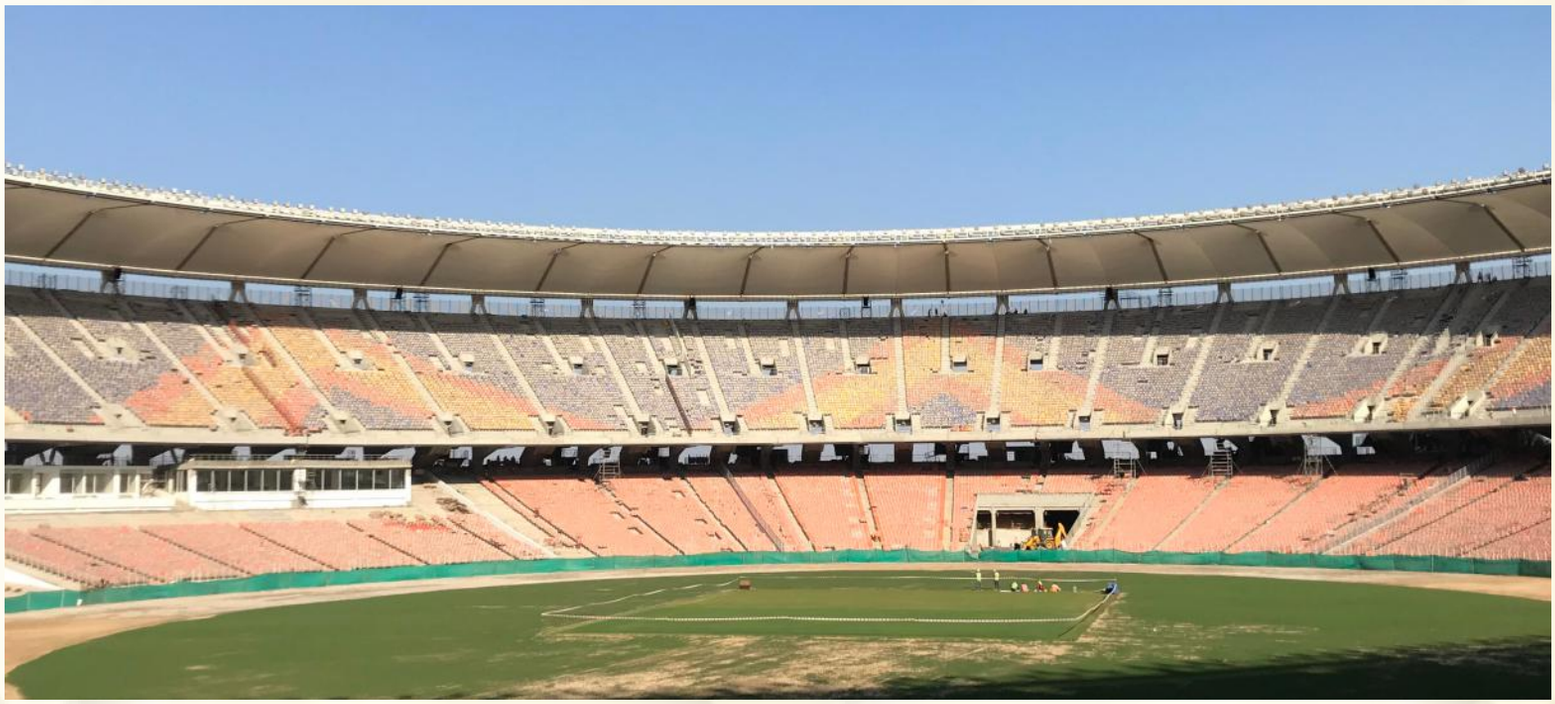
INDIAN AV INDUSTRY MAGAZINE

EXPO PROMOTION MAGAZINE

AV-ICNx

AV INTEGRATION COMMUNICATION NETWORKING

BOSE- Stadium Install Case Study



Bose Professional assures an Immersive Soundscape at Sardar Patel Stadium Motera

Shivanand Mahashetti
Online Instruments

Interview

Industry leader Shivanand Mahashetti talks about how the company is managing the balancing act of being both Distributor and SI and challenges and opportunities that Indian AV industry offers

SYSTEMS INTEGRATION OF THE MONTH:

Pyramid Technologies accomplishes AV marvel at Mahatma Mandir Convention Hall

TECHNOLOGY FOCUS: AI / IOT/ CLOUD:

Technology Enhancement from Smart to Intelligent by Abdul Waheed, Managing Director of EYTE Technologies Pvt. Ltd.

AV-ICNx EXPO 2021

AV INTEGRATION COMMUNICATION NETWORKING EXPO

YOUR ACCESS TO THE AUDIO VISUAL INTEGRATION COMMUNICATION NETWORKING INDUSTRY IN INDIA

Following the success of the first edition, the 2nd edition of the annual AV-ICNx Expo is all geared up to attract OEMs, distributors and dealers of global brands focused on product segments like Video Projection & Display, Digital Signage, Large Display, Interactive Display, Unified communications, Education technology, Audio Processing, Digital Cinema, Cabling, Connectors and signal management, Conference and collaboration, IP & Network distribution.

3D IMMERSIVE PROJECTION & MAPPING

AV EDUCATION & TRAINING

AV PROJECT GALLERY WALK OF FAME

AV PROJECTION DEMO

AV-ICNx SUMMIT Conference • Seminar • Workshop

CAVS Certified AV Specialist

Highlights of the Expo

www.av-icnx.com

For Participation, contact:
Ramesh Chetwani
+91 916 744 7440 I rchetwani@palmexpo.in

Concurrent with

palmexpo 2021
record ▶ play ▶ perform

EVENT ORGANISED BY: ABEC | ITE

YAMAHA
Make Waves

NEXO

P series

THE POINT SOURCE LOUDSPEAKER PERFECTED

Building on NEXOs acclaimed expertise in compact, high output, point source loudspeakers, the P+ Series delivers pristine, full-range sound at even greater Sound Pressure Levels, along with unparalleled versatility, thanks to an ingenious system for varying HF coverage patterns.

Dispersion characteristics can be changed in seconds through the addition of optional magnetic flanges (P12) or horns (P8/P10) to optimise cabinets for a wide range of fixed installations and touring applications, including wedge monitor.

YAMAHA MUSIC INDIA PVT. LTD.
P – 401, JMD Megapolis, Sector – 48, Sohna Road, Gurgaon
Haryana – 122018, India Tel: +91-124-4853300 Fax: +91-124-4853301
Email : support_in@inquiry.yamaha.com

www.nexo-sa.com in.yamaha.com

Content

10 **INSTALL STORY**
Stadium Install: **Bose Professional** assures an Immersive Soundscape at Sardar Patel Stadium, Motera

30 ***Cinema Install:*** **HARMAN** reigns Supreme in Indian Cinemas – ABR Cinemas Gudivada; Century City Cinema Punjab; DM Cinema Aizwal; Shree Talkies Agra

14 **PRODUCT FOCUS**
Line up of **Interactive Flat Panel Displays**

17 **AV TECH WHITE PAPER**
Acoustic and Audio System Design for Small Rooms by **Rahul Sharma** – CEO, Menura Labs in collaboration with Sound Wizard

18 **MOVERS & SHAKERS**
Shivanand Mahashetti, Managing Director, Online Instruments talks about how the company is managing the balancing act of being both Distributor and SI

20 **SYSTEMS INTEGRATION OF THE MONTH**
Auditorium Systems Integration: **Pyramid Technologies** accomplishes an AV marvel at Mahatma Mandir Convention Hall

24 **PRODUCT SHEET**
LED Display; Curved Display; LCD video wall; Matrix Switcher; DLP Laser projector; PAVA System; HDBaseT extender; Videobar

28 **TECHNOLOGY FOCUS: AI / IOT/ CLOUD**
Technology Enhancement from Smart to Intelligent by **Abdul Waheed**, Managing Director of EYTE Technologies Pvt. Ltd.

39 **GUEST COLUMN**
Upgrade your Meeting Room with Right Sets of Technology by Ramya Chatterjee

NEWS

04 **AV TECH NEWS**
Aurora Multimedia Introduces infrared temperature sensing tablet; Extron and Sennheiser Audio and AV Control; New Distribution Partnership between Sennheiser and AUDAC; Extron Introduces Amplifiers with Switchable Bridging; Absen Launches VN and AW Series; AVMI new India operation; DiGiCo launches A164D Wall LCD and A168D Stage; Biamp Purchase of HRT SRL; Cybernetyx AI devices for Collaboration; IBASE Introduces Digital Signage Player with 4x 4K HDMI Output; L-Acoustics Unveils Amplified Controller for Install; Lifesize and Serenova Merger; QSC Adds to Acoustic Design Series; tvONE ships new Dynamic mode for CORIOview; Shure introduces Room Audio Processing Software; Funktion-One launches loudspeakers for install; Eyte Technologies – Kramer Webinar; Sony Workplace Management Solutions in APAC; ViewSonic new interactive flat panel display

41 **AUDIO INSTALLATION**
Shure Celebrates 95 Years in Professional Audio; Mackie Thump15As Deliver Immersive Audio at Full Gospel Church

SIS System supplied, installed and commissioned in a record time of 20 days by Pyramid Technologies for the 7th Edition of the Vibrant Gujarat Global Summit 2019 at the Mahatma Mandir Convention Hall in Gandhinagar

JBL Professional's Dolby Atmos designed audio system enables Shree Talkies to show films with immersive 3D-quality sound

AV - ICNX TECHNOLOGY

CONTENT CHIEF: Anil Shiv Raj Chopra
E: achopra@av-icnx.com

CONTENT ANCHOR: Smita Rai
E: srai@av-icnx.com
M: +98209 43398

ART DIRECTOR: Lalita Tengle
E: ltengle@palmexpo.in
M: +91 98924 47136

ART DIRECTOR: Peter Pereira
E: ppereira@palmexpo.in
M: +91 98212 19919

WEB DEVELOPER: Amol Kanchwade
E: amol.k@abec.asia
M: +91 70393 96266

WEB DEVELOPER: Dimple Shah
E: dimple.s@abec.asia
M: +91 98707 90795

HARMAN

HARMAN PROFESSIONAL ENTERPRISE SOLUTIONS

For over 60 years HARMAN has been developing world-class, award-winning technology solutions that set the standard for innovation and dependability. Enterprises throughout the world leverage HARMAN technology to achieve their objectives productively and efficiently. HARMAN assists Enterprise clients in harnessing the power of various, disparate technologies by ensuring they work reliably and cohesively, while allowing users to focus on communicating effectively. Our approach to standardised systems helps our clients achieve their goals to make technology ownership manageable and secure by offering a complete solution of best-in-class audio, video, lighting and control products.

SPECIALISED APPLICATIONS

• Themed Attractions • Stadiums & Arenas • Hospitality • Government • Houses of worship • Education
• Transportation • Healthcare • Retail Destinations

AKG AMX BSS crown dbx DigiTech JBL PROFESSIONAL lexicon Martin Soundcraft STUDER

To know more, call us on 1-800-208-8880

harmanprofessionalindia@harman.com | pro.harman.com | in.jbl.com/professional | harmanaudio.in/professional

harmanproindiaofficial **harmanproindia** **harmanproindia** **Harman Professional India** **harmanproindia**

All product images shown are for illustration purpose only and may not be an exact representation of the product. Actual product may vary in colour, size and finishing.
© 2020 HARMAN International Industries Inc. All rights reserved.

AURORA MULTIMEDIA INTRODUCES ALL-NEW, ALL-IN-ONE INFRARED TEMPERATURE SENSING TABLET - TAURI TEMPERATURE-CHECK TABLET

Aurora has introduced the new infrared temperature sensor/detector, which provides alerts when a person is running a high temperature within 1 second. The system uses an advanced algorithm for detecting and calculating heat signatures. Based on technology developed in Germany, the highly accurate sensor measures with a tolerance of +/- 0.5 degrees Celsius (+/- 0.9 degrees Fahrenheit).

TTS panel shown with optional APS-1 pole stand

Since Social distancing & Temperature monitoring needs to be implemented and will go on for a while, Tauri would help organisations check Temperature of Staff, Guest, Visitor, Patient etc. at any managed Entrance into Premises.

Tauri provides with an alert when a person is running a high temperature within one second from 3.3 feet away. This product can act as the first layer of screening protection using a hygienic non-touch infrared technology.

TTS-10 10.1" panel *TTS-15 15.6" panel* *TTS-21 21.5" panel*

The temperature sensor provides the first layer of screening protection and ensures more hygiene with non-touch infrared technology. Moreover, a single user can monitor multiple devices.

Options:

- Camera reversible 180°
- APS-1 adjustable pole stand with weighted base
- WMT-1 wall mount
- DTM-1/DTM-2 desktop stands
- **Future firmware upgrade options include:**
  - Photo & thermal result email alerts
  - Facial recognition
  - Customized flagging
  - ReAX control
  - Integration with third-party control and access systems

Key Application Areas include Corporate / Commercial, Malls, Govt Offices, Schools, Zoos, Malls, Museum, Medical Centers, Public Places etc..

Tauri tablets also come with a 2-year warranty.

EXTRON AND SENNHEISER ENHANCE AUDIO AND AV CONTROL IN MODERN WORKSPACES

Extron announced that it is working with Sennheiser to create easy to deploy audio solutions for modern workspaces by introducing additional control system and audio DSP resources that simplify the integration of Sennheiser Dante microphone arrays with Extron devices. Using an Extron DMP Plus series audio DSP connected to a Sennheiser TeamConnect Ceiling 2 microphone, customers can now create high quality sound systems that are easy to control and work reliably.

"It is exciting for Extron to combine our industry leading control and audio DSP solutions with Sennheiser's 75 years of microphone experience." Says **Casey Hall**, Vice President of Worldwide Sales and Marketing at Extron. "By simplifying integration between products, our shared customers will benefit from improved workflows."

"We at Sennheiser always strive to give our customers a unique and, above all, easy-to-use product experience", said **Wienand Mensendiek**, Head of Global Business Development & Commercialization at Sennheiser. "Working with an innovative company like Extron and combining our ceiling microphone TeamConnect Ceiling 2, which is unique in the market, with Extron's DSP makes exactly that possible."

SENNHEISER ANNOUNCES NEW DISTRIBUTION PARTNERSHIP WITH AUDAC

Sennheiser, the German audio giant today announced its exclusive distribution agreement with AUDAC to expand its presence in India market. With this partnership, Sennheiser will manage the complete sales, distribution and services of the comprehensive range of innovative audio products and solutions by AUDAC.

On this occasion, **Vipin Pungalia**, Director, Professional Segment, Sennheiser Electronics India said, "The partnership with AUDAC comes as a great delight to us and will further help us grow and strengthen our presence in the market. We always aim to provide our customers with best class products and services and this partnership will effectively and efficiently help us in reaching our customers and reinforce our footprint in India. Sennheiser has one of the largest sales, service and support system in India. This also gives us the opportunity to offer the wide-ranging products and solution range across the professional ecosystem to make our customers integration easy and efficient. We believe that together, Sennheiser and AUDAC will provide a great portfolio to serve the growing audio market.

Mark Asselberghs, Audac's International ales Director, and Puneet Kumar Kain, National Product Manager at Sennheiser

AUDAC's International Sales Director, **Mark Asselberghs**, is equally excited with the new appointment. "Sennheiser is a well-established distributor who knows their market inside-out. They understand the importance of not just selling a product, but the added value of excellent service and technical assistance at every stage of the project. And that is exactly what AUDAC stands for."

There has been a growing demand for audio equipment and solutions in the market. This collaboration will provide a plethora of products and solutions for the customers and businesses. It will bring AUDAC's wide range of speakers, digital matrix system, amplifiers; solutions like ultra-compact wall speakers, ceiling speaker solutions with subwoofer to the customer.

It further strengthens Sennheiser's ability to provide a technologically driven integrated sound solution to businesses, and customers operating in the professional audio segment. The tie-up will also accelerate the professional velocity of the business.

EXTRON INTRODUCES XPA ULTRA AMPLIFIERS WITH SWITCHABLE BRIDGING

Extron has introduce the XPA U 1004 SB and XPA U 2002 SB, ENERGY STAR qualified audio power amplifiers, featuring flexible channel pairs that can drive 8 ohm, 4 ohm, 70 volt, or 100 volt loads. The individually bridgeable channel pairs of the XPA U 1004 SB can deliver two 100 watt channels into low impedance systems or one 200 watt channel into low or high impedance systems, while the XPA U 2002 SB delivers 200 watts and 400 watts respectively. A rotary switch on the rear panel of the amplifier makes it quick and easy to select the desired output mode.

"These XPA Ultra 'SB' models greatly simplify the process of creating bridged channel output pairs for more power and greater flexibility", says **Casey Hall**, Vice President of Sales and Marketing at Extron. "Designers, dealers, and installers will appreciate the ability of these models to meet the requirements of a wide variety of system designs."

These convection cooled, plenum rated enclosures do not require empty rack spaces for ventitlation and include rack mount hardware.

ABSEN LAUNCHES VN AND AW SERIES

LED Display Manufacturer Absen, unveiled a series of new products at ISE 2020. The new launches include Venus (VN) Series LED display and AW Series for the Digital Out-Of-Home (DooH) advertising market.

Venus (VN) Series LED display

The Venus (VN) Series is an innovative LED display that has been specifically designed for concerts and festivals due to its ability to create super-sized screens at speed.

The VN Series has also been designed to save crews precious time. The VN Series will be available in two standard sizes: 1,500mm (W) x 1,000mm (H) and 500mm x 1,000mm, in order to allow for fully customised options. It will be available in 3.9mm, 4.8mm and 8.3mm pixel pitch versions, boasting up to 5000 nits brightness and black face LED. The VN Series also allows for concave and convex curving options for highly creative video wall designs; with horizontal free-adjustable variances of -10 to +10 degrees, allowing fixed positioning at -10°, -5°, 0°, +5° and +10°.

