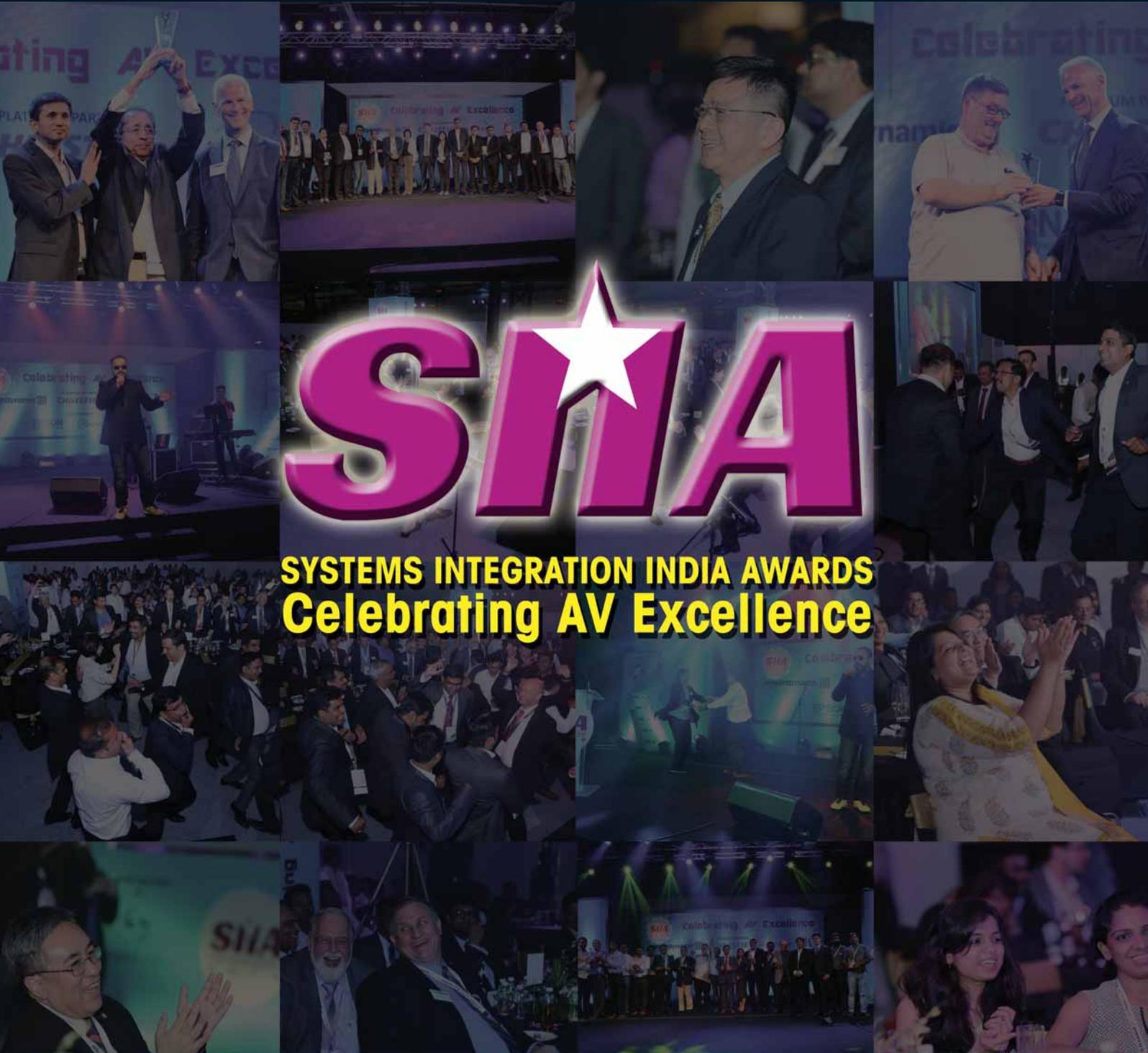


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• SPECIAL FEATURE  
Collaboration Revisited: Video Conferencing

• EXHIBITION REVIEW  
InfoComm India 2016

• INSTALLATION  
Suntec Singapore Offers ImmersiveAV Suite

# Christie Projectors Deliver Vibrant and Lifelike Visuals at DNA-Sharaku Musical Theater in Japan



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NHK Enterprises commemorated its 30th anniversary by showcasing the musical theater titled "DNA-Sharaku" at the New National Theater in Tokyo, using four Christie Boxer 4K30 projectors and a Roadster HD20K-J projector. The vibrant and lifelike display of colors from the projectors offered a high level of visualization with a blend of human interplay, which beautifully melded technological innovation with traditional art form.

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**PRINTED BY**  
Stamford Press Pte Ltd

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## Rewarding AWARDS

From a little past 6 pm to roughly 8.30 pm, on the evening of 12 September – the event of inaugural Systems Integration India Awards (SIIA) 2016 – it was like sailing through a dream situation for me. Something like a Sanjay Leela Bhansali, or Sooraj Barjatya fare! A rich, grand blend of purposeful entertainment, and content!

Yes, SIIA had been like a dream for us, since the time we spotted the opportunity some four years ago; it's been a journey of all sorts though. Exciting, challenging, testing, and intriguing too- considering we were breaking new ground, the 'hard' realities of the ground did greet us at every pitch. Making it smooth, with repeated pitches, and putting in things that help soften the ground certainly took us through an experiential journey.

The incredible manner in which the evening turned out to be, with the whole big AV fraternity of manufacturers, distributors, SIs/Consultants, and, of course, the glitterati of InfoComm International coming together; exulting in the enthralling numbers churned out by the hyper active Mihir; appreciating the Awards mechanism; cheering aloud every time an Award being announced and given; and the standing ovation given to the two illustrious personalities chosen for the Lifetime Achievement Award- all that is simply hard to sink easily.

The commendation of David Labuskes, InfoComm International CEO – "I have never been to an event like this before... what a celebration...congratulations to all of you" – perhaps summarized it all. It couldn't have gotten better.

We sincerely acknowledge the value-add of Lifetime Achievement Award brought in by Naveen Sridhar of beyerdnamic SAARC; judicious distinguishing made by Prashant Govindan of Harman India & Sri Lanka; and the energy of support pumped in by Bharath of Kramer India and Rajesh of Christie India.

The dedication and involvement shown by our Jury Panel deserves a big salute; they made it so astutely objective. The enthusiasm shown by participating SIs is what formed the matrix of it all. A big thanks to you all AVians.

While we bask in the glory that we lived through, we are reminded of the dismal percentile of the industry that got into motion. <10 pc of the supposed strength! That's a concern and responsibility we all need to address.

We can make it, if we all resolve it that strong. That would be more rewarding than what we just had.

**Ram Bhavanashi**  
Editor, India & Middle East  
ram@spinworkz.com

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## beyerdynamic Equips Supreme Court Building in Oman

**MIDDLE EAST:** Leading audiovisual system integrator Oman International Electronics (OHI) was commissioned recently to execute an AV project for the Supreme Court of Oman. As part of a new construction and renovation plan, the entire Supreme Court building complex of the Royal Court of Oman was recently equipped with state-of-the-art audio technology from beyerdynamic.

The new building covers 70,000m<sup>2</sup> with 8 courtrooms, 36 rooms for judges and 56 offices, as well as rooms for lawyers and waiting rooms for witnesses and visitors. Numerous installation microphones and wireless microphone systems are used in addition to the conference system from the beyerdynamic audio specialists in Heilbronn in order to facilitate the work of the judges, lawyers and all participants.

When technical support is not required, the microphone units disappear into the table, becoming almost invisible. The microphone units then no longer take up any room on the conference tables.



In addition to the possibilities for integration and customisation, the customers were also impressed by the functions and reliability of these products "Made in Germany". Since its installation, the conference system has contributed to speech intelligibility and orderly discussion.

The high standards for electro-acoustic transmission have been met by the digital TG 1000 wireless system from beyerdynamic, which ensures perfect voice transmission in every one of the courtrooms in the Supreme Court building.

The long-standing beyerdynamic partner was tasked with providing the media equipment and has installed



a total of 20 wireless systems with 26 handheld transmitters, 10 pocket transmitters and numerous accessories.

Last but not least, the TG 1000 system also impressed with its high bandwidth of 319 Mhz. Moreover, the wireless TG 1000 system is also protected against eavesdropping via integrated encryption, user-friendly menu navigation and negligible latency.

The pre-installed TG 1000 software enables monitoring and controlling using an Ethernet interface or web browser on a PC, tablet or smartphone. Speech intelligibility in sessions and negotiations is also guaranteed with the help of Classis GM 314 microphones.

[www.beyerdynamic.com](http://www.beyerdynamic.com)

## V2 Indonesia Appointed As Lighthouse Distributor

**INDONESIA:** Lighthouse Technologies Ltd has appointed V2 Indonesia as their distributor for the Indonesian market. V2 will be responsible for selling Lighthouse LED display solutions for various vertical markets including DOOH, Shopping Malls, Retail brands, Entertainment and more.

"The aim of this cooperation is to provide customers with competitive LED display solutions that utilize the latest technology and establish both companies as leading players in the LED display business market. Furthermore V2 Indonesia has sales and support service centres across Indonesia and has

a good reputation in the industry for providing quality solutions," said Peter Chan, Managing Director of Lighthouse Technologies.

Rudi Hidayat, CEO, V2 Indonesia, adds, "We took on Lighthouse as we feel there is a market in Indonesia for clients who concern themselves with quality and reliability. TV Studios, Houses of Worship and some Government sectors need top end LED solutions and Lighthouse will help us fill that gap. Lighthouse is a renowned brand and is known for its high quality solutions and I believe together we will be able to penetrate the Indonesian market."



(L-R) Rudi Hidayat, CEO, V2 Indonesia and Peter Chan, Managing Director of Lighthouse Technologies.

[www.v2indonesia.com](http://www.v2indonesia.com)  
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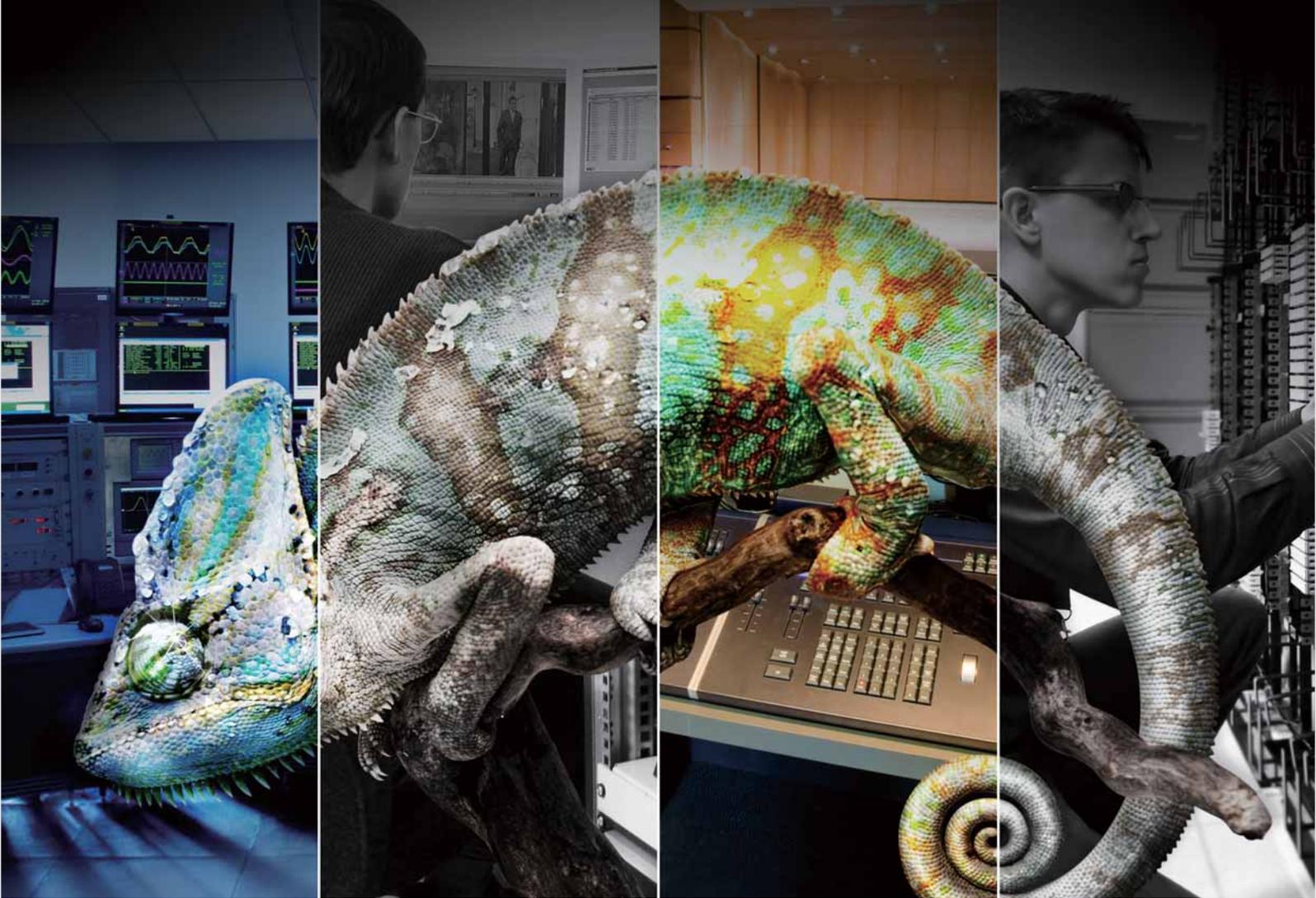
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## Biamp Ramps Up Global Staff Strength & Training For India And Middle East Markets



Craig Upton



Daniel Reed



Jemma Zlydneva

**INTERNATIONAL:** Biamp Systems has announced new appointments to its global applications engineering team and the expansion of its training programme. New online training webinars include sessions in Arabic as well as the additional time zones for India and the Middle East, expanding Biamp's robust education and support offerings.

Craig Upton joins Biamp as the newest applications engineer for Asia Pacific and is located in Brisbane, Australia. His background includes more than 10 years of rich industry expertise in third-party control, DSP programming, networking, and videoconferencing.

Daniel Reed fills the role of applications engineer, video specialist at Biamp at the headquarters in Beaverton, Oregon. Reed has more than a decade of advanced technical and sales experience with hardware and software solutions. Most recently, he worked as the sales engineer for National Display Systems and Dome Radiology.

Jemma Zlydneva is appointed to the role of technical support specialist within Biamp's applications engineering department, and is located in the United Kingdom. Experienced as a products applications engineer and trainer, she was previously with ARIS Pro in Moscow, Russia, where she provided technical support for the full range of Biamp products.

"Craig, Jemma, and Daniel all bring extensive knowledge and experience with our solutions that will fortify our applications engineering department," said Kiley Henner, director of customer experience at Biamp Systems. "They fit perfectly into the ethos of the team at Biamp and the talents of each one will help drive our continued commitment to delivering industry-leading products and services."

Known worldwide for its superior certification training programs, Biamp rolled out additional online training webinars for the India and Middle East markets and in the Arabic language. Each of these regions is of significant importance, and the new offerings begin this month and will run through the end of the year. These webinars will provide integrators numerous opportunities to learn about a range of topics, including gain structure, filters and equalizers, audio networking, dynamic processing, mixing and routing, VoIP basics, Tesira® logic and presets, and more.

[www.biamp.com](http://www.biamp.com)

## Acoustic & Lighting Systems Named Master Distributor For Chief and Da-Lite In Singapore & Malaysia

**SINGAPORE / MALAYSIA:** Milestone has appointed Acoustic & Lighting System (A&L) as the master distributor of Chief and Da-Lite products in Singapore and Malaysia.

Founded in 1990 and headquartered in Kuala Lumpur, Malaysia; A&L has grown its business across Malaysia and expanded its footprints into Singapore, Thailand and Indonesia. A&L is one of the largest distributors in the professional audio and visual industry,

providing audio, lighting, visual and rigging solutions in the South East Asia Region.

"A&L has established itself as a top value-added company for Singapore and Malaysia," said Jan Mergen, Vice-President of International Sales and Marketing at Milestone AV Technologies. "We are pleased to appoint A&L as the master distributor of Chief and Da-Lite solutions in Singapore and Malaysia."

Committed to responding to industry needs, Chief offers a complete line of mounts, racks, power, storage and accessories for TVs, displays, projectors and other AV components while Da-Lite is a leading producer of high quality commercial and residential projection screens globally.

[www.milestone.com](http://www.milestone.com)  
[www.acousticlighting.com](http://www.acousticlighting.com)

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# Kramer Launches Kramer Control at InfoComm India



**INDIA:** Kramer Electronics – leading the market expectations and setting a new benchmark at the InfoComm India 2016, made its own record in style by launching Kramer Control in India. Highly scalable, Kramer Control can control any AV Device worldwide easily and can generate actionable business analytics.

Kramer Control lets users seamlessly navigate to any room in an organization and easily control and manage any AV system, infrastructure or device, including Kramer wireless collaboration products, audio products and systems, thermostats, HVAC, lights, shades, alarms, security, video cameras, and more at a fraction of the time and cost. Based on a distributed architecture, Kramer Control offers unprecedented agility and scalability, catering to a single room or large global enterprise with the same ease of use.

The Kramer Control Platform is made up of three modules: Control Center, Builder and Analytics Dashboard, with

options for public, private or hybrid cloud implementation.

The Control Center is used for defining project content and scope, e.g., building layout, floors, rooms, etc. The first-of-its-kind cloud-based Builder lets users create, edit and configure room control systems from anywhere in the world. With access to a dynamic library of pre-installed device drivers, users can drag-and-drop any device imaginable without any prior programming knowledge.

The Analytics Dashboard (powered by Kramer Network) automatically gathers all control data and generates actionable business analytics such as device health and performance, room usage, operational efficiency, energy usage, and more. Data gathering is optional and can be disabled or enabled based on user preference.

On site, Smart Units are the heart of the solution. Powered by innovative software technology called a "Brain," Smart Units

provide bi-directional control of any device, the Control Center, Builder, and Dashboard with universal I/O ports. The solution supports industry standards such as IR, serial RS-232, relays, and GPIO.

Upon installation, Smart Units can automatically connect to the Cloud and seamlessly sync for updates in real time. They also update themselves whenever new updates become available.

Users can control Smart Units via a user-friendly, customizable interface on a dedicated Kramer tablet, any 3rd-party tablet, or over the web with BYOD. The solution's non-hierarchical distributed architecture of standalone Smart Units ensures the system will remain up and running in the case of any single point of failure.

"It's AV beyond the Box," said Bharath Kumar, India Country Manager, Kramer Electronics. "The world of AV has seen many innovative solutions but arguably nothing like this," he said, "It's been our forte to lead the market's imagination, and innovate solutions creating newer opportunities and richer experiences; Kramer Control fully manifests that."

According to him, the Kramer Control global launch was made from India, as a fitting demonstration of Kramer's belief and commitment to Indian market.

"This is a wonderful solution that can define a new market dynamic," said Aviv Ron, Kramer's Vice-President, Marketing.

[www.kramerindia.com](http://www.kramerindia.com)

## WHITE PAPER: Visual Resolution of Display Screens

This paper is meant to introduce the background on the evaluation of visual display resolution and to present the procedure for its measurement.





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# Mindstec Distribution Now Delivers Automation Solutions with RTI Partnership



**ASIA:** Global Pro-AV distributor Mindstec Distribution has announced that it will distribute the full breadth of RTI and Pro Control hardware solutions and provide dedicated local sales, training, and engineering support throughout Asia region

"By partnering with Mindstec Distribution, RTI gains a well-established AV partner for this region," said Gregory Revell, director international business, Asia Pacific, RTI. "This partnership will also allow us to build and set up accredited RTI and Pro Control training and experience centers in key cities within the region — a vital first step in

strengthening our presence over the coming months."

Mindstec will provide dedicated sales engineer support, taking advantage

of the company's proven distribution leadership and deep market expertise in one of the world's fastest growing economies.

As a result, systems integrators will also gain access to fast, efficient, and dependable local service for the full range of RTI and Pro Control products without any shipping delays.

Mindstec will also provide training, and engineering support throughout the region, which includes Indonesia, Singapore, Malaysia, Brunei, Thailand, Vietnam, Cambodia, Philippines, and Myanmar.

"We are proud to now offer our customers 360-degree supply and support for RTI and Pro Control," said Syed Abdul Wahab, managing director at Mindstec Distribution. "This partnership is an exciting addition to our portfolio, furthering our comprehensive distribution range with a proven leader in custom control and automation solutions. We are committed to providing outstanding training, support and service levels, which is witnessed through the investment and setting up of dedicated training centres across the regions."

With Mindstec providing support in the form of dedicated sales engineers in each country, systems integrators across the region will receive services for RTI and Pro Control products locally & at the same time, the manufacturer gains from Mindstec's distribution experience and knowledge of the market within the region.

[www.mindstec.com](http://www.mindstec.com)

## Atlona Academy Training Day in Singapore

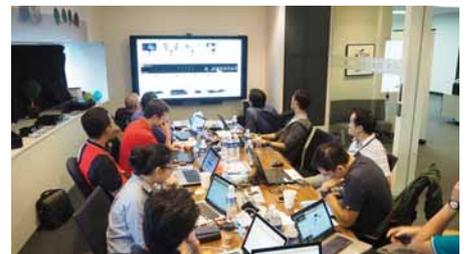
**SINGAPORE:** In August, the Atlona team flew to Singapore to conduct product training sessions for their partners, SIs and consultants in the region. The training sessions, which span over two days, saw more than 30 participants. Besides a majority hailing from Singapore, a number of attendees also came from neighbouring countries such as Malaysia, Thailand and Indonesia.

The learning spirit was high, as participants were entitled to CTS renewal units for this 200 Level Training. Atlona's main line of products such as matrix switchers, HDBaseT, transmitters etc., were some of the key items covered during the training. The newly launched

Omnistream series and HDVS series were also touched on briefly, though the Omnistream solutions are not yet officially shipping.

"The thing about Atlona is that, we are committed to education. When we launched a new product, we always want to educate the market first before shipping it. This is important as people need to know the concept of the solution before buying it," said Benny Ko, Regional Sales Manager – South East Asia.

Following Singapore, similar training sessions also took place in Sydney, Australia. At the same time, a solution

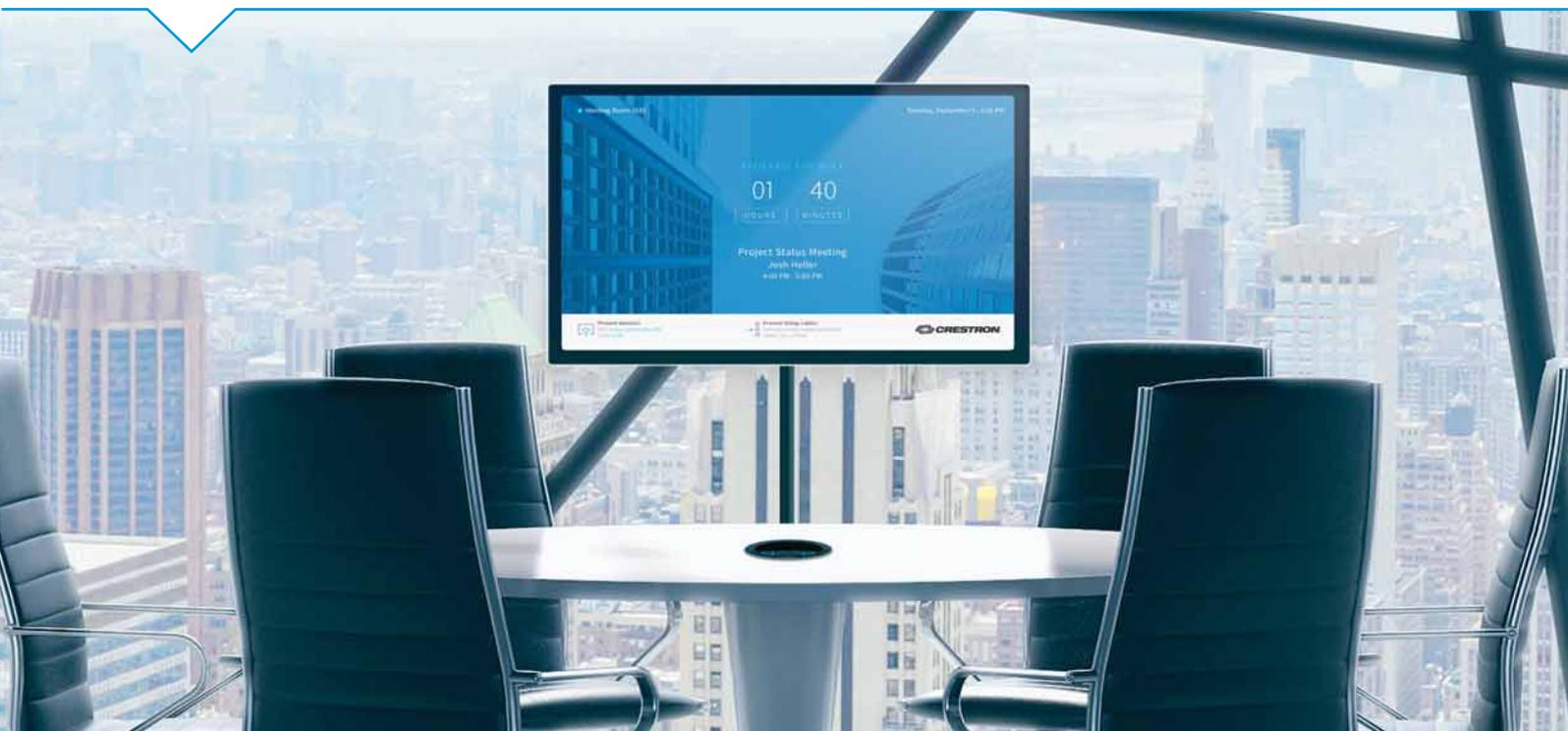


showcase also took place in Thailand with their Thailand distributor, Vichai Trading 1983.

For more information contact:  
[admin@atlona.asia](mailto:admin@atlona.asia)

[www.atlona.asia](http://www.atlona.asia)

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- › Decoding network AV
- › Crestron Smart Graphics™ and web browsing for Crestron TSD-2020 and third-party large format touch displays
- › Crestron Pinpoint™ Compatible

\* DGE-100 also available. Does not include DM input.



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## India's Smart City Initiative Turns to Holy, Pilgrim Towns

**INDIA:** The Smart Cities Mission – created by Government of India with a view to ushering in 'smart ways of living leveraging sophisticated technology and urban means – has announced its third list of cities and towns.

The Golden Temple city of Amritsar topped the list of 27 new smart cities announced by the Minister of Urban Development M Venkaiah Naidu recently. Interestingly, as many as nine cities of pilgrimage and tourism importance have made to the list of Smart Cities to be. These cities include Amritsar, Ujjain, Tirupati, Agra, Nashik, Madurai, Thanjavur, Ajmer and Varanasi.

With this the number of cities selected under Smart City Mission for financing implementation of smart city plans has gone up to 60.

Announcing the cities that were selected in a competition among 63

cities, Naidu said "the willingness and enthusiasm among cities to participate in more than one round of competition is a clear evidence of the urban renaissance set in motion." According to him, competition-based selection has made the cities rediscover themselves as they are undertaking a thorough assessment of the gaps in present levels of infrastructure and service delivery, and come out with comprehensive, credible and actionable plans for area-based development and technology-based pan-city solutions."

