

VERREX INSIDERS

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InfoComm 2023: Kyle's First Impressions and Highlights

By Kyle Stetson

InfoComm 2023 is over, and I still have a lot to process, especially as a first-time attendee. It was full of fantastic days of booth tours, client and vendor dinners, and countless discussions about the future of AV (and AI).

When you enter the expo hall, you are immediately overwhelmed by the massive scale of this event, with small and large booths set up farther than I could see. As I was taken on booth tours, I had the privilege of witnessing the latest advancements in the audiovisual and information communication technology industries.

[Continued on Page 2](#)



More Microphone Musings: Expertise Needed

By Ben Dandola-Grubb

Last month we reviewed personal microphones and microphones for simple meeting spaces. This month we are diving into Integrated Microphone Systems, where the actual expertise comes into play. When designing and implementing this level of microphone systems, you will want to work with a trusted audiovisual integration partner. The ultimate goal is the same as simple systems; we aim to provide microphone coverage for all participants.

Integrated Microphones

I've found that while bare-bones Zoom Rooms and Teams Rooms are great, most organizations need something more customized to facilitate their workflow and collaborative culture. These are the bells and whistles of the seemingly simple audiovisual systems.

[Continued on page 4](#)

VERREX INSIDERS

JUNE 2023



InfoComm 2023: Kyle's First Impressions and Highlights, continued from Page 1

The following are the five stand-out products and collaborations that caught my attention:

Sony SRG-A40 with PTZ Auto Framing Camera:

The Sony SRG-A40 with PTZ Auto Framing Camera's advanced features and AI tracking capabilities caught my attention. Seeing it in action was impressive. The camera employs sophisticated algorithms to automatically track presenters or subjects within a predefined area, ensuring they remain in focus and centered throughout the presentation. The SRG-A40 delivers high-definition video output, smooth and fast pan-tilt-zoom functionality, and exceptional image quality. I saw this in a shootout with other popular PTZ brands and this camera was much smoother and faster. Its auto framing capabilities make it ideal for enhancing visual experiences in lecture halls, auditoriums, and boardrooms.

Extron Integration with Logitech, Poly, and Zoom:

The collaboration between Extron, Logitech, Poly, and Zoom was a surprise for me that will save countless programming hours for our team. I witnessed the seamless integration of their technologies, which greatly simplified video conferencing setups without a complete page flip. Extron's renowned AV control systems, combined with Logitech and Poly's expertise in video conferencing solutions, resulted in a unified and intuitive user experience. Controlling and managing Logitech, Poly, and external room devices through Extron's platforms showcased a streamlined workflow that boosts productivity and reduces programming time.

Shure MXA902:

The Shure MXA902 is an Integrated Conferencing Ceiling Array with a microphone array, internal speaker, and included DSP. This removes the need for a rack of equipment in most small to medium conference rooms. Experiencing its exceptional audio quality firsthand was remarkable, and it was much louder than I initially expected from an all-in-one solution. The MXA902 delivers precise voice capture and noise cancellation, ensuring crystal-clear sound reproduction. Its sleek design seamlessly integrates into any space, making it an ideal choice for conferencing setups and collaborative environments.

LG 55EW5TK-A Transparent Display:

The LG 55EW5TK-A Transparent OLED Touch Display was a showstopper at InfoComm 2023, with a massive wall of transparent displays on the outside of the booth that had attendees lining up to take pictures. They featured oversized fish tank content on a transparent display as well as a sizeable 3D sculpture designed and commissioned for InfoComm. This innovative technology creates a transparent OLED panel that gives the illusion of images floating in mid-air. The 55EW5TK-A offers endless possibilities for immersive experiences in various industries, including retail, hospitality, and museums. Seeing the digital and physical worlds blend seamlessly through this transparent display was truly captivating.

Continued on Page 3

VERREX INSIDERS

JUNE 2023



InfoComm2023: Kyle's First Impressions and Highlights, continued from Page 2

Q-SYS and Seervision:

One of the most exciting collaborations at InfoComm 2023 was between Q-SYS and Seervision. Witnessing their integration firsthand was truly impressive. Q-SYS, known for its powerful AVC processing platform, partnered with Seervision, a leader in AI-driven camera automation. Combining Q-SYS's robust audio, video, and control processing with Seervision's intelligent camera tracking showcased seamless live production workflows close to broadcast quality without operators. This integration holds tremendous promise for enhancing the production value of video conferencing and I can't wait for their next line of products to be released.

My experience at InfoComm 2023 was nothing short of extraordinary. The event showcased the latest advancements in audiovisual and communication technologies. While the top five products I highlighted left a lasting impression, they were certainly not the only companies with new products that are changing the way we think about the future of video conferencing. It was great to meet with everyone at the show, and I look forward to sharing more details with you in future articles! If you want to discuss anything from this article or InfoComm 2023 in more detail, email me at kstestson@verrex.com.

More Microphone Musings: Expertise Needed, continued from Page 1

From the end user's perspective, we deliver the same experience from the simplest Huddle Space to the Executive Boardroom. However, the technology and equipment behind the scenes are often drastically different and require time and expertise for proper design, testing, and commissioning.