AW Series is designed for the Digital Out-Of-Home (DooH) advertising market

The product can be easily hung, stacked and transported, thanks to a 5-in-1 dolly system, which has been carefully calculated to allow two rows and three columns to fit in a 40HQ container, allowing for 315 sqm of LED panels per truck. Wind bracing is also available and can withstand gale force winds of up to level 8.

Venus (VN) Series

AW Series

Absen also launched the AW Series, which is suitable for fixed installation and can also be applied to light boxes and smart light poles to cater for the growing trend of LED display and 5G technology integration, helping to usher in a new wave of intelligent applications.

The AW Series will be available in two standard sizes: 500mm x 500mm (w x h) and 500mm x 750mm (w x h) panels. With a brightness of 5,000 nits, a refresh rate of 3,840Hz and available in two pixel pitches (2.8mm and 3.9mm), the AW Series delivers outstanding image quality and ensures excellent visibility, event at short viewing distances of 3-5 metres, making it well-suited to street advertising.

The AW Series utilises an intelligent auto-light sensor control system to detect ambient light levels to automatically adjust the screen brightness for optimal performance. Its IP65/IP54 waterproof rating and weatherability design means the AW Series can withstand heavy rain, strong winds and challenging environments between -20℃ and +50℃. The product is also highly energy efficient.

Absen can provide a turnkey solution, which includes LED display, frame and controller; making it easy to install, transport and maintain. As the product can be easily fixed to light poles and in light boxes, it is ideally suited for bus shelters and other types of street furniture applications. What's more, as 5G technology becomes more readily available, the demand for 'Smart City' applications is set to increase exponentially to facilitate city operations and transportation management.

The AW Series offers different options to satisfy a variety of dimensions and purposes. For fixed installation, the panel can be rotated, providing more possibility and flexibility of installation. As an outdoor series, the series supports frameless installation, saving the cost of binding materials.

Checkout our bi-weekly Newsletter at
http://av-icnx.com/Newsletter_Archive.aspx

AVMI ENHANCES GLOBAL OFFERING WITH NEW OPERATIONS IN INDIA

THE UK'S AV INTEGRATOR HAS ANNOUNCED THE OPENING OF A NEW OPERATION IN INDIA, TO SUPPORT GLOBAL DEMAND FROM ITS ENTERPRISE CUSTOMERS

AVMI has announced the opening of new offices in both Hyderabad and Bengaluru in India. The announcement comes after the business had a record-breaking year, having won its largest ever contracts for its Global Enterprise Framework of services.

To provide Enterprise clients with a consistent approach to AV project delivery and services, AVMI has recently restructured its organisation to establish a global team that will be committed to serving Enterprise customers only. **John Masters** heads up the new 'Enterprise Service Division', which currently consists of over 70 people located in the US, the UK, Dubai, Hong Kong and now in India. The team is on track to deliver $50m of projects and services across 45 countries this year.

Due to the increasing demand from Enterprise customers for service in India, AVMI has relocated **Vijay Lakshmanan**, from Dubai to India, to build a Project and Support Services team. While AVMI has launched its Indian operation in Hyderabad and Bengaluru it plans to add additional offices in Pune and Gurugram very soon.

Vijay Lakshmanan and John Masters

"Customers want a global service that is both operationally and commercially consistent, which is not necessarily the same thing as simply being present in a number of countries. AVMI has followed its global ambitions by building a truly global team to supply a truly global service. The results speak for themselves and we were delighted to see AVMI being recognised by The Sunday Times for its international growth. Our expansion into India adds a critical piece to the global jigsaw and we remain committed to providing our clients with an exceptional service globally," Commented John Masters Global Head, Enterprise Service Division.

DIGICO LAUNCHES A164D WALL LCD AND A168D STAGE FOR 4REA4

DiGiCo has announced two new I/O Racks, the A164D Wall LCD and A168D Stage, for its acclaimed 4REA4 processing engine for networked audio in installations. Both Racks bring all the connectivity of the original A164 Wall LCD and A168 Stage, but with the additional advantage of Dante connectivity.

"With 4REA4, we enabled audio over IP, but until now it had to be on a dedicated network," explains DiGiCo Technical Sales Manager, Tim Shaxson. "Adding Dante connectivity not only adds the flexibility and familiarity of the Dante network protocol, but also means that consultants and integrators can take advantage of existing network infrastructure to drop I/O for their 4REA4 anywhere on the network."

The A164D Wall LCD is a 16 input 4 output I/O Expander that uses the Dante network protocol to provide fixed, additional I/O anywhere on a network and is designed for wall or floor mounting. It comes with 16 Mic Preamps on XLR inputs with Phantom Power status LEDs and four XLR Line Outs with direct preamp control from the 4REA4 controller software. It can run at both 48K and 96k sample rates and it is AES67 compatible. Primary and secondary Dante ports come with locking EtherCON connectors and can run in both redundant and switched mode. All LCD labels are dimmable and can be customised using Dante controller software.

The A168D Stage is a portable 16 input 8 output I/O Expander, again using the Dante network protocol to provide additional I/O anywhere on a network. It comes with 16 mic preamps on XLR inputs with Phantom Power status LEDs and 8 XLR line outputs with direct preamp control from the 4REA4 controller software. It runs at 48k and 96k and is AES67 compatible. Primary and secondary ports again come with locking EtherCON connectors and can run in redundant or switched mode.

DiGiCo's new A168D Stage and A164D Wall LCD for the 4REA4, both with Dante connectivity

BIAMP ADDS WIRELESS USB AND CONTENT SHARING TO MEETING SOLUTIONS PORTFOLIO WITH PURCHASE OF HRT SRL

Biamp announced it has entered into a definitive agreement to acquire Huddle Room Technology (HRT) SRL based in Modena, Italy. The acquisition adds HRT's innovative family of Huddle Hub wireless USB and content sharing products to Biamp's extensive range of meeting room solutions.

HRT is a leader in wireless USB technology that powers its products and improves the user experience in bring-your-own-device (BYOD) spaces. Its flagship product, the Huddle Hub, allows computers and mobile devices to connect to room peripherals including displays, speakers, microphones, and cameras without any physical connection. Once connected, users can display content, launch applications, and engage in soft codec UC meetings on their personal device.

"HRT has demonstrated impressive vision and technical expertise in designing the Huddle Hub, a truly unique and potent BYOD meeting solution," said **Rashid Skaf**, President, CEO, and Co-chairman of Biamp. "Huddle Hub provides wireless USB, screen sharing, screen rebroadcasting, and smart room integration all from one platform, and

TesiraCONNEC T TC-5D

when combined with our solutions, allows us to create truly extraordinary experiences for our customers. When we introduced our first USB collaboration hub, Devio, it was met with tremendous success and proved the appeal of high-performing, easy-to-use BYOD room solutions. The Huddle Hub's wireless USB capability targets these same applications and is a natural and complementary addition to Biamp's portfolio that we're certain will be well received by integrators and end-users alike."

"I'm tremendously proud of the technology and products we have developed at HRT," said **Stefano Spattini**, CEO of HRT. "I fully believe the Huddle Hub has extraordinary potential to improve the meeting experience in a wide range of common scenarios. The challenge for HRT was how to give our products the visibility in a crowded AV market to let them reach their potential. Joining Biamp aligns us with a partner that is equally excited by what we've built and has the market reach and resources to take full advantage of what our solutions have to offer. I'm enthusiastic about what we will achieve together."

Unlike competing wireless USB solutions, the Huddle Hub adds multi-user screen sharing, which allows several users to share content to the room display simultaneously. Meeting attendees can also request that the displayed content is broadcast back to their laptop or mobile device, permitting them to view content locally rather than relying on the room display. This is a great feature when in-room displays are small, far away, obstructed, or if the viewer simply has difficulty seeing content clearly. This unique combination of capabilities means the Huddle Hub delivers three complementary experiences from a single device.

The corporate cloud-based version of Biamp HRT's collaboration technology, Huddle Hub Enterprise (HH Enterprise), lets enterprise organizations create smart rooms that exist as permanent virtual meeting places. Users can enter virtual rooms from anywhere reachable by the corporate network and instantly begin collaborating with other visitors in the smart room. It's the ideal solution for small groups that meet around tables in lobbies, offices, or in any other location not equipped with AV equipment. As a result, users can share content and collaborate easily and efficiently using only their computer or mobile device. A single HH Enterprise device can host six simultaneous meetings with up to 150 total participants.

Biamp also announced expansion of the TesiraCONNECT line to include the TesiraCONNECT TC-5D

New TesiraCONNECT TC-5D Seamlessly Bridges Biamp AVB and Dante Networks

The new dual network device allows designers to seamlessly incorporate both AVB and Dante into their AV solutions, underscoring Biamp's commitment to multi-protocol support and providing integrators with the tools they need to deliver complete solutions.

TesiraCONNECT TC-5D features the same plug and play simplicity of the recently introduced TC-5 connectivity appliance and adds the interoperability of Dante. With the TC-5D, designers and integrators can easily connect and power via PoE+ both Dante and Biamp AVB devices in the same system with no configuration required.

The new appliance allows connected Dante devices to be managed using Dante Domain Manager as well as configured in Dante Controller. Once installed, the TC-5D can be monitored and maintained using Biamp's SageVue™ management platform like other Biamp products.

Both TC-5D and the existing TC-5 model come with five network connections, four of which are PoE+-powered RJ-45 ports that support single-cable connectivity. An additional unpowered RJ-45 port is included to easily pass all signals back to a Tesira DSP such as the TesiraFORTÉ. For more complex installations requiring greater port capacity, integrators can daisy-chain up to four TesiraCONNECT devices. Both the TC-5 and TC-5D feature a small, attractive enclosure, which gives integrators the flexibility to mount them under a table, in a cabinet, or behind a monitor. The TesiraCONNECT TC-5D and the TesiraCONNECT TC-5 integrate with Biamp's SageVue management and monitoring system for incredible ease of management.

The TesiraCONNECT TC-5D was slated to be available in the third quarter of 2020.

CYBERNETYX'S PERCEPTUAL AI DEVICES FOR COLLABORATION

Earlier this year, Cybernetyx showcased IoT embedded smart connected digital devices powered by AI and Deep Learning Technology for Education and Enterprise.

To help users achieve greater business and educational outcomes in a highly connected environment, Cybernetyx has developed AI, Machine Learning & Deep Learning Technology powered products to transform the verticals with connected digital devices loaded with tons of capabilities.

For **Enterprise** vertical, Cybernetyx has introduced AIRMIND Thinker, AIRMIND Thinker Connect, AIRMIND Think Panel & AIRMIND Hub, AIRMIND Board Scan, BoardScan and EyeRIS PRO.

AIRMIND Thinker Connect: This product for Enterprise, is a retrofit smart connected device can convert any display or TV into a digital interactive & collaboration canvas with lots of features to interact and collaborate in a better way through a simple clip-on set up. It also enables meeting room & huddle rooms users with Video Conferencing functionality with built-in 4K Camera & microphone array. While AIRMIND Think Panel is an all-in-one solution that replaces all the fragmented devices and empowers users with blazingly fast speed to collaborate on a 4K UHD display. To convert handwritten content on any kind of board into digital text, AIRMIND has Board Scan that turns the content into a digital text in real time which can be further printed, saved, downloaded, shared with anyone.

AIR MIND Thinker Connect

EyeRIS Pro: To digitize the projector-based meeting rooms or corporate training rooms or experience centers with disruptive technology, **EyeRIS Pro** has been designed, which when installed on the projector turns the screen into an interactive wireless digital whiteboard with scribbling, wired/wireless whiteboarding, screen casting & touch-back functionality built-in.

The products ranges for **Education** includes Galileo One/IWB, EyeRIS One on Cybernetyx Display, Augmento and Qurio-sity All-in-One Interactive Flat Panel. All these devices have the ability of transforming interactive teaching in the classroom with a gamut of AI-enabled 'assistive teaching' tool and AI powered learning platform (LMS) called KneuraCloud.

EyeRIS Pro

Galileo One: This is a digital device that converts a display or a TV into an intelligent and interactive Whiteboard and makes teaching streamlined and learning fun. EyeRIS One on IWB is the best solution that allows a PC connection on an interactive whiteboard. A unique product of Cybernetyx is Augmento that captures the contents of a blackboard or a whiteboard and turn it shareable, digital content in real time. It does not disturb the setup rather it just records the session and makes a note of it in shareable format. In all-in-one series, Cybernetyx has Galileo Lite that has panel fitted with all the software and hardware.

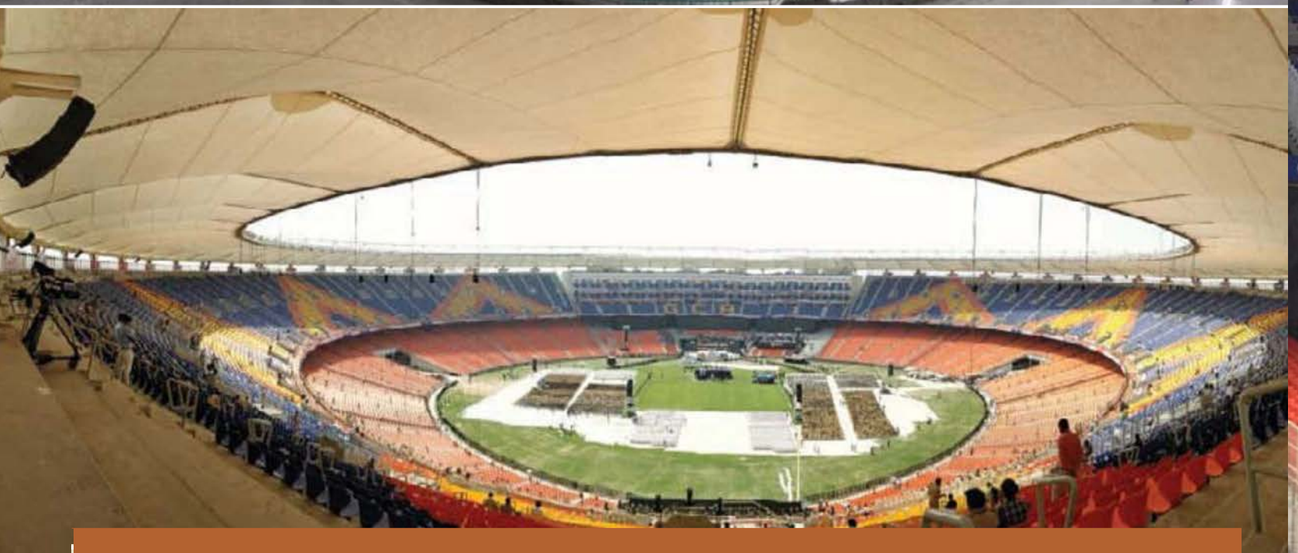
IBASE INTRODUCES AMD RYZEN DIGITAL SIGNAGE PLAYER WITH 4X 4K HDMI OUTPUTS

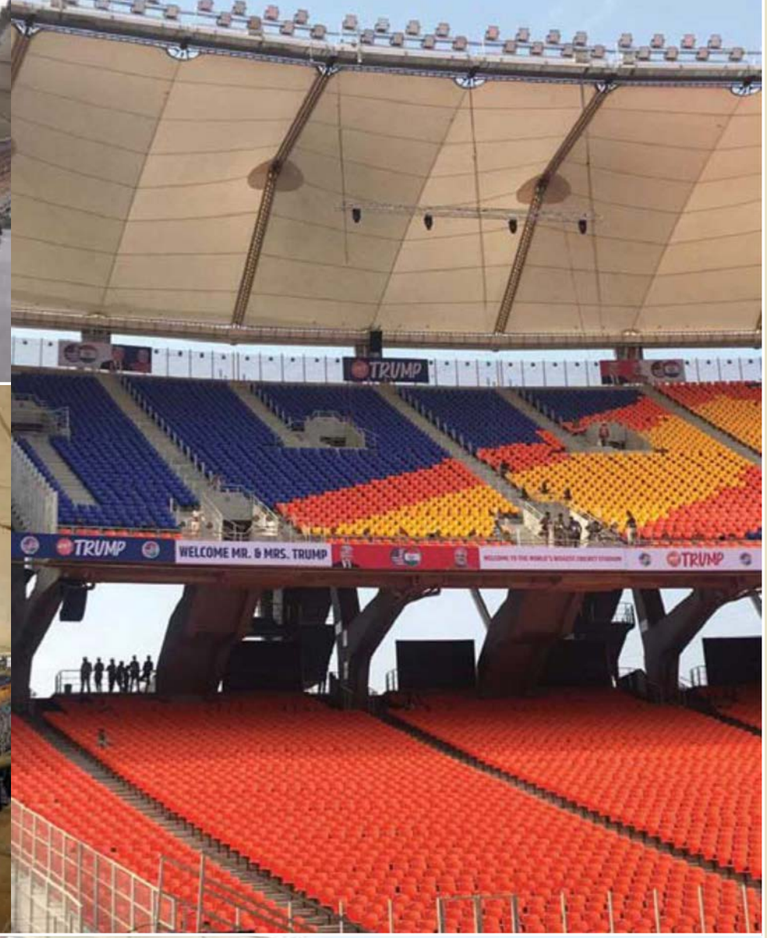
IBASE Technology Inc. has unveiled its latest fanless signage player based on the AMD Ryzen Embedded V1605B processor. The SI-324-N drives four independent displays running 4K resolution with next-generation visual clarity. The Vega GPU architecture in the AMD Ryzen SoC design that provides superior graphics and multimedia processing, and performance of up to 8 compute units.

The SI-324-N is extremely suitable for deployment in retail chains, shopping malls, airports, and banks to deliver compelling video advertising and content. By using the AMD Eyefinity utility, setup is easy to configure a 1x2, 2x1, 1x3, 3x1, 1x4, 4x1 or 2x2 for menu-board and video-wall applications. Measuring 215(w) x 164(d) x 45mm(h), the system comes with a bracket for wall mount installation and, a cableless design for easy maintenance, and product availability for up to 10 years.