The newly selected 27 Smart Cities have proposed an investment of ₹ 66,883 crore (approx. US\$10 billion) under smart city plans including ₹ 42,524 crore (approx. US\$ 6.3 billion) under Area-Based Development and another ₹ 11,379 crore (US\$ 1.6 billion) for technology based pan-city solutions that benefits all the citizens of respective cities. With this, the total investment

proposed by the 60 cities selected so far has gone up to ₹ 1,44,742 crore (US\$ 21 billion), the minister explained.

The Smart Cities initiative is taken to offer tremendous opportunities for a vast number of solution providers from the domain of AV, as communications and networked control systems play a critical role of functionality of diverse services in Smart Cities. It may be interesting point to note that the InfoComm International Asia has been laying special emphasis on this aspect, across its interactive platforms with the industry. The recently concluded InfoComm India 2016 event in Mumbai had a special debate on the subject. Several solution providers from AV have apparently begun re-thinking on evolving solutions that can be applied to smart cities.

[www.smartcities.gov.in](http://www.smartcities.gov.in)

## Media-Go Partners Cenique to Deliver Digital Signage and Audience Measurement Solutions

**ASIA:** To further expand the capability for digital solutions, Media-Go Engineering Ltd. has signed a Master Reseller Agreement with Cenique Infotainment Group on 8 September 2016 at Media-Go's office. The strong business network of Media-Go certainly takes Cenique's shopper insight technology to the next level of exposure.

"Cenique provides one of the best technologies in terms of media playback and video analytics, while Media-Go is one of the industry leaders in Hong Kong, Macau and China of audio-visual systems. The joint forces will accelerate the implementation of Cenique's technology in Hong Kong, Macau and China and hopefully bring successful growths of both companies," said William Ng, the General Manager of Media-Go.

"We have different strengths in different areas and by combining them, I see a lot of opportunities and I feel excited to be working with Media-Go as a team to develop the market," said Shylesh Karuvath, the Co-Founder & CEO of Cenique.

Cenique is an emerging leader in the Retail and Digital Out of Home (DOOH) industry, providing intelligent digital signage and audience measurement solutions. Using their proprietary face detection software, IntelliSense and IntelliAd Platform, responsive content is triggered upon the detection of the viewers' gender and age group. It helps advertisers to enhance the efficiency of their advertisements. IntelliAd also features cloud content management, enabling operators to change customized layout and schedule media playlist on-the-go.



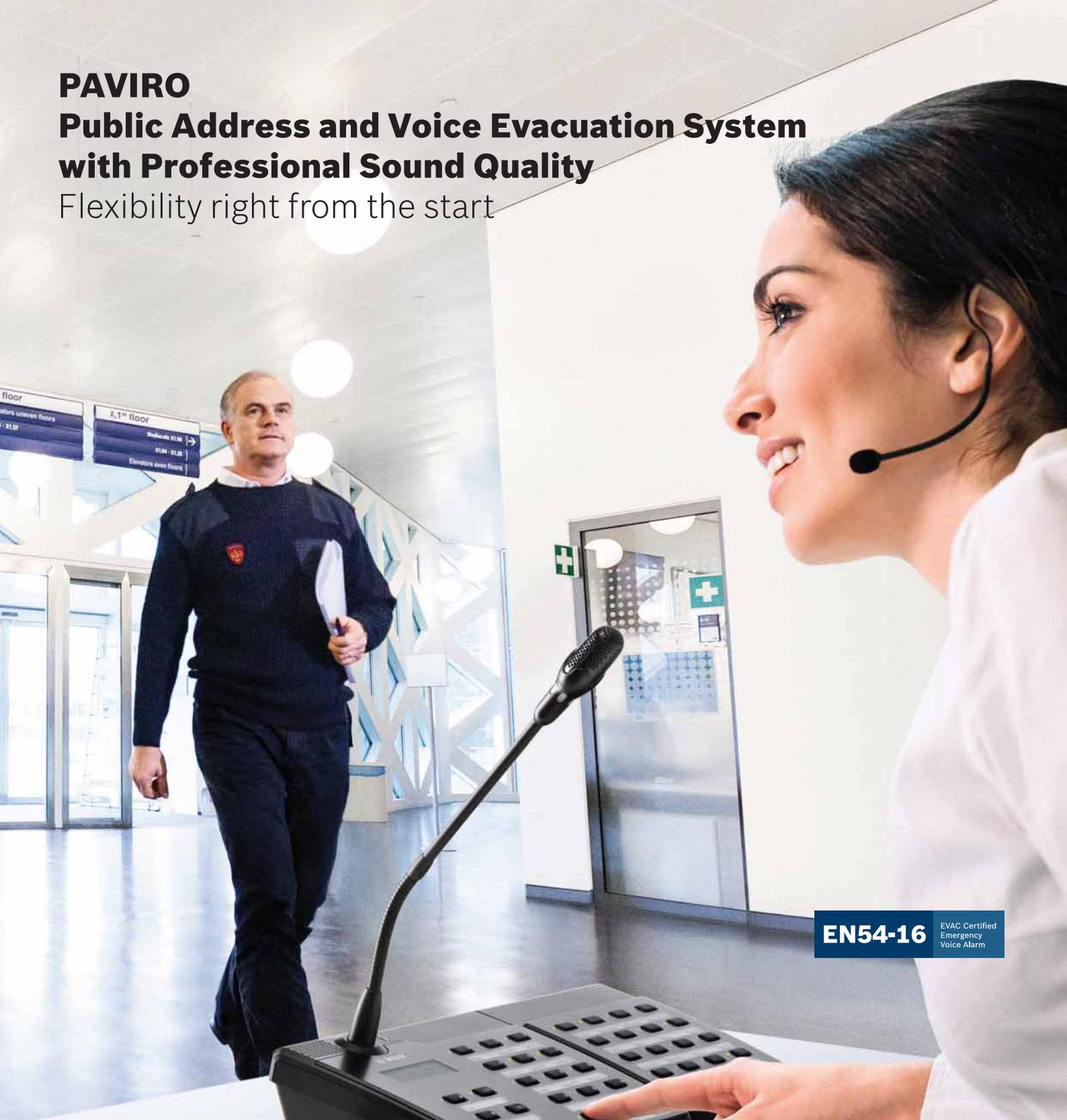
(L-R) William Ng, General Manager of Media-Go Engineering Ltd., with Shylesh Karuvath, Co-Founder & CEO of Cenique Infotainment Group.

Other than showing advertisements to potential customers, Cenique's powerful audience analysis solution, IntelliSense, compiles valuable data generated from passersby counting throughout the day.

[www.cenique.com](http://www.cenique.com)  
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# Crestron Asia Successfully Concludes CresCONVERGE 2016



**HONG KONG:** For the first time, Crestron Asia held the industry event comprised of technical updates, keynote speeches, panel discussion and awards ceremony at the Sheraton Hotel & Towers, Hong Kong. Close to a hundred of top dealers, consultants and business partners were gathered under one-roof to create and witness another unforgettable moment with senior management of Crestron Asia.

CresCONVERGE was started by a "Tech-2-tech" session, sharing the latest approaches and solutions to the audience. Crestron Asia has believed that this technical information could guide integrators and designers' way to outperform against their competitors.

At the keynote session addressed by Ambran Abu Bakar of Hewshott International, attendees were given an overview about smart city intelligence and applications.

With Hewshott's professional consultancy and Crestron's technological advancement, integrators found all the solutions they need to build a smart metropolis.

Following on was a panel discussion by three established AV consultants in the industry. They are: Adrian Lim from



ihD Ltd., Stephen Tong from SM&W and Ambran Abu Bakar of Hewshott. The consultants were invited to share bold and bright ideas on the stage, provoking a great deal of conversation on how smart system can boost corporate's productivity. The discussion

session gave a clear direction to help attendees succeed in today's increasingly demanding and challenging world.

The awards program recognized the leading names in the local Pro-AV industry, showcasing a string of stellar achievements in their respective categories.

This year, Crestron Asia recognized dealer's extraordinary performance in the commercial and residential area, as well as emerging integrators who have gained tremendous growth in the year.

"We are glad to honour exemplary performance of dealers who demonstrated the best practices of Crestron technologies. Given our culture of delivering customer success, we are proud of what we use to improve our people, process, and technology to stay ahead of rising customer expectations," said Tony Yeung, Chairman of Crestron Asia.

He added, "We hope this event can serve a dual purpose of not only helping front line integrators and designers about hands-on techniques, but also leverage on the expertise and knowledge from AV giants to present holistic and powerful experience. CresCONVERGE clearly demonstrates our passion and commitment to provide all-rounded support to our customers."

[www.crestronasia.com](http://www.crestronasia.com)



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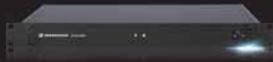
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# Epson Unveils Its First 3LCD Lamp-Free Laser Projector in Singapore



**SINGAPORE:** Epson has unveiled its first EB-L1000 series 3LCD Lamp-Free laser light source projectors in Singapore. Designed for large venues, the EB-L1000 series projectors are the first worldwide to integrate inorganic 3LCD panels with an inorganic phosphor wheel to achieve superior light and heat resistance for spectacular image quality, reliability and durability, underscoring the industry leader's commitment to the laser and high brightness projector markets.

Guests were given an experiential guided tour with impactful large-scale presentations, showcasing features including:

- **Built-in camera for automatic colour and image calibration:** Using 2 units of Epson's EB-L1405U lamp-free laser projectors with 8,000 lumens white and colour light output, the projectors precisely adjust edge blending to combine edges for a seamless, unified look. With the EB-L1405U built-in camera, it detects subtle colour inconsistencies and screens that have become unevenly coloured over time, allowing the projector to automatically correct colour.
- **High definition images with 4K enhancement technology and colour accuracy:** The Epson EB-L1100U lamp-free laser projector with 6,000

lumens white and colour light output, went head-on with a competitor's laser projector at a comparison shoot-out. With its 4K Enhancement Technology, guests experienced the most intricate details for best projection quality and viewing experience.

- **Multi-direction projection:** Epson also demonstrated a portrait projection with the new EB-G7905U (7,000 lumens colour and white light output) high brightness projector launched in early June 2016. The new range of Epson EB-L1000 series lamp-free laser and EB-G7000 series projectors can be rotated 360° in any direction – horizontally, vertically and rotationally – without any loss in image brightness.

Prior to the guided tour, executives from Epson shared insights on Epson's vision to grow its presence in and support demand for innovation in the high brightness projector market. A product presentation also shared key attributes for the EB-L1000 series, including its ability to reproduce images with outstanding levels of colour brightness for extremely long periods.

"Epson is pleased to launch our first series of lamp free 3LCD laser projectors. With this launch, we have become one of the few projector brands in the world that are able to offer a comprehensive lineup, consisting of both lamp and lamp-free projectors, powered by our 3LCD technology. We are definitely committed to further improve our range," said Tan May Lin, Epson Singapore's General Manager (Sales, Marketing & Customer Service Division).

"We look forward to excite the market with more innovation, and we aim to grow our strengths in the mid and large venue market segments. At the later part of this year, we will be launching our 12,000 and 25,000 lumens laser projectors. This launch is really the start of an exciting journey for all of us in Epson as well as for our end users and business partners."

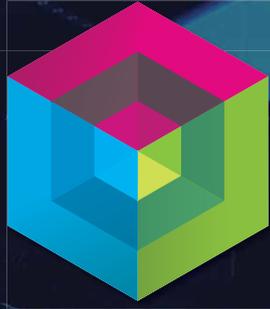
[www.epson.com.sg](http://www.epson.com.sg)



*Toshimitsu Tanaka, Managing Director, Epson Singapore Pte Ltd, at Epson launch event.*

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# Philips Pushes For Smart Lighting With New Experience Centre



**SINGAPORE:** Philips Lighting, a global leader in lighting, has announced the opening of its new Lighting Application Center (LAC) at the Philips APAC Center in Singapore.

Philips LAC is supported by the Singapore Economic Development Board (EDB) and serves growing demands for the Internet of Things (IoT) and connected systems in growth markets — ASEAN Pacific, India, Japan, Middle East & Turkey, Russia & Central Asia, and the Africas. With Singapore as the company's regional hub, the LAC supports testing and development of innovative applications for connected and sustainable systems.

As of LAC's opening, Philips Lighting is already in collaboration with CapitaLand, Toll Holdings, as well as educational institutions Temasek Polytechnic and Admiralty Secondary School to demonstrate the value of such systems and drive the next wave of innovation.

Showcasing the latest digital lighting innovations, the LAC houses an interactive multimedia pixel wall, a multi-experience stadium lighting, visual light communications (VLC) for indoor positioning, warehouse lighting, Power-



over-Ethernet for offices, luminous panels and textiles, connected street lighting, and more.

The LAC also serves as the largest and only demonstration space for Philips Lighting in ASEAN Pacific with indoor and outdoor applications for innovative lighting, with 80 per cent of the centre covered with technologically-advanced LED luminaires that are programmed with interactive and connected features.

Patricia Yim, Market leader, Asean Pacific, Philips Lighting, commented, "Connected lighting is poised to serve as the backbone of the smart city, where

LED light points can be connected be managed wirelessly in the internet of things. Lighting has proven to be an ideal platform for systems and software that enable people to see, feel and function better, while allowing individual structures and entire cities to operate more efficiently and sustainably than ever before."

She continued, "Through our Systems team and the new Philips Lighting Application Center, we continue to hasten our work with partners across industries to drive innovations in connected lighting systems for smart cities in growth markets."

The Philips LAC in Singapore which spans 492sqm, is the fourth and most updated LAC for Philips Lighting globally. Other Philips LAC facilities are in Eindhoven in the Netherlands, Lyon in France, and Chengdu in China.

[www.lighting.philips.com.sg](http://www.lighting.philips.com.sg)



(L-R) Patricia Yim, Market Leader, Philips Lighting ASEAN Pacific; Lim Kok Kiang, Assistant Managing Director, Singapore Economic Development Board; Eric Rondolat, Chief Executive Officer, Philips Lighting

## Vidyo Named a Leader in Gartner Magic Quadrant for Group Video

Vidyo recognized for the 2nd year as a Leader in the Gartner Magic Quadrant for Group Video



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## Asia Pacific's Technology-driven Business Opportunities: Yours to Harness at InfoComm China 2017

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# VEGA Global Celebrates 30th Anniversary With A Bang



**HONG KONG:** In celebration of 30 years in the Audio-Visual and Information Technology (AV/IT) industry, Laurie Chow – Founder and Managing Director of Vega Global – hosted a commemorative celebration at Sheraton Hong Kong Hotel, where over 300 participants, including VIP guests, business partners, clients, Vega overseas branch leaders and Hong Kong staff were in attendance. Participants were mostly dressed in red and black to match the corporate colours of Vega.

The event was unveiled with a “microfilm” to showcase the autobiography of Laurie Chow and how Vega was born and grown to be a global company under his leadership. In his opening speech, Laurie shared his business visions and mottos that contributed to his success. He also expressed his heartfelt thanks to all business partners and Vega staffs that contributed and helped Vega reach different milestones over the past 3 decades.

Before the dinner started, management team and the heads from all branches were on stage to express the gratitude for all participants. Matthew Deayton, Global Business Development Director, led the toast in honour of Chow to celebrate the event and the great successes of Vega. The company also took the opportunity to recognise the



Laurie Chow, Founder and Managing Director of Vega Global

significant contributions of 54 particular staff members by presenting long services award to them.

A specially-composed Vega theme song was broadcasted, which brought another climax for the event. Every participant got involved in the event and enjoyed a memorable night.

Quoting Laurie, “Vega stands for one of the brightest stars in the sky and can be seen by everybody easily. I will let Vega to sparkle continuously and focus on our

core business so as to grow together with all group members and partners in future.”

VIP guests have expressed their thanks and appreciation for the evening.

“It was a pleasure and an honour to be a part of the excellent celebrations to commemorate your 30 years of business. A big well done to you and your team and we look forward to many more years of business growth and success with Vega,” says Argon Ho, General Manager of Cisco Systems HK Ltd.

“The autobiography video of Laurie is very inspirational to all the people who are striving for their life career target. 30 years struggle is not an ordinary story. And I was lucky to witness Laurie’s success & Vega’s growth,” commented Patrick Tse, Senior Manager of Shun Hing Group.

“I was very pleased to attend the grand event last Saturday. Congratulations for this achievement and bringing the Vega wide team together. It gave me the chance to catch up with people I already know and to get to know new ones, was great,” says Bruno Villette, Asia Sales Director of Onelan.

“It is a very successful event and let us understand better on Vega’s growth and a great opportunity to meet up with old friends and meeting new ones.” – Adrian Lim, Group Director of Business Development of ihD.

[www.vega-global.com](http://www.vega-global.com)



Vega Staff Awards

# SiliconCore Appoints Eric Penot As Chief Operating Officer

**INTERNATIONAL:** SiliconCore Technology has announced the appointment of digital development expert Eric Penot to the role of Chief Operating Officer (COO). Eric Penot brings more than 20 years of strategic, operational and digital innovation experience to the company, and will be instrumental in driving strategic development in this newly created role.

As Group Vice President Digital Media for JCDecaux from 2009 to 2015, Eric Penot led the digital transformation of the group, defining their strategy and promoting the development of digital in the group worldwide. Prior to this, he was Chief Information Officer (CIO) of JCDecaux North America, Inc. for 11 years, and prepared JCDecaux to lead in the North American Digital Out-Of-Home (DOOH) advertising industry.

In his role as COO, Eric Penot will lead the sales, marketing and operations functions for SiliconCore worldwide, working closely with the research, development and manufacturing teams to create and bring to market the next generation of LED Displays.

Eric Li, CEO of SiliconCore commented, "Eric Penot has an innate strategic understanding of SiliconCore's key markets and products, and this will be a great asset in his role as COO. SiliconCore's unique set of proprietary and patented technical innovations such as Common Cathode, combined with his experience of scalability and decades of DOOH, will propel our business to new heights in the years ahead."

Eric Penot explains, "SiliconCore is uniquely positioned to redefine the

SiliconCore<sup>1</sup>



display industry through its superior and pioneering set of technologies. I am convinced that the digital display industry is on the verge of its largest revolution to date, with the fast emergence of direct-view LED as the technology that will ultimately replace other existing large format display technologies."

[www.silicon-core.com](http://www.silicon-core.com)

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## Polycom Launches New Customer Demonstration Centre in Thailand

**THAILAND:** Polycom has launched a new customer demonstration centre in Thailand early August, providing customers the opportunity to experience firsthand the company's latest video, audio and content collaboration solutions. The facility also serves the Polycom partner ecosystem and is strategic to providing expertise to all partners thereby strengthening partners' competency.

As part of Polycom's strategic growth plans for Thailand, the centre aims to provide, introduce and equip Thai businesses with Polycom's video and audio conferencing solutions to help them remain competitive.

Located in Bangkok's Central World Tower, visitors to the facility will be provided with specialist advice and resources for purchasing, financing, and deployment to help maximise collaboration investments. In addition, the centre will also showcase the application of collaboration technology across various industries such as healthcare, manufacturing, banking and government.

The demonstration centre will deliver a hands-on, interactive experience of

Polycom collaboration solutions which include: Polycom® RealPresence® Room systems for different room sizes; including the RealPresence Trio™, RealPresence Debut™ and the new RealPresence Centro™, the first visual collaboration solution purpose-built to put people at the centre of collaboration.

Equipped with industry-leading innovations such as automatic camera framing and zooming of meeting participants, SmartPairing, and noise cancelling technologies, the centre will also demonstrate how the unique open-standards approach of the Polycom RealPresence experience ensures interoperability with hundreds of UC, business, and social networking applications, bridging silos to truly unify communications across the enterprise. The centre will also showcase the native integration between Polycom's voice, video and content solutions and Microsoft's Skype for Business, SharePoint, Exchange and Office 365.

Customers will be able to gain better insights of how Polycom's collaboration tools can remove barriers to productivity by using customised solutions according to their organisational needs. The tools



will also allow Thai businesses to develop digital work habits for their organisation that can help drive greater productivity gains, increased efficiency, cost savings as well as retaining and attracting talent.

"Polycom sees this demonstration centre as a key part of their journey as they plan, test and customise our visual collaboration solutions to help them achieve productivity gains." said Thep Ritrangkla, Polycom's Thailand Country Manager. "We see our technology as an enabler for Thai businesses and will continue to be committed in bringing the latest video conferencing solutions and innovations to them."

Interested to visit the demo centre? Contact Polycom Thailand via email at [Kanjanahtai.Chaikwang@polycom.com](mailto:Kanjanahtai.Chaikwang@polycom.com) or send a general enquiry to [asiainquiry@polycom.com](mailto:asiainquiry@polycom.com)

[www.polycom.com](http://www.polycom.com)

## DisplayNote Technologies Adds DELL to their Roster of OEM Partners

**INTERNATIONAL:** Irish collaboration technology specialist DisplayNote Technologies has signed a new agreement to bundle its collaborative presentation app, DisplayNote, on DELL's range of interactive projectors shipping in 2016 & 2017.

The two companies have worked together to produce a complete collaborative experience for the classroom, combining the quality of DELL's interactive projectors with the powerful ability of DisplayNote to wirelessly send what's being shown

on the projector out to students' smartphones, tablet devices and personal computers.

DisplayNote is a screen-sharing solution that offers real-time collaboration in a flexible range of settings from lecture halls to meeting rooms. Presenters and educators can share any content to any connecting device, use their mobile device to present wirelessly and allow participants to contribute and collaborate on a presentation from their smartphone, tablet and PC.



The partnership gives DELL customers the access to DisplayNote's presenter-to-participant screen-sharing technology, with a free four-connection license accompanying qualifying projectors.

[www.displaynote.com](http://www.displaynote.com)

## Calibre Appoints New Sales & Marketing Manager for Asia Pacific

**ASIA PACIFIC:** British image processing experts, Calibre appoints Peng Wu to Sales & Marketing Manager, APAC.

Wu reports directly to Richard Laberge, Vice President, International Sales at Calibre. The appointment coincides with Calibre's debut presence at the upcoming LED China event where the sales and engineering team will be present to meet with local manufacturers as well as visiting organizations looking to boost their inventory.

Based at Calibre's global headquarters in Bradford, Yorkshire, UK, Wu joins Calibre from several years in the local manufacturing industry working in senior management where he acted as the service point between clients and suppliers.

Tim Brooksbank, CEO says the appointment results from Calibre's increased presence in the Asia Pacific region and China in particular. "Wu's great knowledge of Chinese business culture and international business skills will provide great support to the team in what is the fastest growing

market for Calibre. In particular Calibre's OEM programme provides Chinese LED screen manufacturers with access to HQUltra class leading LED scaling technology under the auspices of their own brand, Wu is the natural interface between those Chinese manufacturers and Calibre."



Peng Wu

"The Asia Pacific region is transforming the way companies use LED display technology. I look forward to helping supplier and manufacturing businesses unlock their potential and achieve more with the right processing, scaling and switching technology for LED video displays," concluded Wu.

[www.calibreuk.com](http://www.calibreuk.com)

## Frost & Sullivan Honours Pexip with 2016 Global Video Conferencing Technology Innovation Award

**INTERNATIONAL:** Frost & Sullivan, a world leading technology analysis firm, has recognized Pexip with its 2016 Global Video Conferencing Technology Innovation Award.

The award is presented to Pexip following extensive research. This research has compared Pexip to its competition, and resulted in deep understanding of its product, its market position, and its customer focused approach.

According to Frost & Sullivan, "The next generation of video conferencing solutions is designed to break down the challenges of costs, complexity, and interoperability that impede effective collaboration. Pexip's solution is founded upon an advanced, flexible, and differentiated platform that enables organizations to scale quickly, effectively and affordably connecting users to create agile businesses... Pexip has become a successful disruptor and challenger to the collaboration incumbents."

[www.pexip.com](http://www.pexip.com)



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# A New Chapter Opens in Indian AV Annals

*Excellence Appreciated, Truly, Audio-Visually* By Ram Bhavanashi



*Perseverance pays off, they say. It did, and in what an overwhelming way! The Systems Integration India Awards (SIIA) 2016 event held on 12 September 2016, just reinforced this in no uncertain terms. While it straight away meant opening up of a new chapter in the annals of Indian AV, it also paved the way for some benchmarking. All said, it's just the beginning, but a grand one.*

## SIIA 2016 IN BRIEF

- 23 Projects
- 15 Companies
- 5 Categories: competition
- 6 Categories: no competition but judged
- 2 Highly Commendable Projects
- 2 Lifetime Achievement Awards

## The Awards, Thus They Got:

1.	Best AV appln in Corporate environment	₹ <1 Cr or less	PLAY
2.	Best AV appln in Corporate environment	₹ 1 Cr-5 Cr	PLAY
3.	Best AV appln in Corporate environment	₹ 10 Cr and above	AVID
4.	Best AV appln in Government segment	₹ 1 Cr-5 Cr	AV Graphics
5.	Best AV appln in Government segment	₹ 10 Cr and above	Bharat Radio Centre
6.	Highly Commendable Project-I	₹ 10 Cr and above	VizExperts
7.	Highly Commendable Project-II	₹ 10 Cr and above	ISSPL
8.	Highly Commendable AV Design(project-II)	₹ 10 Cr and above	T2 Consulting
9.	Highly Commendable AV Design(project-II)	₹ 10 Cr and above	Rhino Engineers
10.	Lifetime Achievement Award	.....	Manmohan Gupta
11.	Lifetime Achievement Award	.....	Kelvin Ashby-King

As the curtains went up by 6 pm at the venue on 12 September, with the emcee walking up the stage, to begin the process of the inaugural Systems Integration India Awards (SIIA) 2016, the excitement that ranted the air explained the surcharged atmosphere!

Quite understandable that- given the months of persevering workouts we lived through, and the message we apparently sent across! A first of its kind initiative in Indian, if not Asian AV industry, for its very nature and genre, the SII Awards 2016 event, for one, was more than a revelation.

- It had, arguably, the cream of Indian AVSI industry- top manufacturers; dealer-distributors; partners
- It had the top-notch systems integrators; consultants
- It had the industry's highest institutional body top-brass, AND
- It had, probably, the most comprehensively structured award processes in the industry till date
- All that on the first go!

While the popular Mumbai-based singer Mihir Joshi provided the initial tonal rhythm to the proceedings with his scintillating musical performance, the ten-minute presentation by Spinworkz' Publisher and Editorial Director Thomas Prakasam that followed immediately explained it all. The objective, vision, and mission that it moved along; the categories and awards that were evolved; the judging methodology devised; and the dimensions it projected.

The 40-minute Award presentation journey that followed thereafter not only meant recognizing and rewarding of some of the most ingenious AV projects in India but also the glory of appreciation they won by a Jury of global repute.

"I'm most impressed with both the quality of projects and technical expertise required to deliver these projects" lauded Michael Rutledge, Executive Director, Rutledge AV, Australia, one of the members of the Jury.

The initiative brought to light "some very cool projects" felt Jay Rogina, Principal, at the USA-headquartered Spinitar.

## The Awards



PLAY receiving the award for Best Application of AV in a Corporate environment with budget range of ₹ <1 Cr or less. Swadesh of Green Sources (in coat) presented the award.