Before even considering possible microphone systems, we identify a room's use case. And there can be multiple use cases in a single room, all of which must be accommodated. To choose an appropriate microphone solution, we ask simple questions and listen.

- Are the participants seated, standing, or both?
- Should the tabletop be clear of technology?
- Are there multiple furniture configurations?
- Is a separate microphone required for a presenter?
- Is there a row of chairs along the side wall that need separate microphones?
- Do the users have personal preferences or preconceived notions from prior experiences?
- What is the ambient noise level?
- Are there three glass walls with a concrete floor that make even a local conversation within the room impossible?
- Is perfect audio the requirement without any other regard, such as cost?

Continued on Page 4

VERREX INSIDERS

JUNE 2023



More Microphone Musings: Expertise Needed, continued from Page 3

As the use case conversation unfolds, we can paint a picture of possible microphone solutions. The traditional conference room of the past had one microphone for every two chairs at a table, each located 18-22" off the table edge. These mics were small buttons or goosenecks. This microphone design worked well and is still perfectly viable today. However, few choose to drill so many holes in tables to accommodate microphones nowadays. Through the advancement of technology, many alternate microphone options now exist.

Today we have microphones to suit all needs, from purely aesthetic to ultimate audio quality. In many cases, it seems we can have our cake and eat it too.



Ben's Tip: *Sometimes, we encounter harsh environments. If you ever enter an extremely reverberant room and struggle to converse with someone ten feet away without technology involved, do not expect an audiovisual system to be successful. The first step is to add acoustic treatments in a harsh environment. Then once the space is properly treated for acoustics, we can add conferencing.*

Table Microphones

For a client who wants traditional button or gooseneck microphones, the mics can be the same as they have always been. The difference now is invisible to users. To simplify installation and service and provide additional feature possibilities, I would utilize Dante or AVB as a digital audio transport over Category cable back to an equipment rack. What's nice is that we can also have microphone buttons and LEDs for mute status integrated into the digital transport, greatly simplifying the wiring and cable pulls.

Wireless tabletop microphones are also a great choice. We can avoid drilling holes and remove the technology from the tabletop. The audio quality will remain the same, and there are many options in both the UHF and DECT wireless spectrums. When using appropriate equipment, mute sync can be tied to Microsoft Teams Rooms, Zoom Rooms, and Webex Rooms for both wired and wireless table microphones.

Ceiling Microphones

In the past, we were all rightly hesitant to use ceiling microphones because they were far away from the talker's mouth. It's still accurate to say that the closer a microphone is to the talker's mouth, the more gain-before feedback we can achieve in voice lift scenarios, and extraneous background noises will be reduced.

Years ago, I visited an existing system that utilized three-element ceiling microphones. The general pick-up was excellent, but the lectern didn't have a dedicated gooseneck microphone, and the ceiling microphone coverage had an audio drop-off near the front. When squatting next to the lectern, I sounded great on calls; my voice was about 9dB lower when standing. It wasn't the microphone's fault; it worked exactly as designed.

[Continued on Page 5](#)

VERREX INSIDERS

JUNE 2023



More Microphone Musings: Expertise Needed, continued from Page 4

Today with beamforming technology and suppression of non-voice audio in a DSP, ceiling microphones are an excellent choice. ClearOne pioneered the category with their original Beamforming Microphone Array, and today there are numerous form factors and price points from multiple manufacturers. Beamforming microphones use multiple microphone elements to pinpoint where voices are coming from and focus audio pickup from the talkers. Today some beamforming ceiling microphones can send X, Y, and Z coordinates to a control system for automated camera preset recall.

Wireless Microphones

Wireless handheld and lavalier with belt pack microphones are still the go-to choice for presenter voice lift and Q&A, though many newer form factors are also available. Wireless tabletop microphones are great for reconfigurable rooms where ceiling microphones aren't feasible, and these mics are available with multiple pickup patterns and even wireless gooseneck. When choosing wireless, the user must be cognizant of battery life and be willing to dock microphones in chargers daily. However, some wireless mics have an always-on option when local power is available, such as in a lectern, and cable pulls aren't possible. When carefully planned and managed, high microphone counts are viable.

Traditional wireless microphones of the past used analog modulation, which could be received and heard by anyone within range of the microphone. Mainstream digital wireless microphones with encryption began being deployed around 2010. Anyone using wireless mics should have noticed the FCC auctions of the wireless spectrum in the 2010s, and we ultimately transitioned mics out of the 600MHz spectrum.

Audio is the most critical aspect of any meeting. People might look nice on camera, but you can't actively participate in the conversation without working audio. Meeting equity is impossible without suitable microphones installed in your conference spaces and used by your remote participants. The AV solutions specialists at Verrex know how to ask the right questions and ensure all meeting participants have a voice. [Contact us](#) today to set up a meeting to discuss microphone options that work for you.