The standard SI-324-N houses the MBD324 motherboard, 2x 4GB of DDR4 2400 memory, 128GB of M.2 storage, two Gigabit Ethernet ports, and an 84W power adaptor. Operating systems supported are Windows 10 IoT Enterprise and Linux Ubuntu. Moreover, SI-324-N incorporates IBASE iCONTROL for power-on/off scheduling, automatic power recovery and low-temperature boot protection, as well as hardware EDID (Extended Display Identification Data) to prevent display issues caused by cable disconnection, unrecognized display or power interruption.

The IBASE SI-324-N





Bose Professional assures an IMMERSIVE SOUNDSCAPE at Sardar Patel Stadium – the largest cricket stadium in the world

1,10,000 spectators to enjoy Bose sound at Motera Stadium; ArenaMatch range of loudspeakers deployed as main PA

The Bose team that spearheaded the install. From l-r: Pankaj K Singh - Design Engineer, **Navin Datta** *- Engineering Head, Bose Professional India and Vibhor Khanna - Country Manager, India and SAARC*

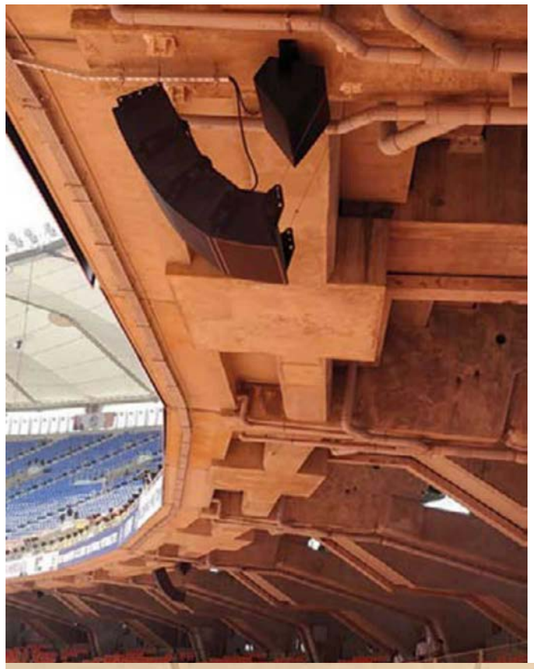
US President Donald Trump and First Lady Melania Trump were welcomed by Prime Minister Narendra Modi as they arrived for the "Namaste Trump" event on 24 Feb 2020, held at the Sardar Patel Stadium in Motera, Ahmedabad, Gujarat, which is now the world's largest stadium, surpassing Australia's Melbourne Cricket Ground. When the stadium officially re-open's for international cricket matches, reportedly sometime in March, spectators will be treated to a pristine sound experience, courtesy, Bose Professional Audio.

Constructed by Larson and Toubro (L&T) and spread over 63 acres with a seating capacity of 1,10,000 people; the colossal stadium now boasts an immersive soundscape thanks to its new comprehensive audio system from Bose Professional comprising a total of 162 units of the globally acclaimed ArenaMatch series. The system was primarily acquired to efficiently and effectively meet the venue's increased aural demands and it creates a record of sorts for Bose Professional as a brand in India, as it now stands are the largest comprehensive sound system deployment from Bose Professional in a permanent installation in the country.

"**Vibhor Khanna**, Country Manager – India & SAARC, Bose Professional, commented: "We are extremely happy with the sound system installation at the Sardar Patel Stadium in Motera, and we are proud and honored to have deployed this system in light of the historical significance of the venue. This is the largest stadium in the world and I consider this installation as one of the feathers in the Bose cap. This is an amazing opportunity to showcase our latest ArenaMatch speakers from the DeltaQ family of arrays and the whole company is energised by this contract, which is among one of our largest permanent installations in India to date."

Reports affirm that the ArenaMatch system from Bose Professional was chosen as the preferred system for the venue after an on-site simultaneous live demonstration was conducted featuring three of the most reputed loudspeaker OEMs available in the country.

"The Bose Professional ArenaMatch line of loudspeakers was launched during ISE in 2019 to coincide with the unveiling of the ArenaMatch installation at Philips Stadion in Netherlands, which provided consultants, SIs and end users an opportunity to witness



the system's sound quality, consistency, vocal clarity and flexibility in outdoor venues such as sports stadiums, arenas and outdoor entertainment centers. After our return from ISE, we approached the Gujarat Cricket Association and L&T who was the master contractor, and it was suggested to have an on-site shootout between three of the industry's most reputed PA brands. After evaluating the performance on various parameters, the authorities hailed Bose' ArenaMatch system as the clear winner, and this is how we bagged this prestigious project," says Vibhor, as he adds, "Our systems are perfectly suited to the demands of this world-class sporting arena".

It is revealed, however, that since the ArenaMatch system had just recently debuted at the time, the brand had to make special arrangements to ensure that the demo was executed perfectly as planned. Navin Datta, Engineering Head- Bose Corporation shares, "At the time of the shootout, the company had just recently launched the product, so it wasn't even available for demo. We had to request the head office to support us with the demo units, which were then air-shipped to India just in time for the shootout, and the outcome of that promptly arranged but wonderful demo, actually almost closed the deal for us."

Intimately involved in the planning of the sound system deployment, Bose Professional was instrumental in guiding the GCA in setting up a world-class audio system. "The design of the sound system had some inherent challenges of meeting the very high SPL levels required for stadium application; while ensuring acceptable STi levels, specially given the high ambient noise levels of such large arenas" says Datta, as he shares that the main challenges in commissioning the system involved delivering uniform and crystal clear sound experience at every seat while maintaining SPL Levels of 100 dBA plus norm and assuring an STI of 0.5 or above from already defined speaker mounting locations.

Various models of the Bose ArenaMatch have been deployed throughout the facility to precisely address these aural requisites - with the three sections in the venue i.e. The Lower Bowl, The Upper Bowl and VIP area featuring multiple units of the **AM10, AM20** and **AM40** boxes in meticulously planned specific configurations.

While the Lower Bowl area features 16 arrays of four units each of the AM10, AM20 and AM40; the Upper Bowl area sports a total of 19 such arrays. Bose products are also used in three of the VVIP sections and the Banquet area within the VIP section.

With the **Panaray 402** featuring a full-range-driver array and being fully outdoor rated, a total of 11 units have been installed in the VIP section and 10 units in the VVIP section, eliminating the need for tweeters and crossovers, to provide unsurpassed reliability and vocal clarity. Furthermore, 10 units of the Panaray 402 and 6 units of AM40 have been deployed as point source to cover the banquet area within the VIP section.

The Articulated Array design, with wide 120° x 60° coverage, reduces the number of required loudspeakers, while the 73-Hz low-frequency range reduces the need for sub-woofers, providing a cost-effective solution.

As Navin affirms "The system, as a cohesive unit, delivers clearly audible commentary and voice announcements to every seat in the venue."

To deliver maximum power till the speaker end, depending on the 'cable run', Bose worked on selecting different thickness (SWG) of speaker cable for different Array Locations. The entire system is controlled through four strategically located control rooms, all connected over Dante. Navin shares, "We used **Bose EX-1280 C** processor, which is a Dante enabled (64X64) DSP. It has on-board 'Logic/Control' to interface with third party devices, and the same is used to interface with 'Fire Evac' system of the BOH areas. Being Dante enabled, it can communicate to various amplifiers installed across four control rooms, seamlessly!"

With affirmations of the system creating quite the positive impression, Vibhor concludes, "This design provides seamless coverage, volume and clarity for fans in all areas of the stadium. This major installation illustrates the depth and clarity of our high-performance speaker systems and we look forward to further installations in similar venues in the future."

Various models of the Bose ArenaMatch have been deployed throughout the facility to precisely address these aural requisites - with the three sections in the venue i.e. The Lower Bowl, The Upper Bowl and VIP area featuring multiple units of the AM10, AM20 and AM40 boxes in meticulously planned specific configurations.

INTERACTIVE DISPLAYS

Line-up of seven feature-rich Interactive Displays for use in the Corporate and/or Education Segments

BenQ - DuoBoard CP8601K

BenQ - DuoBoard CP8601KBenQ DuoBoard is designed to tap into the dynamic possibilities of the modern meeting room by extending, seamless team collaboration. DuoBoard allows users to just bring their own portable devices to start the meeting right away. The built-in camera and array mic also allow for direct video conference without troublesome preparations and cable cluster. It supports various input sources including OPS, HDMI, VGA, USB flash drive and more. DuoBoard also supports multi-account management through NFC technology, which allows users to directly access and manage their personal system-setting, network drive and cloud storage space such as Google drive and Dropbox, by simply scanning BenQ designed NFC cards without having to enter password. Created to aggregate all key tools in one hub, BenQ Launcher allows employees to access video input sources or use the EZWrite whiteboard without having to log into their accounts. Additionally, BenQ Launcher comes with a task switcher, letting users switch between recent apps and input signal sources with just a simple touch.

DuoBoard is pre-loaded with useful business apps such as Blizz by TeamViewer. A one-click-to-start interface enables quality audiovisual group meeting by connecting various devices. The embedded camera and array mic enhance meeting efficiency and boosting productivity.

This feature is designed for extending collaboration, fostering teamwork, and stimulating innovation. Combining two DuoBoards together, users can seamlessly double the collaboration space and develop borderless ideas.

CloudWalker - CloudTouch

Cloud Touch is an interactive presentation solution designed for boardroom meetings, conferences, education and trainings to keep pace with ideas and have engaging conversations. Its smart touch technology makes it an intelligent solution for meeting room, which need seamless collaboration. The in-built digital whiteboard in Cloud Touch provides a plethora of tools to annotate efficiently over any media and interact smoothly during meetings or presentations.

The Cloud Touch enables users to Annotate and work on presentations from the laptop directly on Cloud Touch and control presentations, documents or any applications wirelessly, without having to go to the laptop and control any content on the screen.

Main Features of the Cloud Touch include:

Smart Touch technology; In-built digital whiteboard;
Easy annotation; 10-point multi-touch display; Wireless & Seamless collaboration; Wireless control from Mobile; 4K UHD resolution;
Built-in screen mirroring software; Built-in 20W front facing speakers; Toughened anti-glare glass; Multiple connectivity ports.

LG - 86TN3F

The 86TN3F's new Interactive Display Application introduces an intuitive user interface with a simpler launcher menu, easy control center and a virtually seamless toolbar. By integrating both webOS and IDB apps into a high-performance SoC, the display doesn't need a laptop to operate — it can be easily started with one touch. It includes the latest connectivity options including USB-C, HDMI and DisplayPort for installation flexibility and integration with modern peripherals and content sources. Audio is available through two 10-watt built-in speakers.

LG's 86-inch 86TN3F Interactive Digital Board utilizes In-Cell touch technology to provide advantages in writing performance and visibility, and also offers a crisp UHD experience with its IPS panel. LG's pressure-sensitive Active Pen enables writing in a more natural and detailed way, strokes can be thick or thin and handwriting can be reproduced perfectly, while up to 20 finger multi-touch points can be used simultaneously. The display also features data mirroring technology to enable two-way writing and sharing in real-time, such as instant annotations, in addition to screen and file sharing to laptops and mobile devices through the IDB DUO app.

The 86-inch 86TN3F Interactive Digital Board is USB-C Type Ready. The display provides audio, video and power all in one, making it quick and easy to connect to other devices for smarter meetings. It also supports USB-C type cables that can replace other connectors, such as USB-B, USB-A and HDMI.

Viewsonic - ViewBoard IFP6570

From executive boardrooms to kindergarten classrooms, the ViewSonic ViewBoard IFP6570 enables limitless collaboration and endless innovation. Designed to help teams connect, collaborate, and create, this next-generation digital whiteboard delivers exactly what you need to move your ideas forward. A premium, state-of-the-art design features a bezel-less PCAP (projected capacitive) touchscreen with incredible 4K Ultra HD resolution. This highly accurate interactive screen provides for an incredibly natural and responsive handwriting experience. Using fingers, styluses, or both, multiple users can simultaneously write or draw on the huge 65" ViewBoard panel. What's more, meetings and presentations start fast thanks to convenient one-wire USB-C connectivity.

Key Features include:

High-Performance 4K Touchscreen; Sleek and Slim Design; Convenient USB Type-C;
Improved Collaboration and Productivity; Smarter Meeting Rooms

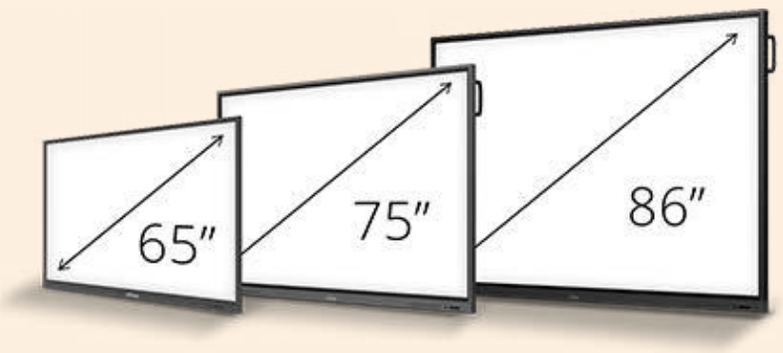
TRIUMPH BOARD - 98" INTERACTIVE FLAT PANEL

The TRIUMPH BOARD 98" interactive flat panel is a presentations tool for showing lessons or presentations interactively in any classroom or meeting room. They feature optional built-in OPS PC standard with incorporated Intel Skylake Processor and Microsoft Windows 10 Pro (OEM) with a selection of language options and preinstalled applications, as well as a wide range of accessories such as LiftBoxes or mobile stands.

The TRIUMPH BOARD 98" interactive flat panel is a fully integrated, professional, multi touch UHD IFP (resolution - 3840×2160) which claims amazing performance and stunning visuals. New and improved 20-input IR touch technology with 1mm accuracy and 1.8mm minimum touch object enables a more precise writing experience and even lets users write with a pencil. Various Inputs and Outputs can be accessed on the front, side and even bottom of the panel. A DP port is also available on the side panel. The front USB ports can be used to connect OPS, laptop or Android devices. Improved and stronger Dual 2,4GHz / 5GHz Wi-Fi dongle allows creating a hotspot even without a network infrastructure, so it's possible to share content wirelessly to users' devices and vice versa!

The IFP is powered by Android version 8.0 bringing many new useful features. The most popular browser, Google Chrome, now comes preinstalled as well as the unique TRIUMPH CLOUD online that can be used within Android. Users will be able to set up a password and lock the screen or set up a favorite wallpaper, no signal picture or lock screen picture. Users can clear the entire cache with one click or restrict access to certain inputs based on the customer's needs. All features and setup can be brought up very quickly, with a two-finger touch gesture.

Vivitek - Novotouch EK



The NovoTouch EK Series interactive flat panels are an all-in-one solution for the education sector. The touch screen range combines wireless collaboration, digital whiteboard, and active announcement board function into one display

The NovoTouch EK Series enables educators to stream the screen wirelessly to the larger touch panel and use the capacity of wireless mirroring from any device, fully adapted with the BYOD practice thanks to its cross-platform compatibility with Windows, macOS, Android, and iOS. Embrace and accommodate all types of computer and tablets.

To enhance the teaching and learning experience, the teachers can capture and save everything on the screen as a video clip. The NT Minute enables students to review the lesson at a later stage, or it can be shared with students who were unable to attend it.

Furthermore, with the NT Live Hub functionality, one can real-time duplicate the screen to other displays in the virtual Hub, which is ideal for classes or groups that need to be split across two classrooms

Available in sizes ranging from 65", 75" to 86"

They all offer the visual brilliance of 4K-UHD resolution.

It also doubles up as an announcement board, due to its built-in NovoDS, a digital signage solution that is easy to use without any programming skills.

SHARP - PN-CD701

PN-CD701, the world's first certified Windows collaboration display from Sharp, is certified for Skype for Business and is a next generation 4K 70° interactive display that enables better space utilization and more productive collaboration in meetings, boardrooms, training rooms, technical reviews and almost anywhere else.

Using Sharp's award-winning technology, together with a built-in microphone, high quality camera and IoT sensor hub, it works seamlessly with the best Microsoft 365 collaboration tools.

It is easy to plug in a device by just connecting with the 8m long USB-C cable. It automatically switches to the right input for whatever information you want to display.

With its 10-point Projected Capacitive (PCAP) touch technology and direct optical bonding, it provides a more accurate and natural Pen-on-Paper experience. Writing on-screen is just as quick and effortless as writing on a flipchart or whiteboard. By using either a finger or pen, notes and comments can be added as simple text or by drawing freehand to highlight changes and annotate the information on-screen.

The Windows collaboration display from Sharp has been certified for Skype for Business and is supported by Microsoft Teams. It offers high quality audio and video and provides the best ways to connect and collaborate using the power and productivity of Microsoft 365 at room scale.

The On Screen Display (OSD) buttons are discretely located on the front for quick and easy control and the video conferencing camera and IoT sensor hub has been integrated neatly on the top of the display. An integrated directional microphone picks up sound from anywhere within the meeting space.

The Windows collaboration display has in-built Wireless Casting that works with Windows and Android devices.

Up to five devices can be connected simultaneously and the Touch back control enables to control screen content from either the display or the source device.

