems Integrator: Pan Intelocom

AV Highlight: Projection mapping, multi-layered holographic projection, panoramic projection complemented with impeccable audio for a truly immersive experience

Project AV Brands: Christie, Dynacord, Electro-Voice and JBL

Building memorial museums is nothing new; they'd been there for decades, and all over the world. But the one in Ranchi, the capital of Jharkhand in India is different- the Birsa Munda Museum. For its very objective, timing, structure and texture. It's a museum created in memory of a 'son of the soil,' who attained martyrdom fighting Colonial oppressors even while characterizing a millenarian sainthood. More, it laid a unique precedent for setting in a new genre of museums- aimed at creating a visible vibe to rediscover the country that India was.

It was recently inaugurated – remotely – by the country's Prime Minister Narendra Modi who also announced creating 10 such museums in the country.

SI Asia presents an account.



The refurbished Old Central Jail in Ranchi which now features the Birsa Munda museum.

Vibes with Tribal History

India's and Indians' vibes with their history are being reconnected with a new vibration, via audio-visual technology. As the country continues its journey through its pridefully conceptualised *Azadi ka Amrit Mahotsav* (celebrating 75 Years of India's Independence) the celebration got a 'first-of-its-kind,' evocative expression with the launch of the Birsa Munda Museum in Ranchi, the capital of the North Indian State of Jharkhand.

When India's Prime Minister Narendra Modi remotely inaugurated the Museum – *Bhagwan Birsa Munda Smriti Udyan-sah-Swatantrata Senani Sangrahalaya* – on the 15th of November 2021, coinciding with his birth anniversary, it meant more than one thing:

- It's the first of the country's 10 tribal museums – envisioned as part of a grand mission – aimed at making the young and newer generations aware of the nation's prideful tribal history even as it contributes to the promotion of tourism.
- It's built in the memory of the region's tribal hero *Birsa Munda* who spearheaded India's first tribal



struggle and millenarian movement against Colonial oppression.

- It's perhaps the first museum created on the site of a prison where the person was actually jailed, trialed, and allegedly killed by jail authorities.
- It's one of the most distinctively designed and executed museums employing audio-visual technologies to involve people and inculcate the *spirit of identity*, and struggles that made the nation.

Developed on a 25-acre site at the Old Central Jail in Ranchi where the young tribal icon was actually held, trialled, and died at 24 in 1900, the new museum comprised restoration and conservation of the Birsa Munda jail, besides depicting the millenarian efforts in their diverse detail. That the ₹37 crore-(nearly US\$5 million) museum complex had as much as ₹21.41 crore (nearly US\$2.9 million) going into its audio-visual technology deployment explains the scale with which the project was designed for a grand nation-building vibe.

Promoted by the Jharkhand Urban Infrastructure Development Company Limited (JUIDCO) – a Government of Jharkhand concern for building government projects – the mega budget AV project has been designed by New Delhi-based AV consultancy firm A B Design Habit & Co. Pvt Ltd while the job of AV systems integration was won by another Delhi-based integration firm Pan Intellectcom.

The coming together of Design Habit and Pan Intellectcom is like a familiar success formula in the industry that the combination has executed many a prestigious projects- Virasat-e-Khalsa; Golden Plaza; Dr. B R Ambedkar Museum; and Rashtriya Swachhata Kendra- to name a few.

So, when they both again got together, it was ought to scales big- both in matter and material. The ambition was big on the client side that the ensuing museum had to be a 'visible story-telling vibe' to people about the spirit of rebellion against oppression from its root cause and how it unfolded on the countryside.

The Design Story

With the specification being ambitious, the designer wanted to create an immersive show-based narrative- with varied formats of projection mapping,

set revealing, multi-layered holographic projection, panoramic projection and more.

“The *Bhagwan Birsa Munda Museum* is a narrative ensemble with immersive experiences, exhibits, outdoor installations and a mapping show,” says Amardeep Behl, Managing Director of AB Design Habit. “It honours the struggles of tribal revolutionaries who rose against the threat posed to the traditional ethos of this region, and were martyred defending their *Jal-Jungle-Zameen* (water, forest, and land) from exploitation by the British,” he explains. “The museum pays tribute to these brave sons and daughters of the soil who rose in the cause of their motherland.”