The very first Award of the event/ evening, the Best Application of AV in a Corporate environment with budget range of ₹ <1 Cr or less went to **PLAY** for its ingenious design and integration of Formal and Informal Rooms at a project site of Hindustan Unilever Ltd.

Swadesh Khetawat, Managing Director of GreenSources Pvt Ltd presented the Award to PLAY.



PLAY again received an award for the Corporate category with the budget range of ₹ 1 Cr-5Cr. Harish of Epson India (4th from left) presented the award.

Interestingly, the Mumbai-based AVSI-Consulting firm scored a double when it won the next level Award too, in the same Corporate category with the budget range of ₹ 1 Cr-5Cr due to its ingeniously done design-build of full AV and Energy Management System at the entire facility of D'décor Exports Pvt Ltd.

Harish A K, Deputy General Manager of Epson India (Visual Products) presented the Award to **PLAY**.



AVID with the award for Corporate category, with the premium budget range of ₹ 10 Cr and above. Aviv Ron (centre in tie) of Kramer presented the award.

The Award for Premium segment AV application in this Corporate category, with the budget range of ₹ 10 Cr and above, was won by the Bengaluru-based **Audio-Visual Integration Distribution (AVID)**.

Kramer Electronics Ltd's Vice-President-Marketing Aviv Ron, who has flown straight from their Israeli HQ, specially for the SII Awards, did the honours for the winner.



Veenu Pasricha (right) of A V Graphics receiving the award from Prashant Govindan of HARMAN.

The next Award – Best application of AV in a Government environment with a budget range of ₹ 1 Cr- 5 Cr – was won by **A V Graphics Pvt Ltd**, for the ingeniously done full turnkey production and installation of a Sound & Light Show at the Jharkhand War Memorial in Ranchi, for the 23 Infantry Division of Indian Army.

Prashant Govindan, Sales Director at HARMAN for India & Sri Lanka Operations, gave away the award.



Wolfgang Lukhardt of beyerdynamic (extreme left) presented the award to Bharat Radio Centre for the Government category, with a Premium budget range of ₹ 10 Cr and above.

The next level Award in this category, with a Premium budget range of ₹ 10 Cr and above, was won by **Bharat Radio Centre** for its design-build of high-end conferencing system at the Main Mandap of UP Vidhan Sabha (Legislative Assembly). The system comprised embedded microphones and voting capabilities, simultaneous interpretation, camera pickup, live audio and video streaming and sound reinforcement.

beyerdynamic Managing Director Wolfgang Lukhardt did the honours for this prestigious Award.

## Highly Commendable Project Awards

That some of the projects submitted were very unique and had a very close contest, the Jury Panel commended them highly for their sheer nature, and expertise woven into the space. The event thus had two Highly Commendable Projects:



Rajesh Patkar of Christie Digital (left of picture), presenting the award to VizExperts for Highly Commendable Project, Museum sector, with a Premium budget range of ₹ 10 Cr and above.

One- Gurgaon-based **VizExperts** for supply, install, integration, testing and commissioning of multi-channel AV and IT hardware including fully integrated

high resolution immersive show with animated multimedia, images and video content for the Digital Panorama the Science Exploration Hall for Kolkata Science City



Rajesh Patkar of Christie Digital, presenting the award to ISSPL for Highly Commendable Project, Government sector, with a Premium budget range of ₹10 Cr and above.

Two- Mumbai-headquartered **Innovative Systems and Solutions** for implementing different technologies like Holographic imaging, multi-projector edge blending, 3D mapping, interactive touch walls, projection masking, 360 degree projection and more, for Dandi Kutir Phase-2 in Gandhinager.



Also presented with the award for the same project were the two consultants who played key roles. Kelvin Ashby-King of T2 Consulting and Naidu Narendra of Rhino Engineers (2nd and 3rd from left respectively)

Rajesh Patkar, Deputy GM of Christi India presented the awards.

That the Dandi Kutir install had two consultants contributing their might, SIIA decided to honour them as well for the sheer expertise woven. Kelvin Ashby-King of T2 Consulting and Naidu Narendra of Rhino Engineers received the Awards simultaneously.

## Marking New Dimension: Lifetime Achievement Award

The SII Awards 2016 reached its Finale with what had most in the gathering haven't even thought about! With a resolve to benchmark as also value-add



in its own distinctive style running strong, SIIA Organizers marked a new dimension to its 'Celebration of AV Excellence' event with a Lifetime Achievement Award. Here we

recognise Naveen Sridhar, Director Sales & Marketing -SAARC, beyerdynamic India Private Limited, who had mooted the idea of the Lifetime Achievement Award. It was his suggestion that helped us develop the Lifetime Award.

Interestingly, the voting members, who are the Partners of this award event initiative voted two highly acclaimed individuals with equal votes. The SIIA, therefore, decided to honour both of them, in all the fairness of the objective. The Lifetime Achievement Award thus was presented to:

**Manmohan Gupta, Founder of Actis Technologies and Kelvin Ashby-King, Managing Director, T2 Consulting**



Here again we recognise the invaluable contribution by Prashant Govindan, Sr. Director - India & Sri Lanka Operations, Harman Professional, who provided the

organisers with the appropriate recognition words to distinguish between the two Lifetime Achievement Award winners.



Manmohan Gupta, Founder of Actis Technologies, presented with the Lifetime Achievement Award for "The Most Distinguished Visionary in Systems Integration in India." At the side of Mr Gupta, is his son Abhimanyu.



Kelvin Ashby-King, Managing Director of T2 Consulting receiving his Lifetime Achievement Award for "The Most Distinguished Professional in AV and Lighting Design in India."

This prestigious Award presentation had none other than InfoComm International Executive Director and CEO David Labuskes doing the honours.

### SIIA Partners Felicitated

All said and done, SIIA 2016, couldn't have been there without the exceedingly fulfilling support of its Partners.



"We have been feeling for something like this for quite some time; we were glad when SIA came up with it," says Rajesh Patkar, Deputy General Manager, Christie Digital Systems. "There can be multiple benefits from the initiative. It will encourage SIs doing good job as 'a practice' and not just as a mere job; consultants create better designs more and more, to stand a chance for the honour."



Chips in Bharath Kumar, Country Manager, Kramer Electronics-India: "This is a recognition not just for SIs but also to ourselves- the manufacturers; and consultants, besides distribution partners. The appreciation for a good work done in integration will act like a nice encouragement for all those involved in the work; it will help enhance our offerings in terms of products and solutions."

[www.siindiaawards.com](http://www.siindiaawards.com)

### THE AWARDS EVENING...Capturing the moments pictorially...



Mihir Joshi kicks off the event with his performance.



Mihir sets the tone for the evening by getting the guests into the mood...what else but by dancing.



And soon it became a festive atmosphere:) Even with an on-stage performance.



The laughter and smiles got everyone in the right mood for the actual Awards.



Thomas Prakasam, presenting to the audience the objective, vision, and mission of the Awards; the categories and the judging methodology devised; and the dimensions it projected.



David Labuskes, Executive Director and CEO of InfoComm International giving a short speech.



Ram Bhavanashi, Editor for India and ME, Systems Integration Asia, giving his thank you speech to all who were present, who had participated and who had supported the initiative.

**And all these would not have been possible without our partners...**



Platinum Partner beyerdynamic



Platinum Partner Christie Digital



Platinum Partner Harman



Platinum Partner Kramer



Gold Partner Epson



Gold Partner Green Sources

**A special BIG thank you to our Judges...who had to set aside time amidst their busy schedule to judge the entries.**



Jay Rogina,  
Principal,  
Spinitar, USA



Michael Rutledge,  
Executive Director,  
Rutledge AV, Australia



Steve Jarvis,  
Commercial Director,  
Cordless Consultants, UK



Mark Hazell,  
Sales Director,  
ProAV, UK



SYSTEMS INTEGRATION INDIA AWARDS

2 0 1 6

# CONGRATULATIONS TO ALL OUR WINNERS AT THE INAUGURAL SYSTEMS INTEGRATION INDIA AWARDS

WE WOULD ALSO LIKE TO THANK OUR  
PARTNERS FOR THEIR IMMENSE SUPPORT IN  
MAKING THIS A SUCCESSFUL EVENT

Award Platinum Partners:

beyerdynamic))))

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Award Gold Partners:

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Organised by:



Official Media:

systems  
integrationasia

# Epson Reveals Brightest Laser Projector With 25,000 Lumens

Epson's newest laser projector, the EB-L25000U, uses 3LCD technology with industry's first fully inorganic optical engine (both the 3LCD panels and phosphor wheel are inorganic) to deliver 25,000 lumens of white and colour brightness. The use of a laser light source contributes to a high contrast ratio of 2,500,000:1 that provides absolute black and vivid colour. First previewed at ISE this year, the new laser projector is ready for shipment now.

Epson has in recent years steadily increased its lineup of projectors in this class for applications including large exhibition rooms, concert halls and outdoor signage.

## Image Quality

The EB-L25000U is a powerful projector that goes beyond Full HD, boasting WUXGA native resolution. Users can also project 4K enhanced resolutions in confident colours with the intuitive colour correction systems that compensates uneven colour and brightness. Epson's 4K Enhancement technology assist by shifting pixels diagonally by 0.5 pixels to double the resolution, delivering crisp, high-definition images. The R&D team also ensured that colour bleeding is kept to an absolute minimum whilst achieving 4K resolution throughout the entire zoom range, by rethinking the internal structure of the projector.

With laser technology it is possible to deliver complete black during full-black scenes by dimming the light source in real time according to the input video signal.

The projector offers advanced colour adjustments of hue, saturation and brightness for each colour in the RGB and CMY colour models. Users can further improve image quality with Epson's Super-resolution technology that provides rich textures for further improvements in the projected image.

Maintaining a specific brightness over a prolonged period of time is also possible with the customised mode for constant brightness. This will of course also affect the number of maintenance free hours. The lower the brightness, the longer the maintenance free hours. Museums might find this a useful option.

The Epson EB-L25000U also offers auto colour adjustment made possible with its built-in camera that detects screens that have become unevenly coloured over time, allowing the projector to automatically correct the colour through colour calibration. It also detects subtle colour inconsistencies between multiple projectors. This function can be utilised to calibrate colour manually or automatically at regular intervals to deliver stable image quality with minimal maintenance.

## Reliability

Epson's original LCD panels and phosphor wheel are made of inorganic material with superior light and heat resistance. Combining these in a laser projector results in bright, vibrant images for extremely long periods. Users are able to operate



24/7 for 20,000 hours of operation before the brightness starts to decrease, Epson's warranty covers the full projector for 20,000 hours and not just the mechanical aspects of it.

The sealed optical engine protects image quality by preventing the infiltration of dust and smoke. The high efficiency filter also doubles up as a smoke filter that ensures the projector works perfectly in any event. All these ensure minimal maintenance.

Other useful features include status monitoring of signal, voltage and network information. Users can also monitor and log times with drops in voltage. The ability to log up to 30 voltage drops can help to determine the cause of unexpected shutdowns.

In terms of the casing for the projector, the adoption of a pipe frame and baseplate structure have greatly improved the durability of the casing and the redesigning of the internal structure has helped make the projector compact and lightweight for easy installation.

## Flexibility

The ability to rotate 360 degrees and being fully tiltable, as well as a large variety of lenses ensures that these projectors can be installed in a wide variety of locations for projection mapping, signage and a host of other applications.

The EB-L25000U interface includes HDMI, HDBaseT, VGA and 3G-SDI thus ensuring input flexibility. The projector also offers edge blending capabilities: the adjustment of blanking width for over sized images, the ability to adjust vertical and/or horizontal distortion when images are projected onto a curved surface or corner wall, auto-scaling of images from multiple projectors and split screen capabilities of projecting two images with one projector.

Users can easily control the projector either through a computer web browser or smart device to adjust projector settings. The EB-L25000U supports DMX-Artnet for synchronising lighting effects with audio.

[www.epson.com.sg/highbrightness](http://www.epson.com.sg/highbrightness)



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Find out more: [www.iseurope.org](http://www.iseurope.org)

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# Integrated Systems Europe

**7-10 February 2017**  
Amsterdam, RAI, NL

*All the connections you need.*

## Extron: 17" Capacitive TouchLink Pro Touchpanels

Extron continues to expand its TouchLink Pro series with TLP Pro 1720MG and TLP Pro 1720TG. Measuring at 17", the wall mount and tabletop TouchLink Pro touchpanels comes with capacitive, edge-to-edge glass touchscreens. These 1920x1080 capacitive touchscreens also provide a vibrant image and a more responsive control surface.

Designed for use in AV system applications that require complete, interactive control of a broad range of devices, the touchpanels can receive power and communication over a single Ethernet cable. The TLP Pro 1720MG and TLP Pro 1720TG have stylish designs and powerful features that make them ideal for control applications requiring fully-customizable touchpanels with large control surfaces and multi-source video preview.

### Key features:

- Customizable using Extron GUI Designer software.
- Both panels works with with any Extron IP Link Pro control processor.
- Video preview inputs that support high resolution, HDCP-compliant video from HDMI sources and XTP devices.
- Powerful interface design software offers ready-to-use resource kits to help design a wide variety of interfaces for rooms and presentation environments.
- For mounting flexibility, the TLP Pro 1720TG can be removed from its base and mounted on any VESA standard mounting arm or bracket.
- The TLP Pro 1720MG and TLP Pro 1720TG can be programmed using Global Scriptor, with support for Global Configurator Plus and Professional coming soon.



**Availability:** Now shipping.

[www.extron.com](http://www.extron.com)

## Christie: New Flat Panels Combine Performance & Reliability

The new Christie® FHD492-XV and FHD552-XV LCD flat panels are versatile and rated for 24/7 use in the control rooms of government facilities, public utilities, security and surveillance, telecommunications, and transportation. The first of a new series, both panels provide the renowned quality Christie is famous for in a value-priced LCD display.

**Applications:** Panels can be used individually in spaces including lobbies, sports bars, retail establishments, family entertainment centres, and both arenas and stadiums.



FHD492-XV



FHD552-XV

### Key features:

- Impeccable images in flawless detail.
- With a combined 13-millimetre (6.5mm per side) bezel, the new series is perfect for control rooms using multiple images on multiple screens.
- The panels can combine with Christie® Phoenix® EP, a network-distributed processor that installs directly into compatible Christie displays.

- An affordable option in tiled video wall displays where bezel width isn't of primary importance.
- Panels can be tiled in portrait or landscape mode.

**Availability:** Ships in November 2016 with a three-year parts and labour warranty.

[www.christiedigital.com](http://www.christiedigital.com)

## AMX: Enova DGX 100 Series

The Enova DGX 100 Series Digital Media Switcher Family delivers pixel-perfect video and crystal clear audio to any environment, from in-room meeting spaces to campus-wide distribution, up to 10 kilometers. The 100 Series has been internally re-architected to make installation, management and control of the entire Enova DGX system, including DXLink Transmitters and Receivers, more intuitive and resilient than ever.

### Key features:

- Audio Processing – Parametric EQs on every output and true audio breakaway on all inputs and outputs.
- Configuration and Management – All-new, powerful web interface with real-time feedback on signal status.
- Quality levels & diagnostics.
- Visibility to the complete setup of DXLink endpoints.
- Network Security enhancements – Via the completely re-engineered integrated NX Controller.
- User Authentication.
- Role-Based Access Control.
- Encryption and other Network Service Security Features.
- Plus all features Unique to the Original Enova DGX such as: InstaGate Pro® Technology; SmartScale® Technology; Full 4:4:4 Support; Modular design.

Availability: Now shipping.



*Editor's Note: To sweeten the deal, AMX has reduced pricing of several Enova DGX Boards and the Enova DXLink Transmitters and Receivers by 20%!*

[www.amx.com/enova](http://www.amx.com/enova)



- Real 4K over Fiber Solution  
Stretch & Control digital video audio standards
- DVI / HDMI / DisplayPort / SDI Fiber Optic Extender
  - KVM Extender (Fiber Optic & IP base)
  - Multi Format Modular Matrix
  - Various Video Format Converters
  - Wireless Extender



## HDMI Active Optical Cable; HDFC-100



- **Supports** up to 4K 60Hz(4:2:0), 4K 30Hz(4:4:4)
- **Transmits** HDMI signal up to 150m(492feet) over Hybrid cable
- **Operates** by HDMI source without external power
- **Supports** 3D contents transmission
- **Supports** HDMI 1.4, 36bit color depth
- **Complies** with CEC, EDID, and HDCP
- **Certifies** FCC / CE standards for EMI/RFI emission

## DVI Active Optical Cable; DVFC-100

- **Supports** WUXGA(1920x1200) / 1080p at 60Hz(36bit, 3.4 Gbps/ch)
- **Transmits** DVI signal up to 150m(492feet) over Hybrid cable
- **Operates** by DVI source without external power
- **Supports** HDMI 1.4, 36bit color depth
- **Supports** 3D contents transmission
- **Complies** with EDID, HDCP
- **Certifies** FCC / CE standards for EMI/RFI emission



## Revolabs: Portable Conference Phone for Small Spaces

Revolabs has announced the debut of YVC-300, a portable USB and Bluetooth® conference phone from Yamaha, bringing high-quality audio to new applications. Designed for small groups and powered by USB, the YVC-300 is a versatile conference phone delivering ample, clear sound to ad hoc meeting areas such as open collaboration and touchdown spaces.

The YVC-300 is a perfect choice for organizations that want to offer high-quality group communication solutions without the cost of dedicated equipment for every conference room or open collaboration space. Users can simply borrow a device from an available supply, connect it to their PC-based audio, video and web conferencing client via USB connection and return it at the end of the meeting.



### Key features:

- Turns smartphones and tablets into conference phones by acting as the microphone and speaker when connected by Bluetooth, including fast-pairing for NFC-enabled devices.
- Analog audio input and output terminals allow the phone to connect easily to videoconferencing systems.
- Calls placed simultaneously over any of the connection interfaces are bridged into a single call.
- Equipped with Yamaha's leading sound processing technologies — including adaptive echo cancellation, background noise reduction, and human voice activity detection.

**Availability:** Now shipping.

[www.revolabs.com](http://www.revolabs.com)

## Canon: First HD Laser Projector with Interchangeable Lens

The Canon LX-MU800Z is the first single-chip DLP projector in the company's interchangeable lens series. Equipped with a Laser Phosphor Light Source, the LX-MU800Z delivers a maximum brightness of 8,000 lumens, for up to 20,000 hours. Coupled with advanced adjustment and rotation features, users can project onto a wide range of screen surfaces and also obtain a 360-degree orientation on the vertical axis

**Applications:** Ideal for a range of applications such as digital signage, auditoriums and art exhibitions.

### Key features:

- Native WUXGA, with a display resolution of 1,920 x 1,200
- Dynamic contrast ratio of up to 10,500:1.
- Long-life laser light source, sealed filter-free system.
- Seven interchangeable lens options.
- Able to rotate 360 degrees at all angles on the vertical axis.
- Motorised lens shift that enables users to adjust the vertical and horizontal positioning of the projected image.
- Extremely adaptable for multiple built-in terminals including 3G-SDI, HDMI, DVI-D, and a built-in HDBaseT™ receiver.
- Compatible with Crestron, AMX, and Extron devices enabling control and the monitoring of multiple projectors on a network.
- Also supports PLink™, ideal for observing lamp hours, usage and more.



**Availability:** Now available at all Canon authorised dealers.

[www.canon.com.sg](http://www.canon.com.sg)

## Leyard: Breaking the 1mm Pixel Pitch Barrier

Delivering a breakthrough pixel pitch of just 0.9 millimeters, the 0.9mm TWA Series LED Video Wall Display is one of the finest LED display in the industry today. By breaking the 1-millimetre barrier, the 0.9mm Leyard TWA Series video wall display offers customers unparalleled resolution, with crystal clear viewing even at close-up distances of 10 feet (3 meters) or less.

The Leyard TWA Series 0.9mm joins the existing Leyard® TWA Series line of fine pitch LED video walls available in 1.2, 1.4, 1.8 and 2.5 millimeter pitches. Leyard TWA Series LED displays offer a crisp, high-contrast image and are built to maximize energy efficiency, utilizing 35 percent less power than conventional LED displays.

### Key features:

- Industry-Leading Power Efficiency: In standby mode with a black screen, the displays consumes up to 60 percent less power than the most power-efficient LED video wall displays.
- Innovative, Easy-to-Maintain Design: Innovative "flat panel" design that includes a 16:9 form factor optimized for the most popular high resolution standards.
- Leyard TWA Series displays are self-contained units with standard HDMI inputs and looping, along with optional redundant configurations.
- 54-inch cabinet: Larger means easier to install and manage.

Availability: Now shipping.

[www.leyard.com/TWA](http://www.leyard.com/TWA)



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- ✓ Group Device Control
- ✓ User Permissions



## ZeeVee: Making AV Distribution over IP Easy

ZeeVee now offers an end-to-end H.264, IP video distribution solution with the new ZyPerMX, and the ZvMXE. ZyPerMX, an HD IP video encoder using industry standard IP networking technology, while ZvMXE is a high performance, plug and play, IP Set-top-box.



### Key features of ZyPerMX:

- Delivers content over an Ethernet network using standard H.264/MPEG4 AVC encoding technology.
- Embedded audio is passed through and supports Linear PCM, AAC, and MPEG-1 Audio Layer 2.
- Resolutions up to 1080p HD and 1920 x 1200 @ 60 Hz are supported.
- Easy to configure and manage using Maestro web-based management tool.

### Key features of ZvMXE:

- ZvMXE auto-discovers the ZyPerMX streams, which are added automatically to the lineup.
- Future channels/streams can be added.
- Support three main HD formats: H.264, MPEG-2, MPEG-4.
- Unified remote controls both MXE and television.

**Availability:** Now.

[www.zeevee.com](http://www.zeevee.com)

## Oncam: New Additions to 12MP & 5MP Camera Range

Now you see it, now you don't. Oncam's product portfolio continues to evolve, and the company has recently announced the latest additions to their Evolution 12MP and 5MP camera ranges – the Evolution 12 and 05 Recessed Cameras.

**Applications:** The product is specifically developed for recessed mounting ceilings and the new design means installation can be fully completed from below the ceiling line. It is suitable for a range of applications such as: Retail Stores, Shopping Malls, Hotels, Restaurants and Banks.

### Key features:

- Simple and quick installation (no extra fittings required and is entirely accessible from below the ceiling line).
- Ultra Low Profile.
- Suitable for installation in Air Handling / Plenum Spaces (UL2043 Certified).
- Advanced 12MP and 5MP Sensors.
- Blends seamlessly as it can be painted to match the installation environment.
- SD Card Recording.

**Availability:** Now.

[www.oncamgrandeye.com](http://www.oncamgrandeye.com)



## Atlona: First HDR-Compatible 4K/60 4:4:4 Video Extender

Atlona has unveiled the Centum Series AT-CENT-301-CEA, the industry's first high dynamic range (HDR) compatible video extender, which delivers 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling and HDMI data rates up to 18 Gbps, to meet next-generation residential integration requirements. The AT-CENT-301-CEA is the latest addition to Atlona's extensive family of HDBaseT extenders.

**Applications:** Installations utilizing the latest UHD and HDR sources, and/or Professional AV applications with full-motion, highly detailed 4K graphics presentations for visualization, 3D renderings, simulations, and more.

### Key features:

- HDCP 2.2 compliant and provides HDMI transmission up to 330 feet (100 meters) over category cable with embedded multi-channel audio.
- HDR and 4K/60 4:4:4 video extension are made possible through the use of visually lossless VESA Display Stream Compression (DSC).
- Supports Ethernet pass-through, RS-232 and IR control, and Power over Ethernet – the receiver is powered by the extender.
- EDID management features ensure proper audio formats and video resolutions are provided to the AV system.

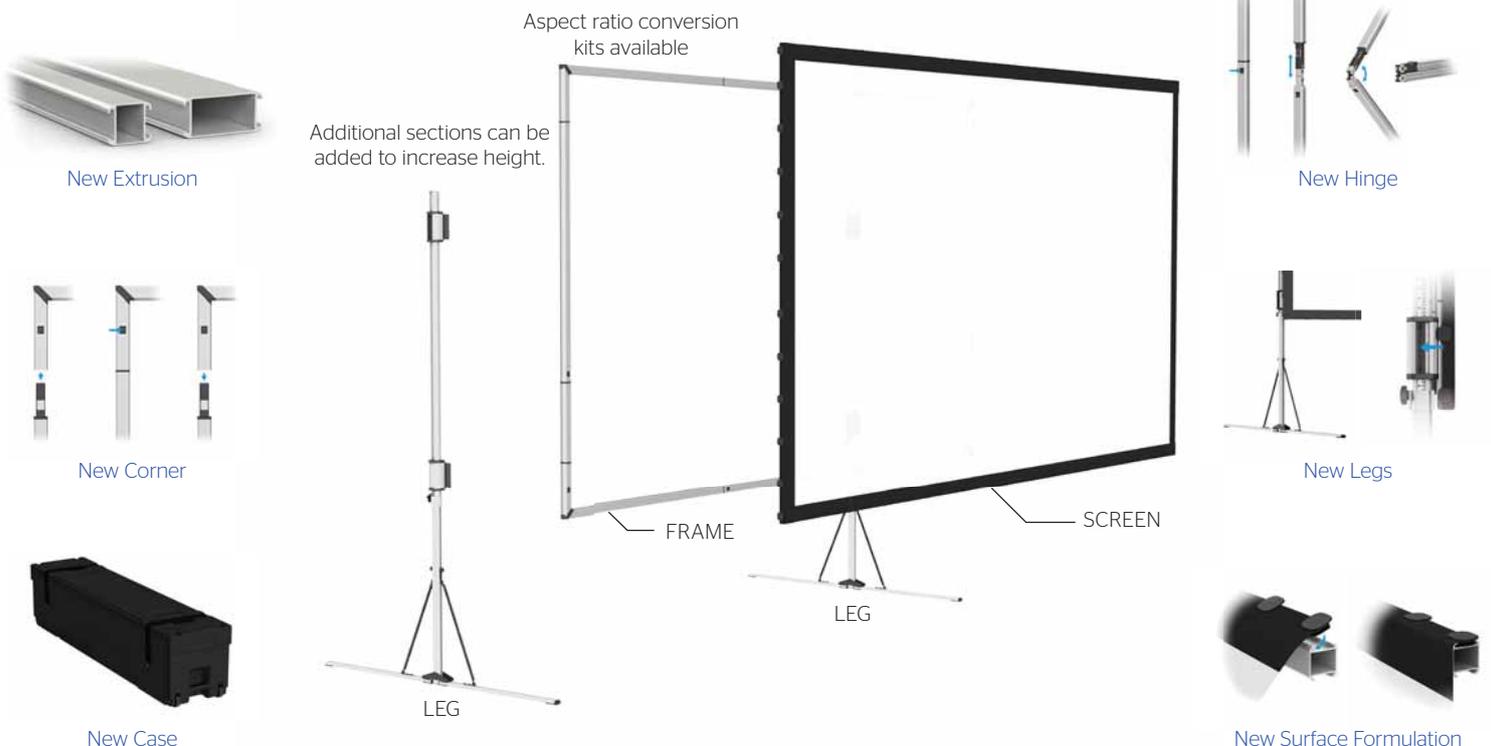


- Supports the HDMI Audio Return Channel, with the ability to transmit digital audio from a television back to the transmitter, and then to an AV receiver via HDMI or a TOSLINK digital audio output – This allows easy integration of audio from over-the-air TV broadcasts and smart TV apps.