ACOUSTIC AND AUDIO SYSTEM DESIGN FOR SMALL ROOMS

- PART 1

By - Rahul Sharma, CEO, Menura Acoustic Labs In collaboration with Sound Wizard

Acoustic and audio system design for a "small room" can be extremely challenging, especially for critical listening applications like coantrol rooms and reference home cinemas. It is vital to understand the relationship between system design and acoustics, and to accept that neither aspect can be designed in isolation without considering the needs and requirements of the other. In this six part educational series, we will outline many important "small room" design considerations and along the way demonstrate how to effectively tackle common acoustical and system design problems

Small Rooms

Let us start by defining a "small" room, firstly so that you aren't utterly disappointed at the end of the series, and secondly because understanding the distinction between small and large rooms is the key to digesting the completely different design approaches to both. In an attempt to keep theory to a minimum, lets just say that small rooms are those where the room boundaries are close enough to create modal issues in the lower frequencies. Extensive low frequency absorption is usually required, and since the first reflections of sound from room boundaries reach the listener extremely quickly, a great deal of care must be taken to prevent early reflections from colouring the direct signal. As a rule of thumb, a room whose largest dimension is under 20m or 65 ft can be considered to be a small room

continued on pg 40

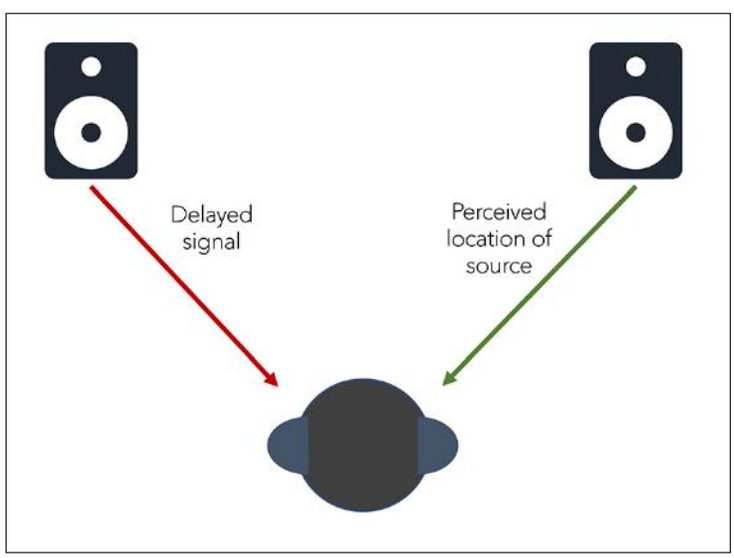


Fig.1: The Haas Effect

Shivanand Mahashetti - Managing Director, Online Instruments

THE ONLINE INSTRUMENTS INTERVIEW

Bangalore-based Online Instruments (India) Pvt. Ltd. has built a strong foundation for itself in the Indian AV industry by deploying a seamless distribution and integration network. Starting in 1994 as a six member team, the company spearheaded by Mr. Shivanand Mahashetti and Mr. Mahesh Bellad is today one of the fastest growing AV companies with a team of over 350 people. ***AV-ICNx*** got in touch with ***Shivanand Mahashetti***, Managing Director, Online Instruments to know the more about how the company is managing the balancing act of being both Distributor and SI and the challenges and opportunities that the AV industry in India offers.

Please tell us a little about yourself and your career graph in the Indian AV industry till date

Starting as a distributor in 1994, I gained a couple of years of experience in distribution of telecommunication and office automation products. Consequently, I started distributing audio/ video conferencing products, including projectors and displays. With an unbeatable zeal and painstaking effort, we have started AV Integration segment only with two manpower in 2006. It is a long journey with several stumbling blocks, but at present, I am proud to say that Online Instruments is one of the recognized systems integration companies with 300 employees. However, there is no pause and this year, with enough stick-to-itiveness, we are planning to expand our operation out of India.

What are the major brands that you distribute?

We distribute a good number of brands, including Samsung LFDS, Panasonic LFDS and projectors, Christie (displays and projectors), Avocor (collaborative displays), Logic AV products, Logic displays, Orange LED lighting products. We distribute a few brands at regional level and certain brands at the national level.

What criteria/factors do you consider before taking up distribution for a brand?

We zero in on a few factors-

- Whether the product is suitable for Audio-video system integration
- Suitable for both IT and AV platforms
- High technology product with sustainable life
- Cutting-edge features with preferred potentiality
- Can give revenue of 4-5 million dollar per year
- Easy serviceability

Can you elaborate on some major projects accomplished by Online Instruments and what exciting new projects do you have in the pipeline?

One prominent project is one of a 1000-seater multipurpose hall

with artificial intelligence to facilitate automation for audio and video.

We got international recognition for this implementation due to its user-friendly approach and up-to-the-minute features. In addition, recently we have accomplished a good number of installations with value addition for the global clients and these notable installations became a benchmark for them.

We have a few in progress projects with two global clients to develop their standard operating procedure (SOP) for their conference rooms across the world. We are proud to associate with these MNC clients to deliver this kind of privileged projects on a global level. We are also associated with some MNC clients for service across the Global locations.

With Online Instruments playing a dual role of a distributor and systems integrator, how does the company tackle undercutting on AV projects and how do you maintain a balance between the SI side and the distribution side of the business?

We have a complete separate division for AV and distribution with different people in each team. In the organization, everyone is working with separate business commitments. Here, most of the products are branded and all system integrators are getting prices cleared from the OEM directly, including our projects and AV division. Hence, we don't face any issue and each division maintains profit and loss separately, even though it is a single company.

How big is your team at OI? Are they all certified AV professionals?

At present, we are associated with 400 people and among them, 300+ employees are exclusively for the AV division, where240 employees are certified professionals. Besides, 100 employees are for the back office, logistics, and distribution.

What are the major challenges you face as a Systems Integrator in India? Or are most challenges nullified or minimized since you are also a distributor?

We are facing no challenges as such.

What are some advantages and challenges of being both an integrator and distributor?

There is no advantage as each division works as a separate entity.

What are the major issues facing the Indian AV industry and what is most unique about the Indian AV market?

There are a few issues such as skilled manpower, competitive market, high taxation compared to the global market and others. Besides, there are two prominent hassles and one is no incentive program from the Government of India for exporting AV products and the other one is poor infrastructure for the manufacturing industries.

AV and IT convergence –opportunity for distributors or threat? Please elaborate.

Due to AV and IT convergence, market experiences a positive volume of expansion with a wide range of collaborative products. AV people are getting access to IT areas. But, one challenge is the right manpower sound with both IT and AV skill sets.

What is your opinion on the AV industry's evolution to an experience-creation model? Does it offer opportunities for distributors and if yes, what kind of opportunities?

Merging AV with IT opens several doors of opportunity for distributors, manufacturers, system integrators as the business volumes are also increased. It introduces more user-friendly as well as leading-edge products.

In an age of technology disruption and value-chain consolidation, how has the role of the system integrator changed?

It is not technology disruption, instead we have considered it as a technological advancement. We adapted to this change by embracing innovative solutions which help our client to have more ROI out of small spaces. We at Online Instruments, accept challenges and adapt to the changes quickly to provide the futuristic and state-of-the-art solutions to the customers.

PYRAMID TECHNOLOGIES ACCOMPLISHES AN AV MARVEL AT MAHATMA MANDIR CONVENTION HALL

When Mahatma Mandir, one of the biggest convention centres of India, decided to spruce up the AV system with the latest state-of-the-art Speech Interpretation System at its massive property spread across 34 acres of land, its authorities turned to Mumbai based Systems Integrator, Pyramid Technologies, for the task at hand. AV – ICNx reports.

Mahatma Mandir, which is a convention cum exhibition centre and a memorial museum of Mahatma Gandhi located in Gandhinagar, Gujarat, boasts of a column free air-conditioned hall with capacity to accommodate over 15,000 people at a time. Its theatre style main hall has capacity of 5000 people and the exhibition halls are built over 10,000 sq ft area encompassing four seminar halls (three having seating capacity of 500 and one with capacity of 1000), seven hi-tech conference halls. The main congress hall with a seating capacity of 5000 hosts several international events in a year.

Pyramid Technologies, which is associated with the venue since the project inception in 2009 – 2010, was tasked with installing the latest technology and Ensuring operational stability, in line with Large Scale Facilities regulations for Quality Assurance and compliance.

THE AV SET-UP

To manage large scale international events, the convention centre is equipped with Full color 6 MM and 10 MM pixel pitch 6 LED Screens, the largest being 17.9 Mtr x 4.8 Mtrs. The entrance displays a Microtile 8.97 Mtr x 1.22 Mtr Video wall of 88 Cubes, each cube size being 20 inch approx. A complete sound reinforcement system covers the main convention centre including the Seminar Halls, amphitheatre in Gandhi Garden comprising of the entire set up of microphones, signal processors, amplifiers, Line Arrays, controllers and speakers.

Ajay Parwaney, Managing Director, Pyramid Technologies

The Audio Video System comprises of 21 projectors, Screens, high end Video Conferencing Systems and Video Distribution Systems on Skew free cables and fibre interface have been installed which transmit live video feed from the entire facility to the OB vans for live satellite

Systems Installed:

- Video Distribution System – **Kramer, Israel**
- SRS Systems – **Electrovoice (Bosch), USA**
- LED Screens – **CreateLED, China / Hong Kong**
- Public Address Systems – **Bosch, Germany**
- Microtile Display – **Christie Digital Systems, USA**
- SIS Systems – **Beyerdynamic, Germany**
- Digital Conference Systems - **Beyerdynamic, Germany**
- Baggage Scanners – **Smiths, Europe**
- DFMD – **Garrett, USA**
- CCTV Systems – **Dvtel (FLIR), USA**
- BMS Systems - **Honeywell USA**
- ACS Systems – **Honeywell, USA**
- Fire Alarm Systems – **Edwards (UTC), USA**
- Bollards – **Urbaco, Europe**
- Boom Barrier – **Came, Italy**
- UVSS – **Vehant Systems, India**
- Video Conference Systems- **Polycom**

transmission. The ELV and AV Systems have been integrated for the entire project, between the Museum Building, External Mounds, Utility Building and the Gandhi garden, which houses a large Amphitheatre for events and concerts.

THE BEYERDYNAMIC ASSOCIATION

Simultaneous interpretation Systems, with several audio channels for the transmission of foreign languages, was required. Pyramid provided this with the SIS Simultaneous Interpretation System from Beyerdynamic. Eight SIS 1202 double consoles were installed in separate booths on the balcony as part of the interpreter's console. The Eight foreign languages were simultaneously transmitted to the digital IRIS Infrared Transmission System compliant to the international IEC 61603-7 standard for infrared audio transmission of simultaneous interpretation systems.

This upgrade to the new Simultaneous Interpretation System was supplied, installed and commissioned in a record time of 20 days to make sure the system was used for the 7th Edition of the prestigious international Vibrant Gujarat Global Summit 2019 held at the Mahatma Mandir Convention and Exhibition Centre in Gandhinagar, India. The system was used to transmit eight languages in the 6,000m^2 hall, which has a capacity of 5000 seats with VIP viewing galleries.

The key challenges for the project was to replace the 30 IR radiators with a RF based system. Pyramid used Beyerdynamic Unite with Two RF Access points to replace an infrared system comprising 30 infrared transmitters.

Two access points replace 30 infrared transmitters

The new **Beyerdynamic Unite** digital wireless communication system was installed with only two access points into the ceiling of the Mahatma Mandir Convention and Exhibition Centre and used to transmit eight languages in the 6,000m^2 congress hall. Beyerdyamic's Unite replaces an infrared system comprising 30 infrared transmitters.

The Requirements

The 6,000m^2 (100x60m) congress hall in the Mahatma Mandir Convention & Exhibition Centre, which holds up to 6,000 people, was to be equipped with new interpreter systems. The existing system of 30 infrared transmitters was to be replaced and there was to be no interference with UHF, WiFi and LED screens.

The Solution

Only two Unite AP4 access points had to be installed, synchronised and connected to the Dante audio network. "And the second access point was required only because eight languages were to be transmitted – otherwise, one access point would have sufficed", says **Ajay Parwaney**, Director of Pyramid Technologies, the company which implemented the project.

One access point can transmit up to four languages. A total of eight access points can by synchronised in a network, meaning that 32 channels can be broadcast simultaneously. There are 1,000 Unite RP beltpack receivers available for participants. They can use the receiver to select the channel with the required language. The DECT system is reliable thanks to its high operating range, long operating time, noiseless digital transmission and automatic frequency management. With the highest AES 256 bit encryption standard, this digital system is also tap-proof. The system can be easily monitored, updated and configured via the Unite cockpit charging technology.

In addition to the AV Systems, Pyramid has also executed the turnkey installation for the Low Voltage systems throughout the facility. High-end and latest technology in the field of Fire Detection and Surveillance systems was used to deliver best results. The Intelligent Addressable EST3 Fire Detection System comprises of 2000+ Detectors to ensure Life & Equipment Safety within the facility.

The System also comprises of an IP based Surveillance System with a network of PTZ, Dome Cameras and dedicated Servers to cover the entire facility. With the use of highly Integrated Framework we were able to meet the site's all security needs and protect existing investments while allowing for seamless future technology upgrades. Christie video wall (4.8 mtr x 1.36 mtr) installed in the CCTV control room.

Screening Systems include Metal detectors, Under Vehicle Scanning Systems, Baggage Scanning Systems, Boom Barriers and Bollard Systems.

An external security management platform based on access control system comprising of Controllers, advanced access control panel & Proximity card readers are installed at strategic points for additional security.

Beyerdynamic Inventory:

- 1.000 x Unite RP bodypack receiver
- 1.000 x DT 2 headphones
- 2 x Unite AP4 access points
- 28 x Unite CC-36P cockpit charging cases
- 1 x SIS 122 control unit
- 7 x SIS 1202 double interpreter stations
- 14 x DT 394.SIS interpreter headsets

This upgrade to the new Simultaneous Interpretation System was supplied, installed and commissioned in a record time of 20 days to make sure the system was used for the 7th Edition of the prestigious international Vibrant Gujarat Global Summit 2019 held at the Mahatma Mandir Convention and Exhibition Centre, Gandhinagar

INDIAN AV INDUSTRY MAGAZINE

EXPO PROMOTION MAGAZINE

AV-ICNx

AV INTEGRATION COMMUNICATION NETWORKING

YOUR CONNECT TO THE AV INDUSTRY

2018 - 2019

2019 The New Expression

AV Consultants and Systems Integrators,
inform us of your latest projects for coverage in AV-ICNx magazine

www.av-icnx.com

ABSEN
KL SERIES

Absen recently announced the launch of KL series, a fixed indoor product with a perfect balance of excellent visual performance, ease of operation and price. KL is available in five pixel pitches ranging from 1.6mm to 3.9mm. The KL series is a reportedly a great LED option for wholesalers, distributors and project contractors who buy LED modules and the other components to assemble LED displays for diverse projects. KL is well suited for a wide array of applications, including various retail spaces, hotels, corporate, government, transport and more indoor environments. Key **Features of the KL Series include:**

Outstanding visual performance: The Absen KL series boasts a high level of brightness, grayscale, contrast ratio and refresh rate.

Innovative design: It allows for multiple installation methods including wall-mounting, hanging and floor installation, in use of the creative back channels or connecting pads. The product comes in standard size of 640mm×480mm, with an extra option of 320mm×160mm for customers in cases that need design flexibility.

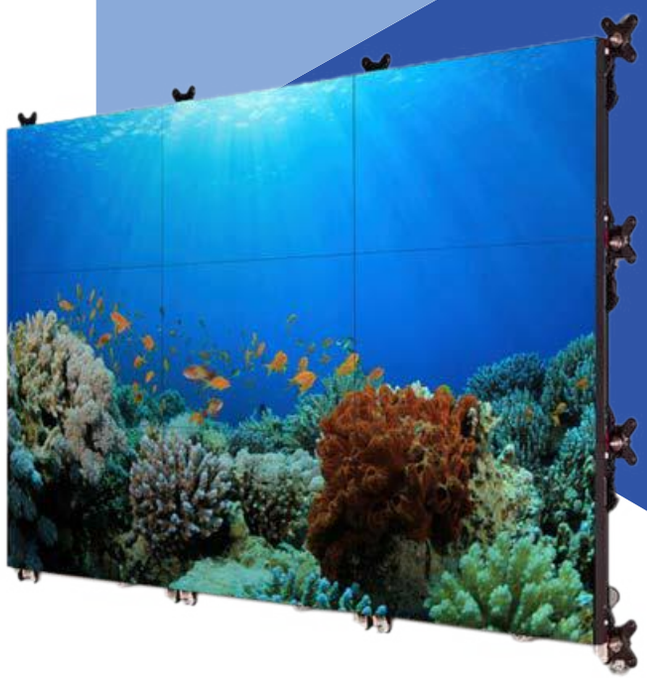
Ease of operation and maintenance: Absen's KL is a front & rear installation and maintenance product with a depth of only 70mm and weighing at 7.8kg per panel. In addition, KL as an all-in-1 product, with PSU (power supply units), cables, receiving cards and the other key components inside, offers better installation and maintenance solutions for end users.

AOTO
C SERIES

C series is a curved display product which meets a variety of design requirements by its lightweight structure and flexibility. It can form a 0.92m column display by only 6 cabinets. With the advantages of magnetic front maintenance, seamless splicing, HDR10, 24 bit processing depth, and high-level fire protection, C series brings viewers a creative and unparalleled visual experience. It can be applied in transportation and digital.

C series is an indoor/outdoor product that supports creative splicing. By its innovative module design, the product creates an impressive and eye-catching display effect, and can be used/integrated to be a part of the vivid city landscape. It can be used in different shapes, such as column and arc shape displays.

BARCO
UNISEE 500



The Barco UniSee is a seamless LCD video wall, offering typical brightness levels of 500 cd/m^2. It is designed for use in environments with controlled ambient lighting conditions. It complements the flagship Barco UniSee, with its typical brightness of 800 cd/m^2

Barco UniSee's bezel-less design, which makes the inter-tile gap barely noticeable, enables spreading content over multiple tiles without the interruption of a disturbing black border. The UniSee Mount uses the power of gravity to perfectly and automatically align panels – and keep them in place over time. UniSee Mount also eases maintenance efforts, allowing swift undocking of separate panels. Sense X, the automatic, continuous color and brightness calibration system, ensures that the complete wall gives a perfectly balanced image at all times. The local dimming feature brings higher contrast, lower radiated heat and reduced power consumption.