VERREX INSIDERS

JUNE 2023



Verrex's InfoComm 2023 Top 10

By Jason Gago and Ben Dandola-Grubb



We are fresh back from InfoComm 2023 and visions of AV solutions are still dancing through our heads. The Verrex Team had an incredibly productive, informative, busy, and fun week absorbing everything AV at the show. As always, the technology and innovation were off the charts and we got to check out some inspiring collaborations! InfoComm is always a highlight of our year. Here's what we saw that we are most excited about:

Cisco Room Bar Pro

A full appliance video bar for small and medium room applications with enhanced features. What we like about it: It can run MTR native with camera controls or traditional Webex, and it has left/right/center speaker channels for spatial audio support and transmission. The internal camera can be manually rotated up and down for mounting above or below a display, and it has "Meeting Zones" to create camera framing areas to avoid framing people outside the intended meeting area, such as outside a glass wall.

Q-SYS Seervision Acquisition

Q-SYS announced its plan to acquire Seervision, a Swiss-based industry pioneer in AI-driven camera automation software. We saw a live demo and it can track based on audio presets. Still, the true power comes from automatic tracking and framing based on actions, triggers, and even individual users that the system can recognize. Seervision brings broadcast-level production value to the boardroom. This software can be purchased to run on a large Windows machine or on a Seervision Server.

Crestron Automate VX

Crestron is working on a software update for the end of the year that will enable the Automate VX system to watch for the direction meeting participants' heads are turned. This will allow for the automatic switching of cameras to get the best shot of the front of a person's face. Once released, the software update will be compatible with all existing Automate deployments. Automate can be deployed without presets and uses AI for tracking.

[Continued on Page 7](#)

VERREX INSIDERS

JUNE 2023



Verrex's InfoComm 2023 Top 10, Continued from Page 6

Sennheiser Team Connect Bars

Sennheiser has spent the last two years developing two scalable all-in-one conferencing devices, one for small and the other for mid-sized collaboration spaces that boast an extensive feature set and premium audio, as to be expected from Sennheiser. Some noteworthy features include PoE+ for the "S" Version and integrated Dante to allow use in larger spaces by pairing with external amplifiers or Sennheiser's TCC2, TCCM, or Speechline wireless without an external DSP. Acoustic Echo Cancellation (AEC) is built into the bar. The setup is configured with the Sennheiser Control Cockpit Software and you can configure horizontal exclusion zones. The 4K Ultra HD camera is further enhanced by AI features like "Autoframing" and "Person Tiling," enabling all remote participants to see everyone in the room clearly. There's a USB-C host connection and HDMI out, so with a USB-C connection to a laptop/computer, the bar can feed video into the room display via HDMI.

Shure MXA902

Shure's ceiling microphone with built-in speaker has an estimated 20x20ft coverage from the microphone and speaker, depending on the ceiling height. Based on the live demo, this is a fantastic sounding option for a single microphone/speaker/DSP solution in a room and is Shure's enhanced solution for rooms that might otherwise utilize a sound bar.

LG Transparent OLED Displays

LG's Transparent OLED Display was a real showstopper at InfoComm, with a massive wall of transparent displays outside the booth that caused such a stir that attendees lined up to take pictures. This innovative technology creates a transparent OLED panel that gives the illusion of images floating in mid-air. Seeing the digital and physical worlds blend seamlessly through this transparent display was genuinely captivating. The creative uses for this technology are endless.

Sony BRAVIA BZ40L Series

Typically displays with the best contrast have a reflective surface, but these 4K displays utilize a combination of deep black non-glare and low reflection coating. Sony showed live comparisons of these displays against other Sony models and the competition. These displays showcased dynamic visuals with true-to-life color and detail by reducing reflections and boosting contrast.

Chief Tempo Flat Panel Wall Mount System

Chief debuted its Tempo Flat Panel Wall Mounting System, which has a pull-out mounting feature and can hang mounting plates inside the rear of the mount to secure AV gear behind the display and make the installation more serviceable. An integrated power strip can be mounted and the mounting plates can be fabricated off-site, reducing on-site installation time.

Continued on Page 8

VERREX INSIDERS

JUNE 2023



Verrex's InfoComm 2023 Top 10, Continued from Page 7

INOGENI CAM230 Multi-Camera Switcher

The INOGENI CAM230 is a cost-effective USB and HDMI multi-camera switcher that helps improve meeting equity in virtual meetings. With its easy-to-use camera switching capabilities and support for bidirectional audio with video bars, facilitators can ensure that all participants have equal opportunities to speak and contribute.

Absenicon C Series

Absen's standard all-in-one LED on a stand for conferencing is a very good-looking, cost-effective display with near-perfect pixel pitch across the entire canvas. With integrated wireless sharing and a sound bar, this all-in-one design means no external devices are required for local presentations.

Honorable Mention

The Pet Alliance of Greater Orlando won our hearts with their Press Paws and Adoption Event. What a great way to take a break from the show!



We'd love to chat about any of these solutions and any other AV Solutions you are curious about. Reach out to us today to learn more about any of the AV solutions we learned about at InfoComm 2023.