**Availability:** March 2017.

m

## FAST-FOLD NXT



**STRONGER, FASTER, SIMPLER**

## Matrox: High Density H.264 4:2:2 10 Bit Codec Cards

Matrox® Video recently unveiled two new additions to the M264 family of developer products, the M264 S2 and the M264 S3, doubling and tripling the performance available in the M264 line. With the capability for up to three channels of 4K XAVC encoding/decoding in a single slot card, the M264 family now enables OEMs to provide multi-channel 4K production servers on a PC platform.

The 3/4 length PCI Express Gen3 x16 Matrox M264 S2 and S3 provide an instantaneous H.264 quality and density boost offering the pristine quality needed for broadcast contribution, production, and distribution.

**Applications:** Matrox M264 cards are the ideal H.264 accelerators for channel-in-a-box systems, video servers, broadcast graphics systems, multiviewers, and switchers or create high-density encoders, transcoders and other broadcast media equipment.

### Key features:

- Encode/decode up to three streams of 4Kp60 at 4:2:2 10-bit, 30 streams of HD long GOP at 4:2:2 10-bit, or 48 streams of HD at 4:2:0 8-bit.
- The faster than real-time encoding/decoding ability of the M264 allows multiple blazing fast transcodes for distribution on differing media platforms.
- Repurpose content into any resolution before encoding or after decoding, particularly beneficial for OTT workflows.
- Specifically designed for high-density encoding/decoding (Baseline Profile to High 10 Intra Profile up to Level 5.2)
- Provides the highest possible quality at the lowest power per stream (<1.5 W per HD stream).
- Comprehensive development tools in the Matrox DSX SDKs for Windows® or Linux® include versatile file reading/writing, memory management, IP streaming, synchronization mechanisms and a large selection of software codecs and effects.



- Prototyping tool provides a graphical representation of all hardware components.

**Availability:** OEMs can book a meeting with the Matrox OEM team to discuss the complete Matrox developer products roadmap.

[www.matrox.com/video](http://www.matrox.com/video)

## Screen Innovations: Zero-G® is World's First Rollable Television

Screen Innovations (SI), the purveyors of innovation in the two-piece projection industry, has announced the future of television with Zero-G, a revolutionary new motorized projection screen that, when deployed, literally appears to be floating in midair and rolls out of the way when not in use.

### Key features:

- No need to rearrange rooms: Suspended by cables, Zero-G can be placed anywhere in a room.
- Simplified installation: Comes with Removable PCB, upper lift tubes, and factory pre-programmed bomb-bay doors on its flush model.
- Using an optical sensor, users can also set an automatic upper limit.
- Option to ship material tube separately from case for new construction installations.

**Availability:** Available in ambient-light-rejecting Slate® material or Pure®, in white or gray screens, with screen sizes up to 160-inches diagonally in 16:9 aspect ratio.



[www.screeninnovations.com/zero-g](http://www.screeninnovations.com/zero-g)

## PureLink: HDTools 6x2 Presentation Now Available with iCON Control

PureLink's HDTools™ PS-6200 6x2 Presentation Switcher & Scaler has been expanded and enhanced with a new complementary software interface that adds extra broadcast style switching features to the system's already rich platform that comprises of: Hybrid Matrix Switcher, Auto-Scaling, Flexible audio-routing and Auto-EDID.

**Applications:** It has been widely used in the industry as a flexible, high performance solution for integration into live theatre, houses of worship, conference rooms, classrooms, and more.

### Key features:

- The PS-6200 features six inputs from both analog and digital sources, as well as two channel digital outputs.
- The added iCON software application, designed to support touch screen displays, provides instant input to output switching on each of the output busses.
- iCON also features a preview/program swap capability, which allows the user to flip the two output buss input selections, exactly like a broadcast switch, increasing its utility in multiple applications.

**Availability:** Now.

<http://main.purelinkav.com/>



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# Surgical Procedures Beyond Convention

*Cardiac Surgeon Shares His Surgical Experience That Was Enhanced by Live Video Streaming & Recording*

**D**r. Sarju Ralhan is breaking new ground at the Hero DMC Heart Institute in Ludhiana, India. An internationally acclaimed surgeon with a focus in cardiovascular, thoracic and vascular surgery, he has a keen interest in the surgical management of patients afflicted with coronary artery disease and diseases of the aorta.

Having done over 5000 off-pump coronary artery bypass grafting (OPCABG) procedures, Dr. Ralhan's specialty is total arterial grafting on a beating heart using bilateral internal thoracic arteries (ITA), the arteries that provide an important alternate blood supply if the native coronary arteries becomes obstructed. He performs the surgery using the rare procedure of just one incision to the chest.

According to Dr. Ralhan, this method extends the surgery by 20 minutes but can add 20 years to the patient's life expectancy.

## Promoting the Procedure

Intent on promoting this new surgical method, Dr. Ralhan wanted to find an effective way to reach the public in general and specialized surgeons in particular. Given the busy schedules of his team and other healthcare professionals, watching the surgery live in the operating room was not always practical.

Dr. Ralhan wanted a device that could record the procedures and provide straightforward access to the videos. To achieve this, he required high quality video delivery, recording capabilities, portability and ease of use.

Dr. Ralhan and his team evaluated many video capture devices but narrowed their search to the Matrox Monarch HDX, a H.264 dual-channel recording and streaming appliance, after consulting product reviews and a local distributor.

## A Surgical Solution

Using Monarch HDX, the workflow is very straightforward. Surgeries are filmed with a Luxtec headlight camera or a Nikon D810 camera. The Luxtec headlight camera outputs composite video which goes through a



Matrox Monarch HDX's H.264 preview stream feature lets Dr. Ralhan verify the input before beginning his live webcasts.

composite-to-SDI converter then into the Monarch HDX encoder. The Nikon D810 outputs an HDMI signal which goes directly to the Monarch HDX.

To stream the surgery, Monarch HDX sends an RTSP stream over the LAN at 2 Mbps. Dr. Ralhan's staff can view the live stream directly from computers on the LAN or via Wi-Fi on their mobiles or tablets, all using VLC Player.

To record the surgery, the Monarch HDX is typically set to record at 25 Mbps to a USB drive or SD card. Monarch HDX provides the option to save files to a variety of recording media types, including a shared network drive, USB drive or SD card; so it is easy to store recordings in a way that works for everyone.



The Hero DMC Heart Institute in Ludhiana, India

"As of today, only my operating room staff members view the live streams, but I expect to live stream surgeries for workshops where I will have a broader audience."

- Dr. Sarju Ralhan

The videos are reviewed and edited with Final Cut Pro X or Adobe Premiere before being made available to medical professionals on Dr. Ralhan's YouTube channel and website. The surgical recordings are also provided to patients on a thumb drive.

Monarch HDX profiles simplify setup. Technicians use the Monarch HDX Command Center to initially select resolution, bitrate and all other streaming and/or recording parameters then to save a profile.

In advance of a surgery any operator can easily choose one of the pre-configured profiles for a particular camera or destination, for example, and the parameters will be loaded automatically.

Technicians also take advantage of Monarch HDX's H.264 preview stream feature to view a low bitrate preview of the input directly in the Command Center before going live.

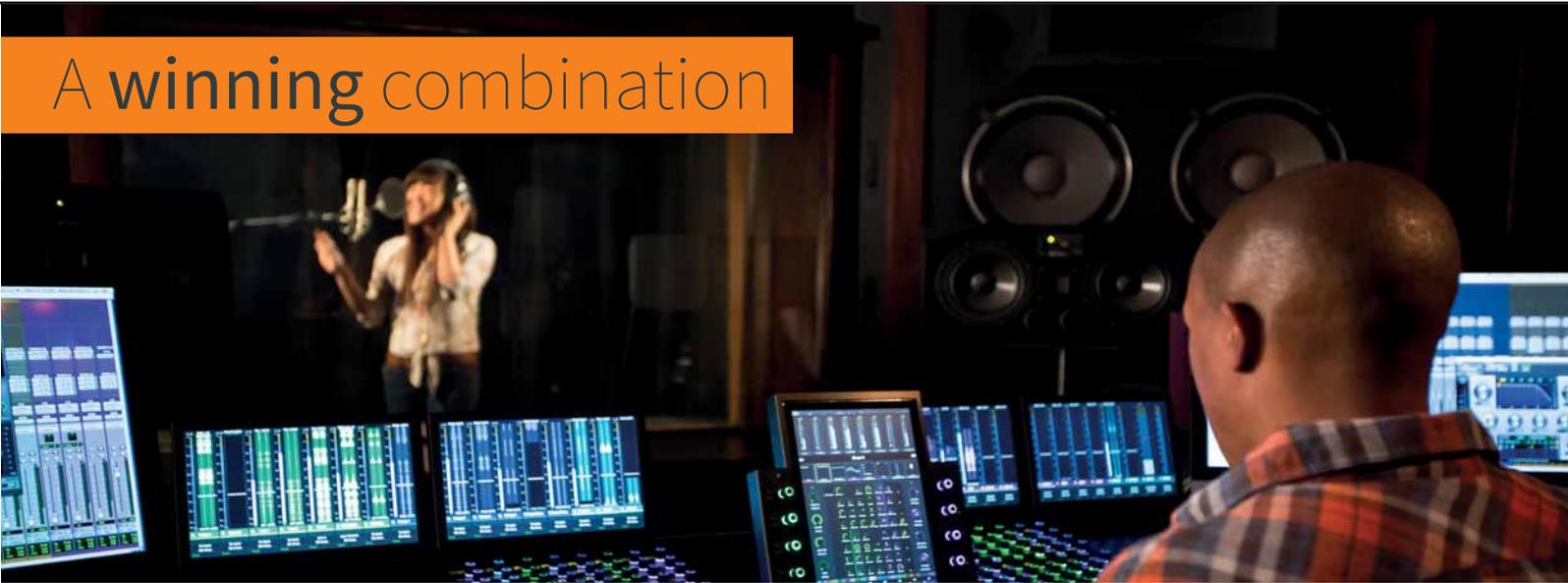
**The Final Result**

Since implementing the Monarch HDX into his workflow, Dr. Ralhan has found that "this content delivery mechanism is quite easy and user friendly, and adds no additional cost". Viewers simply need to log in and open a VLC player on their device of choice to watch the latest surgeries in HD.

**Expanding the Scope**

Dr. Ralhan intends to use Monarch HDX to live stream surgeries to surgeons around the world. He hopes to have his surgeries featured on websites such as ORlive.com with the goal of getting young surgeons to use this technique more frequently.

[www.matrox.com](http://www.matrox.com)



A winning combination

Avid Pro Tools | S6 and IHSE Draco tera | S6

The Draco tera | S6 KVM switch takes the Avid Pro Tools | S6 control surface to a greater level of performance and capability. Maximizing efficiency, simplifying workflow and increasing flexibility in professional sound studios.

Editors can instantly switch between Pro Tools stations with just a single touch, giving them complete control with no distraction. With no transmission delay or image degradation, they see the complete picture.



Deluxe Media, Hollywood

“ We can dynamically allocate any system to any room and move between mix stages with minimal setup time. It gives us great flexibility.

Doug Higgins, Director of Audio Services



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# ISE 2017 - All The Connections You Need

The world's largest AV and systems integration show is looking to get bigger and better...

You're invited to ISE 2017!  
Visit the ISE website and  
use the following code to  
register for the show,  
free of charge: **390125**



The 2016 edition of the Integrated Systems Europe exhibition placed it at the forefront of the world's international technology and business to business trade shows. For the first time in the Amsterdam-based exhibition's 13-year history, the show ran for four days. It drew in a record number of registered attendees (over 65,000) who flocked to see the products, services and solutions being presented by over 1,100 of the world's leading AV equipment manufacturers and service companies.

At the end of the show, ISE was confirmed as the world's largest AV and systems integration exhibition. With registered attendees coming from over 150 countries worldwide, many from outside Europe, ISE is now recognised as truly international in the role it plays in bringing together the world's leading AV technology developers, suppliers and end users.

For those who have not attended this event before, it's necessary to understand its roots. Integrated Systems Europe is co-owned by CEDIA and InfoComm International, the two leading trade associations for the respective residential and commercial installation business. Their objective, and that of the Integrated Systems Events teams that produces the show, is to provide the opportunity for unparalleled interaction between end users and vendors in an environment that facilitates business, learning, networking and fun in one of the world's most exciting cities!

## Integrated Systems Europe

**7-10 February 2017**  
**Amsterdam, RAI, NL**

Broadly, the show floor of ISE is divided up into a number of distinctive areas of technology. These are Digital Signage and Digital out of Home; Unified Communications; Smart Building; Pro Audio; Residential Solutions; Education Technology and Smart Building. The latter two areas are new for 2017 and reflect a growing focus from exhibitors and in these fast developing sectors.

For the 2017 edition of the show, taking place on 7-10 February at the award winning Amsterdam RAI conference and exhibition centre, enhancements are already being put in place to ensure that the next event is the biggest and best so far. The most obvious evidence of this will be the addition of new hall space (Hall 9) and a reorganisation of the show floor layout to make sure that it maximises the attendee experience.

Looking specifically across the 14 halls being used for ISE, Digital Signage has its own specified area on the show floor, in Hall 8, but there are relevant exhibitors in all 14 halls, making ISE the world's largest gathering of Digital Signage manufacturers and service suppliers.

ISE has become one of the key destinations in Europe for discovering the latest UC technologies and solutions. The show covers a range of UC technologies, including: integrated videoconferencing and telepresence systems, remote worker



and teleworker technologies, cloud services, networked interactive whiteboards, managed service providers, and collaboration system integrators ICT service providers.

Attendees will also find a huge number of manufacturers, suppliers and integrators that are concerned with Smart Building technologies. The areas of Smart Building covered includes: air conditioning, lighting and shutter control, security systems, heating, ventilation, monitoring, alarming, water control, energy management, metering, audio and household appliances.

ISE is a must-exhibit platform for companies concerned with the manufacture, distribution and integration of audio equipment. Visitors attend the show to stay at the cutting edge of professional audio and to experience how it's being integrated into a wide range of diverse applications from those used in live entertainment events to voice evacuation and security. The ISE show floor is home to more than 250 audio exhibitors. In fact, an entire Hall 7 is dedicated to this particular area of the AV and systems integration industry.

Residential Solutions has a designated area on the ISE show floor, in Halls 1 and 5. This area is also home to the ISE Residential Solutions Show Floor Theatre, which is another source of key industry insight and expertise. With over 200 relevant exhibitors focussing on Residential Solutions the case for attending ISE grows stronger every year.

In recent years, we've seen the rise of educational learning techniques like flipped learning, peer-to-peer, collaborative, blended learning and lecture capture. Technology designers and providers have recognised the rising importance that technology has in education and are reacting with products and solutions. This adds up to a general trend that education-technology's prominence at ISE is growing, which is why there will be a dedicated education hall in 2017.

ISE has always had solutions and products for education, with educational buying groups attending the show. The new hall, Hall 13, will consolidate these things and help them to grow further, while simultaneously helping attendees who

are focused on this sector to embark on a more coherent ISE journey.

In addition to a packed show floor, attendees at ISE 2017 will be able to experience a full range of bespoke events and dedicated personal development learning programmes. Typically, CEDIA and InfoComm International will provide dedicated training opportunities throughout the show, combining a mix of conferences, workshops and specialist training sessions. The duration of these events ranges from a short 30-minute InfoComm Flashtrack session to a full day's conference programme or workshop, ensuring that all attendee needs can be met.

The ISE Show Floor Theatres are based within the halls and offer free-to-attend presentations made by exhibitors and their customers. The Show Floor Theatres at ISE provide a unique opportunity for attendees to hear industry experts, consultants and manufacturers present the latest in project-based case studies, workflow solutions, technological innovations and business analysis in an intimate and innovative setting on the exhibition floor. Each presentation is 20 minutes long with a 10-minute Q&A. No pre booking is necessary.

For 2017, the five ISE Show Floor Theatres are: - the InfoComm International Commercial Solutions Theatre sponsored by Crestron; the CEDIA Residential Solutions Theatre; The ISE Audio Solutions Theatre; The InfoComm International Unified Communications Solutions Theatre sponsored by Crestron and the CEDIA Smart Building Solutions Theatre sponsored by KNX.

ISE 2017 will also allow visitors to attend and participate in a wide range of events which include: an industry awards ceremony; a conference that covers venue technology integration; 'off-site' tech tours to view state-of-the-art AV installations, a Drone Arena Theatre and a range of hosted buyer sessions.

An undoubted highlight of the show will be the Friday Closing Keynote speech. Details to be announced in early November.

[www.iseurope.org](http://www.iseurope.org)





MIDDLE EAST  
& AFRICA  
2016

6 - 8 December 2016  
Dubai World Trade Centre  
[www.infocomm-mea.com](http://www.infocomm-mea.com)

# AV COMMUNICATIONS IN A HYPERCONNECTED WORLD

## GEAR UP TO LEAD TODAY'S AV BUSINESS

When InfoComm Middle East & Africa 2016 unfolds at Dubai World Trade Centre this December, it will be the main headliner. Now running independently from GITEX, the show's standalone format promises deeper engagement with AudioVisual (AV) manufacturers and convenient access on the exhibition floor.

Enjoy face time with over 150 exhibiting companies from more than 20 countries. Strike up new partnerships with over 20 first-time exhibitors and see their solutions. Also, be the first to discover more than 35 innovations debuting in the Middle Eastern and African region.

This year's edition will highlight the AV and Information Communications Technology (ICT) convergence. Explore AV solutions that now ride on the network, and how they transform operations. At the accompanying Summit, you can keep abreast of industry trends and ensure your knowledge stay relevant.

**MANY NEW  
EXHIBITORS  
BRING NEW  
SURPRISES TO  
EXHIBITION**

HERE IS A PREVIEW OF  
SOME OF THEIR PRODUCTS  
AND SOLUTIONS.



### A LOW-COST 4K VIDEO OVER IP ENCODER

Antrica's **ANT-38000** encoder connects to an AV device, encodes any 4K or ultra-high-definition (UHD) display and streams it over the network. It supports HDMI 1.4, 3G HD-SDI output, Rapid Spanning Tree Protocol, MPEG-TS streaming, Real-time Messaging Protocol as well as local USB recording.



### THE VERSATILE VIDEO PROCESSOR FOR MULTIPLE APPLICATIONS

Magnimage's **LED-580F** is a high-performance processor that supports 4K x 2K input. The solution supports preview, hot backup, multi-machine cascade, customized output resolution seamless switch, schedule and many more functions.



### MODULAR VIDEO WALL CONTROLLERS FOR LARGE-SCALE AND MISSION-CRITICAL APPLICATIONS

DigiBird Technology's DB series of modular video wall controllers are six chassis models that support 12x8 to 152x144 HD inputs and HD displays. The system blends centralized and distributed processing architectures, allowing remote input sources to be connected to the DigiBird video wall controller via IP decoder cards and DigiBird encoders.



### HD VIDEO CONFERENCE CAMERA WITH FULL HD AND WIDE VIEWING ANGLE

The UV950A's advanced ISP processing algorithms allow for vivid images with high resolution and fantastic color rendering. This solution by Minrray Industry supports H.264/H.264+ encoding, ensuring the motion videos stay in crisp quality regardless of the bandwidth conditions.



### LED VIDEO WALLS CAPABLE OF A WIDE VIEWING ANGLE AND SHARP IMAGE QUALITY

Transtech LED's Discovery series of LED video walls is designed for applications with close viewing distance. Available in pitches measuring 1.2, 1.5, 1.9 and 3.8mm, the displays boast high gray scale and high refresh rate even at low brightness.

BE INSPIRED  
BY OVER 35  
NEW-TO-REGION  
SOLUTIONS

HERE IS A PREVIEW OF  
THE LINE-UP.



### PROFESSIONAL 4K SCALING AND SWITCHING MADE EASY

The Venus X1Pro is a compact 1U seamless switcher and scaler that features 4K input, output and distribution. A brainchild of RGBLink, the solution is ideal for signal distribution to LED senders or 2K video walls.



### FIRST HDMI 2.0 MATRIX SWITCHER WITH 4K SUPPORT

Lightware Visual Engineering's 8x8 HDMI 2.0 is the first HDMI2.0 standalone matrix switcher that supports uncompromised 4K resolution at 60Hz 4:4:4. Of a compact size, it is suitable for meeting rooms and command centers. The solution also supports 3D, Dolby TrueHD and DTS-HD Master Audio.



### SUPERIOR LASER VIDEO WALL FOR MISSION-CRITICAL OPERATIONS

Delta is introducing the Extra Slim Full HD Laser Video Wall. The 50-inch and 70-inch cubes offer HD (1920x1080) resolution, excellent standards in brightness uniformity ( $\geq 98\%$ ) wide viewing angle and true redundancy. The laser video wall has also received the IP6X certification.



### LED VIDEO WALLS DESIGNED FOR 24/7 OPERATIONS

Leyard's TWA/TW series features LED video walls in 1.2, 1.8 and 2.5mm pitches. This series supports the highest pixel density. Its 16:9 form factor is optimized for high-resolution standards, ease of installation and service as well as outstanding flatness and uniformity.



### BEST-OF-BREED CEILING AND TABLE ARRAY MICROPHONES FOR AV CONFERENCING

Shure MEA will bring in Microflex® Advance™ networked array microphones. The Microflex® Advance™ Ceiling Arrays provide configurable coverage for rooms of any size. On the other hand, the Table Arrays offer versatile and adjustable coverage in tabletop solutions.

## INFOCOMM MIDDLE EAST & AFRICA 2016 SUMMIT:

### YOUR COMPETITIVE EDGE IS HERE

Another staple of the show is the Summit, which comprises three mainstays: InfoComm University Seminars; Industry & Technology Forums; and Manufacturers' Presentations. Some sessions relevant to AV professionals like you include:

#### AV/IT SECURITY NEEDS ANALYSIS

Mr Zielie will touch on the increasing importance of AV installations within the enterprise IT network. Learn from him how to ensure any devices riding on the network will adhere to security features and configuration.

Paul Zielie, Manager of Enterprise Solutions,  
Harman Professionals

#### ESSENTIAL MATHS FOR AV PROJECTS

Calculations are an essential part of any AV project. Designed to help you hone your mathematics, the session will delve into visual and projection, Ohm's Law, audio, scales and conversions.

T S Gopalakrishnan, Staff Instructor,  
InfoComm International

There will also be presentations and panel discussions relevant to the IT, education, interior design, acoustics and more sectors. Full Summit programme and updates are available at [www.infocomm-mea.com](http://www.infocomm-mea.com).

InfoComm Middle East & Africa has also partnered with Integrated Systems Events and invidis consulting to present **Digital Signage Summit MENA @ InfoComm MEA 2016**. This Summit is timely, as the region is moving toward sophisticated digital experiences with a wow factor. Extraordinary showcases like the Discovery Channel Shark Week exhibit will invigorate your creativity. Learn about the trends affecting shopping mall signages, content and commercial concepts as well as Digital Out of Home networks. Panel discussions will also touch on the potential of programmatic buying. Be here and explore how digital signage can be tapped to supercharge your clients' businesses.

### INFOCOMM MIDDLE EAST & AFRICA 2016 FAST FACTS



MIDDLE EAST  
& AFRICA  
2016

6 - 8 December 2016  
Dubai World Trade Centre  
[www.infocomm-mea.com](http://www.infocomm-mea.com)

#### ADMISSION

- Admission is free for both Trade Exhibition and Summit.
- Strictly open to professional trade and business visitors above the age of 18.
- Register online before 1 December 2016 at <http://www.infocomm-mea.com/>, or onsite during show days from 9:30am to half hour before closing time.

Organized by:

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INTERNATIONAL

# AV COMMUNICATIONS IN A HYPERCONNECTED WORLD

## GEAR UP TO LEAD TODAY'S AV/IT BUSINESS

Herald the Internet of AudioVisual (AV) Things. It is the ability to control air conditioning and lighting all with a touch of a button, be it in the office or hotel room. Wireless cameras can stream footage of live events to anyone in the world; and, in the classroom, capture and send annotated images to students' smartphones or laptops. Microphones can be connected to speech-to-text processors and have speeches transcribed in real time. Indeed, the uses are highly adaptable to any business need.

This December, be inspired by cutting-edge professional AV and Information Communications Technology solutions at InfoComm Middle East & Africa. The world's most innovative technology purveyors will be here. See a multitude of solutions, from digital signage to augmented reality, unified communications to audio mixers. Witness the impact of the Internet of AV Things at the show.

### Za'abeel Hall 5 | Opening Hours

6 December 2016, Tuesday 10am – 6pm  
7 December 2016, Wednesday 10am – 6pm  
8 December 2016, Thursday 10am – 4pm

Organized by:

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# Reinforcing The Cause, With Intent and Content



*InfoComm India 2016, the fourth edition of Indian AV industry's annual exposition, in simple terms, reinforced the importance of the cause in a world that is both getting increasingly networked and complex as well. The three-day event – organized at the Bombay Exhibition Centre from 12-14 September – had all that it is known to, plus an extra glitz and blitz in the form of the inaugural Systems Integration India Awards (SIIA 2016). An SIA exclusive.*



**infoComm**

INDIA  
2016

## IFI 2016 - FACTS 'N' FIGURES

**Exhibitors:** Close to 200

**Countries:** 14

**New products/launches:** over 65

**New Entrants:** Over 25

**Tech Sessions:** 38

**Visitor attendance to Seminars:** 2128

**Total Footfalls to the event:** 7,036

**Growth over previous event:** 8 per cent

InfoComm India 2016 – the event's fourth outing in four years – while might have looked a continuation of the routine for many, was more of a reinforcement of what it has come to stand for, than of a regular exhibition of products and conductance of seminars. Bettering the platter for networking amongst technology thought leaders, developers, and user communities.

The event's passion for making itself look different from its previous editions interestingly began with some vintage stuff, as a couple of 1911 models of Ford cars were roped in (for bringing in the InfoComm International top brass) for the inaugural ceremony. The event also opened right at 10 am on day one, instead of the previous timing of 12.30 pm!

The event did score some significant notes of difference that have apparently registered a huge impact, and promises to scale still higher levels in the years to come:

- One- The launching of Women of InfoComm Network (WIN) event. It was first such event dedicated to promoting leadership and providing opportunities for advancement of Indian women in the Pro-AV and ICT industries. The WIN serves to provide an ecosystem geared to supporting and empowering women who are working in the technology and AV sectors
- Two- The launching of Systems Integration India Awards (SIIA). The inaugural edition of the ambitious initiative that seeks to recognize and reward outstanding contributions from SIs, and Consultants in Pro-AV proved to be exceedingly successful, setting itself a very tough task bar for the coming editions (*Read the News pages on the event*)
- As many as 11 Awards were presented including two Lifetime Achievement Awards- as part of the first-of-its-kind of Awards initiative in the domain of AV, globally
- Two manufacturers – for the first time in their product launch history – made InfoComm India as their global Launchpad. AV electronics majors Kramer and Extron made global launches of their newest solution from IFI 2016 Show Floor
- Bosch Security Systems, made an India-specific product launch, in a special décor

'AV communications in a hyper connected world' – the theme of the event this time – was there to see on the show floor in Hall 1 in the form of products from all segments of audio, video, networking, and displays, as well as programming of technical sessions.

