

THE ROLE OF AR & VR IN ADVANCING THE AV INDUSTRY



Sajan Joseph, Co-Founder & CEO, Ctrl Alt Experience at AV-ICN Expo Conference and Seminar 2024

Ctrl Alt Experience helps brands tell their stories and build authentic, lasting relationships with their audience through immersive and interactive technology driven experiences. This excerpt from the AV-ICN Conference and Seminar 2024 provides insights on AR and VR from Sajan Joseph, Co-Founder & CEO of Ctrl Alt Experience. Sajan's session focused on how AR and VR can assist users in design, training, and support in the AV Industry.

The increasing use of AR and VR technologies in the AV industry is revolutionising key areas like design, training, and support. These immersive technologies enable a more efficient and engaging experience, offering practical solutions to common challenges faced by AV professionals. As AR and VR become more accessible, their potential to enhance the industry grows, bringing new opportunities for innovation and improvement.

Design

Designing AV systems traditionally involves a series of detailed steps, including creating CAD drawings, schematic diagrams, and 3D renders. However, these processes can be time-consuming and may not always help clients visualise the final product. The introduction of AR and VR

into this process offers an innovative solution. With VR tools, designers can create immersive environments that allow clients to interact with the proposed designs in real-time, giving them a much clearer idea of how their space will look once the project is completed.

Sajan Joseph, CEO of **Control Alt Experience**, emphasised the importance of speeding up design processes, saying, "If you give a BOQ faster or something that helps you design faster, then your resources are used for what matters most." As VR technology such as **Xverse** by **Xten-AV** allows users to adjust designs instantly, the design phase becomes quicker, more accurate, and engaging. This allows professionals to focus on what matters while providing clients with an interactive experience.

Additionally, Joseph noted, "Faster design processes allow for better allocation of resources. If we can create visual representations faster, then the design becomes a tool that's more useful to everyone involved." This fosters collaboration and enhances the quality of the final design.

Incorporating AR into the design process offers another advantage. AR tools can be used on-site to visualise equipment placement and modifications in real-time. By scanning an empty room with a tablet, clients can instantly see how their space would look with different installations, helping to refine decisions on the spot.

Joseph also emphasised, "Using AR on-site means the client sees exactly how their space will look before committing to the installation. This reduces second-guessing and last-minute changes." This tool

helps avoid costly mistakes and ensures a smoother transition from concept to completion.

Training

Training in the AV industry has traditionally been a mix of in-person sessions, roadshows, and online certifications. However, physical training incurs significant costs, and online courses often lack immersion, leading to lower retention rates. This is where VR and AR can make a substantial difference. VR-based training offers an immersive learning experience, allowing users to practice and engage with equipment and scenarios in a virtual environment, leading to better retention and understanding.

Joseph highlighted VR's effectiveness, noting that people trained in VR are "two to four times more likely to retain" information compared to traditional methods. With VR, trainees can experiment with setups and configurations in a risk-free environment, gaining practical knowledge without the need for expensive equipment or travel. Furthermore, VR offers asynchronous learning, allowing trainees to access modules and lessons at their convenience.

Joseph further added, "One of the best aspects of VR training is the ability to recreate complex scenarios that might not otherwise be possible in a real-world training environment. It offers a way for people to make mistakes and learn from them in a safe space." This allows for high-impact, low-risk training that benefits both trainees and organizations.

VR and AR also offer group learning environments where multiple users can join a virtual classroom and collaborate on

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tasks in real-time. This reduces the need for costly in-person sessions and enables global participation. AR can also be used for remote training, where users can visualize the steps to set up or troubleshoot equipment in their own space, guided by augmented displays.

Joseph observed, "VR makes it possible to scale training. A single instructor can teach hundreds of students simultaneously, anywhere in the world." This scalability helps utilize training resources more efficiently, reaching a wider audience.

Support

Support in the AV industry often involves troubleshooting equipment, identifying issues, and communicating with clients on-site, which can be slow and inefficient. Engineers typically rely on photos, schematics, and phone calls to diagnose problems, but this method can waste time. AR technology, coupled with IoT devices, streamlines the process by providing real-time visual feedback and data on equipment status.

Joseph described the challenges of traditional support, saying, "I really struggled

to fix that issue because there were no phones allowed in that facility." AR offers a solution by enabling technicians to view and interact with equipment remotely, overlaying critical information directly onto the physical world. For instance, AR-enabled tools can highlight connected cables or malfunctioning components, speeding up the troubleshooting process.

Joseph added, "AR can guide you step-by-step through the troubleshooting process, overlaying important visual cues and instructions directly onto the equipment. It's like having a tech expert with you in real time." This improves the support process, reduces downtime, and increases efficiency.

With IoT integration, support can also be improved by notifying technicians of issues as soon as they arise. Technicians can use AR glasses or mobile devices to scan racks and equipment, identifying the problem and resolving it quickly.

Joseph pointed out, "The combination of IoT and AR allows technicians to instantly know what's going wrong with the system and fix it before it becomes a major issue." This proactive maintenance reduces downtime and keeps systems running smoothly.

Conclusion

AR and VR are not just trendy buzzwords; they are practical tools that are transforming the AV industry. By improving design accuracy, enhancing training retention, and optimising support efficiency, these immersive technologies offer significant benefits. As they become more accessible, AR and VR are poised to revolutionise the way AV professionals work and engage with their clients.