In order to realize the ambitious visualization, the consultant sought to evolve seven-zone design for the install, including two large courtyards, and install of as many as 10 statues of the region's revolutionaries – apart from the main hero – and galleries on the unfolding of the movement. The defining displays of AV, however, are the areas of zone-1, 2, and 3:

- Zone-1: Is marked by a 270-degree projection mapping achieved by roping in four 1-chip DLP projectors and a screen measuring 11.8m x 3m on the longer side, and 4.8m x 4m on the shorter side on the right; it also has an outdoor projection mapping along with sound and light
- Zone-2: Is marked by a projection mapping with a set for weaving in a physical ambience with mannequins of tribals
- Zone-3: Is marked by triple-layered projection mapping with mannequins of tribals
- While Zone-1 has one, and zone-2 has two hyper-elastic mannequins, zone-3 is marked by a hyper-elastic animatronic screen



Zone-1 projection mapping.

There are more, of course, to see.

The Journey into the Story-telling

The experience begins right at the entrance of the museum where the AV acts are weaved into the combination of administration offices, ticket counters, Director's Office, VIP Lounges, shops, outreach centre and galleries.

The very entrance of the museum is lined on either side with the introduction to the museum (on the left), and to Birsa Munda (on the right). These two introductions are marked by aluminium composite panels (ACP) screens, and outline the essential details of the museum and Birsa. The left of the entrance has three areas of info 'about the jail' while the right of the entrance has the multimedia centre as well as the outreach centre dishing out wider details.

The passing through entrance leads to the large Court Yard-1 that is marked by creatives depicting the pristine countryside that existed prior and during the exploitation by the British began. It does have a cobbled stone pathway meandering through thick jungle grass vegetation, patchy short-grass vegetation, and rammed earth zones.

This Courtyard is essentially tracing the history of local tribal communities, their living patterns, culture and fairs, plus the arrival of the British, and how they began to exploit the region.

The depictions here are complemented with the outdoor audio application comprising 13 units of **JBL** Control 85M (garden speakers), that are powered by a pair of **Electro-Voice** 1250T amplifiers.

Zone-1: Exiting from the Courtyard-1 leads to Zone-1, one of the three essential zones forming the core of the Birsa Munda Museum. This zone is essentially marked by an indoor and outdoor projection mapping, besides a sound and light show depicting the childhood, and formative years of Birsa, amidst the colonial feudal land system coming in contrast with the traditional tribal land system.

The 270-degree indoor projection mapping application has four **Christie** 1-chip DLP projectors, with three units focussing on the front, wider surface, and one unit handling the shorter side on right.

The audio on the other hand has five units of EV's Evid 6.2 loudspeakers, augmented by one unit of



Zone-2 projection mapping.

ELX200- 12SP subwoofer, and powered by three units of **Dynacord** amplifiers.

Zone-2: This zone is marked by an innovative play of AV, by means of what Ishan Chaturvedi, the Project Coordinator from Design Habit put it as sharc tooth gauze arc– which is an 8-point cotton scrim normally used in theatres and lighting applications. When front-lit at an oblique angle, the scrim appears opaque but when lit from behind, the scrim appears transparent, revealing the up-stage scene.

“We employed a 11.8m x 2.5m screen to achieve that immersive effect,” reveals Ishan.

“It’s not so much uncommon, but we employed it to good effect,” he explains. The way the ambience of a tribal village with huts, mud walls, curved clay tiles designed seeks to get the visitors into the setting, while mannequins and the audio transcends people straight into the context.

Zone-3: The art of projection mapping is, perhaps, taken to

the next level here, as the designer employed two modes of the application– one being the a triple-layered projection, and the other being a multi-layered projection immersion.

The triple-layered projection – essentially characterized by what Ishan puts as hyper-elastic animatronic employment – is yet

another not-so-uncommon, but distinctly designed innovation of AV to achieve that immersive effect. Generically referred to mechatronic puppets – simply meaning mechanized puppets of realistic impact – animatronics are modern variants of puppet automation employed to portray characters in places of special attraction.

According to Ishan – who got involved with the project from day one – they are made of silicon, and pneumatically operated from outside. The mould is taken from the body of the actor – resembling Birsa and acted in the short-film created – and employed to create the immersive visual.



Zone-3 multi-layered projection mapping.



Outdoor sound and light show with projection mapping.