"It is indeed a hyper connected world; with the kind of solutions that are flooding the market; the variety of gadgetry coming into use; and the diversity of applications taking all that," said a senior member working with the Smart Cities Mission, an urban renewal and retrofitting initiative launched by Government of India, as part of its ambitious programme of 100 Smart Cities.

While the very objective of the mission itself is to streamline the otherwise chaotic growth processes impacting urban living in the country, the multitude of solutions being offered to shape up Smart living is also adding up to a kind of ambiguity, the official maintained, 'it is platforms like this InfoComm that they hope to find some convincing solutions or modalities.'

"We visit various events to see what best we can find, and we do hope programmes like this help our cause a lot," he vouched.

Understandably, the Opening Ceremony and inaugural programme had all its sessions focussed on topics related to this 'hyper connect world.' Some of the important topics included those on 'Planning Sustainable Cities (from Singapore to India),' 'Evolving CyberThreat Landscape' and perspectives of technology adaptation in various government organs.



(L-R) Konftel's Tommy Edlund and Nipun Khanna

"This is our first time here, and we are pretty excited," said Tommy Edlund, Director of Global Sales, Konftel. "We have been able to meet some serious technology takers," added Nipun Khanna, Konftel's Regional Sales Manager-India & Middle East. It does appear a good show, it's been growing year on year, they felt.



(L-R) Kramer's Aviv Ron and Yair Levin

For Kramer Electronics' Vice President-Marketing Aviv Ron, whose visit to India happened after 25 long years, and therefore first time to InfoComm India, the event looked great. "It feels great coming here; good to see such a high enthusiasm among visitors," felt the Kramer top exec. "It's been a good show; we get to see some serious customers," felt Yair Levin, Kramer Asia Managing Director.

Given the considerations of security concerns, and AV industry's stakeholding in the Security domain, the event did have some very high profile visitors from Government of India, and other States. "Audio-Visual solutions play an indispensably critical role when it comes to security," said Satyawan Gautam, Addl. Deputy Commissioner of Police, Delhi Police.



Satyawan Gautam

"We have deployed a very comprehensive surveillance system in Delhi, and have been successful to a great extent," he said. "InfoComm show is a place we get to know what new solutions have come to market, and how we can improvise on what we have already done."



Rakesh Kumar Dahiya

For Rakesh Kumar Dahiya, Senior Executive (ITOS-M) Maruti Suzuki Limited, AV is a vital component of any business environment today. "We have deployed AV systems for multiple purposes- communications, business decision, and security, and we have been able to experience the impact," he emphasizes. "If we want to explore more, InfoComm event is one congregation where we expect to see them all together."

"As India embarks on its urbanization and modernisation path by building smart cities and harnessing digital technologies, we will have to continuously innovate to ensure that InfoComm India will remain relevant and can contribute to India's development," said Richard Tan, Executive Director, InfoCommAsia Pte Ltd. "To this end, we will continue to engage industry leaders, government planners and researchers to tap their knowledge and expertise; and use the insights gained to improve and enhance InfoComm India as an effective platform to facilitate economic development."

Overall, with a diverse array of cutting edge solutions on the show floor, and thought processes running through the technology sessions, the event has been like an 'Internet of Audio-Visual Things,' to take the words of an ICT functionary.



## From the Show Floor

Pretty much in line with its exhibition ingredients, the InfoComm India 2016 had a good mix of manufacturer-distributor turn-up showcasing a wide range of new, and / or highly popular ranges of solutions from audio, video, display, screens, security and networking gear.

### Audio:

The audio segment majorly comprised product displays from beyerdynamic, Biamp, Bosch Security Systems, ClearOne, Digibird, Harman, Konftel, PowerSoft, Sonodyne, Sound Control Technologies, Sound Tube, Taiden, Toa, TW Audio, who had come directly to the event, besides those who have made their presence felt through their distribution partners.

**beyerdynamic** – expanding its Quinta wireless conference system portfolio presented a new meeting solution- the Quinta TB wireless boundary microphone. The Quinta TB wireless boundary microphones optimise the often undervalued role of voice transmission during video conferences.

Different operating modes can be set using the system software- in microphone mode the Quinta CU acts as a multi-

channel receiver, in which case a maximum of four Quinta TBs (depending on the size of the room and the number of participants) can be operated simultaneously. In this mode, the software can be used to connect up to 9 central control units. In conference mode the Quinta TB acts as a delegate microphone unit and can be used for any traditional conference application.

The Quinta Triple Band technology ensures uninterrupted transmission. The system operates with highest HD audio quality and 128 bit encryption and a 24-bit PIN code guarantee protection against eavesdropping. The system is distinguished by its speedy recharging time and a long operating time of at least 14 hours.

**Biamp Systems** showcased its new Devio collaboration system. Created specifically for huddle rooms and small gathering spaces, the versatile solution makes collaboration fast, simple, and intuitive. With Devio's easy-to-connect device (Devio CR-1) and advanced beam-forming microphone (Devio DTM-1), meetings are equipped with high-quality laptop-based audio and video conferencing for enhanced user engagement and productivity.

With as little as a single USB 3.0 connection to a Windows or Mac OS X-based computer, Devio brings high-end audio input and output and easy connectivity to in-room technology like displays, web cameras, and more. Once connected to the CR-1, end users can share content locally and initiate their preferred soft codec from their computer – no additional software applications or devices to learn how to use.

### Noise Reduction to further optimize meeting audio:

Engineered to fit into any space and minimize clutter, the CR-1's mounting clip enables it to be installed on top of or under the room's work surface, or even mounted on a wall behind a display. The DTM-1 can also be mounted to the table, minimizing cables and securing the microphone's position in the room.



**Bosch Security Systems**, besides demonstrating its popular product range with new upgrades, highlighted its product showcase with an India-specific product launch. This launch included Plena- all-in-one amplifiers; Plena Mixer Amplifiers with news features; Premium ceiling speakers, and ABS Horns.

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According to the company, the products are specifically designed for local market requirements, keeping the affordability factor in view.

These apart, the company also demonstrated its upgraded systems from CCS 1000 D Digital Discussion System, as well as the Dicentis Wireless Conferencing System.

The CCS 1000 D Digital Discussion System is a compact, versatile and highly flexible system ideal for small to medium-sized meeting areas – town halls, local business centers and courtrooms – as well as for mobile installations used by rental companies.

The system's extension unit provides extra power, allowing venue owners, rental companies, building managers and participants to expand the system to up to 245 devices. It can be easily connected to Bosch's Digital Discussion System and includes a built-in splitter for easy installation at any point in the system. The CCS 1000 D Extension Unit offers three power supply outputs and is protected against short circuits. Multiple users can connect to the central unit to control a meeting or to view the system's status.

The company has also improvised its popular DICENTIS Wireless Conference System with new software V1.3, basing on a Bosch Smart Wireless Management Software. The new upgrade ensures interference-free and highly-flexible wireless conferencing using standard Wi-Fi technology. This technology also frees users from having to search for the best Wi-Fi channel by automatically switching to the strongest channel without interruption.

The newly released software also offers rental companies or council technicians more comfort and peace of mind when configuring the DICENTIS Wireless Conference System. The system is even more stable and more robust, leading to less acoustic artifacts and improved channel switching.



**ClearOne** launched its new, feature-rich, compact two-channel DIALOG 20 wireless microphone system- that increases the breadth of its wireless microphone product line. DIALOG 20 targets uses in which only a few wireless mics are required, e.g., classrooms, presentation and training venues, huddle and other spaces.

The system comprises a Receiver with built-in antenna, all types of Transmitters – Boundary tabletop, Gooseneck podium, Handheld, Beltpack and Docking Station.

"The small, compact form factor is one, while its incredible package of features the other," explains Griffith Zacharia, ClearOne's Regional Manager for India, Middle East and Africa.

"The system delivers multiple options and combines ease of setup, use, adaptability, and security all in one affordable package."

Using robust adaptive frequency-hopping spread spectrum technology within the 2.4 GHz unlicensed spectrum, DIALOG 20 has several advantages over fixed frequency transmission. First, DIALOG 20 is resistant to narrowband interference because it switches frequency using a pseudo-random sequence. Second, this sequencing makes the frequency-hopping signals very difficult to intercept. Third, the use of 128 bit AES encryption on each hopped frequency further secures the wireless audio transmission.

The unlicensed spectrum allows DIALOG 20 users to employ the same model with the same frequency plan worldwide, without being concerned about regulatory frequency restrictions or limitations by locale or country.

DIALOG 20 comes with four transmitter options: handheld, belt-pack, gooseneck podium, and tabletop version with programmable buttons.

The receivers may be mounted on a rack shelf, a wall or ceiling. Equipped with an integrated antenna, DIALOG 20 offers an option to extend the antennae up to 20 feet away. The receivers can be configured and monitored using a Windows software application. A Mac OS version is coming soon.

**HARMAN Professional** showcased its expanded JBL brand's Constant Beamwidth Technology (CBT) column array line with the introduction of the CBT1000 loudspeaker. The passive column array has been designed to offer greater output, deeper bass response (below 40 Hz) and more advanced adjustability of the coverage pattern than previous models.

The CBT1000 full-range cabinet and CBT1000E extension cabinet can provide adjustable vertical pattern selections for aligning the coverage to the geometry of a room. Independent selection of four 'pattern up' coverage angles and four 'pattern down' coverage angles combine to provide 16 different vertical coverage combinations.

The CBT1000 comprises of twelve 6½-in high-excursion, low frequency drivers and 24 high-power tweeters to deliver 130dB continuous output with 3000W of power handling for high output applications.



Swedish audio solutions provider **Konftel** highlighted its products with its Ego-a compact and portable personal speaker phone that fits easily inside a briefcase. Despite its size, the Ego delivers crystal-clear sound thanks to Konftel's unique OmniSound audio



We've redefined pro audio (again).

NEW!

**ClearOne's CONVERGE® Pro 2**

- New algorithms reinvent audio DSP
- New architecture extends flexibility and scalability
- New software creates an unmatched user experience

NEW!

**ClearOne's Beamforming Microphone Array 2**

- New 2<sup>nd</sup>-gen builds on 3+ years of 1st-generation installations
- Powered by most advanced, new AEC and Noise Cancellation DSP
- New single-cable, flexible mounting: ceiling, table, and wall

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Even smaller venues deserve professional audio.

NEW!

**ClearOne's DIALOG® 20 Two-Channel Wireless Mics**

- Compact receiver with multiple mounting options
- Handheld, Boundary, Gooseneck & Beltpack Transmitters
- Scales to fit smaller spaces & applications
- Natively connects with CONVERGE® Pro 2 mixers

WIRELESS MICS | [CLEARONE.COM/NOWIRES](http://CLEARONE.COM/NOWIRES)



Video conferencing doesn't even scratch the surface.

**ClearOne's COLLABORATE® Pro 900**

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- In-room wireless presentation
- Recording and live streaming
- 12x PTZ camera
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MEDIA COLLABORATION | [CLEARONE.COM/COLLABORATE](http://CLEARONE.COM/COLLABORATE)



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- Multiple encoder & decoder models
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VIDEO WALLS | [CLEARONE.COM/PANORAMA](http://CLEARONE.COM/PANORAMA)

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Contact number : 02240074085

technology. Ideal for a meeting with a couple of colleagues in one of smaller conference rooms, or in a hotel room while one is away from the office, the system is also an easy to use device as it works seamlessly with Skype for Business, Cisco Jabber, Avaya Communicator and other conferencing tools. It connects easily to a PC via a USB port or to a tablet or smartphone via Bluetooth. Moreover, the Konftel Ego has support for ultra-fast Bluetooth pairing through NFC (near-field communication) and HD quality calls. With Bluetooth A2DP (advanced audio distribution profile) the user can play favourite music with superior audio performance when the meeting is finished. The clear and attractive LCD display screen lets the user see at a glance which feature is enabled. This is also shown by the LEDs which shine downwards in different colours. The Konftel Ego has a headset port, and the built-in battery gives you the option of completely cordless use.

**Powersoft** brought to show something distinct, a very definition of something revolutionary, opening possibilities that were previously inconceivable- the Deva loudspeaker. Limited only by the imagination, it is an ultra-nimble, technologically advanced loudspeaker tool that is set to transform the way organizations communicate with peers and customers. As an all-in-one device complete with three-way broadcast messaging, infotainment, entertainment and surveillance capabilities, Deva integrates multiple communication solutions into a single, elegant form factor.

Before Deva, designers had to rely on so many vendors in order to offer many features to high-end infrastructures. Now Deva seeks to change history. In a single device that weighs just 10kg, top-class services are at the clientele disposal. In depth, one may entertain selective audience with background music, keep them informed through possible announcements (advertisement, courtesy, emergency) and at the same time lastly protect them through recording high-quality video, capturing photographs and providing security lighting when it is needed.

Other major exhibitors included Renkuz Heinz; Toa; and Taiden.

The **audio segment** had some of the biggest distribution names coming from the Pro-Audio industry such as Acoustic Arts who showcased latest/popular ranges from Cloud Electronics, Community Professional, Televic, and TW Audio, besides others; Ahuja Radio; Alphatec who showcased the Music Group solutions; Ansata who brought to show Avid, D&B Technologies, DPA microphones; Rivera International who showcased Aimline Audio, and Atlasied, and Soundtube solutions; and SunInfonet who demonstrated latest ranges from Shure.

## Video/Displays

Major video/display solutions exhibitors included BenQ, Christie, Dataton, Dell, Delta, dnp, Hitachi, Lumens Digital Optics, Panasonic, and Streme VideoWall, besides a few from the distribution segment.

Taiwanese projection leader **BenQ's** brought to show its latest ultra-short-throw, next-gen projector for learning applications – the MW883UST – that combines high brightness, stunning WXGA resolution for crisp image quality, simple installation set-up, and interactive capabilities that change the way the users are engaged. The 3000 Lumens projector beams out a 10,000:1 contrast ratio ensuing clear image for a rich visual experience even under high ambient light conditions. With an exclusive PointWrite interactive module option, the projector allows teachers and students to interact easily with and annotate course material to create an engaging learning environment using pens or finger-touch technology. Additionally, BenQ QWrite interactive software allows teachers to capture and save lessons with ease so that students get the exact notes as they appear on the board. Wireless connectivity and content sharing is enabled via an optional QCast dongle. Featuring Blue-ray 3D capabilities, dual HDMI ports (one being MHL-compatible), a USB reader for PC-less presentations and document saving, and powerful 20-W audio, the projector becomes a complete content hub. With the shortest throw ratio on the market, the MW883UST can be placed just a few inches from the projection screen — casting diagonal images up to 140 inches.

**Mounting solutions leader Chief** brought to InfoComm India show floor its popular ConnexSys Video Wall Mounting System, that was actually developed by using installer feedback to create a simple-to-install system, improving the video wall experience in the areas of speed, alignment, serviceability and rigidity.

**Christie Digital Systems**, continuing from its last year's multi-zone display methodology, created what it called the 360-degree visual experience by roping in its latest single-chip, and 3-chip DLP projectors, as well as the LED, camera capture, and show control technology. Leading the pack were the multi-award winning Christie Boxer 4K30 3-chip projectors; HS Series boasting world's brightest one-chip DLP, laser phosphor illumination, and the new Christie AP Series 3LCD projector, which provides high quality performance in a compact, easy-to-use and value-added package. **This is the first time that the Christie HS and AP Series projectors are showcased in India.**

The seven-zone display of Christie booth demo included:

- Zone-1: Christie Boxer with AirScan IR-Laser Multi-Touch Sensor for rental, and interactive multimedia display/presentation solutions
- Zone-2: Christie Roadster HD20K-J with Real-time ID Tagging for captivating interactive floor projections
- Zone- 3: House Mapping with Christie HS Series for an enlivening miniature house model using one-chip DLP laser phosphor projector, and Pandoras Box
- Zone- 4: Dome Projection with Christie HD14K-M for creating wonderful projection mapping on uneven surfaces
- Zone- 5: Virtual Reality Experience with Christie Captiva and Christie 360 for creating a fascinating virtual walkthrough of various environments created by Christie 360, seen through Oculus Rift virtual reality glasses



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\*Source: Futuresource Consulting. \*Source: Cyber Media Research - India Half Yearly Digital Projector Market Review, 1H FY 2015-16.

†Compared against similarly-priced leading 1-chip DLP® business and education projectors based on NPD data from July 2011 through June 2012 (available at [www.npd.com](http://www.npd.com)). Colour brightness (colour light output) measured in accordance with IDMS 15.4. Actual colour brightness will vary depending on actual usage conditions. 3LCD® is a registered trademark of Seiko Epson Corporation. DLP® is a registered trademark of Texas Instruments, Inc. and its use here does not imply any affiliation with or endorsement by them.



- Zone- 6: Control Room Display Solutions for demoing seamless access and control of audio-visual data regardless of the user's location, using Christie Phoenix and Christie FHD552-X LCD panels
- Zone- 7: Holographic Display with Christie FHD552-X for innovative display concepts for a mesmerizing visual experience

In addition to the seven themed zones, a display zone featured a comprehensive range of 3LCD and 1DLP solutions including the Christie AP Series, D Series, G Series, GS Series, H Series, HS Series and Q Series. Further, the booth also had the award-winning Christie MicroTiles installed behind a large Christie logo cutout at the main reception counter.

Coming for the first time, **Dell Professional** presented its full HD 3000 lumens projector 1850 for a brilliant, Full HD clarity image even in limited lighting situations. The 1850 system is set to dazzle any situation from classrooms, training rooms and conference rooms to cricket matches with razor sharp images. Equipped with HDMI, VGA and a powered USB port, the 1850 allows users to connect to multiple platforms with ease. Making it more endearing to customers is the Dell's two-year advance exchange warranty- which means in the event of problem situation, Dell will send a new projector to site before the erroneous one is returned.

Display solutions leader **Delta** unveiled its new display solutions designed to increase productivity for control rooms, indoor/outdoor displays, and collaborative applications. The solutions showcased included Delta's extra slim 4K laser DLP video wall with 450mm of depth boasting world's highest brightness compared to standard LED Cubes. The displays offer Full HD resolution and contrast ratios of up to 1,000,000:1 to deliver magnificent image quality. Delta also demonstrated its Fine Pitch Series and IE Series that offer black SMD technology to enable a seamless, high-resolution, high-contrast display solution for interior areas with short viewing distances. The 1.2mm LED and 3mm LED delivers excellent image and video quality in any indoor setting. Its compact and lightweight design guarantees quick installation and ease-of-maintenance.

Also on demo was Delta's ultra-narrow bezel LCD video wall solutions which offer Full HD resolution with exceptional

brightness of 700 nits (55-inch cubes) and a minimum 3.5mm combined bezel width. The 4K LCD Monitors deliver visual excitement to indoor environments. Available in sizes 70" (Full HD), 84" and 98," these 4K and Full HD LCD Monitors find application for retail, airports, railway stations, events and other public venues.

Danish screen major **dnp** brought to launch its new cabinet for the dnp LaserPanel. The elegant projector housing solution, with just a click on a button, opens and slides the projector into position mode. dnp LaserPanels offer large high-contrast images at a fraction of the cost of an LED flat screen. They meet the users' demands for large easy-to-install display sizes while remaining affordable for companies, educational institutions and homeowners. Based on optical screen technology, these LaserPanels are powered by a laser projector mounted over the screen that shoots down from a steep angle. The display is mounted on the wall like LED flat screens.

**EZTalks Technology Co Ltd**, a professional video conference service provider with more than six years' experience on video communication technology, exhibited for the first time in India. Specialising in video conferencing solutions with both hardware and software options, the company used India as a platform to debut its new all-in-one Video Conferencing device EZTalks Onion. "We are excited to showcase our newest all-in-one video conferencing equipment -- 'EZTalks Onion' on exhibition site. Professional video communication technology should benefit all ordinary people's work as long as they want it," said Jack Zhang, EZTalk's Global Marketing Director. He further added, "And it should be as easy and affordable as personal digital products instead of a huge investment of complicated devices and IT support." EZTalks Onion is created to lower the threshold of professional video communication system, both software and hardware, in the way of cutting down price and reducing setting procedures.

LCD projection major **Epson** came out with its new EB-L1000 series laser projector. Designed for large venues, the EB-L1000 series projectors are the world's first to integrate inorganic 3LCD panels with an inorganic phosphor wheel to achieve superior light and heat resistance for spectacular image quality and reliability.

The EB-L1000 series projectors' new lamp-free laser light source with 3LCD technology, is capable of reproducing images with outstanding levels of color brightness for extremely long periods, delivering up to 20,000 hours of maintenance-free use. The projectors come with nine optional lenses including the world's first zero-offset ultra-short throw lens, the ELPLX01, providing maximum flexibility and enabling the projectors to be installed in the shortest throw distance where available space is at a premium. Designed to operate 24/7, the EB-L1000 series are ideal for applications requiring continuous projection including command centers, storefronts, museums, digital signage and more.

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**Hitachi India Pvt Ltd** showcased six new projection models, including three with HDBaseT compatibility, in their mid and high-end projector line up. The new models include- CP-X5500; CP-X555; CP-WX5500; CP-WX5505; CP-WU5500, and CP-WU5505.

The models CP-X5555; CP-WX5505; and CP-WU5505 come with HDBaseT compatibility, as per the company communiqué. Aimed at medium, and large venue applications, the new 55XX series bring to play 3LCD technology, with high resolution and high brightness at a competitive price. These models also come with a host of features that are marked by Hitachi's first HDMI-Out Solution; HDMI x 2, and HDBaseT. They can be installed with vertical and horizontal lens shift, picture shift as well as geometric correction. For advanced and impressive installations, they come with edge blending and warping capabilities as well as a hard-wired remote in and out connection that is capable of controlling up to 7 projectors with a single remote. Picture-by-Picture and Picture-in-Picture are also added to enhance professional presentation.

Hitachi is also introduced their 8000+ Series 3LD projectors as a value for money proposition to high-end customers. These models include CP-X8800; CP-WX8650; CP-WX8750; CP-WU8600; and CP-WU8700.

Another Japanese visual solutions leader **Panasonic** brought to show its LED Video Monitors. Called the DM Series, these monitors come in six different sizes of 32", 43", 49", 55", 60" and 65" diagonal, and feature 3 HDMI inputs, 2 USB inputs, a Media Player, and, of course, are all full HD resolution. Also on demo was the DSM Series which offer a 43" and 49" screen. The DSM Series features Built-in Wireless LAN, Double USB Sharing, Display Mirroring amongst other features.

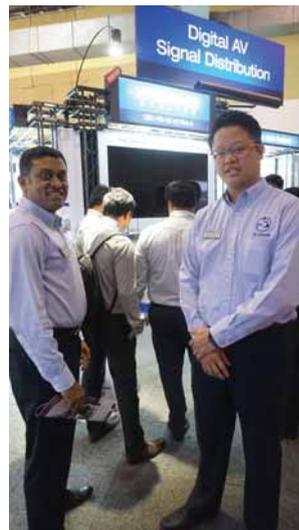
Digital signage solutions provider **Tripleplay** brought to show its TripleSign Digital Signage system that promises a 40 per cent cost saving against competitor products in implementations of 10 screens or more. The TripleSign is a software based end-to-end thin client server solution for providing rich media, digital signage content distributed to single or multiple screens. A truly flexible and simple to use package, TripleSign Digital Signage finds itself at home in any environment, be it a sports arena, head office, university, shop floor, bank, hospital or hotel. Utilising industry standard, IP set-top boxes (STB), linux based PC players or the Samsung Smart Signage Platform (SSP) the TripleSign Digital Signage software solution will work with any screen or display, and with no moving parts it creates a more reliable and robust solution, consuming little power.

## Control/networking/presentation / automation

Control automation major **Crestron** showcased their low-cost presentation solution with new low-cost HDMI switcher and extender pair aimed at meeting the needs of small meeting rooms, huddle rooms, and classrooms. Intelligently

designed and Crestron-engineered to the highest digital media standards, the HD Scaling Presentation Switcher and Extender (HD-MD-400-C-E) has all the features system integrators want, at a breakthrough price.

The Crestron HD-MD-400-C-E delivers an incredibly simple and cost-effective multimedia presentation solution for classrooms and meeting spaces. It allows a laptop or mobile device to be connected to one of three inputs at a table or podium, and routes the signal to a display or projector up to 230 feet (70 meters) away. An additional AV source can be connected at the display device location or through an optional wall plate. Fully automatic operation detects when a source is connected or disconnected at any input and turns the display on and off, alleviating the need for any control panels or remotes.



AV networking gear major **Extron** made a record of sorts at the InfoComm India 2016 show floor, when it made a global launch of what it called the world's first HDMI to HDMI 4K scaler. The DSC HD-HD 4K Plus A, and DSC HD-HD Plus A xi, are the industry's first scalars capable of converting between HDMI resolutions up to 4K/60 with full 4:4:4 signal processing. They feature HDMI 2.0, HDCP 2.2-compliant connections that support data rates up to 18 Gbps, and incorporate the Extron-exclusive Vector 4K scaling engine, specifically engineered

for critical-quality 4K applications. Both models support 4K/60 4:4:4 on a single connection, with the DSC HD-HD 4K PLUS A xi also supporting 4K/60 signals as columns using two connections. The scalars feature many integrator-friendly features, such as on-screen display, stereo audio embedding and de-embedding, internal test patterns, and the ability to display custom images and logos for on-screen corporate branding and messaging.

**Kramer Electronics** launched its new VIA wireless presentation solution. The VIA GO, as the solution is called, gives iOS, Android, Chromebook, PC, and Mac users instant wireless connectivity with its advanced presentation technology. VIA GO features content streaming for crystal clear mirrored images and stunning video playback. The solution includes iOS and Android mirroring. With industry-leading 1024-bit encryption and built-in Wi-Fi, VIA GO can be used securely on the internal network.

With any laptop or mobile device, VIA Wireless Presentation and Collaboration Solutions let meeting participants share any size file, edit documents together in real time, turn the main display into a digital whiteboard, chat with other users, and stream full uninterrupted HD video (up to 1080p60).

**AV gear major Lightware Engineering** brought to show floor a quick and easy to set-up and use solution for huddle room video-conferencing. The company demonstrated its UMX-TPS-TX140 transmitter and HDMI-TPS-RX95 receiver that seamlessly allow for VGA, DVI and HDMI signals to be transmitted with the image shown in full HD LED display.

Having video-conferencing in these small rooms is very comfortable and efficient as it allows users simultaneously cooperate and share content with one another to execute collaborative work - all they need is a display installed, HDMI or VGA ports in the room, a camera for videoconferencing and availability to go wireless with their smart interfaces. With HDMI/DVI/VGA ports, it's easy to connect laptops to displays and easily let them share content.



**Distribution major Green Sources**, besides exhibiting Chief's mounting solutions, also demonstrated Collaborate Room Pro- a complete video collaboration system with built-in features far beyond those of competing room systems at an affordable price point. Conference with up to nine locations simultaneously and take advantage of built-in recording and streaming- all without an add-on server. No infrastructure is required. This complete system contributes to workplace efficiency with its multi-purpose design and easy set-up use.

Green Sources also demonstrated the efficient screen mounting solution from Milestone- the FastFold NXT.

Overall, the InfoComm India 2016 apparently reinforced its focus and direction on Indian AV industry. **The 2017 edition of the event would be organized from 26-28 September at the same premises**, and probably with more difference and vibrancy offerings.