ATLONA
OMEGA AT-OME-MS52W

AT-OME-MS52W Matrix Switcher streamlines BYOD collaboration with flexible wired inputs, wireless AV casting, USB extension and a wide range of integration features. Combining flexible wired and wireless AV input support with USB extension and user convenience features such as automatic input selection and display control, the newest Omega Series innovation provides a universal connectivity and switching solution that is ideal for applications from multi-participant presentations to video conferencing. The OME-MS52W's wired connections include HDMI, DisplayPort and USB-C inputs alongside mirrored or matrixed HDBaseT and HDMI outputs. The USB-C port provides adapter-free AV input from the latest generation of tablets and laptops, as well as device charging. The USB-C interface also combines with the switcher's integrated USB 2.0 hub to provide data connectivity for two peripheral devices; simultaneous AV and USB switching for up to three host computers; and USB extension to a compatible Atlona HDBaseT receiver. This provides an ideal USB integration solution for software video conferencing and interactive displays. The OME-MS52W supports HDBaseT transport of video up to 4K/60 with 4:2:0 chroma subsampling alongside embedded audio, control, Ethernet and – when paired with a USB-capable Omega Series receiver such as the AT-OME-EX-RX or AT-OME-SR21 – USB data. All wired AV inputs and the local HDMI output support 4K/60 4:4:4 at HDMI data rates up to 18 Gbps.

CHRISTIE
CRIMSON SERIES

The Christie Crimson Series of 3DLP laser projectors, introduced earlier this year, deliver 31,500 ISO lumens for the same price as the Crimson 25 models with the same 60Hz processing and Christie BoldColor Technology in a compact, rugged package for rental, staging and fixed installation customers. Users will also experience the same Christie TruLife electronics and the built-in warp and blend capabilities of Christie Twist. In addition, by adding Christie Mystique, users will reduce multiple projector calibration times from hours to minutes, saving both time and labor costs.

Designed with the technician in mind, the Crimson Series is built-tough and is easy to ship, handle and install thanks to its compact form factor, quiet operation and omnidirectional capabilities. Featuring an IP5X sealed, solid-state laser light source, Crimson projectors provide years of reliable, low-cost, and virtually maintenance-free operation while delivering vibrant, lifelike colors in theme parks, indoor and outdoor arenas and stadiums, entertainment venues, mega events, public spaces, and more.

The new Crimson models are upgradeable to 120Hz and support both Christie Guardian for real-time automatic blended-image correction when content is playing, and the Christie Terra input card for seamless integration into SDVoE networks.

BOSCH
PRAESENSA

PRAESENSA is the latest Public Address and Voice Alarm (PAVA) System from Bosch for every mid-to-large application. The system provides high-quality audio for music or messaging to every area in the building and is controlled via the intuitive graphical user interface on the call station touchscreen, or via personalized software running on a tablet or PC. Easy to install and highly cost-efficient, this advanced Public Address and Voice Alarm system brings peace of mind to a new level.

Fully IP-based and fully-featured, it is a state-of-the-art Public Address and Voice Alarm system. Installation and integration are straightforward, and it delivers great audio quality with an easy-to-use interface.

PRAESENSA uses IP-connectivity and a smart power concept with integrated redundancies to give you an extremely cost-efficient system, equally suited to either centralized or decentralized topologies. All components of the system are IP-networked for highest flexibility and scalability.

Innovative amplifier architecture allocates power intelligently for lower cost of ownership and user-centric design delivers an intuitive interface with feedback on progress and status

The Comprehensive system can adapt to changing needs.

IDK

HDC-UHD SERIES EXTENDERS

IDK HDC-UHD series of HDBaseT extender with distribution amplifier, features 4K@60 and HDCP compliant.

The selected input signals can be distributed to HDMI and HDBaseT simultaneously. The latest HDC models are much more user-friendly and convenient and have the versatility to be the extender for classrooms, meeting rooms, presentation rooms, signage, surveillance, and other AV systems.

The HDC–UHD series can transmit LAN/RS-232C control signals for peripheral device control and system equipment management. The new series also features Daisy chain for extending and distributing video, audio, and control signals. In addition, digital audio signals can be de-embedded onto the analog output signals.

Key Features include:

- Two inputs supporting HDMI and HDBaseT supported
- Daisy chain distribution
- Embedding audio
- WEB browser control
- Anti-snow, Connection Reset

BOSE PROFESSIONAL

VB1

Bose Videobar VB1, an all-in-one USB conferencing device that brings premium audio and video to meeting areas—from huddle spaces to medium-sized rooms—and allows users to be clearly seen and fully understood on video conference calls. The six beam-steering microphones actively focus on voices in the room and reject noise. The Bose-proprietary transducers reproduce accurate, room-filling audio from multimedia presentations, play Bluetooth audio, and ensure voices sound natural and clear. The 4K ultra-HD camera with autoframing delivers crystal-clear video, so remote participants can see presenters, whiteboards, and other in-room objects.

The single-cable USB connectivity means there's no need for separate audio and video cables at the table, reducing clutter. The Bose Videobar VB1 can be mounted to suit the space using the included table stand or wall-mount kit, or with an optional VESA mounting accessory. All mounting options allow for tilt capability to keep the team centered in the video image.

The Bose Videobar VB1 connects to existing network infrastructure, seamlessly integrating with popular third-party cloud services including Microsoft Teams, Google Hangouts Meet, Zoom, and more.

TECHNOLOGY ENHANCEMENT FROM SMART TO INTELLIGENT!

by Abdul Waheed

In this article ***Abdul Waheed***, Managing Director of EYTE Technologies Pvt. Ltd. talks about how technology has evolved over a period of the time and has been embraced by one and all. The article also elucidates on issues pertaining to security of technology, introduction of IOT and its applications and what the future looks like.

Lazy people are not considered as useful resources in any society, but they can be ideal to drive the direction of technology. They can find the best routes and shortcuts for any complex jobs given to them. This is what I believe can be used to create convenience of use in technology or what we call as user-friendly devices.

Manual tik-tok switches (don't try to find this on Google Play) to push buttons and touch screens, are all examples of the way that we have explored to make things 'easy to use'. Alexa, Hi Siri, or Hey Google may be the best commands that drive technology the easy way. Going forward technocrats are working on commands, which use the neuron signals of the brain. This means, you don't even have to move your lips; for instance for a VC session you only need to provide the command in your brain and the screen drops down, the projector lift comes down, projector switches on, the drapes roll down, lighting creates the required mood and of course the AC will turn on. Doesn't it sound like heaven?

Manufacturers are in fact finding it difficult to cope up with the fast pace, at which today's technology is moving. The lifecycle of any product is reducing at very high speed. Many a times we service providers of technology are being asked by clients to design a system that can last for five to 10 years. Our reply to them is simple - how long have they used their last cellular phone, maximum two years? Then how can one expect more from equipment, which is much more complex than a mobile phone?

IOT, AI, Cloud, Data Analytics, ML, AR, VR are the common terminologies for people in the workspace technology domain. These technologies are the game changers of today's world. Let me simplify for better understanding.

We are all well aware that Internet is the most widely used mode of communication in the world today. The social networking domain, be it WhatsApp, Tiktok, Insta, FB or Twitter is becoming increasingly popular and lazy (read 'easy to use'). Even people in rural areas who might not have even seen classrooms or school buildings, not only know how to use the internet and social media but are also addicted to it. This is the world of internet today.

Similarly, todays smart equipment, be it the security camera in your office, or the thermostat of the air conditioner, or the occupancy sensors in the meeting room, everything is connected to the internet. They also talk to each other by providing their status to each other via cloud and cloud-based devices.

'Cloud', which was not easily available for access until a few years ago, is now easily accessible at reasonably affordable rates. Also, easily accessible are free platforms like Youtube, We-transfer, Google Drive etc.

Today these smart devices boast of an additional feature – intelligence. Intelligence that we, human beings always feel is the distinguishing factor between us and other creatures. Now this intelligence is being installed in Machines and robots too.

Artificial intelligence implanted in machines uses ML (Machine learning) language enabling them to be smart and intelligent like humans. To understand this, please look at your smart phones. Actually, they are not only smart (getting all your data and information with your permission by making you

agree to terms and conditions while installing applications :) but are intelligent too.

When tilting a phone, it immediately changes the content into portrait or landscape mode using sensors. It intelligently changes the brightness - sensing the lux level or ambient light, it reads fingerprints and even eye retina. Smart phones know to click a selfie when you smile, it recognizes the faces and sorts your photo gallery, it has access to your routes and locations, knows your home and office destination and can automatically send notifications about traffic on your route at your office leaving routine time. This kind of intelligence can obviously also be very scary.

Google and others are collecting all this data since years enabling them to become leaders in Bigdata, and data analytics, which is among the essentials for any business in today's world.

We cannot run away from this, and will have to adapt and embrace the technology.

Since a decade we have been talking about Smart Buildings, then we had the 'Intelligent building' concept and now the world is talking about 'Living building' concepts.

Smart buildings are those that have smart devices, which were dumb, meaning: the access card machine can help open doors but is not an IOT device and does not talk to other devices.

In **Intelligent Buildings**, the devices installed can talk to each other and provide data to the facility mangers dashboard, giving inputs about temperature in the room, enabling the FM to control temperature from his control panel on the screen. Projectors can provide critical data. For instance, they can send out information that lamp hours are burnt out in a particular room and can request for an engineer to install a new lamp in meeting room number 4 for example.

Living Buildings are a step ahead. The facility manager may just have to look for some other job, as all the above-mentioned functions will take place automatically without human intervention. It will not only have the smart devices installed, but all the devices can give their feedbacks to each other via cloud, and based on the feedback they themselves can take smart decision and actions.

If it was raining the previous night, the humidity sensors installed in the garden will send a signal to the the water pump that humidity level is such that the plants don't need water today, thereby saving resources like water and energy.

If on a particular day you need to start your official activities at noon for any reason, you can leave a message on the office phone app on cloud that you would be needing meeting room #4 for an hour in the afternoon for meeting a vendor and post that you would need a quiet place to study the tender document. The intelligent building will take care of everything, from booking the room for your meeting for an hour, to lighting your seat. Before you even enter the room, the presentation display will turned on and ready for the meeting and your favorite cappuccino or drink will reach the table at the exact time entered in the cloud data. Not to forget, email will be sent automatically to your vendor and facility manager about the booking details. The way finder for outside visitors can also be sent to the vendor. This not only saves time, energy and cost, but also contributes to higher efficiency and productivity as normally 30% of employee's time is wasted finding vacant space for meetings.

The sensors of Living Building can also read facial expressions and provide feedback to HR managers if an employee is seen in stressed conditions.

Technology is contributing to energy saving, cost reductions, higher productivity and wellness. It addresses many issues of the modern world, including traffic issues. Almost everybody is using Google maps. When you book an Ola or Uber etc., you don't get two taxis waiting for you, because the moment a driver accepts the booking, the software's intelligence stops other drivers from accepting the same booking, not only saving human time but also fuel and aiding in improving traffic situations.

The Fitbit on your wrist, talks to your body and the doctors connected to the data collected through cloud. This is another example of how technology is contributing to improving quality of life.

It not only sets vibrations alarm to make you aware of the phone calls (avoid noise pollution, keep your phone on vibrator mode but can wake you up gently from your sleep. It also monitors your pulse, heartbeat, and BP. It collects the data of your health and keeps your doctor updated of how many steps you are walking every day and if your BP is under control. God forbid if during sleep your pulse rate increases or your blood pressure shoots up beyond prescribed levels, it can vibrate at higher frequency in an attempt to wake you up and can even send an alarm to the doctor. Request for an ambulance can be sent out giving updated details of your condition and in this manner, technology can save lives. So, is technology a disruptor or a bane?

Above are examples of how AI, IOT, and cloud-based services are being used to Enhance Your Technological Experiences.

Abdul Waheed is a dynamic AV industry leader and Managing Director at EYTE. EYTE Technologies Pvt Ltd. is one of the leading AV, IT, IOT AND Acoustic consultants in India. Abdul, A CTS holder from Avixa, has been part of the AV industry for more than two decades and has been contributing to technological development and assistance to many clients. EYTE has contributed and delivered many successful projects that includes MNCs, Hospitality, Government and Educational segments. He be reached at abdul@eyte.sg

AV-ICNX EXPO 2021
AV INTEGRATION COMMUNICATION NETWORKING EXPO

27 28 29 MAY 2021
BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

HARMAN REIGNS SUPREME IN INDIAN CINEMAS

JBL Professional's Dolby Atmos designed audio system enables Shree Talkies to show films with immersive 3D-quality sound.

To deliver clear, intelligible sound at DM Cinema, CineTech Engineering Works installed a premium JBL Professional cinema audio system comprising of C222 cinema loudspeakers along with JBL Professional 4642A cinema subwoofers and 8320 cinema surround speakers powered by Crown DSi amplifiers and a JBL Professional CPi2000 cinema sound processor

From the first design to the finished furnishings, the goal of every multiplex or single screen cinema is to create a space that incorporates the impressive experience of science and commercial cinema. This is the reason why, since decades theatres across India have banked on HARMAN's JBL range of cinema speakers.

Cinema theatres are a niche market with ever changing technology and JBL has been a pioneer in the cinema speakers market in India. Harman Professionals recently upgraded four cinemas with the power of JBL Professional Cinema Audio Solutions. **AV-ICNx reports.**

ABR Cinemas

ABR Cinemas The Next is a world-class multiplex located in historic Gudivada. With three luxurious theaters, ABR Cinemas is one of Andhra Pradesh's premier cinemas. To create a more immersive AV experience with even, balanced coverage, ABR Cinemas recently decided to upgrade its aging audio systems. ABR Cinemas hired sound integrators Digital Sound System to install three cutting-edge HARMAN Professional Solutions cinema audio systems featuring class-leading JBL loudspeakers, Crown amplifiers and state-of-the-art Dolby Atmos processors.

"We are proud to have been associated with HARMAN Professional Solutions and all of the products recently installed at ABR Cinemas," said **Dariya Hussain Syed** of Digital Sound System. "The JBL Professional 4732 loudspeakers and 4642A subwoofers have delivered exceptional audio results. We received the products promptly and the technical support from HARMAN Professional Solutions helped us complete the installation on time."

Digital Sound System equipped **the Audi 3 Theater** with an immersive **32-channel Dolby Atmos** solution powered by a **Dolby Atmos Cinema Processor CP850 and Dolby Atmos Interface DAC3202**. To deliver crystal clear sound, Digital Sound System installed **JBL 5732 ScreenArray loudspeakers** in

The JBL Professional 4732 loudspeakers and 4642A subwoofers delivered exceptional audio results at ABR Cinemas, Gudivada

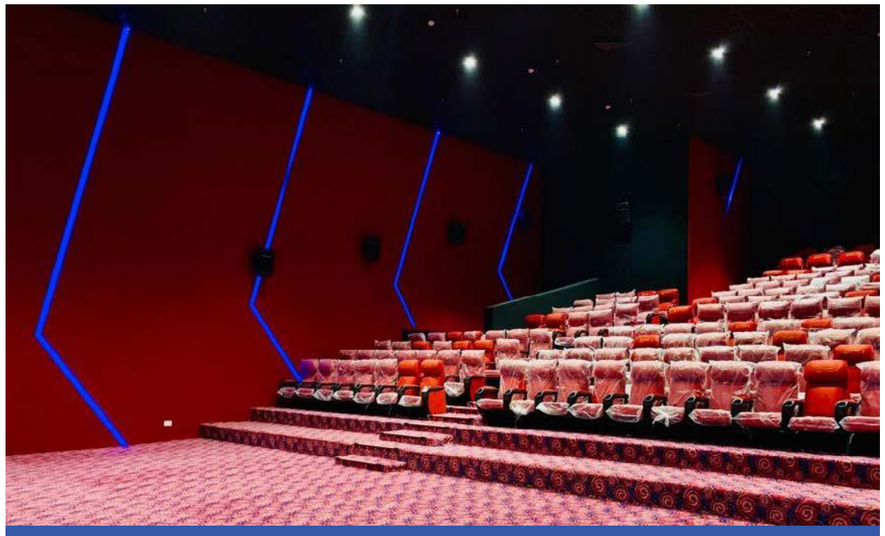
left, center and right positions. To provide additional low-frequency support, Digital Sound System selected powerful **JBL 4642A dual-driver subwoofers** and **JBL 4641 subwoofers**. Digital Sound System mounted **JBL 9310, 9300, and JBL 8320 cinema surround loudspeakers** on the walls and ceiling to ensure consistent coverage throughout the theater. The system is powered by **Crown DSi 4000, DSi 2000 and XLC 2500 amplifiers**.

In **the Audi 2 Theater**, Digital Sound System installed a complete 7.1 cinema audio system featuring **JBL 4732 ScreenArray loudspeakers** in the left, center and right positions. Digital Sound System selected JBL 4642A dual-driver subwoofers to deliver smooth bass response and JBL 8320 compact cinema surround loudspeakers to ensure balanced sound in every seat. The system is powered by Crown DSi 4000 and DSi 2000 amplifiers and controlled using a state-of-the-art **JBL CPi2000 cinema processor**.

Digital Sound System installed a **compact 7.1 cinema audio syste**m in **the Audi 1 theater**, featuring **JBL 3732 ScreenArray loudspeakers** in the left, center and right positions. The system is enhanced with a JBL 4642A dual-driver subwoofer for low-end support and JBL 8320 compact cinema surround loudspeakers for comprehensive coverage. The system is powered by Crown DSi 4000 and DSi 2000 amplifiers. A JBL CPi2000 cinema processor offers complete control over the system.