The AV exploit here involved three Christie DLP 1-chip projectors. The second projection mapping – a multi-layered act – in the same zone comprised four Christie DLP 1-chip projectors.

“Each part of the museum has a unique format,” explains Amardeep. “An exhaustive exercise in research, ideation and conceptualizing, besides a lot of hard labour of expertise went into figuring out the video specifications,” he elaborates. “Since this was a new challenge for us as well, extensive testing and experimentation went behind the whole museum before arriving at the experience that you see today.”

According to him, the mapping of the facade was also challenging due to the wide resolution and the unique architecture of the jail building.

For audio, five units of Evid 6.2 powered by three Dynacord amplifiers reinforce the audio ambience.

This zone-3 apparently makes the central core of the museum in terms of its story-telling content. For it depicts the conflict between the tribals and the British-powered-feudal lords with a finesse, and emotional connect. The two projection mapping scenarios seek

to transcend the visitors through the content and drive home the point, how they were exploited.

Moving out from zone-3 is getting into Courtyard-2 that is characterized by an amphitheatre lining the crescent-shaped outer edge of the zone. This amphitheatre is characterized by the statues of five tribal freedom fighters on either side, and matched by respective murals on the facing wall.

The statues on the left comprise those of Ganga Narayan Singh; Poto Ho; Vir Buddhu Bhagat; Bhagirathi Manjhi; Telagna Khariya while those on the right include three pairs of rebels- Siddhu Kanhu; brother duo of Nilamber-Pitamber, and Divya-Kusun, besides the single statues of Gaya Munda and Jatra Tana Bhagat.

The AV exploit here is marked by five Christie 1-chip DLP projectors, and two laser projectors for the video, while audio comprised a combination of eight units of EV zx1i90b, and three units of Sx600pi speakers that are augmented by two pairs of EVF215D amplifiers. They are further powered by four L3600 and three L1800 amplifiers.

“It took a lot of hard labour and some serious ingenuity to impart that experiential setting to the museum that the client tasked us to do,” say the design consultant.

Creating the video content in live action with careful casting and extensive historical research brought the story to life in a unique manner,” explains Amardeep. “The site orientation required us to experiment with multi-layered projection on various transparent and translucent surfaces to create the depth, and use the space effectively,” he elaborates. “This, along with sets, props and mannequins has created a truly immersive experience.”

Beyond the Courtyard-2 and towards the rear end of the museum premises, there are displays depicting other tribal revolts that marked the earliest stages of the Freedom Struggle. It is marked by galleries on various other tribal heroes who led the agitations against the oppressive British across the country. Along with them, the attractive part here is a 30-minute short-film on Birsa Munda- which is segmented in three parts of seven-minute childhood; eight-minute teenage passage; and 15-minute adulthood.

Uphill Task in the Hills

The museum was remotely inaugurated by the Prime Minister – in the thick of the Covid-induced restrictive regulations – to coincide with the birthday of the chief protagonist Birsa Munda. How challenging it was for the teams involved in the install, integrator, and allied members?

Understandably, procurement of construction material, hardware and lighting systems, particular printing setups, etc. – that are otherwise very easily available in non-pandemic situations – was hard and sometimes just not possible. “This project combined the talents of many teams,” recalls the Design Habit chief, “Covid posed a very potential issue of coordinating amongst

the teams,” he says. “It was indeed challenging. However, we managed to establish a synergy amongst them, which is what we see today.”

As for content evolution, we needed to be sensitive to cultural and ideological sentiments of various tribes and communities concerned in telling an emotional story that is close to their hearts,” Amardeep elaborated. “It was a strenuous but fulfilling job at the end that we ensured we did what we were ought to.”

A truly uphill task, accomplished in the hills!

The Jail Museum

The best part of the project, according to Amardeep, is the site which is actually the decommissioned jail made by the British where Birsa Munda was held as a prisoner, and died under mysterious circumstances.

“The museum inside the jail brought authenticity and relatability to the narrative for the visitors,” observes the Design Habit chief. “Despite the limited spaces for individual galleries, we were able to deliver a great visitor experience while housing multiple high-end technological equipment along with set elements,” he explains. “That made the experience completely immersive.”

The video content produced for the three galleries was also very special as it was shot on the real locations where each showcased incident actually took place, and most of the cast members were those from the tribal communities.

A fulfilling tribute – not just to a tribal hero but also to a whole big cause for a nation’s native connect.

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