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Smart City Conference

# Clocking in Network Media Transport Protocols

By Martin Bonsoir



Timing, as they say, is everything. Musicians in an orchestra must keep to the same beat if they are to play a symphony in the way it was intended (avant-garde music lovers, I'm sorry). Synchronised swimmers must keep coordination at all times in order to avoid accidentally kicking their colleague. And traffic lights must keep some sort of coherence if they are to allow traffic to flow at an intersection.

Synchronisation is not just required to prevent a musician from playing at the wrong moment or to prevent a city from becoming gridlocked. It's also critical in many other areas of our daily lives, which would cease to function if left bereft of this harmonisation.

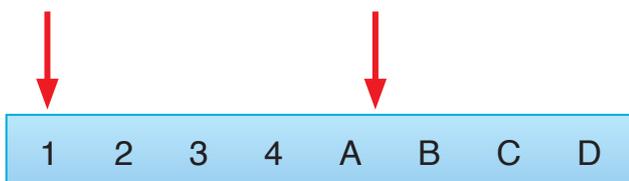
How synchronisation is achieved depends on the technologies involved. In the pro-AV world, we are perhaps most familiar with SMPTE time code, which is used in the film and video production industries. Or word clock, a staple of digital audio for the past years. I also suspect that most people would have come across NTP (Network Time Protocol).

The examples above may all sound a bit dated, but synchronisation is vital in new technologies too. Improvements in manufacturing techniques grant us ever cheaper and more precise clocks, yet even if they are perfectly synchronised, at some point they will inexorably start to drift. Unlike our social ability to deal with a perennially late dinner guest, in the world of digital media clock deviation it's more than a big deal. It's a disaster.

Devices sending each other digital data must be able to decide and, at a minimum, agree when the "digital word" begins.

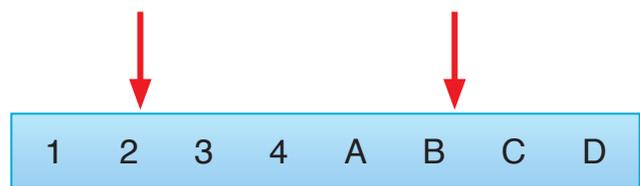
Consider the example below. Let's imagine a device needs to send the message "1 2 3 4 A B C D". It sends the first digit when its clock strikes the 01:00 mark, sending one character every second. Four seconds later, it would have arrived to the A, culminating with the D when the clock marks 01:07.

Time Stamp 01:00      Time Stamp 01:04



However, what if the clock at the receiving device was one second off? A one second deviation in time would provide the receiving device with a different message and a very different result than expected. The initial "1 2 3 4 A B C D" will be read as initial "2 3 4 A B C D". And that's without taking into consideration the clocks may drift even further during transmission.

Time Stamp 01:00      Time Stamp 01:04



While the example above is an oversimplification, it outlines how critical it is for devices in a media network to remain in sync. Having established this, let's explore how devices in a CobraNet, Dante and AVB networks synchronise.

CobraNet, the oldest of the protocols we are covering, defines a method for connected devices to elect a Conductor. The Conductor is then entrusted to do a number of tasks; one of which is to emit the Beat packet 750 times per second, to which all devices in the network synchronize their clocks.

In a simplistic way, the method is very much akin to that of a drummer in a dragon boat: keeping a beat everybody else hears and synchronises to. Effective? Well, the method has been going strong for more than 20 years, and it still works. Efficient and precise? That's another matter. This method requires a considerable amount of traffic (750 packets per second is a healthy dose of data), and the limitations inherent in the method restrict the precision of the synchronisation.

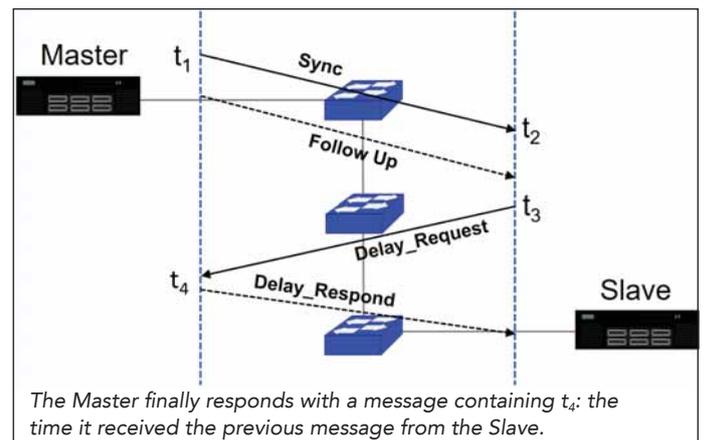
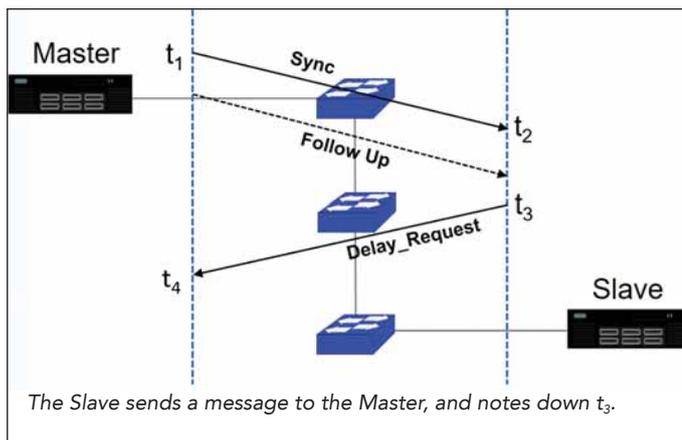
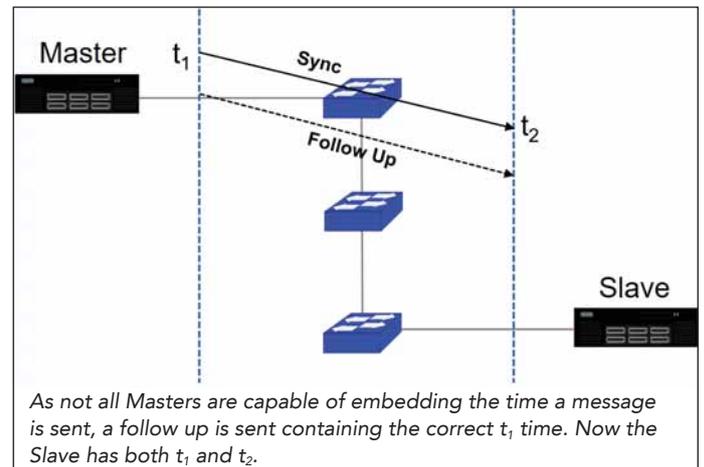
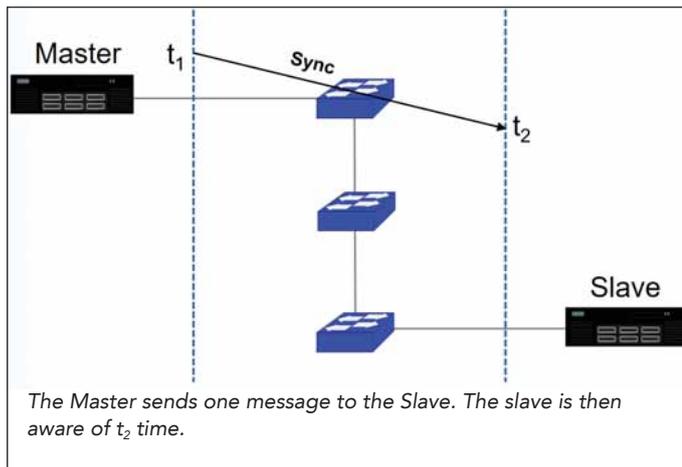
Benefitting from being a newer technology, Dante entrusts an IEEE standard to provide synchronisation services. IEEE 1588-2002, known as Precision Time Protocol (PTP)\* for time synchronization, uses a rather clever mechanism to ensure devices are able to keep all their clock synchronised. Once devices are connected in a network, they undergo a selection mechanism to elect a Master. Once the Master has been established, the following process occurs:

The Slave now knows  $t_1$ ,  $t_2$ ,  $t_3$ , and  $t_4$ , and can use that information to calculate the clock offset as follows:

$$t_2 - t_1 = \text{delay} + \text{offset}$$

$$t_4 - t_3 = \text{delay} - \text{offset}$$

Offset



This rather elegant process, which can be repeated up to once-per-second, permits devices on the network to enjoy synchronisation using far fewer messages than before and with great precision.

But the good folks at IEEE are not ones to rest on their laurels and the relentless advances in technology required that the protocol be improved. Thus, IEEE 1588-2008 was introduced as a revision to the original standard (although not backwards compatible), boasting several features designed to improve its robustness, accuracy, and precision. The revised version of the PTP protocol is creatively known as PTPv2.

PTPv2 builds on the processes described above to determine the offset between clocks (although the process can be done up to 10 times a second if required for greater precision), and introduces configuration options, conformance specifications, support for IPv6, better performance on slower networks and enhanced mechanism to select clock master, amongst other things. One of the various ideas introduced by PTPv2 is that "Bridges" (Ethernet switches most of the time in the world of AV) participate in the synchronisation process, rather than just the end points. This means the entirety of the network is time-aware, allowing for greater accuracy and faster convergence, ideal for reliable transmission of audio and video.

And I suspect you are guessing, AVB/TSN synchronisation comes courtesy of IEEE 1588-2008 (PTPv2), or more precisely, the 802.1AS standard (a profile of PTPv2 intended to be specific to IEEE 802 networks) otherwise known as Ethernet or Wi-Fi.

This explains, amongst other things, why 801.1AS support is required on network switches in AVB/TSN networks. These are time sensitive networks that allow for the highest level of reliability in the transmission of media with very tight synchronisation. And as we learnt above, there's never enough synchronisation.

The best part of it all, is that we're not done yet. Stay tuned for IEEE1588 version 3. Coming to your audio-visual world in the near(ish) future.

\* The full, official, and rather grandiose name of the publication is "Standard for a Precision Clock Synchronization Protocol for Networked Measurement and Control Systems". Not bad, not bad at all.

*Martin Bonsoir is the EMEA Applications Engineering Manager, overseeing operations in Europe, Middle East, India, and Africa. With more than 23 years of pro-audio experience, Martin's passion for people and all things audio continue to add richness and insight to his work everyday.*

# Tailoring Control Rooms To Human (A)Gain

- Vivekanand



*Control Room – quite arguably – has become indispensable in most applications, across the domains today. Particularly, in segments like corporate, transport, defence, SmartCity, and, to a good extent in Government (security), it comes out more critically manifesting. The more the solutions evolve, the more may be the intrigue with it, unless mapped methodically. Here is one perspective. Read on:*

**Psychological studies show that interpretation and retention are reduced during periods of stress, which leads to overload and operator error.**

Since the dawn of the digital age, industry has been focused on improving the Human-Machine Interface (HMI) associated with the developing digital technology. The primary aim was to optimize the machines by allowing humans to interact with them more efficiently. What has not been a primary focus during the digital age evolution is the impact this technology has caused on Human Factors (HF). In my travels, I often hear the terms Human Factors and Human-Machine Interface used interchangeably. In actuality these terms are far from synonymous. HMI refers to the Human interaction with the display, computer, and software that serve as the human's interface to applications present on the computer system. The industry focus on HMI and evolution since the dawn of the digital age has created systems highly optimized for the human interaction.



Over the years the control room operator's tasks have become increasingly complex. The number of sources and data inputs has grown massively, while regulations, industry standards, and individual companies, operating procedures strictly control how the plethora of operator applications are integrated. In this I will concentrate more on some of the underlying technology issues that have a significant impact on operator efficiency. Resolving these issues can boost operator efficiency as well as job satisfaction.

At one end of the spectrum, we find operator workspaces composed of numerous applications, all running on stand-alone systems. Monitoring and control are conducted via separate operator stations, each with a dedicated screen, mouse and keyboard. Function key and HMI (Human Machine Interface) conventions also vary from application to application. For reporting tasks, operators must gather information from multiple systems

– which is time-consuming, slowing down operator response times, and requiring the operator to remember information from several different systems (because drag & drop is not available across these disparate systems). Sounds like a recipe for disaster? It is ... tried and tested.

Integrated systems, on the other hand, provide many advantages and opportunities. At the positive end of the spectrum, we have control rooms in which all necessary process control and safety information is presented by a single integrated system allow information from different sources to be made available to other support applications (such as Information Management Systems, shift logs, production monitoring, etc.), so that reports, key performance indicators and other data can be easily shared. Such a system enables reports to be generated and distributed automatically, relieving the operator of this task. The main drawback of such a solution, however, is the cost, time and effort of implementation. But there might be a more practical way – the sweet spot – to achieving higher operator efficiency: some level of desktop integration that is more cost- and time-effective than full system integration and that does not risk invalidating application warranties and maintenance agreements.

At the negative end of the spectrum, we find control rooms with a lot of separate system hardware components assembled in an ad hoc, haphazard way. The result is a confused layout and cluttered workstations, with no overall structure, requiring

operators to move both physically and mentally between systems. When operators must move from one system to another to complete a task, the chance of human error increases, and the movement might cause a delay in noticing an event. This can slow down operator response time and leaves little chance for an early recovery. KVM (keyboard, video and mouse) switches can reduce the number of keyboard and mouse sets, but they require the operator to manually select which system the KVM is connected to. Also, KVM solutions – typically a one-application / one-screen concept – have very limited flexibility with regard to optimizing visualization

## The rise and fall of emulation solutions

During the evolution of the operator workspace, the non-convergence of HMI and HF problem continued to grow. Many attempts were made using different technologies to solve the non-convergence of HMI and HF problem. While each approach addressed a specific issue in the non-convergence of HMI and HF, the utopic solution was never achieved. Below figure summarizes the more popular approach that was used in the late 1990s and is still used today.

Description	Key Strength	Key Weakness
Traditional KVM switches	Latency performance	High networking cost, no multi viewing, no collaboration
Hardware KVM over IP	Latency performance & IP networking	No VDI integration and no collaboration
A/V multi viewers	Multi viewing	No VDI integration and no collaboration
Software KVM over IP	Cost & IP networking compatibility	Multi-source/Display support
Virtual desktop infrastructure	Performance and IP net-working compatibility	Multi source/Display support

## Visual Integration is the key

System integration also has a significant effect on the HMI – the operator's window into his/her world. Good HMIs are the key to great Situational Awareness. On the other hand, disparate HMIs increase operator workload and the risk of error. Compounding the problem, operators might not always be physically in front of the right application or screen at the right moment. This makes it difficult to gather the right information in a timely manner to diagnose problems. Worse yet, this information may even be obscured by another application window that is irrelevant to the situation. At the extreme end of the spectrum, where control room design follows standards such as ISO 110643, we find fully integrated HMIs based on a user-centered design process underpinned by an HMI Philosophy and an HMI Style Guide. However, such an approach may not be easy to apply to upgrades, where legacy equipment and systems are involved, or in some industries where many different vendors and different types of applications are involved.

**Visual Integration delivers many of the Benefits – but avoids the cost-of multi-application HMI integration**

There is good news though. Technology has evolved within the visualization space so that there is an alternative for such extreme levels of HMI integration as mentioned above. Visual integration delivers many of the benefits – but avoids the cost – of multi-application HMI integration. This means that the right information can be presented directly in front of the operator precisely when he needs it. A visually integrated system also allows for the single mouse and keyboard interaction. Plus, visual integration also allows the operator to optimize his environment to his personal needs or the requirements of operations in normal or special event mode. Another benefit of this approach is that it enables operators to save their personalized settings and activate them at any operator workstation at any time. Finally, the flexibility of visual integration does not compromise corporate policies and procedures regarding the IT infrastructure.

**Now the operators can have all their applications in one pixel space using just one keyboard, mouse, and audio.**

*(The author is Sales Director, Barco India. SI Asia thanks the author for the insightful perspective.)*

# Understanding Retro-Reflection in Ambient Light Rejecting Screens

By Dave Rodgers



## How does an ambient light rejecting' material actually 'reject' an indirect light source and why should we love the concept?

Ambient light allows us to see the world. From the moment of our first breath to our final sigh, the waking hours of our lives are bathed in ambient light. Think of your best days under the sun; the warm rustic glow of candles and firesides, or the countless light bulbs that have illuminated your path through all these years.

Of all the phenomena in this great universe, it has contributed so much to the quality of our lives... Unless you are trying to get a good picture on any large video display, then it is just too darn bright. Once again, the old adage proves correct that "you can have too much of a good thing."

The term "Ambient Light Rejecting" is part of the AV industry nomenclature as a screen feature that prevents ambient light from washing out an image. There are AV purists out there who hate the use of the word "Rejecting" and technically, they are correct. "ALR" does the opposite of reject, it either absorbs or diverts ambient light away from the viewer's field of vision.

So why say ALR? Simple, "Ambient Light Rejecting" gives customers an easy mental image of a screen that gets rid of ambient light and its washout effect. Also, "Angular divergent reflectivity of indirect light sources within an absorbent active matrix to mitigate the intrusive effects of luminous inundation onto projected images", is too much of a mouthful and every Marketing Team out there hated it. Besides, "Ambient Light Absorbent" sounds like something you clean your kitchen floor with.



\*Undoctored photo of ALR (Ambient Light Rejecting) Screen



\*Undoctored Photo of Ambient Light from an outside source washing out a matte white projection screen

## So what is Ambient Light?

To AV Installers, ambient light is any atmospheric lighting that originates from an indirect source of luminance that can be inside, outside, naturally or artificially occurring. Basically, it's any light source other than your projector that threatens to wash out your image or otherwise impair its visual aesthetics.

This includes but is not limited to light coming through windows and skylights from an outside source, track lighting, in wall/ceiling lights, lamps, candles, fireplaces, or even the light of your own video screen reflecting off light-colored surfaces in your room.

It is surprising but true; light colored walls, ceilings and flooring can all contribute to ambient light problems and negatively affect your video performance.

When projected light bounces off your screen, it turns every surface in your room into a potential reflector that will in turn contribute to washing out the fine qualities of your projected image.

So yes, dressing up like Mr. Roarke and watching Fantasy Island episodes in a room lined with white marble floors, alabaster walls and a whitewashed ceiling is far from ideal for getting the best out of your projector screen. Next time, think Knight Rider instead.

## So how do we "Reject" ambient light?

The bottom line is that most rooms do not have 100% control over environmental lighting. As cool as a fully contained home theater room is, most households don't have them.

Instead, homes are trending toward having large projection screens in living rooms, dens, and media rooms as a means of replacing the household television set with a larger than life +100" screen. This is entirely feasible as long as you take the needed steps to counter the washout effects of ambient light.

To some degree, a brighter projector does help. The extra brightness drowns out a little more of the milky white glare of indirect room lighting but it does bring with it a negative effect as well.

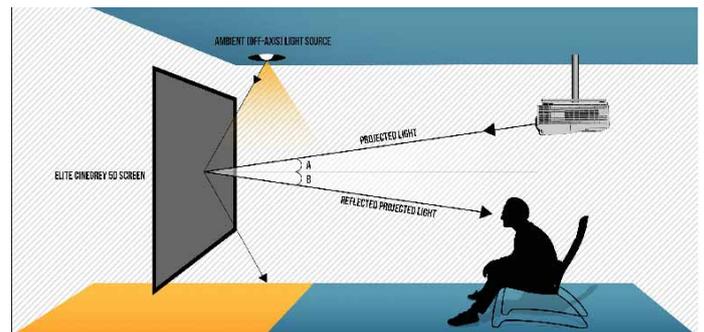
As much as you want a bright, colorful image, you don't want it too bright or your contrast suffers. An excessively bright screen can also cause eye discomfort so a more practical solution is necessary. Instead of thinking about a brighter projector lamp, consider a specialty projection screen.

Ambient Light Rejecting screens come in two basic formats. Either they will be **Retro Reflective** or **Angular Reflective**.

According to the Law of Reflection, "...the **incident ray**, the **reflected ray**, and the **normal to the surface** of the mirror all lie in the same plane and that the angle of reflection is equal to the angle of incidence."

ALR surfaces may not fully react in accordance with the Law of Reflection because they add their own variables, which are either microstructures or multi-layered optical filters. Normal white projector screens have **Diffusion Uniformity** that scatters the projected light to provide uniform brightness over the full 180° of the projection angle. However, it scatters all light, not just the projected signal so high levels of ambient light will wash out the image on a standard white screen.

**Angular Reflective** means that light reflects off the surface at precisely the opposite angle of incidence exactly as the laws of reflection describe and as the diagram below illustrates.



This type of screen is the preferred model for commercial applications but also widely popular with residential applications as well. The material prevents full diffusion from occurring to provide greater control over the washout effects of ambient light.

The focused reflectivity rewards viewers with a bright projected image that achieves a superb level of color temperature. At the same time, off-axis light is diverted away from the viewer's range of visible perception. Its multiple layers of diffusion material further negates the washout effects of ambient light while also enhancing black levels for sharp image clarity.

**Retro Reflective** means that the material will reflect back the image direct to the light source. This limits the options of projector placement but its performance levels are so superb, this format is typically the overall favorite of home theater aficionados.

A Retro Reflective Ambient Light Rejecting screen essentially absorbs ambient light away from the viewer's field of vision. The screen is capable of doing this by means of an active microstructure design. In English, this means that the actual reflective surface of the screen has been structured down to a microscopic level in order to reflect the projected image directly into the viewer's field of vision while absorbing the majority of all other indirect light.

When a cross-section of the active retro reflective material is viewed, it is revealed that the reflective surface actually has a serriform or "saw-tooth" microstructure. This structure acts as a funnel to concentrate the direct light of a projector back in a narrowed angle of reflection that is comparatively a small "slice" of the 180° brightness of diffusion uniformity.

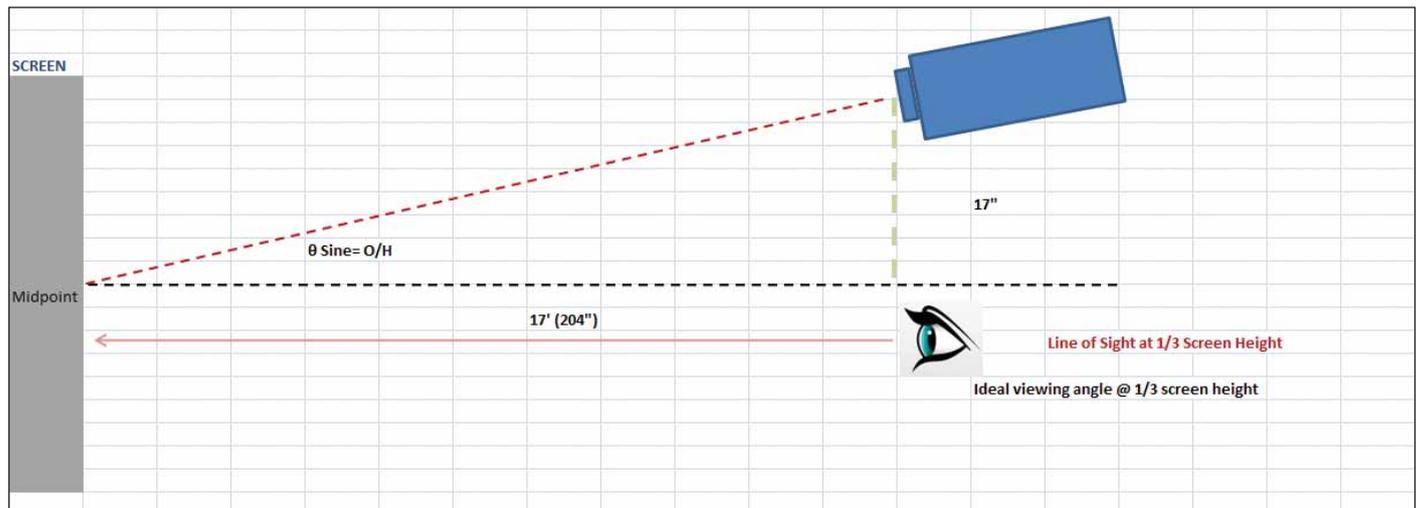
At the same time, indirect light is either absorbed in the dark saw-tooth formations seen in the picture or otherwise cancelled out by the diffusion layers.

With retro-reflective materials, light coming from the projector must hit the material in direct alignment with the screen's level center without being off by more than a 5° angle. Any vertical off-axis angle of projection greater than that will be reflected off at so extreme an angle that it will not come into the viewer's field of vision.

## How do I calculate this angle?

There are two steps you must take and here they are:

- Know where and how your screen should be positioned in accordance to where your viewers shall be.
- Make sure your angle of projection is correct regardless if tabletop or ceiling mounted.



Pretend your projector is 17' (204") from your screen & 17" above the screen's center.

- Find the diagonal measurement (red dotted line) using the following equation. Square the two measured distances and add them together; then get the square root of the solution.
- $204^2 + 17^2$  or  $(41616 + 289 = 41905)$  then  $\sqrt{(41905)} = 204.7''$
- Your diagonal is roughly 205".
- Using a scientific calculator, divide your vertical (17") by the diagonal (205") =  $0.0829268\dots$
- Calculate the Arcsine using the inverse key (sin<sup>-1</sup>)
- Your answer is 4.75°
- Since the angle is within 5° of the projector's vertical axis, this installation is appropriate for a Retro Reflective Material.

## Here are the basics in positioning your screen.

**Viewing** – The optimal alignment with the human eye should be with the bottom third (1/3) of the screen's overall height. \*Note, the average height of the human eye level is 50 inches (127cm) seated and 60 inches (152.4cm) standing.

**Seating** – The optimal viewing distance from which one can comfortably view a projection screen is 1.5 times the screen's actual width.

Normally, you can use dead reckoning to gauge a reasonably good vertical projection angle inside of 5 degrees. However, if you insist on doing the math, here is the way to calculate your angle as follows:

## Here's Why You Should Love the Concept

ALR enables the viewer to maximize the effects of optimal contrast and even ISF Certified Color Temperature. It enhances brightness while filtering out ambient light. This creates a realistic image that allows 4K content to be appreciated in its full glory with the lights on or off. Color is more defined; the sharpness and image clarity of high resolution (UHD and 4K) content is more defined.

[www.elitescreens.com](http://www.elitescreens.com)

## About The Author

Dave Rodgers is the Marketing Manager for Elite Screens Inc. He has 20 years of experience in the AV and wireless communications industries. He has made numerous television, radio and editorial appearances providing installers and do-it-yourselfers with easy solutions toward creating larger-than-life big screen applications.



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# Collaboration Revisited: Video Conferencing

SI Asia's Shireen Ho gathers the thoughts and opinions of Logitech and EZTalks



**C**ollaboration, Video Conferencing, Huddle Rooms, Unified Communication, etc – These are all buzzwords trending in the video collaboration space these days. Indeed, this is not a brand new industry and many veteran industry players already have their roots firmly grounded in this space but this has not stopped new players from entering the market.

And it's not a surprise, because the Video Collaboration (VC) market is lucrative. According to a research report by MarketsandMarkets, the global enterprise video market is expected to grow from USD 16.98 Billion in 2015 to USD 36.84 Billion in 2020, at a CAGR of 16.7% from 2015 to 2020<sup>1</sup> – that's a whopping size of a pie to share!

With increasing globalisation, video conferencing has become a viable solution for organizations to 'get things moving' at a faster pace and to reduce their travel

expenses. This is especially true for smaller organizations and startups who want the convenience of being able to meet whenever they can but do not have a sizeable budget to send their employees all over the globe.