"We recently had JBL Professional products installed at ABR Cinemas in Gudivada," said **Ramakrishna Anil Kumar Pechetti**, CEO, ABR Cinemas. "The sound quality and product performance have been very good. Working with the HARMAN Professional Solutions team has also been a great experience, as everyone was highly professional and ensured timely delivery of the project. I'd recommend JBL Professional products for future upgrades at any branch of ABR Cinemas."

"With a forward-looking approach and a focus on quality, ABR Cinemas wanted to offer a world-class cinema experience for guests in Gudivada, Andhra Pradesh," said **Aditya Todi**, Senior Director of Sales and Marketing, HARMAN Professional Solutions, India and SAARC. "We're glad to have been part of this journey with them."



Century City Cinema, boasts of a cutting-edge audio system that includes JBL 4732-T loudspeakers and JBL 4642A high-power subwoofers along with JBL 9300 cinema surround speakers

Century City Cinema

To deliver clear, intelligible vocals and a superior surround sound experience, Cine Tech Engineering Works equipped Century City Cinema Punjab with a state-of-the-art JBL Professional cinema audio system.

Located in the heart of Mandi Dabwali, Century City Cinema is a 381-seat multiplex with two luxurious screening rooms. To deliver a world-class cinema experience, Century City Cinema hired Cine Tech Engineering Works to upgrade their aging audio-visual system with a cutting-edge HARMAN Professional Solutions cinema audio system featuring class-leading JBL loudspeakers and Crown amplifiers.

"We recently installed cinema sound solutions in Century City Cinema, Punjab, with the help of the HARMAN Professional Solutions team," said **Asad Rashid**, Owner, Cine Tech Engineering Works. "As per the client's requirements, we designed a cutting-edge audio system that includes JBL 4732-T loudspeakers and JBL 4642A high-power subwoofers along with JBL 9300 cinema surround speakers. The system is powered by Crown DSi Series amplifiers and a JBL CPi2000 cinema processor."

Century City Cinema equipped both theaters with premium **JBL 4732-T triamplified ScreenArray loudspeaker** systems to deliver crystal-clear, THX-certified sound. Equipped with JBL ScreenArray technology, 4732-T systems deliver impressive output, balanced coverage, and minimal distortion. To deliver rich, powerful low-end for music and sound effects, Century City Cinema selected **JBL 4642A dual-driver subwoofers** for their flat frequency response and high output. To create immersive audio experiences, Century City Cinema supplemented the system with **JBL 9300 cinema surround loudspeakers**. With a versatile wall-mounting system, JBL 9300 loudspeakers can be positioned at three different angles for optimal coverage.

To provide staff at Century City Cinema with a simple means of adjusting audio levels and sound quality for both screening rooms, Century City Cinema equipped the theater with a **JBL CPi2000 cinema processor**. With state-of-the-art DSP processing, audio enhancement presets and an intuitive software interface, the CPi2000 provides seamless control. The system is powered by Crown DSi Series amplifiers.

"We recently set up a JBL Professional sound system in our facility to deliver an amazing cinema experience with crisp, clear sound quality," said **Sagar Bansal**, Owner, Century City Cinema. "Our visitors appreciate the enhanced surround sound effect, which has solidified our reputation as a quality cinema. Working with the HARMAN Professional Solutions and Cine Tech Engineering teams was a great experience."

DM Cinema

DM Cinema is the first cinema in Aizawl. With comfortable seating for up to 140, a full-sized cinema screen and a 2K projection system capable of showing 3D films, DM Cinema provides an immersive experience for moviegoers. In order to ensure comprehensive coverage throughout the theater, DM Cinema hired CineTech Engineering Works to install a world-class cinema audio system. CineTech installed a state-of-the-art HARMAN Professional Solutions cinema audio system featuring class-leading JBL loudspeakers and Crown amplifiers.

"Being the first cinema in Aizawl, this was a huge breakthrough in the north-east," said **Asad Rashid**, Owner, CineTech Engineering Works. "The support from the HARMAN Professional Solutions team was commendable, and enabled us to complete the installation within the designated time frame. For the installation at DM Cinema, we had to create a design that would have a shallow profile and produce quality cinema sound in a less-than-perfect acoustical environment. We decided to install JBL Professional C222 cinema loudspeakers along with JBL Professional 4642A cinema subwoofers and 8320 cinema surround speakers, powered by Crown DSi amplifiers and a JBL Professional CPi2000 cinema sound processor."

CineTech installed **JBL C222 ScreenArray cinema loudspeakers** as the main left, center and right speakers to provide smooth, accurate sound reproduction. C222 speakers combine patent-pending Dual Dissimilar Arraying and Acoustic Aperture Technology to deliver remarkably uniform coverage. With a compact footprint, the C222 is perfect for small and medium multiplexes with space constraints.

To provide even, balanced coverage for every member of the audience, CineTech installed **JBL 8320 cinema surround speakers**. CineTech selected JBL 8320 speakers for their high power handling, high sensitivity and extended bass response. For additional low-frequency support, CineTech installed JBL 4642A dual-driver subwoofers. JBL 4642A subs are equipped with two 18-inch drivers for rich, powerful low-end. The system is powered by Crown DSi 4000, DSi 2000 and DSi 1000 amplifiers. To provide staff with an easy-to-use means of controlling the system, CineTech equipped the theater with a **JBL CPi2000 cinema processor**.

"HARMAN Professional Solutions has provided our theatre with high-quality surround sound using JBL Professional products," said **Zodintluanga Hmar**, Owner, DM Cinema. "We love the output the system provides, as it makes for an ideal experience for our audiences. Working with the HARMAN Pro team has been nothing short of perfect. The team helped us throughout the entire project, and we'd recommend other theatres to work with them too."

"It is a matter of pride that HARMAN Professional Solutions has the good fortune to reach out to places as far out as Mizoram," said **Aditya Todi**, Senior Director Sales and Marketing, Professional Solutions, India and SAARC. "Delivering quality sound has always been our mission and we're glad that DM Cinema in Mizoram has chosen to go the JBL Professional way. Here's to many more such installations."

Shree Talkies

Located on the north side of Agra, the Shree Talkies movie theater boasts the highest cinema revenue in the state of Uttar Pradesh. The recently upgraded 860-seat main theater became the first in the city to offer Dolby Atmos sound, which features ceiling and full-range surround speakers to create an immersive, three dimensional soundstage. To comply with Dolby's strict specifications for Atmos theaters and offer a premium audio experience, Shree Talkies hired cinema integrator CineTech Engineering Works to outfit the theater with JBL Professional loudspeakers and Crown amplifiers.

"With the theater having a seating capacity of 860, total throw distance of 112 feet and height of around 45 feet, designing an immersive audio system with overhead speakers was a challenge," said Asad Rashid, Owner of CineTech Engineering Works. "Only JBL can deliver professional cinema sound in this type of large-format Theater, with products like the ScreenArray and Cinema Surround Series loudspeakers. And with the help of HARMAN Professional Solutions team, we were able to finish the installation before the deadline."

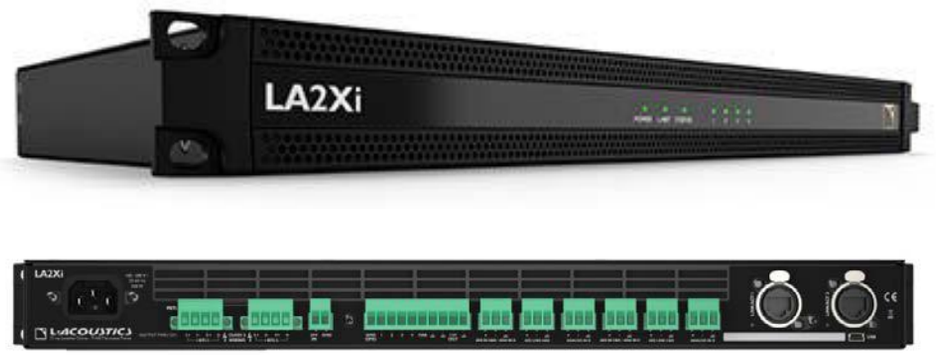
Behind the screen, **JBL 5742 high-power ScreenArray loudspeakers** deliver maximum output with minimal distortion for the left, center and right channels. Screen Spreading Compensation (SSC) and Optimized Aperture Waveguide technology give the 5742 speakers extremely focused coverage. For the surround and overhead channels, CineTech installed **JBL 9310 and 8350 high-power cinema surround loudspeakers**. The passive, two-way JBL 9310 speaker features new transducer and waveguide technologies developed to produce studio-quality performance with pattern control tailored to modern theatre geometries. The JBL 8350 speaker offers high power handling and sensitivity to meet the extended dynamic range required by digital sound formats, plus multiple mounting options for convenient installation. **JBL 4642A dual 18-inch subwoofers** add thunderous low-frequency output, delivering the full impact of modern films.

For amplification, CineTech installed a range of **Crown DSi Series amplifiers**, including the **DSi 1000, DSi 2000, DSi 4000 and DSi 6000**. Ranging in power from 475 to 2100 watts, the DSi Series amplifiers offer onboard DSP and perfectly matched performance with JBL ScreenArray systems. Together, the Crown amplifiers and JBL cinema loudspeakers form a class-leading cinema audio system that delivers unparalleled immersion at Shree Talkies.

"Our theater has been appreciated for having one of the best audio systems in a single-screen cinema in North India, and HARMAN Professional Solutions has helped us make that happen," said **Agarwal**. "Choosing any speaker brand other than JBL Professional was just not an option. Considering JBL's cinema legacy across the globe, there was no doubt about the quality of the product or the service.

Our audience has an amazing cinematic experience thanks to JBL loudspeakers. It was a fantastic experience working with HARMAN Professional Solutions and CineTech Engineering Works. Post-installation support was brilliant, and we are very satisfied with the quality, sales and service."

L-ACOUSTICS UNVEILS MILAN-CERTIFIED LA2XI AMPLIFIED CONTROLLER FOR INSTALL



L-Acoustics launched its first install-specific amplified controller at ISE earlier this year. Primarily designed to power L-Acoustics compact loudspeakers, the bridgeable 4 x 4 channel **LA2Xi** offers anywhere from one to four outputs, allowing it to also drives medium and large format loudspeakers, in full or reduced SPL, for various types of applications. LA2Xi is the ideal choice to power background music in leisure installations, distributed fill systems in performing arts centers, studio monitors, private auditoriums and more.

LA2Xi adapts to the needs of various applications, allowing to choose a four-, three-, two- or one-output channel configuration. In 4 x 4 single-ended mode, it can drive up to 16 X4i or 5XT compact coaxial loudspeakers. In residential applications where maximum SPL is not required, LA2Xi powers a stereo pair of elegant Syva and Syva Low colinear source loudspeakers. In 4 x 3 configurations, it can drive a pair of X8 reference monitors with a SB15m subwoofer. Bridging all channels in 4 x 1 mode powers one KS28 reference subwoofer with an impressive 2550 W.

Packaged in a 1U chassis for optimized rack space, LA2Xi was made for integration applications. Underneath the streamlined front panel lies the same DSP engine as the flagship touring LA12X amplified controller, including features for loudspeaker management, protection and monitoring as well as a comprehensive set of tools for system adjustment and calibration. Milan-certified, LA2Xi offers analog and AES inputs as well as AVB with seamless redundancy. The rear panel contains terminal connectors for AES and analog inputs, loudspeaker outputs as well as four GPIO and a 24 V DC backup power for the DSP card, enabling external control and monitoring, and ensuring fast recovery in case of power loss.

"We are proud to expand our amplified controller range, which is renowned for high performance and efficient amplification to the installation market," explains **Genio Kronauer**, Director of Electronics Development at L-Acoustics. "From the blank page through to launch, the LA2Xi has been honed to meet the needs and specifications of our installation partners. Its flexible input/output architecture makes it a powerful addition to our line-up."

LIFESIZE AND SERENOVA MERGE TO CREATE CONTACT CENTER COMMUNICATIONS

MARLIN EQUITY PARTNERS' INVESTMENT TO ACCELERATE DEVELOPMENT OF UNIFIED CLOUD COMMUNICATIONS AND COLLABORATION PLATFORM TO HANDLE THE FUTURE OF WORK IN THE ENTERPRISE

Lifesize and Serenova announced a merger, creating a contact center communications and workplace collaboration company serving more than 10,000 customers worldwide. Marlin Equity Partners, a global investment firm with over $6.7 billion of capital under management, is the financial sponsor of the merger and will continue to invest and support the growth of the combined business to address the $60 billion unified communications-as-a-service (UCaaS) market.

With the merger, the company is addressing the convergence of UCaaS and CCaaS technologies in the contact center with a complementary platform of enterprise-grade, cloud-based, high-definition video collaboration and contact center solutions –– both recognized by Gartner, Inc. in their respective industry Magic Quadrants.* The new entity will enable customers to consolidate the patchwork of communications, contact center and video collaboration solutions, delivering a new breed of unified, Omni channel experiences for workplace collaboration and customer engagement. The company will provide customers with global scale and tailored local support through its partner ecosystem in more than 100 countries worldwide.

Craig Malloy, founder and CEO of Lifesize, will serve as CEO of the new company. Serenova CEO **John Lynch** will assume the role of senior vice president of sales, including strategic oversight of global major accounts.

"This merger joins two companies with vast market expertise and cutting-edge, cloud-based solutions. When combined into an integrated platform, we will be uniquely positioned to help organizations deliver communication experiences that far surpass the status quo, from the contact center to the meeting room and beyond." Said Malloy.

"The synergies between Serenova and Lifesize solutions will allow us to revolutionize how businesses communicate with their customers and will deepen the value we can offer to our existing contact center customers worldwide." said Lynch.

QSC ADDS INTEGRATED SUB/SAT PENDANT LOUDSPEAKER SYSTEM TO ACOUSTICDESIGN SERIES

QSC has introduced the AD-P.HALO, an integrated SUB/SAT pendant loudspeaker system as part of the AcousticDesign Series featuring an integrated 6.5" subwoofer and four 2.75" transducers in a single enclosure. This purpose-built system is ready to install right out the box, eliminating the need for complex and time-consuming assembly of multiple hardware components. The AD-P.HALO provides integrators a hassle-free design that greatly expedites the installation process and reduces overall labor costs.

The AD-P.HALOHALO brings high performance output and enhanced musicality for background music applications, such as high-end retail and hospitality where music inspires the overall atmosphere. At 200 watts RMS, the AD-P.HALO offers significant dynamic headroom that far surpasses the background music performance of traditional two-way pendant-mount loudspeakers.

Consultants and integrators can use AD-P.HALO alongside any number of AcousticDesign Series loudspeakers (ceiling-mount, pendant-mount and surface-mount) because the entire AcousticDesign portfolio maintains consistent sonic characteristics

6.5-inch Dual Voice Coil, Small Format Pendant Subwoofer

providing design flexibility for any installed application. In addition, by taking advantage of Q-SYS™ network amplifiers or QSC DSP-enabled amplifiers, integrators can take advantage of QSC's Intrinsic Correction proprietary voicing algorithm for QSC loudspeakers, which helps to further reduce the set up time and tuning process.

"Our extensive conversations with integrators revealed common struggles associated with other pendant loudspeaker systems in this class, which we address with AD-P.HALO," says **Travis Nie**, Product Manager, Installed Loudspeakers, QSC. "We also needed to eliminate the frustration spawned by excessive assembly times, which can take 30-40 minutes or more for each loudspeaker. The AD-P.HALO delivers on both promises with an all-in-one system that takes minutes to install."

TVONE SHIPS NEW DYNAMIC MODE FOR CORIOVIEW

tvONE is now shipping a new Dynamic mode to tvONE's 4K multi-window processor, CORIOview.

CORIOview, a fast, intuitive, 4K multi-window processor with up to eight sources can now be used in two modes. Users can choose from a classic multi-viewer look and feel or the highly optimized Dynamic mode when collaboration and ease of use really matter in your huddle rooms, meeting spaces, and control rooms.

With the new Dynamic mode, users can connect, collaborate, and present like never before. Connecting a source to CORIOview will automatically add you to a shared visual multi-window display, and a simple push of a button will take you full screen to present with maximum impact. For ease of navigation, on-screen labels provide you with source information and audio status. If you need to pause your visual collaboration, output video and audio can be muted or unmuted as desired.

tvONE's CORIOview, can now be used in two modes - the classic multi-viewer look or the highly optimized Dynamic mode

Working in the traditional Classic mode, CORIOview out-performs other solutions. Features include eye-catching transitions, up to eight inputs in just a half-width 1RU modular chassis, advanced source labelling, colour borders, and audio. You can also choose to output to a portrait or landscape display.

CORIOview is an ultra-compact, 4K multi-window processor that can take inputs from up to eight separate sources for HDMI (4K or HD), DVI, 3G-SDI, HD-SDI, HDBaseT (4K or HD), and streaming video depending on the configuration of its modular design, and output them to HDMI (4K or HD), DVI, 3G-SDI or HDBaseT (HD).

SHURE INTRODUCES INTELLIMIX ROOM AUDIO PROCESSING SOFTWARE

Shure introduced IntelliMix Room – the first audio processing software for Windows 10 PCs that is fully optimized for use with Shure networked system microphones.

IntelliMix Room is a software-based DSP that requires minimal customer setup or additional special hardware, which reduces the costs and footprint required to deploy premium AV conferencing. It can be deployed to in-room Windows 10 PCs and meeting control devices that are already in-place to run popular software-based AV conferencing services, bringing premium audio to video conference calls.

This new software provides up to 16 channels of audio processing, IntelliMix Room deploys the same algorithms as Shure's award-winning P300 IntelliMix Audio Conferencing Processor, but is installed on the same in-room PC as the conferencing soft codec.