Logitech GROUP  
Video Collaboration  
Solutions

This also gives rise to smaller scale meeting spaces, also known as huddle rooms or huddle spaces. And with smaller spaces, large-scale, expensive tools are definitely not the ideal solution for these end-users, hence, many new and emerging tech companies have set their directive to service this sector with smaller scale, yet convenient and user-friendly VC solutions.

## On Current VC Market Trends

Mention Logitech and one will immediately think of the high quality mice, keyboards, web cam, microphones and game controllers

the Swiss company makes. Therefore when the company launched its first video conference camera, the Logitech ConferenceCam CC3000e in 2014, fans of Logitech were quick

to accept its entrance into the new space. Nonetheless, it is still a fairly new player in the enterprise VC market compared to the big boys like Polycom and Cisco, but the shift from complex, legacy and purpose-built systems to cloud-based solutions has provided the computer accessories company a chance to venture in.

"With the move to cloud-based videoconferencing, customers now have additional flexibility in the room systems they deploy. Rather than investing in multi-thousand dollar codecs and equipment, customers can now install high-quality, affordable, USB-based conference cameras," said **Lee Bergs, Senior Regional Category Manager, Video Collaboration, Asia Pacific, Logitech**. "This change has finally – after many years of anticipation – lowered the barrier to entry for videoconferencing so that any size business can afford to benefit from video conferencing."

In addition, steady upward trends in cloud-based video conferencing within the Asia Pacific is also another interesting observation as Logitech's market research indicates the Asia Pacific enterprise video endpoints and infrastructure market generated almost 3% growth in 2015 with revenue valued at \$0.7B.

"As companies shift toward a more open workspace (+36% next 2 years), the need for fully-equipped huddle rooms is expected to increase by 34% during the same timeframe," added Lee. "Markets in China, Japan, & ANZ show steady high growth opportunities for local cloud video vendors like V-Cube, Zoom, BlueJeans, Skype for business & Vidyo.

**"As traditional VC endpoint solutions flatten, Video Conferencing as a Service (VCaaS) solutions in Asia Pacific are expected to triple by 2018 from 2014." – Lee Bergs, Logitech.**

### Huddle huddle...

Driven by the trend of open offices and increased desire for workers to collaborate in small groups, huddle rooms are, without a doubt, huge in the enterprise market and it's a space that VC providers are seriously looking at. But compared to traditional VC spaces, what are the pros and cons for huddle spaces and what should end-users look out for when deciding on solutions?

**EZTalks Technology**, a provider of video conferencing services who recently launched an all-in-one VC device called Onion, offered their view and opinion.

"The pros of traditional VC spaces is that it allows many people to participate at the same time in the same space, but the downside is that it's not easy to get everyone heard or noticed. It is also difficult to manage a big meeting when you have expensive equipment that is not easy to operate," said a company representative of EZTalks.



*EZTalks Onion: All-in-one video conferencing device*



"Whereas in huddle rooms, it's flexible and effective for a small team meeting. Though at first it may seem like there is a limit in number of participants, but with the right solution, it is an issue that can be resolved with SAAS like EZTalks."

Logitech agreed that both huddle spaces and large conference rooms have their own advantages.

"Huddle rooms offers the opportunity for ad-hoc collaboration and low investment in equipment, but when meetings have a larger number of onsite participants and are more formal, traditional conference rooms may be a better alternative," says Lee.

He continued, "Regardless of room size however, today's video equipment should be affordable and easy-to-use – whether it's a bring-your-own-PC (BYOPC) approach or a dedicated in-room system like Logitech GROUP Kit with Intel NUC."

### Workforce Mobility

As the modern workforce gets more mobile, many employers have given employees the option to work from home or on-the-go. With VC playing an important role in enterprise communication to increase workers' productivity, advances in mobile technology has taken it even further.

"(It is) predicted that in 2016, 70% of all video conference calls will be placed from mobile smart devices. The high penetration of mobile technology makes mobile VC possible anytime, any where," commented EZTalks. "As mobile technology gets more advanced, the easier it is to deploy mobile VC."

"Advancement in mobile technology means that we now can do just about anything on our mobile devices that we can do on a computer," said Lee. "The same is true for video calls... Also, there's no question that seeing your colleagues face-

to-face helps establish credibility and build rapport versus audio-only discussions. Not only because you can put a face to a name, but also because non-verbal communication makes up the bulk of the messages we take away from our conversations.”

## End-Users' Expectations

Thanks to the prominence of FaceTime, Skype, Google Hangouts, and many other video calling apps, video calling has become a norm for millennials and Gen Y-ers to connect with their family and friends. Upon entering the workforce, many of these young workers expects to have some sort of video conferencing services in place in order for them to communicate with their co-workers.

When asked what are some common expectations that VC end-users now have of their hardware/software provider, Lee reveals that one of the biggest leaps forward in the world of VC is the ability to join with one touch.

“In the past, a video call required a dedicated room system with a clunky and complex remote control, not to mention the support of VNOC (Video Network Operations Centre) in many cases,” he said. “Today, people expect to walk in a room and touch a console or a plug in their laptop and click to join a call. Anything more complex than that is not a good use of their time.”

Additionally, high-definition (HD) audio, video and content-sharing are all must-haves as people have come to expect more with the sort of advances that has taken place the past few years.

## The Past, Now & Future

Indeed, one-touch join is a huge development in video conferencing. In the past, participants often had to enter IP addresses or complex codes to enter a meeting, compared to now, where participants just need to click or touch a single button to join a scheduled meeting.

Video resolution is also improving, with HD and 4K becoming a common standard to adhere to. With the support for 4K implemented across various devices such as flat screens, cameras and platform providers, Logitech also remarked that opportunities has opened up for VC in the fields of telemedicine, quality control in manufacturing, remote film editing etc, among many other applications.

EZTalks observes that infrastructure improvements on the network speed has given rise to better quality video calls as well as VC services relies heavily on network connectivity. Current network infrastructure has given VC providers a good platform to work on but moving forward, interoperability is a key aspect that VC providers, integrators and end-users should consider when deploying a VC solution.

“Many VC providers are devoting their time to solve this as this is a hot-button question asked by many of our customers. Many of them had wanted to expand their current software and/or firmware which they already owned and for cost-saving reasons, they would want to maintain what they have instead of investing something brand new,” said EZTalks.

**“As a service supplier, we have to try our best to satisfy customer’s needs by being flexible enough to accommodate and integrate third-party solutions into our own software.” – EZTalks**

Logitech also acknowledges the importance of seamless interoperability with third-party services. “If we take telcom as an example, it's baffling that there's not been widespread interoperability until now. Imagine what happens if your SingTel phone could not call your family's member's Starhub phone because the phones are not on the same network... It's a myth (as in) why so many video platforms have been built as islands and has continued to be, but this must and will change,” concludes Lee.



A video conference meeting facilitated by Google Hangouts. (2005) Credit: Raysonho @ Open Grid Scheduler / Grid Engine (Wikimedia).

## What End-Users Should Know

What are the things should an end-user or integrator consider when choosing a suitable VC solution for huddle rooms, home office and conference room? Logitech and EZTalks shares the following:

Huddle Rooms	Home Office	Conference Rooms
<p><b>Logitech:</b> For huddle rooms, affordability should be a key consideration but not at the cost of quality.</p> <p>Ease-of-use is important to encourage user adoption with minimal IT support. Additionally, it's nice to have a portable solution so that it can be moved from room to room as businesses look to equip hundreds of huddle rooms.</p> <p>Lastly, regardless of whether it's in a huddle room, conference room or home office, most of us end up using several different meeting platforms in a day, so it's important to choose a video system that is flexible and works with any video conferencing platform.</p>	<p><b>Logitech:</b> For a home office, we recommend either a USB-connected webcam and speaker/microphone solution.</p> <p>For example, the Logitech C930e combined with a P710e speakerphone or H620e headset.</p> <p>If you have a larger office, you might also want to consider a huddle room solution like the BCC950 or Connect. As mentioned above. A video and audio solution that works across multiple platforms is critical.</p>	<p><b>Logitech:</b> For larger conference rooms, it's important to consider what AV solutions have already been deployed.</p> <p>If there's already legacy equipment in the room, companies may want to protect their existing investments, so solutions like Pexip are a good alternative to help bridge the old with the new.</p> <p>There are a few additional considerations for larger meeting rooms such as camera and mic range. The ability to zoom in and out is important, and installed audio solutions may be more appropriate in very large spaces.</p> <p>Also, with more formal meeting spaces, IT may want to retain control of the video systems, in which case, something like GROUP Kit with Intel NUC might be a better alternative than a BYOPC approach.</p>
<p><b>EZTalks:</b> You have to consider things like audio, video quality, stability, convenience and cost. Some EZTalks solutions to consider include: EZTalks Cloud, VCS, X3 or Onion.</p>	<p><b>EZTalks:</b> Once again, audio, video quality, stability, convenience and cost are main considerations.</p>	<p><b>EZTalks:</b> Things to consider include audio, video quality, stability and scalability. Suitable EZTalks solutions include EZTalks Cloud/EZTalks VCS, EZTalks speakerphones and cameras.</p>

## Virtual Reality & Video Conferencing

Will it be a hit or a miss? Some hotel meeting venues are already enquiring on how can they implement Virtual Reality (VR) in their meeting spaces to "stand out" from the crowd. So what's Logitech and EZTalks' take on this?

"This will be an interesting space to watch. If you look at VR and AR, there's still a lot of opportunity – some of which we can't even imagine. But as I look at AR games like Pokemon Go, I wonder how soon it will happen due to a number of factors such as battery life and user experience. But only time will provide us with insights on what's possible," said Lee.

EZTalks remarks, "It seems like a hit but VR and VC are targeted at different fields where VC is a conference service and VR is emulation technique. Integrating VR technology into VC will improve the video experience, so in the long run, VC will definitely benefit from VR."



A Teliris VirtualLife high resolution telepresence system in use (© Teliris / Wikimedia Commons)

[www.logitech.com/en-sg/conference-cam](http://www.logitech.com/en-sg/conference-cam)  
[www.eztalks.com](http://www.eztalks.com)

<sup>1</sup> Enterprise video market worth 36.84 Billion USD by 2020. (2009). Retrieved September 20, 2016, from <http://www.marketsandmarkets.com/PressReleases/enterprise-video.asp>

# Privileged To Be Part Of The Growth Curve: MMG

*Manmohan Gupta is a name that no one in the AVSI industry in India needs an introduction. For most, the name is a statement, a phenomenon, and an inspiring model of AV entrepreneurship. From the days of graduating from BIT Mesra in 1964, to journeying through stints at OTIS, Boxwell; entrepreneurial steps with OHPs; and founding Actis, with total focus on AVSI domain- it's been an inspiring journey.*

*The inaugural Systems Integration India Awards recognized this pioneering journey with the 'Lifetime Achievement Award' for being "The Most Distinguished Visionary in Systems Integration in India." Excerpts of a tete-a-tete on the occasion:*

## SI Asia: Hearty Congratulations. Simply said, how does it feel?

**MMG:** Simply, I feel honoured and humbled that the SI Asia team and the Jury chose me for this award. Awards like this are not really something that we expect, or plan for in our industry, or during our working lives, so it's a very pleasant surprise. I'd like to thank you and all the Jury members for this honour- it has been my privilege to have been a part of the growth of the AV and AVSI industry in India.



followed by flat panel displays – these completely changed how compelling we could make our presentations and how easily we communicated. Video-conferencing considerably expanded the scope and importance of AV in the enterprise. Obviously, the most powerful milestone was the advent of systems control and integration itself. The convergence of IT and AV technologies which we call Networked AV has been bringing amazing power to clients by making collaboration simpler. The advent of Cloud services is another very important milestone for the growth of AVSI, and one that is taking off right now.

## SI Asia: What it means to you personally, and what it means to your business, and its brand?

**MMG:** Looking at it from a very personal perspective, I think that it means that we have managed to do a lot of things right over the last 45 years that we have been a part of this industry. Perhaps most important to us, as an organization, is that we have been able to anticipate, understand and meet the needs and expectations of our clients well, and to earn their trust.

## SI ASIA: How did you get into the domain of AVSI?

**MMG:** In what you might call the early days of AV, our role was more as an engineering and manufacturing firm that produced some of the earliest AV products in India. It began with 35mm film projectors in 1972-73; then film editing equipment in the late 1970s, and really opened up with overhead projectors (OHPs) from 1984 onwards. Then, of course, came the personal computer era, which as they say "changed everything." That's when we first began to see the potential for AV to grow fast and wide. It began with LCD panels around 1987, followed by multimedia projectors – in the mid-1990s. When AVSI arrived in the mid-to-late-1990s, we were already looking for the next step in our growth. We saw AV integration as way to help AV diversify and achieve deeper impacts for our clients.

## SI ASIA: Could you pick up a few important milestone developments over the decades?

**MMG:** Some of the important factors that have driven this growth are generic- economic growth; globalization; and maturation of the industry etc. But, if I had to identify key milestones, I'd say: advent of LCD/multimedia projector

## SI ASIA: How about the notion that AV Industry in India has 'arrived'?

**MMG:** Based on the sheer numbers we certainly feel that the time for AV in India has already arrived. There is clearly a new understanding amongst clients, of the applications to which AV can effectively contribute – and these are manifested in the kind of things we are being asked to do for them. At this point, we feel we are roughly in the middle of the growth curve.

## SI ASIA: What is your message to the young, and aspiring AVSI professionals in the country?

**MMG:** We feel the AVSI industry in India is a young, vibrant and fast-growing segment with many opportunities for a generation of smart, young people to apply their talents. This is a place where they can find the opportunity to do some very interesting, challenging and rewarding work, and to build their careers over the next few decades – with as much and probably even much greater success than I have had.

[www.siindiaawards.com](http://www.siindiaawards.com)



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# An Intercontinental AV Expertise India Owned: Kelvin

*Kelvin Ashby-King, an intercontinental name that Indian AV had owned decades ago. The resume might look intriguing but intrigue is often the connotation of the story of Indian AV itself. It is, perhaps, thus a befitting statement that Kelvin had been adjudged as 'Most Distinguished Professional in AV and Lighting Design in India,' at the Inaugural Systems Integration India Awards, and rightly chosen for the 'Lifetime Achievement Award.'* Kelvin is the Managing Director of T2 Consulting. Excerpts of a tete-a-tete on the occasion:

## SI ASIA: Hearty Congratulations. Simply said, how does it feel?

**KELVIN:** I am extremely honoured to receive this award and more so when sharing it this year with Mr. Manmohan Gupta who I admire and respect so much. But this award is not for me; it is for my team and all of the people that have worked with me over the years, specifically Chandrashekar Niak, Muniraj N.A., and Raghu N. It is always a team effort.

## SI ASIA: What it means to you personally, and what it means to your business, and its brand?

**KELVIN:** Personally, it is an honour to be recognised for nearly 20 years working in India and 30 years in this industry; it's been a rollercoaster ride at times, but India has given me opportunities to do projects of every sort, try out leading edge ideas and stepping out of the box .... No other country would have given me this opportunity and, for this, I am very grateful. For the business and brand, hard to say but I am sure it will be positive for our customers – current and future – to see that we have been acknowledged for our achievements.

## SI ASIA: How did you get into the domain of AV and Lighting Design?

**KELVIN:** I got into this industry by not going to my lectures at University; rather hanging out in the Theatre as that was more fun (I had been into Theatre since a child)...Post graduation, I worked in theatre as a lighting and audio designer but the time came to get married and I had to find a job that paid regular money. So I joined Selecon (Stage Lighting Manufacturer) as first the New Zealand Market Manager and then Asian Region Market Manager. After a number of years, I got head-hunted and joined Inova Audio Visual in Singapore, and this was me, well and truly in the Av industry. The rest is history from there...

## SI ASIA: India to you now is Home. How did that come about?

**KELVIN:** India was the best mistake in my life... I came here purely by accident, Inova had had a company here in India since 1994 but it really had not done business of any scale. I was based out of Thailand and, by this stage, running my own company as Inova had been sold, but the Asian Money Crisis came in 1997; my Thai office could not support me and my young family at that time, as there was no work. I came on a visit to India to meet people and look again at the market. Got offered a partnership by Ashok Vorha in Esco India and there



the Indian story starts. I had told my wife I was coming here for two weeks, and six months later my family joined me here.

## SI ASIA: Could you pick up some four important milestone developments over the last few decades in the domain?

**KELVIN:** In AV, I think the four major market changers were the Single Lens LCD Video Projector, Video Conferencing, HDBaseT and AV Converging with IT. There were many more but these were, to put in Steve Job's terms, disruptive technologies. They changed the direction of our industry. In lighting, the

single largest change was affordable control systems and incandescent to LED.

## SI ASIA: How about the notion that AV Industry in India has 'arrived'?

**KELVIN:** Indian AV arrived a long time ago; we have been doing projects in India that are done nowhere else in the world. We are setting standards in a lot of instances. We just had not seen it, and we have not made everyone see it. AVSIs in India are creating some of the most innovative solutions in the world, setting or resetting AV standard for a large number of companies. Probably the only areas we are not doing as well as the rest of the world is in education segment; but even that is now coming with thousands of classrooms being made digital every year. We have definitely arrived.

## SI ASIA: Where do you see the AV Design going into the future?

**KELVIN:** I think anyone would tell you the same thing, even if they only have a basic understanding of our industry- we are going IT; we are going to become part of IT, but not absorbed into it. We are and going to be more and more important specialised subsystem. We use the IT infra yes, but what we do is still very specialized, and requires very detailed knowledge not just IT but all the AV knowledge we have gained over the years.

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In AV And Lighting Design In India

SINGAPORE

By Shireen Ho

# Suntec Singapore Augments MICE Venue Offerings With ImmersiveAV Suite

*Transforming Audience Experience Like Never Before*



In June, Suntec Singapore Convention and Exhibition Centre announced that it has launched a brand new ImmersiveAV Suite as part of its MICE offerings. In partnership with Active Visual Pte Ltd and Digimagic Communications Pte Ltd, the ImmersiveAV Suite is one of the first experiential services to be offered by a venue owner in Southeast Asia.

“Already one of the most digitalised convention centres, this launch will take Suntec Singapore further in the use of the latest technology to transform the audience experience in the Centre,” said Arun Madhok, CEO of Suntec Singapore.

When asked what was the motivation behind the new offering, Madhok explained that the ImmersiveAV Suite was “created out of anticipation of client needs and in recognition of the potential for emerging immersive technology trend.”

## What is the ImmersiveAV Suite exactly?

Offering event organizers the flexibility and freedom to create memorable and engaging experience through a semi-permanent immersive setting, the ImmersiveAV Suite comprises of two fully customisable products that can be set up readily: the Panorama and the Float3D.

Spans up to 105 meters in width and powered by 20,000 lumens projectors, the Panorama is a wide-format projection screen supplemented with a state-of-the-art AV system. Clients can choose from 105 meters (Panorama105), 65 meters (Panorama65) or 25 meters (Panorama25) of screen widths to suit their space requirements.

## PROJECT FACTFILE

**Client:** Suntec Singapore

**Venue:** Suntec Singapore Convention & Exhibition Centre

**Segment:** MICE, Venue

**Location:** Singapore

**System Integrator:** Active Visual

**Content Producer:** Digimagic Communications

**Task:** To enable event organizers to produce experiential events in an immersive setting that is affordable and easy to deploy.

**Solutions Highlight:** Panasonic PT-DZ21K2 Series, Dataton WATCHOUT 6, d&b audiotechnik Y- and E- Series, SPACE Screens.

With a screen height of 5 meters, organisers will be able to display large panoramic scenes for a dramatic visual impact. A wide range of capabilities include video presentations, motion graphic overlays, live streaming, Skype video calls and Twitter messages in multiple windows enhances the immersive space and raises audience engagement levels.

On the other hand, Float3D uses holographic projection technology to present still images and logos using animated effects to create a depth of field. Suspended at 4.5m above ground, the visual becomes the illuminated centrepiece in an event.

“Rigorously tested to ensure technical compatibility and packaged with content to make it convenient for customers, the Panorama and Float3D may be rented together or

**"Response by the market has been encouraging. There has been numerous enquires for the ImmersiveAV Suite of solutions. The Panorama105 was deployed recently in September for an event by the Singapore Institute of Directors."**

*- Arun Madhok, Suntec Singapore Convention & Exhibition Centre.*

separately," says Madhok. "The set up will be configured and optimised to the client's contracted hall space in Suntec Singapore."

## The Solutions

Working behind the scenes to make the ImmersiveAV Suite a commercial reality was Active Visual, one of the two key technology partners Suntec Singapore has engaged to realise their lofty ambitions. As mentioned, the Panoramas are wide screen installations, hence finding suitable solutions to meet the requirements is a task for Active Visual, the system integrator.

### SCREENS

Keeping in mind that the installation needs to be done within a short time frame, having easy-to-assemble screens is crucial in making this happen and it is also the reason why they had chose to work with SPACE Screens.

"We have chosen SPACE Screens from Barcelona for their viewed super contour model, which is specially designed for large-scale projections, cinemas, theatres, museums and conference halls," said Patrick Chan, General Manager, Active Visual Pte Ltd.

He continued, "The most obvious reasons lies in SPACE Screen's uncomplicated assemble and stylish outlook... Additionally, these screens can be manufactured in any size and format, admitting any type of projection: front, rear and 3D. Its stylish, matt black aluminium frame ensures perfect

tensing of the fabric, critical for a fully seamless immersive projection."

Each screen comprise of 1 set of 25m (L) by 5m (H) and 4 sets of 20m (L) by 5m (H) of matt white satin with a thickness of 0.22mm and a gain of 1:1. To form the Panorama105, all five sets of screens will need to be deployed. Client may also opt for the Panorama65 or Panorama25 with the corresponding total screen length.

### PROJECTORS

In terms of projection, 11 units of the high-powered Panasonic PT-DZ21K2 Series 3-Chip DLP projectors were specified, along with multi-function rigging and stacking frames SAV-SF01.

Featuring a unique high-powered UHM quad-lamp system that dramatically reduces cabinet volume and weight while projecting images with up to an astounding 20,000 lumens of brightness, the Panasonic PT-DZ21K2 Series 3-Chip DLP projectors also support 3D Projection, which is vital for the ImmersiveAV Suite.

In addition, the projectors are also equipped with Panasonic's Detail Clarity Processor 5, an algorithm that sharpens outlines, corrects contours and reduces ringing noise, ensuring high resolution with fine details.

"Other major reasons for choosing the Panasonic PT-DZ21K2 Series 3-Chip DLP Projectors include its Multi-Unit Brightness Control and Multi-Screen Support System. With the Multi-Screen Support System, we were able to blend and control





**“One of the challenges for the ImmersiveAV Suite is the accuracy of all the rigging points. This is overcome through precise measurements and calculation to achieve the correct projection distance and viewing angles.”**

*- Patrick Chan, Active Visual Pte Ltd.*

luminance on multiple screens much more efficiently,” Patrick explained.

The Colour Matching feature ensures that any variances in colour between the multiple projectors are corrected. The Multi-Unit Brightness Control automatically corrects brightness fluctuations that occur over time in individual projectors, which can be especially apparent in a multi-screen setting.

To prevent casting shadows of people standing in front of the screens, Active Visual also made use of Panasonic’s Multi-Function Rigging and Stacking Frames SAV-SF01 to rig the projectors directly on the truss. The frame which was developed by Panasonic makes installation more efficient and helps overcome the challenges of tight setup durations.

The projectors also run on Dataton Watchout 6 for multi-display production, playback and presentation.

#### SOUND

For acoustic requirements, a total of 12 units of d&b audiotechnik Y- Series Y8 were used along with 4 units of d&b audiotechnik Y- Series Subwoofer, 4 units of d&b audiotechnik Y- Series Y7P, and 4 units of d&b audiotechnik E- Series E12.

“For true dynamic sound we have chosen d&b audiotechnik latest series, the Y- series,” states Patrick. “With the omnidirectional, capabilities, and the array able, cardioid Y-SUB, for a precise and dry low end, the Y-Series is quite simply a system with everything.”



**"Just like how you would brief a production house to create the customised content and backdrop, except that this time no carpentry or print is needed as everything is digital."**

*- Donald Lim, Digimagic Communications.*

In essence, all Y-Series cabinets house two 8" low frequency drivers for transferring a vibrant and transparent performance, while a 1.4" compression driver delivers precise and velvety high frequencies. Featuring rotatable horns for easy deployment in either orientation, the lightweight Y7P point source loudspeakers offer horizontal dispersion angles of 75° and 110° respectively and ensure horizontal directivity control down to 500 Hz; beneficial especially in reverberant or acoustically challenging environments such as the convention halls of Suntec Singapore.

### **The Float3D**

Using a 10,000 ANSI lumens projector, the Float3D holographic projection is suspended 4.5m above ground and is projected on a special patented film (size: 2.5m x 2.5m).

### **The Magic of Content**

So now you have the venue and all the necessary equipment and technology in place, but how about content? After all, content is king when it comes to engaging audience. Enters Digimagic, the content partner in this innovative partnership. As a content producer, were there any specific challenges when creating content for the ImmersiveAV Suite?

"It is not really a challenge but a new expression of possibilities," responds Donald Lim, Managing Director of Digimagic Communications. "We're now able to integrate presentation content into the backdrop and environment design, as such the whole space become more dynamic and immersive. Imagine a space where the walls comes alive, event themes digitally build to blend into the presentation content with motion pictures, live video feeds, dynamic Info feeds like tweet messages, polling, submitting and voting of questions. Speakers are able to be beamed into the hall from overseas in holographic forms as a floating talking head, virtual presenter or a Holo-podium."

For end-users who are keen to deploy the ImmersiveAV Suite, the content producer advised: Be prepared to embrace the new way of executing an event or conference.

"Think of the whole backdrop as a Digital Wallpaper, delivered through The Panorama. You can expect the environment to be customised for every segment of your event like a full 105m surround screen kickoff video, or 20m long PowerPoint presentation, park your huge product in full scale for a live demo, or a coffee break in a garden."

[www.suntecsingapore.com](http://www.suntecsingapore.com)

<http://av.com.sg>

[www.digimagic.com.sg](http://www.digimagic.com.sg)



CHINA

# RGB Spectrum Provides Broadcast Reliability

*High-Levels Of Stability And Redundancy Ensures Continuity Of Broadcasts*



**B**eijing Radio and Television Network (BRTN) is a new radio and television agency in China that provides millions of viewers worldwide with news, sports, and general entertainment programming. Launched in January 2014 by Beijing Media Network (BMN), BRTN distributes content from the 18 member stations of the BMN and also creates original content for broadcast.

BRTN's state-of-the-art integrated performance hall features a large-scale, panoramic display wall that works with RGB Spectrum's MediaWall 4200 Display Processors to provide a spectacular backdrop for the programs filmed in the studio. The 7.5 x 42 feet wall is made of laser phosphor display (LPD) tiles from Prysm and is the focal point of the performance hall. The two MediaWall processors driving the wall are used to configure and display video and graphic images with the precision and clarity required for high end television applications.

Inputs to the processor include pre-recorded content and live camera streams from BRTN and BMN servers as well as text, graphics, photos, and videos from PCs to support and enrich programming. A matrix switcher provides each MediaWall processor with up to twelve sources for simultaneous display. These windows can be of any size or configuration. Technicians can quickly change the appearance of the video wall by selecting preset layouts.