IntelliMix algorithms are specifically designed to optimize the performance of Shure's range of premium conferencing microphones such as the MXA910 ceiling array, MXA310 table array and Microflex Wireless. IntelliMix Room aggregates and optimizes the audio output of multiple microphone sources and thus scales-up to support even more complex boardroom deployments. With Echo Cancellation, Noise Reduction, Automatic Mixing, Automatic Gain Control, and secure Dante routing, IntelliMix Room automatically produces a single channel of conference-ready audio.

IntelliMix Room is licensed on three-year and five-year options. It offers deployments of either up to eight or 16 channels of processed audio which includes support and maintenance. Using Shure's free Designer software, integrators can either set up rooms using Shure's supplied templates, or easily configure their own for consistent large-scale deployments in their customers' facilities. IntelliMix Room's software-only approach for DSP is particularly suited to progressive systems integrators offering AV-as-a-service solutions to their end-customers.

Main features of the IntelliMix Room include:

- Natural audio quality for more room sizes and budgets
- Consistent AV quality across rooms
- Fully Dante compliant
- Enterprise-wide licensing
- Scalability and lower maintenance costs
- Ease of deployment and management

All audio over the Dante network secured via Shure Network Audio Encryption

"Shure is rising to the AV demand," said Jim Schanz, Vice President, Global Systems Sales at Shure. "The pace of corporate consults and installs is increasing by the day and integrators need a way to take the complexity out of setup and put time back on their side. Now they have a secured solution."

FUNKTION-ONE LAUNCHES ITS SMALLEST EVER LOUDSPEAKERS FOR WIDE RANGE OF INSTALLED APPLICATIONS

Funktion-One announced the launch of two compact loudspeaker models – the F5 speaker and the SB8 bass unit for the install segment.

The Funktion-One F5 is a loudspeaker innovation, which offers an extremely balanced and natural sound quality that's not often found in loudspeakers of its size. The F5's ultra compact dimensions and high output mean it is suited to a wide range of applications, including distributed public address systems, bars and restaurants, as well as domestic applications, such as home cinemas, desktop monitoring and home music systems.

The Funktion-One SB8

The F5 features a Funktion-One bespoke wide-range, high-sensitivity 5" driver, an integrated high pass filter for low frequency protection, angled cabinet design for desktop use and a 3/8" microphone stand mount.

The Funktion-One SB8 is an extremely compact, yet powerful bass unit. It is perfect for applications where a conventionally sized subwoofer is too large or obtrusive, such as in bars, restaurants, retail and galleries, as well as domestic applications.

The dynamic and musical SB8 features a high-sensitivity 8" bass driver and requires no EQ or controller, only crossover filters. A self-powered version will be available soon.

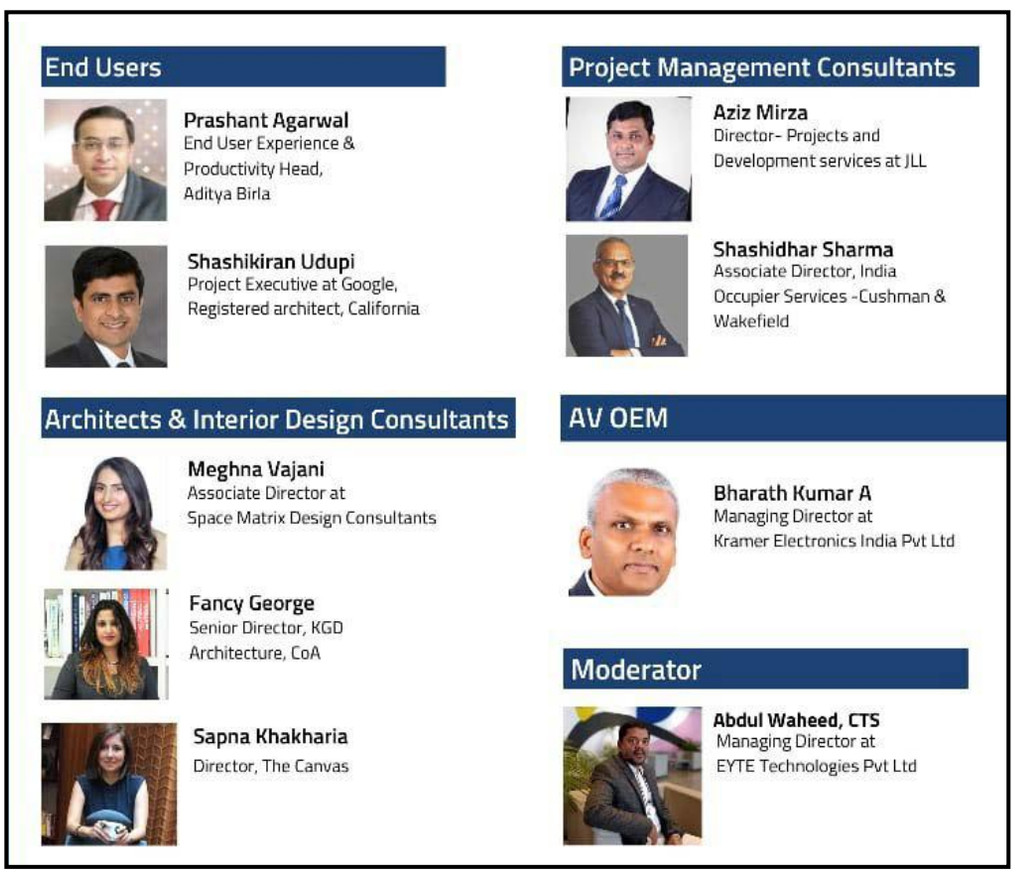
The Funktion-One F5

Funktion-One founder **Tony Andrews** said: "We're very happy to introduce the F5 and SB8 at ISE 2020. Though they are small in size, they are capable of the high-performance standards that we demand from all of our loudspeaker innovations."

EYTE TECHNOLOGIES ORGANISE WEBINAR ON "40-DAYS LOCKDOWN-ACCELERATION TOWARDS DIGITAL TRANSFORMATION" IN ASSOCIATION WITH KRAMER

The coronavirus pandemic outbreak crisis, which has affected millions of people across the world, has mandated the adoption of technology and tools like video conferencing, online collaborative tools, data on cloud etc.

Eyte Technologies Pvt Limited in association with **Kramer** recently organised a Webinar on the topic - 40-days lockdown-acceleration towards Digital Transformation. The panel boasted of well-known speakers with more than two decades of experience in their respective fields from across the project industry spectrum comprising of end users, architects, PMC and AV equipment manufacturers.



Moderated by **Abdul Waheed** – Managing Director of Eyte Technologies Pvt. Ltd., the panel comprised of Fancy George – Senior Director, KGD Architecture; **Aziz Mirza** – Director, Project and Development services at JLL; **Meghana Vajani** – Associate Director at Spacematrix Design Consultant Private Limited; **Sapna Khakharia** - Director, THE CANVAS, one of India's leading architectural and design studio; **Udupi Shashikiran** - Project Executive at Google; **Prashant Agarwal** - General Manager at Aditya Birla Group and **Bharat Kumar** from Kamer.

Cisco Webex was the Technological Platform Partner for this event.

The discussion focused on the impact of Covid 19 on ongoing projects and a 180-degree shift in office designs considering work from home as an emerging work style for many offices fulfilling social distance demands. In the session, Technology emerged as the tool for survival going forward and the panel discussed the possible shift of touch free technology solutions, automation, AV, IT and AI solutions from being luxury solutions to being must haves for new office designs.

Meghna Vajani, expressed that there is going to be huge manpower crunch once the offices resume back and that there was a need to be optimistic about the situation, as it would not be the end of life. Besides contributing to family and social bondings, Aziz Mirza noted the other pros of WFH and discussed how it is set to become the norm.

Replying to one of the questions put forth, Facny George, said that office space designs would in future be very different, giving an indication of more technology discussion for projects now. She said, "the involvement of technology is going to increase in offices, right from thermal screening, to clean air in the office, you guys need to help us." Prashant Agarawal from Aditya Birla Group added that 'even the traditional offices would now think about a mandate on WFH for certain percentage of office staff. Shashikiran Udupi said that Google had been at the forefront of technology since years, and data analytics, use of collaboration tool, web meetings etc. would in future be the mandate in many offices. Bharat Kumar reinforced that Kramer had many solutions in the AV and IT domain which could easily address the challenges being faced by the designers in post covid office designs.

The panelist also felt that, not all is lost. The word "crisis" in Chinese is composed of two characters, one representing danger and the other, opportunity and that it was time to focus on the second part, 'opportunity'.

Panelists noted that technology had lessened the impact of social distancing enabling people to use technology in innovative and new ways and all the panelists agreed that companies would now invest more in tools enabling employees to work remotely and collaborate virtually, assess their current bandwidth to support remote work, perform periodic network stress testing and identify workarounds for critical tasks that are not executable from home.

The discussions also envisioned many new possibilities to emerge, which would put India as a strong power to reckon with on the world map.

The Webinar received positive feedback from Audiences who attended. All were unanimous in that the session was insightful, positive and provided good insight of how things would change and how soon one could adapt to the changes.

SONY LAUNCHES TEOS WORKPLACE MANAGEMENT SOLUTIONS IN ASIA PACIFIC

Sony announced the Asia Pacific launch of TEOS, a comprehensive suite of workplace management solutions that reportedly unlocks productivity, creativity, communication and collaboration. Covering the whole spectrum of display and workspace management needs, the bespoke solution gives AV, IT and facilities managers full control over devices, signage and content across the entire workplace ecosystem.

TEOS offers a solution to manage content and facilities in corporate as well as education environments. Designed to make the smart workplace a reality, users can orchestrate their entire workspace centrally using personalized signage, efficient room booking, automated reception, and technologies to enable more efficient communication and collaboration.

At the heart of the solution is TEOS Manage, the workplace management platform from Sony. Users can achieve efficiency, insight and impact by taking full control of devices, signage and content across meeting rooms, reception areas and every space in between.

As needs evolve, users can transform the way they work even further with a complete family of corporate workspace solutions that are operated through TEOS Manage including, Streamline Room Booking, Make Visiting Easy, Master Meetings and Communicate Clearly.

In addition, the latest TEOS 2.2 update has been designed to unlock the potential of new advances in IoT sensor technology, boost integration and untap new productivity and efficiencies in the workplace and workforce.

VIEWSONIC LAUNCHES VIEWBOARD IFP50 – 2 SERIES TO 4K UHD INTERACTIVE FLAT PANEL DISPLAYS

Leading global provider of visual solution products, ViewSonic Corp., announced the launch of ViewBoard IFP50 – 2 series, interactive flat panel displays providing upgrades to the hardware and software features. From an ultra-slim bezel design and enhanced touch screen, to built-in 2.1 stereo speakers with subwoofer and SmartPort USB, the ViewBoard IFP50 – 2 series provide outstanding experiences for enhanced classroom learning and next-gen boardroom collaboration. The new embedded Android 7 operating system, improved myViewBoard whiteboard software and improved casting ensures that IFP50 – 2 displays deliver incredible next-level collaboration.

The ViewSonic ViewBoard IFP50 – 2 series include an enhanced 20-point touch-enabled panel, which provides not only differentiated tip sizes of IR-based pens, but also simultaneously offers two color writing, in addition to allowing multiple users to write or draw on the display's surface. The new touch screen also features reduced latency of 4ms for a smooth writing experience.

These interactive flat panel displays provide powerful computing for annotation and multimedia playback without the need for a PC. The IFP50 – 2 ViewBoard displays come with a built-in ARM quad-core processor and an Android 7.0 operating system, making it 2.3x faster than previous iterations. This offers better application performance, more efficient memory usage and optimized hardware integration, with 2GB memory and 16GB storage. With the improved processor power, IFP50 – 2 displays can handle multiple cast streams, allowing up to nine screens, with the vCastSender utility. Also, the users have option to utilize native Chromecast from any Chrome-enabled devices.

"ViewSonic interactive flat panels are packed with latest features and technologies to make sure that the users can collaborate and share content the best way possible, whether it's directly on the display or between devices. The IFP50 – 2 series deliver incredible picture quality with faster computing and enhanced responsive touch capabilities for an immersive experience." said **Eric Wei**, Senior Sales Director ViewSonic Asia Pacific. "To provide seamless experience to the end-users, IFP50 – 2 series have specific upgrades such as the ability to input asset tags to each display for inventory control management."

The ViewBoard IFP50 – 2 series of interactive displays are "out-of-the-box" collaboration ready. It allows users to write, highlight, edit and transform documents and images on the screen in real time. myViewBoard digital whiteboarding software also features Single Sign-On that allows users to easily and securely log-in to multiple cloud drives, multiple meetings, etc., with a single sign on; QR Code Sharing which enables users to share content via unique QR codes on the ViewBoard display; as well as entity management and built-in on-canvas browsing.

The ViewSonic IFP50 – 2 series offers a variety of sizes from 65- to 86-inch interactive displays that have native 4K UHD (3840x2160) resolution and come with multiple connectivity options including: HDMI, Composite, VGA, YPbPr, SPDIF audio-out, USB 2.0 and 3.0, RJ45, RS232 in/out, optional slot-in PC and Audio in/out, to connect to a wide variety of computing and multimedia devices. New ports include a SmartPort USB: a series of front-facing USB ports that follow current input channels; and a dedicated camera port so users can connect a camera to use between a slot-in PC or Android system, with no need to plug/unplug when switching operating systems.

RAMYA CHATTERJEE

UPGRADE YOUR MEETING ROOM WITH RIGHT SETS OF TECHNOLOGY

HOW TO ENHANCE MEETING ROOM PRODUCTIVITY BY SELECTING RIGHT SETS OF TECHNOLOGY

The way people work is changing; from a top-down approach to the collaborative workforce, maze-like corridors to single mile-long room, drab cubicle to a treadmill desk, every change in pattern is affecting the outcome at the workplace. Speaking of the meeting that makes sure everyone is up to the expected speed, has a witnessed drastic digital transformation in near future - from formal to informal, traditional to agile, face to face to electronically connected, with a sole aim to enhance meeting room productivity.

How many times have you been waiting in the meeting room to get it started, held up by a piece of technology that has refused to cooperate? Or the host is busy connecting the cable to mirror the device? Well, if we calculate the cost of time spent on just waiting, we will realize a tech upgrade is immediately needed in the meeting room, to save the precious time and enhance productivity.

As per Harvard Business Review, executives spend nearly 23 hours a week in meetings that do not include impromptu gatherings. If the initial 10 minutes of every meeting goes in just setting it up, then a big chunk of time has been lost.

Emerging Evidence

Collaboration lies at the heart of every meeting room, whether it is with colleagues, clients, partners or vendors. Merging digital communication patterns with physical spaces, meeting rooms have come a long way in the modern workspace. Employees armed with laptops and mobile phones from far-flung offices, shared workspaces and homes are collaborating and maximizing productivity.

The Problem

Tangled cables and adapters. Garbled audio. Mirroring the presentation on the projected screen. Searching for the dongles. Connecting with remote employees. Minutes tick by and participants get drifted. Most aptly, these are technology clutter and conundrum.

The Challenge

Without killing the budget or increasing the workload of the IT Support Team, companies are looking for retrofit solutions to upgrade their meeting rooms, which could augment the power of their existing set up by manifold. Even the top-notch talents and the finest leadership have lagged behind due to poor technology.

The Solution

Using the right set of technology integrated into smart connected products help in seamless collaboration in a meeting room and enhances the overall productivity, without any wait.

Smart connected products are built on entirely new technology infrastructure – new product hardware, embedded software, and cloud connectivity. With Computing, AI, and the internet

weaved into the everyday fabric of our life, these products understand the objects and environment and interact in natural ways.

Digital Transformation at Workplace

Using the right set of technology, meeting room productivity can surely be enhanced. Whether it is sharing content from different devices and communicating across multiple locations, or supporting the trend of smaller meetings; technology has always supported what users look for.

The top five feature which every executive looks for in an upgraded meeting room is simplified hosting, connecting, collaborating, sharing, and writing/annotating. Well, the expectation is not limited to the features rather the solution should be endowed with an understanding of the environment, senses the user proximity and context, intent and behaviour through advanced IoT sensors embedded in the devices.

Navigating into the world of smart connected products, Cybernetyx has developed

Ramya Chatterjee, CEO at Cybernetyx,is an achievement driven and high-performance leader, having a strong record of contributions in streamlining P&L functions, new business development, stimulating businesses, heightening productivity and improving systems & processes. He has gained hands-on experience across industries in technology product companies in Audio Visual (AV), Information & Communication Technology (ICT), IT Hardware / Software and Office Automation

(OA) segments with vertical focus includes Education, Corporate, SME & Govt. Ramya Chatterjee is a dynamic change agent, skilled in positioning organizations to achieve operational excellence with strong ROI drive. Delivered improvements in process, market positioning, cost control, business model re-structuring and consistent growth. He is well organized with a track record that demonstrates self-motivation, entrepreneurial ability, creativity and initiative to achieve corporate goals. He is persuasive and influential professional with a strong verifiable career track for successfully propelling through start-ups/emerging businesses and managing end-to-end business with conceptualization & sound thought process and having outstanding success in building and maintaining relations with key partners/ clients. He can be reached at ramya.

chatterjee@cybernetyx.com

a new set of technological possibilities for meeting rooms and enabled faster connection, seamless collaboration, and wireless casting with more augmented capabilities. It has a wide range of retrofit devices, which when clipped on the top of a standard display, instantly turns it into an agile space with touch interactivity, wireless multi-device collaboration, and digital whiteboarding software.

Save your Entire Session - Any standard panel in the meeting room can be used to write and annotate but it comes with limited space. A Touch Interactive Whiteboard integrated with whiteboarding software makes collaboration, writing, and annotation much easier along with saving the entire session. With unlimited pages, erasing the board and losing the content becomes the thing of the past.

Collaborate Seamlessly – The ability to collaborate - sharing any form of content without connecting cables, casting screen or joining the meeting from any location is the rising trend of meeting rooms in 2020. Give your employees the flexibility to work at their own pace to achieve maximum productivity.