Television studio applications require a high-level of stability and redundancy to ensure the continuity of broadcasts. The MediaWall processor was chosen because of its reputation for unsurpassed reliability and stability. According to the integrator, Century Sage System Technologies, the customer was very impressed by the processor's quick response to signal switching, stable performance, and flexible control options.

Century Sage System Technologies offered these observations: "RGB Spectrum's processors were a perfect fit for the video broadcast industry, since equipment stability, redundancy and real-time transmission are critical. The flexibility and seamless switching performance of the MediaWall system exceeded the client's high expectations and we are very satisfied with both the ease of installation and the stellar performance of RGB Spectrum's products."

[www.rgb.com](http://www.rgb.com)

## PROJECT FACTFILE

**Client:** Beijing Radio and Television Network (BRTN)

**Segment:** Broadcast

**Location:** Beijing, China

**System Integrator:** Century Sage System Technologies

**Task:** To install video wall processors that can configure and display video and graphic images with the precision and clarity required for high end television applications.

**Solution Highlight:** RGB Spectrum MediaWall 4200 Display Processors

INDONESIA

# Bosch Facilitates Effective Communication At The House of Representatives

*DPR-RI Now Enjoys Enhanced Communication During Meetings*



**D**ewan Perwakilan Rakyat (DPR-RI) or The People's Representative Council is one of the two elected national legislative assemblies in Indonesia. Also known as The House of Representatives of the Republic of Indonesia, it functions as a legislative, budgeting and oversight parliamentary institution. With 560 elected members from 10 political parties, DPR-RI is one of the largest democratic parliamentary houses in Asia.

## The Challenge

In line with its purpose, DPR-RI regularly conducts parliamentary meetings in its conference room with its elected members. In order to ensure smooth proceedings, the client was seeking top-of-the-line professional equipment that would deliver crisp, clear audio throughout the conference. In addition, the conference management system had to accommodate interruptions or the flow of irregular communication.

To show that they are the best match for the task, Bosch and its partner not only had to display the quality of the audio equipment but also present strong unique features that distinguishes Bosch from the competition.

## The Solution

After reviewing several products and ensuring that they complement the existing set up, the client selected a host of products to be installed.

These included 560 units of the Bosch DCN multimedia conference device, 9 units HD Dome Conference cameras with

automatic camera control, Sound reinforcement comprising Electro-Voice speakers, amplifiers, subwoofers, and a wireless microphone set up.

The products were selected to improve speech intelligibility and provide better meeting management during parliament sittings.

The queuing feature of the DCN multimedia conference system has also created better speaking flow in meetings for smoother and more effective proceedings. And with the names of the speakers displayed on screens, members can identify who is speaking and when it's their turn to deliver their address.

The DPR-RI now enjoys enhanced communication during meetings with smooth and effective meeting proceedings and superior sound quality.

[www.boschsecurity.asia](http://www.boschsecurity.asia)

## PROJECT FACTFILE

**Client:** Dewan Perwakilan Rakyat (DPR-RI)

**Segment:** Government

**Location:** Jakarta, Indonesia

**Task:** To install top-of-the-line conference solution that would deliver crisp, clear audio throughout conferences. The conference management system also had to be able to accommodate interruptions or the flow of irregular communications.

**Solution Highlight:** Bosch DCN multimedia Conference System

INDIA

# D'Décor Exports Furnished With High-End AV

by Ram Bhavanashi



*Mumbai-headquartered D'Décor Exports Pvt Ltd – considered world's largest producer of woven upholstery fabrics – has embellished itself recently with a very sophisticated conference room to better communicate with its business units in the country, and global connects outside. Play Technologies had the honour to design and deploy the audio-visual systems that was essentially powered by beyerdynamic audio and Crestron control systems.*

**D**'Décor Exports – formerly Dicitex Décor Pvt Ltd – has evolved to be the world's largest woven fabrics mill in a span of 16 years from its humble beginning in 1999. From its four state-of-the-art plants near Mumbai, the company produces every day over 120,000 meters of fabric that is embellished by top-class designers.

The company is credited with the honour of introducing the country's first robotic warehouse, besides water-repellent and flame-retardant fabrics. The exponential success measured by over 10,000 owned and copyrighted designs; a manifold growth from \$8 million to \$250 million revenues; and exports-spread of 65 countries worldwide meant that its business infrastructure required a sophisticated communications system.

D'Décor roped in Mumbai-based AV consultants Play Technologies to design and deploy a well-defined audio-visual systems integration in its conference room.

PLAY design team proposed a wide range of high-end audio-visual solutions and lighting management system to facilitate efficient communication and collaboration to enhance the quality of D'Décor's business. The Conference Room's AV deployment was aimed at the ability to facilitate:

- Management meetings, as well as sales and marketing meetings.
- Face-to-face interview with candidates for probable employment.
- Interface with customers directly towards closing the business deal quickly and easily.
- Video-conferencing to share creative content and evaluate champions.
- Teleconferencing to enhance organisational productivity, engage employees at all levels and reduce travel budgets.

The AV deployment thus features a video wall with **six LG 55-inch LED cubes 55LV75A** done in two rows of three each. The cubes are characterized by a thin bezel that give a seamless image, as also a clear and bright picture without any pixel impact when showing a native resolution content.

The AV configuration features **beyerdynamic's Stegos RS and Stegos TB** handling the tasks of audio and video-conferencing, as well as audio reinforcement. The Stegos TB is known for its

features like high noise immunity, safety against unauthorised listening due to spread-spectrum, 128-bit encryption key, low energy consuming receiver, illuminated multifunction button, manual or Push-To-Mute operating mode etc. "The feature richness of the systems make them an ideal choice for the given situation," explains Sachin Jain, Director at Play Technologies.

The video-conferencing is an IP-based set-up that is designed with the objective of enabling anyone related to a chosen communication event to join the discussion even from a remote location. This enablement effectively takes away the risks of time and travel if the person is away from the location of the intended meeting.

The design also employs FOH speakers meant for local audio reinforcement, and wireless table microphone for speech reinforcement.

All AV automation controls are configured to be handled by a **Crestron CP3 processor** which is a compact, rack-mountable 3-Series system with immense power and numerous integrated control ports. Known for its enhanced scalability, high-speed, and real-time multi-tasking, the system helps seamlessly run multiple programmes simultaneously.

The system also features a **Crestron 8x8 Digital Media Switcher DM-MD 8x8** which is a fully modular and expandable matrix switcher device offering ultra-fast digital video and audio switching, and lossless HD multiroom signal distribution for all types of AV sources.



"In D'décor, we have used seven HDMI input ports," informs Sachin. Crestron supports AV presentation content sharing facility by using either Table points or Wireless method. The user can open up the content and start discussion, or share content instantly. "The system allows users to do multi-party calling so that a group discussion can be facilitated at any point of time without having to meet at a place physically," elaborates the PLAY Tech Director.

Table AV points for laptop connectivity is provided for wireless presentation functionality so that quick and easy laptop/tab connectivity can be made instantly. Further, the system allows multiple users to connect to it, and share together by shifting the content with alternative displays simultaneously.

"Overall, the system flexibility supports to watch multiple video contents on a large display wall," Sachin explains, "this even provides for resizing the video into large view or small view, as per the need."

[www.playtechnologies.in](http://www.playtechnologies.in)



# Shure, Microphones & Conferencing



**W**ithout a doubt, the Microflex Advance™ (MXA) series is one of Shure's most exciting solutions this year. Debuted at ISE 2016, the MXA family targets boardrooms, meeting spaces, and lecture theatres – thus creating a huge opportunity for Shure to further extend their reach in the corporate and education market.

What is the motivation behind this product development? And where will Shure be going with this? **SI Asia** recently caught up with **William Chan, Managing Director of Shure Asia** for a quick chat on the company's recent innovations, thoughts and opinions on current AV conferencing solutions.

## **SI Asia: What is the motivation behind the development of Microflex Advance?**

**WILLIAM:** Shure has been spending quite a bit of time on the development of Microflex Advance. We began thinking about and developing the whole concept for this product several years ago.

There are two key directions or drivers for this. First, is our excellent command of audio and transducer technology. I would say it's in the Shure DNA because we have been doing this over 90 years. Second, our growing focus and expertise in software is also another factor that has led us to develop MXA.

## **SI Asia: What are the key market opportunities Shure is looking at?**

**WILLIAM:** In the Integrated Systems area, two key market segments that we are looking at will be corporate and education.

Take Singapore for an example, the city-state is known for as the hub of Southeast Asia and it has got a lot of multinational companies (MNCs) with their regional HQ set up here. AV conferencing has become an essential business communication tool. High quality audio equipment is a must to create an efficient and productive global workspace. With the launch of MXA, I think Shure is ready to connect with these MNCs and provide effective solutions for their needs.

Apart from corporate, the education market is also something we are looking at. As education facilities get modernized, lecture theatres are also getting more sophisticated. Classrooms, buildings, and whole campuses are networked. Increasingly, there is a need to monitor multiple locations, a need for interconnection as well as a need for software that enables central control and automation. These are all high level functions and it's also what we consider when developing our latest, as well as future products.

## SI Asia: What are some challenges do you think integrators/consultants are facing these days?

**WILLIAM:** If I were one of the SIs, the one thing I would put my eye on when I work with a manufacturer will be the quality of the product. At the end of the day, it's not just about the technology that makes things work, but it's also about the quality of the product. When SIs work with their client, they definitely want to finish their job within the specified period of time, and they also want to make sure that the project is being completed successfully without any complaints. That of course, depends on how good the installation is, and then to a large extent, depends on the quality of the product.

*"As a manufacturer, we (Shure) understand that customers are willing to wait for new technology. What they are asking for are products of great quality. For us, it's not only about innovation, but making sure that the quality exceeds the customers' expectations."*

## SI Asia: What particular value-adds do you think Shure has brought to the conferencing market?

**WILLIAM:** I think that goes back to the two key directions that I mentioned earlier. By applying our established knowledge on transducer technology into the MXA line of audio conferencing products – which is basically the audio technology of how we command the capturing of sound – and also the intensive effort we put in digital signal processing and software control, is what that will distinguish us from our competition.

## SI Asia: What's your take on unconventional microphones i.e. wireless, ceiling microphones, sound bar etc.?

**WILLIAM:** I would say that this is becoming a trend as end-users might not want to notice that there are any visible devices around to capture sound. At the end of the day, all they care about is whether the sound has been captured correctly and reproduced. Using MXA Ceiling mic as an example, one won't even notice it if you don't look up.

But I think what matters is not just the front end capturing device, but more importantly, the back end. For Shure, our systems can be easily be integrated in corporate networks. The technology and user-friendly software are intuitive and easy to set up. I believe this is important not just for the SIs, but also for the end-users.

*"Interestingly, we have seen a convergence between AV personnel and IT admin group. The trend it seems, IT people are taking control of everything. I guess that could be due to the convergence of technology."*

## SI Asia: What are your thoughts on "Audio on the Go" (mobile devices)?

**WILLIAM:** I think there is a big future for it and there are already a lot of good players in the market. As the big players continue to improve the audio and video capabilities on mobile devices, these devices are just going to get more and more powerful.

But I still see that no matter how mobile we get, at the end of the day, we still need to somehow integrate those technology back to some fixed installation. We still need to conduct some meetings in the conference room at some point, and through various research done by agencies that we have worked with, there seems to be a growing demand for smaller meeting rooms such as the huddle rooms.

From the way I look at it, there will still be demand for very high-end conferencing solutions, and those will continue to exist for customers who are willing to invest in a fixed install room where multiple parties can have audio video conferencing together. But the booming part is the huddle rooms. I envision this is where Shure can play a very influential role with MXA.

## SI Asia: Where do you see MXA going from here, in terms of potential?

**WILLIAM:** I would put my biggest bet on software and capturing devices. There will be, or rather, there should be room for improvements. Maybe not so much about the form factor but the guts inside the capturing devices is something we will continue to improve.

The software can be really powerful and the Digital Signal Processing (DSP) technology that comes with it is one of the unique features for MXA. This is where Shure's strengths are. In the past, we have hardware devices that do the signal processing but now we are changing it to be software-based. As we move on, smart microphones with their own signal processing software are in a future not too far away from us.

## SI Asia: What do you see in the future of AV conferencing in the next 5 years?

**WILLIAM:** I think it will take a while for end-users to adopt to current technology. So rather than thinking about the next big thing, I think it will be better for us to hear from our customers about what refinements they are looking for in our solutions.

Unlike consumer business, I don't think there will be any major developments in the commercial world for AV conferencing. But rather, I would expect a lot of enhancements and improvements. For example, the level of automation and control. We have our own thoughts on these, but we also need to hear from our customers about it.

# Thinking of Buying a New 8K Screen? Don't Bother.

By Sharon Jiang



Sharp's introduction of a brand new screen boasting an unheard of 8K resolution had videophiles buzzing last year. Sure, resolution like that is undeniably impressive, but the screen — clocking in at an imposing 120 inches and holding an even more impressive retail price of \$133,000 — has AV professionals wondering if the new technology is worth the hefty price tag. When many organizations are still only beginning to incorporate 4K tech into their component subsystems, should you continue down that path or hold out for the new 8K gear? The short answer is no and here's why:

An 8K screen is alluring for one very good reason, but first a little context. Before 4K debuted back in 2012, the best available screen resolution was 1920x1080, most often referred to as 1080p or "Full HD." The new 4K screens boasted an eye-popping 3840x2160 pixel resolution at a consumer level aspect ratio, which after a little number crunching — multiplying 3480 by 2160 — is fully four times higher than 1080p. This is the origin of the 4K moniker but these screens are also marketed to consumers under the name Ultra High Definition or "UHD" for short.

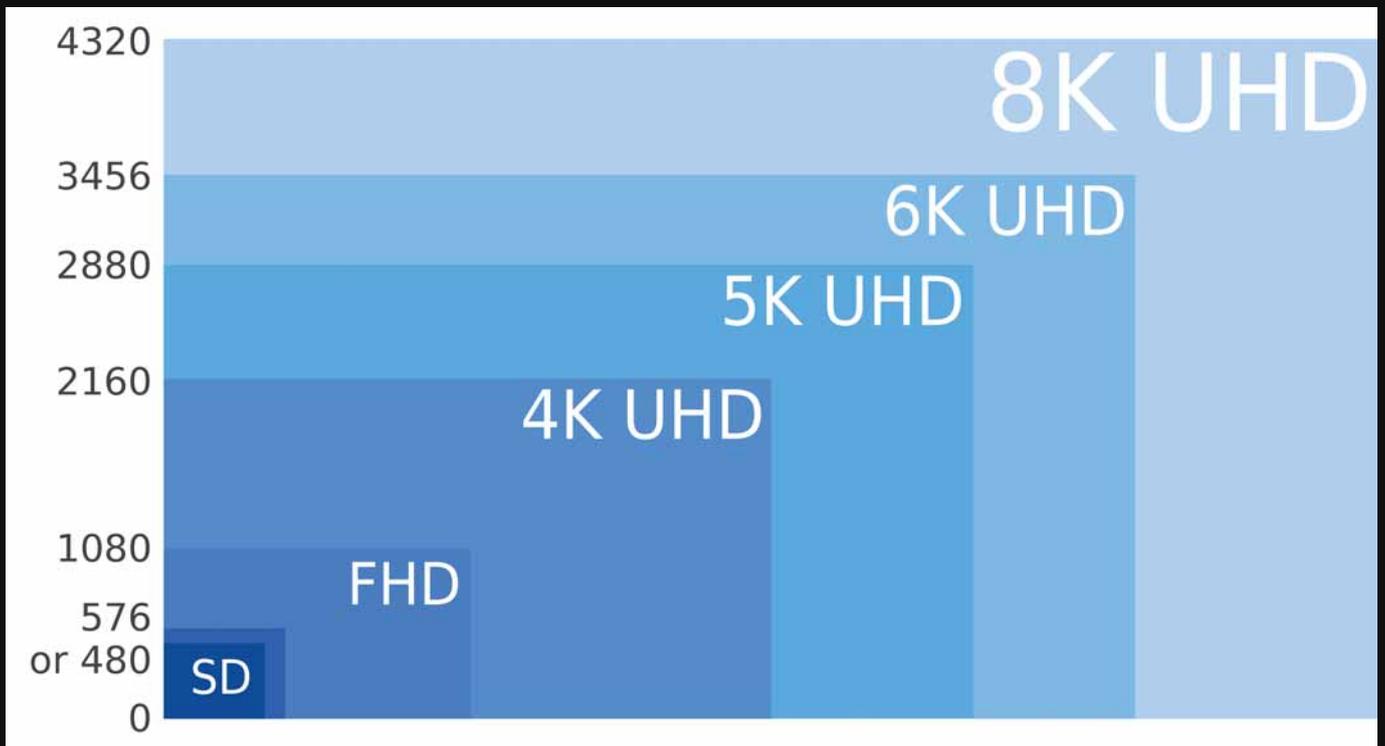
An 8K screen, now known as Full Ultra High Definition, offers dimensions of 7680x4320. That's four times more detailed than a 4K-resolution screen and a staggering sixteen times the resolution of 1080p. So clearly, if you must have the bleeding edge technology in near-lifelike pixel resolution, 8K is the way to go. But unfortunately, it may not be that simple.

Right now, there's a real question about how the human eye processes these super high resolutions, with some experts believing the naked eye is incapable of viewing resolutions higher than 4K. While this hasn't been established with certainty, there is consensus that the viewer's distance from the screen plays an important role.

At ten feet away, it's difficult for the human eye to detect a difference between 1080p and its lower resolution predecessor of 720p because the screen's pixels are just too small. If your viewer has 20/20 vision — only 35% of adults do — that means their eyes can recognize sixty pixels per degree from about twenty feet away. For screens over 80 inches in size, the audience would have to be around five feet away for their eyes to focus in and recognize 4K.

To make matters worse, the smallest available 8K display size is 120 inches — which is really only suitable for large scale presentations — so if it's even possible for the human eye to register a difference between 4K and 8K in the first place, most of your audience would have to be sitting within arm's length of an enormous screen to discern the resolution improvement. If you've ever sat in the first row at a movie theatre, you know how unpleasant that experience is.

Besides the rather important question of the human eye's ability to recognize resolutions greater than 4K, there are plenty of other reasons to hold off on investing in the 8K



experience, and one of the most important is available content. Professional grade cameras like the RED are capable of shooting in full 8K, but television, movies, and sports broadcasts are only now moving into the 4K realm. And as streaming continues to become our go-to method of content delivery, data usage quickly becomes problematic.

Viewing in 4K eats up about 17GB per hour with many cable companies offering a cap of only 250-300GB per month. Depending on your usage, 4K viewing could devour your available data at an alarming rate. Now imagine the data fire

hose you'd need to make 8K content your first choice. The expense would likely be unmanageable.

So at this point, the high entry cost combined with the lack of available content and the questions surrounding our ability to even register ultra high-resolution images makes the case for an investment in 8K screens questionable at best. This may change as the technology develops, but for now your best bet is to continue expanding your video infrastructure with proven 4K components.

[www.cablewholesale.com](http://www.cablewholesale.com)



*Sharon Jiang is the founder and CEO of CableWholesale. Jiang has grown the company from a one-car garage in Cupertino, CA to an international business that provides more than 3,600 products to customers all over the world. CableWholesale, which just celebrated its 20th anniversary, is a certified woman-owned and minority business, and has been recognized as an Inc. 5000 fastest-growing private company as well as one of the Bay Area's largest women-owned businesses.*

# Beginning The New Phase, Leveraging Strengths



*Aviv Ron, Vice-President (Strategy & Business Development), Kramer Electronics, has a rather amusing connect with India. He had come to this country, as a very young, explorative lad 25 years ago! Fresh from his mandatory military service in Israel, after his engineering degree, he wanted to explore the Oriental World and set out to Thailand, and soon landed in India. Went to Srinagar, and then to Ladakh. While he enjoyed the fascinating nature of 'Paradise on Earth,' and the 'highest motorable place on the planet,' he also got to come under the first winds of Kashmiri unrest, as his movement was curtailed by the restrictive orders due to troubles in the valley.*

*Fast, and fast, forward, Aviv was back in India recently – after 25 years – and this time pretty much official, and as a very consummate business leader, flying all the way from Tel Aviv to Mumbai- to be part of the inaugural Systems Integration India Awards 2016, as also InfoComm India 2016.*

*SI Asia ventured for some time with Aviv Ron, a Columbia Business School graduate of MBA, and a telecom-turned-AV thought leader, and what it turned out to be- a revelation. Read on:*

## **SI Asia: Welcome to India, how does it feel?**

**AVIV:** Life takes its own time and course, and I'm extremely happy to come here again, after so many years, and in a different mould altogether. It feels great. It feels great on two accounts. For the country that is so unique for its geography, people, and culture; and for the strong position that Kramer enjoys here; the passion amongst people for technology, that's truly great.

## **SI Asia: Strategy and Business Development...What does it exactly entail?**

**AVIV:** I was more and more in telecom, but my joining Kramer three years ago got me so deep into AV that I feel like one from long as I'm doing many things here. For example, we identified 4K as one very important direction. To gain leadership in 4K technology, we developed tens of products over a very short period of time. The VIA, the receivers, extenders, cables and everything to do with 4K, and we got to place the 4K@60 Hz at 4:4:4. Result, we are already at the forefront of this technology, and we are looking ahead to make longer strides.

## **SI Asia: Could you elaborate on strategies you brought to place, and value-adds to brand Kramer...**

**AVIV:** Three years ago, when I stepped into the company, one of the market dynamics that we noticed was that the market getting agog with collaboration in wireless. So, we saw two things- wireless connectivity and wireless presentation, and increase the use of collaboration in a meeting room. We looked at what could be the fastest way we took leadership in that line. We did that in partnership with a company that we identified as having a potential to reach the market faster and stronger. It was WOW Vision, headed by Dr. Dinesh Tripathi, and it's been a very successful journey since then. The synergy we created between us is the excellence of solutions; and

our ability to bring those offerings on global scale in a very professional fashion. Our coming together created much bigger impact than what either of us could have done singly.

The other areas we looked at were partnership in the area of Controls, and Advanced Scalers for Rental and Staging markets. An important point to note here is while we make partnerships for developing advanced solutions, we also have a strong focus on our in-house product development capability.

## **SI Asia: That is something asking for a clinical market mapping. How about that?**

**AVIV:** Very good question. There are several ways to do it; some of them are public, and some very private. Public sources are those of market research material, published by various agencies, both in print and the Internet. We do a thorough study of that to ascertain what product is doing how in what geography; why a particular product is taken, or not taken; what product offering we could push in with what value-add.

The other element is of course market feedback which we do throughout the chain. We interact with customers, sales teams, channel partners, and SIs to know what the market requirement was, were we missing something, and what we could do to fulfil that. We have 25 offices around the world; we interact with them regularly, and do periodical reviews with them.

We have a forum called TAC-Technical Advisory Committee, with members representing top markets. They regularly come with suggestions on what's moving the respective market. All that will form a matrix of ideas during our strategizing.

We also try and analyse customer satisfaction from some potentially competing products. All this goes into strategizing our business and product offerings.

### **SI Asia: Feedback from across the world might be as diverse as the markets are. What's most fascinating finding for you?**

**AVIV:** That's again a very good question. There are markets with some standard practices and technologies, and there are others that have less standards. For example Japan, whose working culture is for total perfection, no compromise on quality. So, you cannot move there a product that is not 100 per cent perfect. So, we use the Japanese taking as our benchmark, if a product is taken by the Japanese, we are sure we did everything right with the product. On the other side, there are some markets that are essentially budget-driven. We make it clear to the value-driven markets on what offering would make a better deal for them cost-effectively.

### **SI Asia: How about the BRICS markets. How do they fit into to Kramer's strategy?**

**AVIV:** Oh, that's again interesting. We are strongly present in all these markets. While there are a few things common, they do differ on some specifics. In case of Russia and Brazil, the volatility of currency is a big issue. While they are very mature markets with good technology takes, their state of economy does challenge our strategies. To recall my experience with Russia, a couple of years ago, our business dropped almost by 90 per cent in just one year by sheer fall of economy. The Rouble depreciated by 60-70 per cent, making business difficult. We ideated on rebuilding the business by some very innovative planning with our local partners.

For example, we sold a video content overlay solution. That the economy was not supporting business in conventional way, they ideated creating compelling value for customers in a unique way- to support large retail stores in a way that helps generate more business. That was to show the products' video on a display, and at the same time a content that promotes the product over the video. It worked exceedingly well; and we felt it could work well for other apps and markets as well- like in restaurants, personalized messages and more. The technology is very easy to sell, understand, and implement. So, that was a wonder app we leveraged significantly.

In Brazil, it's the same story of economic pressure. We are strategizing similarly.

China is a strong economy and a huge market too, but with a high degree of local competition. So, our strategy is not to go everywhere, just figure out where our solutions have a value add, or situations we can leverage and propose a better value add than the competition.

India is both similar and dissimilar. The country is huge, but very small community. Everybody knows everyone in the industry. It does help us in a way that by establishing strong partnerships, we can cover the whole of the country. That we have a very strong team working very hard, we are able to have good presence in this market.

### **SI Asia: Could you elaborate on a demonstrable case of leveraging strengths?**

**AVIV:** Recently, we had a big customer making a specific request for an auto-switcher called Digital Interface Processor, or DIP-20 with a feature of automatic turn-on and -off external devices, when someone connects into the switcher. We didn't have the feature at that time. Neither the competition had it. But the customer insisted. We decided to work it out; went back to our labs; worked, and tested it out; brought it here; and demonstrated to the customer. Before it became available to the public, we offered it as a custom-developed solution to the customer. He took it to his site, tested, liked it, and gladly adopted it in large numbers, and it is a big success story for us in India.

### **SI Asia: How do you see the market dynamic changing in the near and long-term?**

**AVIV:** The resolutions are going higher and higher. In a short span of time, we have seen the market choices going up from HD to 2k to 4k, and now to 8k. But we never know if the higher and higher resolutions may take off well, like the 3D never took off, the way it was anticipated.

Content transfer on network-based IP packets is a big thing today. IT managers of organizations have a great challenge to address in that they are required to ensure content transfer over Wi-Fi, securely and reliably and on most occasions in real-time.

AV, in the strict sense of the term, though hasn't moved from its traditional base of conference room, auditorium, stadium, and concert hall, showed some novelty in the form of Huddle Rooms.

### **SI Asia: Can you tell us more about Kramer Audio...**

**AVIV:** We have a lot of unique solutions when it comes to audio networking; we have two technologies distributing audio right now. One is Kramer Electronics Distribution System, a proprietary technology that allows audio distribution up to 99 speakers over a twisted pair in a very cost-effective way; and the other is Dante. We are supporting the Dante network with a big line of products. We are also happy to be able to control Dante-supportive speakers over Kramer network.

### **SI Asia: What's your immediate priority?**

**AVIV:** We are in the beginning of a new phase, positioning Kramer very strongly with some unique solutions, specific to certain verticals. We have a tremendously strong technology combining unique hardware, software and cloud. Our challenge now is to work more closely with our partners to make sure they are committed to move and grow with us, particularly in the converged world of IT and AV. The other priority is to continue our dialogue with End Users, the people who are eventually using our products. We need to stay closer to them, because they teach us more than anyone else on how we can make our offerings better.

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