Major Considerations before you Buy

Before starting with your research, check where your setup is falling short. Are you looking for augmenting your existing setup while adding an aesthetic look in your meeting room or you are looking to change the entire setup? Decide the best for your business, not only in the near future, but for the next 5 years at least. Choose a product that could meet your requirements in present and scale it up later.

Among many available players, Cybernetyx is a global player in Interactive Touch Screen, and is widely known for its robust products, intelligent platform, and prompt support system. Cybernetyx is one of the world's largest Tier-1 interactive technology suppliers to top display OEMs of the world such as NEC, ViewSonic and others empowering millions of devices worldwide.

ACOUSTIC AND AUDIO SYSTEM DESIGN FOR SMALL ROOMS

continued from pg 17

In the first part of this series, we will focus on three basic acoustic and psychoacoustic phenomena whose understanding are critical to effective design; the Haas effect, comb filtering and phase shift.

Haas Effect

The simplest way to describe the Haas effect is through its other name, the precedence effect. If two sources of sound are separated in arrival time by less than approximately 40ms, they are perceived as one. Because of this, both sounds also appear to come from the same location, which ends up being the physical location from which the first sound reaches your ears. Because of this powerful psychoacoustic phenomenon, your brain locks into this physical location, and it then becomes very difficult for your brain to reset and convince itself that there are in fact two separate sources of sound in different locations.

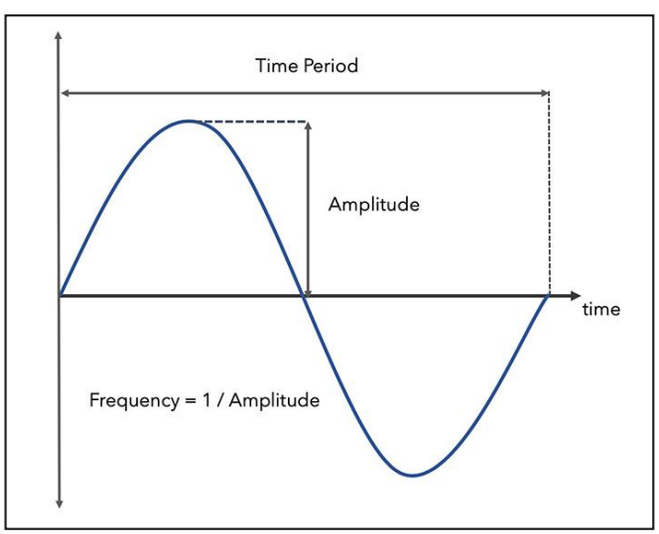


Fig.2: Amplitude, Time Period and Frequency of a Wave

Either the level of one has to be reduced significantly, or it has to be delayed by over 40ms. The implication of the Haas effect in small rooms is straight forward; your brain is unable to separate the direct signal from early reflections because the arrival times are too close together! Why is this bad? The short answer is comb filtering, but the concept of phase shift needs to be understood before we open that can of worms.

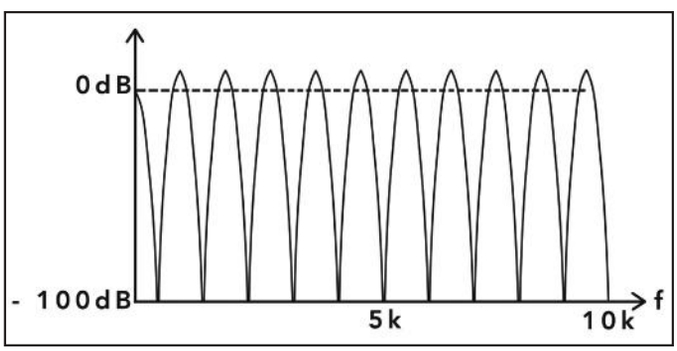


Fig.3: Combing

Phase Shift and Comb Filtering

As audio professionals, most of us are aware that every audible (and inaudibile) frequency has a corresponding wavelength. The time period defines the time it takes for one complete oscillation over that wavelength. While most audio signals are complex and never resemble a sine wave, we will still use one to illustrate our concept.

In the image below, two audio signals with the same amplitude (level), frequency response and wavelength BUT different arrival times have been added. Because of the different arrival times, the combination of constructive and destructive interference results in the "combing" you see in the image below. As you can imagine, this is not a desirable result.

The time delay created a phase shift in the wave, which combined with the original signal. Thanks to the Haas effect, this is the resultant wave we hear in a room. We sometimes mistakenly attribute the resultant wave to the audio system alone, when in fact it is a combination of the room and source. The colouration affects the spectral content of the sound waves, which goes against the main design goal of any listening space – transparency. The solution is to create a reflection-free zone, both through acoustic treatment and/or angling the walls of the listening room. Stay tuned as we dive deeper into acoustic and audio system design considerations for "small" rooms!

www.menuralabs.com
info@menuralabs.com

SHURE CELEBRATES 95 YEARS IN PROFESSIONAL AUDIO

Shure Incorporated is proud to celebrate its 95th year as an industry leader in audio technology. From its humble beginnings in 1925 as a one-man company selling radio parts kits, Shure has a rich legacy of innovations in audio, and today, offers a diverse portfolio of game-changing and industry standard wired and wireless microphones, personal and professional listening products, and conferencing and meeting solutions. Shure products are now sold in more than 120 countries, and through the decades, they have been used around the world by such luminaries as Dr. Martin Luther King, Jr., Elvis Presley, Pope Francis, Nelson Mandela, The Beatles, and every United States President since Franklin D. Roosevelt.

Important product innovations throughout the Company's 95-year history include:

- Unidyne I Model 55, the first unidirectional microphone with a single moving coil dynamic element.

Shure Corporate Headquarters, Niles, IL

- SM58 microphone, the industry standard worldwide for live vocal performance.
- Vagabond 88, the world's first handheld wireless microphone.
- SE Earphones, premium, "in-ear" ear phones with Sound Isolating technology and unique sound signatures.
- Axient Digital, the world's leading wireless microphone system with intelligent hardware and software to detect and avoid interference.
- KSM8 Dualdyne dual-diaphragm dynamic handheld microphone, featuring a patented cartridge design with ultra-thin diaphragms and groundbreaking reverse airflow technology.
- MOTIV digital microphones and recording solutions that deliver great sound quality anywhere.
- Microflex MXW, MXA, and MXC lines of intelligent wired and wireless microphone systems for A/V conferencing and discus sion.
- The SM7B microphone, widely used for studio recording, podcasting, and audio blogs.

This past year was another notable one for Shure product innovation. The Company launched TwinPlex, a revolutionary new subminiature lavalier microphone; the MV88+ Video Kit, a new stereo microphone to enhance content capture on smart phones; Microflex Advance MXA910 with IntelliMix, a leading solution in ceiling-mounted audio

S.N. Shure, 1926

capture technology; and the AONIC line of listening products, including AONIC 50 Wireless Noise Cancelling Headphones and AONIC 215 True Wireless Sound Isolating Earphones.

"Whether our customer is a musician, audio engineer, lecturer, broadcaster, videographer, AV integrator, content creator, or simply a music lover, Shure has an innovative audio product to exceed their expectations," said **Christine Schyvinck**, Shure President and CEO. "Our founder, S.N. Shure, was dedicated to creating products of exceptional sound quality, durability, and technical innovation. His vision, combined with the passion, expertise, and creativity of our Associates, has led us through 95 years of success. We are very appreciative to all of our customers and channel partners for their support over the years."

MACKIE THUMP15AS DELIVER IMMERSIVE AUDIO AT FULL GOSPEL CHURCH

The Full Gospel Church in Sarvodai Nagar, Jabalpur is known to be actively involved in the development of the community in addition to its services, which has garnered a great deal of praise for their initiatives.

During recent times, the church has revitalized the premises with a much needed dose of ardor and energy, thanks to the newly acquired **Mackie Thump15A** powered loudspeakers playing a crucial role in faithfully representing the word of God through the preacher's voice. The speakers were installed by Manjeet Electronics based in Jabalpur.

The management at Full Gospel Church shares, "We were looking for a competent and aesthetically pleasing loudspeaker system that would deliver top quality reinforcement for speech and music during our regular services. Manjeet Electronics recommended us to opt for the Mackie Thump15A owing to their trust in its exceptional quality and delivery, being dealers for Mackie themselves; and we're extremely happy with our decision. The Thump15A offers pristine quality audio with remarkable flexibility and efficiency and the fact that the attendees are enjoying the sound says it all."

PALM™ technology

SOUND & STAGE • LIGHTING • INSTALL SOUND • MUSIC PRODUCTION • DJ TECHNOLOGY

EXPO PROMOTION

YOUR CONNECT TO THE GLOBAL AUDIO INDUSTRY

The **PALM technology** magazine is today considered as the premier information facilitator and knowledge catalyst for the pro-audio industry in India, providing responsible, expeditious and a persuasive mix of company business news, product & technology updates, features & interviews, market reports, industry analysis and more.

The magazine content provides solutions for not only audio for stage sound and music production but also high quality audio solutions for studios, broadcasters and audio for video and post production. PALM technology is the ideal platform to source high-end audio-for-video and advanced sound processing equipment to enhance sound and Foley effects, location recording, live broadcasting etc. The magazine circulation comprises readership of 100% industry professionals across application segments like live Events & Entertainment, Music production and post-production and professional AV, television and broadcast Installation & Systems Integration.

www.palmtechnology.in

Contact us immediately to connect with your audience!

For editorial and advertising queries contact ***Smita Rai*** *at* ***srai@palmtechnology.in*** *or at* ***+91-98209 43398***

SEQUENCE OF STEPS TO FOLLOW ON RESUMING STUDIO OPERATIONS POST AN EXTENDED DURATION OF SHUTDOWN

***Munro Acoustics India** has put together a suggestion / guideline document after consulting many studios and engineers across the world to aid their clients in the Indian Subcontinent, Middle East and SE Asia. **AV-ICNx** has featured the same for the benefit of the industry.*

Munro Acoustics India or AV-ICNx will not be held responsible for any mishap / accident/injury caused using the guidelines and steps mentioned in this article on resuming Studio Operations.

Article by: Kapil Thirwani, MIOA,
MSc Audio Acoustics,
BEng Electronics; info@munro.co.in

Electrical:

- Ensure all the MCBs in your Distribution Box are in the OFF position.
- Ensure all the switches, power outlets etc. in the premises are in the OFF position.
- Switch ON the mains to the Distribution Box.
- Switch ON only the lighting load MCBs.
- Sequentially switch ON all lights in the premises. Keep an eye out for flickering lights or any light that fails to turn ON (turn OFF the switch for all flickering/ non-functioning lights and circuits).
- Switch ON the Raw-Power MCBs in the Distribution Box.
- Check the PHASE-NEUTRAL voltage at various raw power outlets using a AC Multi-meter (it should be fairly stable and around 230V (+-5V)).
- Check the PHASE-GROUND voltage (it should be similar to the above).
- Finally check the NEUTRAL-GROUND voltage (it should be preferably below 2V)
- In the event of an extremely high/low or severely unstable voltage reading, avoid turning on any equipment and get it checked by your electrician at the earliest.
- Switch ON the Refrigerator and allow it to stabilise (preferably 24hrs, but 3-4 hrs minimum)
- Switch on the UPS and check for any error LEDs or beeps allow it to stabilise (the batteries usually take about 12-18hrs to charge, depending on the residual charge left, but the UPS display will indicate when it is safe to operate)

HVAC:

- Clean the Air Filters of all HVAC units. (High wall units have these in their indoor units, for Ducted systems please call your HVAC serviceman).
- Switch ON the MCBs for the HVAC units from the Distribution box.
- Switch ON each HVAC unit one at a time allowing a minimum of 30mins of operation before switching on the next unit.
- Schedule HVAC servicing as early as possible.

Cleaning and powering up equipment:

- Clean the Rack mounted/Standalone gear, Computers, Screens, Televisions and Speaker Monitors gently with dry microfibre cloth.
- In humid areas, dust may collect as grime over surfaces. Use Isopropyl Alcohol (I.P.) on microfibre cloth to clean this.

MUNRO ACOUSTICS INDIA

(Please Note Isopropyl Alcohol (I.P.) may wipe out the paint, labels, words printed on the equipment, cover it with masking tape or transparent tape before applying any I.P.)

- Clean the cables with I.P. and cloth.
- Clean the Monitor speaker's drivers and surface with I.P. soaked cloth gently. (Use dry cloth on paper cones).

Follow the below steps to turn on your Studio Equipment sequentially:

- Before Powering up the equipment switch ON a dehumidifier and AC (Dry Mode) and run it for at least 8hrs.
- After 8 hrs switch on the Computer and run it on the UPS for the 1st day (Do not turn on your Monitors).
- Post ensuring stable operation of all devices for a Day, you can switch on the Monitor speakers.

- Switch on the equipment one by one.
- Switch off any device that seems to be operating abnormally, and have it checked by the service agency.
- Let all equipment remain switched on for at least an hour before running audio.
- Run the audio signal test check the inputs and outputs levels.

Protecting & Cleaning Microphones:

To reduce the risk of spreading diseases through bacteria and viruses, one or more remedies, explained in detail below, may be used:

- Ideally, have one microphone per user (including the accessories).
- Clean all surfaces, i.e. microphone housings, head baskets and accessories, both before and after use.
- Leave the microphone unused for some time.
- Utilise separate accessories such as windshields to add protection.
- Use of hand sanitiser installed on mic stand simultaneously is encouraged like shown below.

For cleaning microphone housings from any soiling, including human exhalations, you may use ethyl alcohol (ethanol) or isopropyl alcohol (Isopropanol/I.P.). Used as a disinfectant, typically a 70% solution is used. Apply with a disposable soft cloth, a soft brush or paper tissue. Make sure that the liquid is applied only to the outside of the microphone and does not enter the inside or the capsule.

(Please Note Isopropyl Alcohol (I.P.) may wipe out the paint, labels, words printed on the equipment, cover it with masking tape or transparent tape before applying any I.P.)

- Do not use rough materials which might scratch the surface. Do not use any solvents stronger than ethanol or isopropanol (I.P.), as these might damage the surface.
- Never use sprays, as these can deposit on the membrane and thus damage the microphone capsule.
- With some microphones, the head basket can be easily removed for cleaning. Make sure not to touch or damage the capsule.
- With the head baskets containing foam windshields, remove the inner foam and clean it separately.
- Metal head baskets may also be cleaned on the inside with ethanol or isopropanol.
- Not using a microphone for a minimum of 6 hours, before using for another artiste, will significantly reduce the possibility of any infection deposited on the metal surfaces. For plastic or cloth accessories, an extended period of 48 hours or more is needed to achieve similar results.

General Work Ethic suggestions based on many Studios Operational Internationally:

- Work with two Staff teams (A&B) if possible on a weekly basis.
- Avoid using public transport (when operational) to get to the studios, or home from the studio.
- If clients are feeling unwell on the day of the session or are exhibiting any signs associated with COVID19 they should not attend the session and contact the studio immediately. Please don't hesitate to check body temperatures via non-contact thermometers of anyone entering the studio premise for safety's sake.
- Reception and communal areas should be marked at 2m intervals to encourage social distancing. Corridors to be clearly marked to state that only one person should use them at a time.
- Hand sanitising points should be set up in reception areas and in studio control rooms with clear signage encouraging their use upon entry and exit. Hand sanitiser and liquid soap dispensers to be readily available at all times in bathrooms.
- Kitchen facilities only to be used by staff team (i.e. no food preparation to be done by clients, all refreshments and use of microwave to be done by staff) and clearly marked as such. Clients to bring their own food and water where possible. Signage reminding staff to wipe down kitchen touch points (i.e. kettle handles/coffee machines/microwaves) to be clearly displayed and antibacterial spray provided for this.
- Where there are multiple studios in one building, a separate toilet / bathroom to be allocated to each studio and clearly indicated with prominently visible signage.
- Session start times to be staggered whenever possible on premises with multiple studios. Studios should reserve the right to install additional security on the main entrance. This will help with managing kitchen and bathroom areas as well as corridors.
- Studio should promote unattended remote sessions wherever possible, else limit the number of people attending sessions to the absolute minimum (2 for 10/12 sq.m., 3 for 12/15 sq.m. etc.) in order to minimize the number of people passing through the studios. All attendees' names and contact details to be provided before the session during the booking. Only those on the booking form will be allowed access to the building. Non-essential parties to join via Skype/ Zoom/Google Hangouts.
- All staff must be briefed thoroughly on hygiene and cleanliness and the increased need to uphold this throughout the studios and in communal areas. Engineers and assistants to commit to washing their hands at regular intervals, particularly when entering, or re-entering premise after phone/toilet/smoking breaks.
- 'Deep clean' intensive cleaning organised with government/health agency approved cleaning partners with a focus on anti-bacterial coverage on all touch-points.
- Alcohol wipes to be available in communal areas and in studios for wiping down of touch-points/door handles/light switches before use and at regular intervals. Clients are encouraged to bring their own keyboard/mouse/phone & laptop chargers to use in the studio, if preferred.
- Staff who are asked to do food runs by clients should not handle cash – payments should be made by card/online only.
- All staff members to adhere to the government guidelines of isolating themselves for 14 days if they are experiencing a fever or cough, and to inform the studio immediately if this occurs. Any artist or client displaying symptoms to refrain from visiting the studio.

BOSE

PROFESSIONAL

MORE THAN POWER. PRECISION.

Bose ArenaMatch DeltaQ array modules

ArenaMatch arrays bring proven DeltaQ sound quality and precision coverage to outdoor installations. Featuring an IP55 weather rating, ArenaMatch DeltaQ modules make it easy to create durable and reliable outdoor systems that deliver consistent, intelligible sound to every listener.

Learn more at PRO.BOSE.COM

© 2020 Bose Corporation. ArenaMatch and DeltaQ are trademarks of Bose Corporation.