PLAY TECHNOLOGIES
Transforms AV Experiences at Aljamea

*Showering excellence and dynamic learning, **Aljamea Tus Saifiyah** offers an inclusive environment for the young aspirants. Keeping the intellectual passions in mind, **Play Technologies** shapes the academic and cultural landscape with the AV installation at Aljamea Tus Saifiyah Mumbai Auditorium. **Sachin K. Jain**, Principal Consultant, PLAY technologies, shares insights on the state-of-the-art facility as he recounts the installation experiences with AV-ICN Magazine.*

Play Technologies delivers state-of-the-art facility at **Aljamea Tus Saifiyah**, a world-class Arabic academy with an auditorium of 650 seats and 16.6m W X 24.6m L under balcony and 16.6m W X 9.9m L balcony. The exceptional facility is meticulously designed to deliver a top-tier audiovisual experience, incorporating cutting-edge technology for unparalleled performance. With a combination of **QSC, Shure, K-Array, Lightware, Blackmagic, Crestron**, and **AOTO** equipment, this auditorium sets a new standard in AV excellence.

The 650-seater Auditorium, primarily intended for student use, is a versatile and spacious venue that caters to the diverse needs of the academic community. It serves as the epicentre for a wide array of cultural events, skits, paper presentations, and lecture events, all organized and participated in by the vibrant student body. Equipped with cutting-edge audio-visual technology, the auditorium ensures that student presentations and performances are delivered with

A view of Aljamea Tus Saifiyah Mumbai Auditorium, equipped with AV solutions by QSC, Shure, K-Array, Lightware, Crestron, Panasonic, AOTO, and Allen & Heath

precision and impact.

With three existing campuses for state-of-the-art education in Surat, Karachi, and Nairobi, the client wanted a new campus in Mumbai with smart technologies that would stay relevant for the next decade. The sound and video quality had to be the best-in-class and at the same time, easy to use for smaller events such that it could be controlled using an iPad.

AV Transformation of Aljamea

QSC 510i Processor: At the heart of the audio system, the QSC 510i processor ensures crystal-clear sound quality. Its advanced signal processing capabilities and optimized audio output, guarantees that every word and note resonates with precision and clarity. QSC 510i being a chassis-based system, provides flexibility in selecting number of input cards and output cards based on the requirement. It also includes option of Dante Card, which provides Dante inputs and outputs of 68x68 channels.

Shure ULX Wireless Microphones: The Shure ULX Wireless microphones provide audio capture and versatility, allowing presenters and performers to move freely while maintaining impeccable sound quality. Their reliable wireless technology ensures seamless communication. Antennas have been installed on stage and in the audience area for microphones.

K-Array Line Array Speakers: The K-Array Line Array Speakers ensure that no detail is lost during lectures, performances, or presentations. The entire auditorium is reinforced through just two stacks of loudspeakers on the left and right side of the auditorium. The sleek size and aesthetics of the loudspeakers ensured that the vision of the interior designers remained intact without any compromise on the sound quality and distribution. The sub-woofers were mounted below the stage for low frequency reproduction. A flexible array nicknamed Anaconda was provided as near fill speakers. This entire speaker system was powered by K-Array KA208 power amplifier.

Tannoy Wall Mount & Ceiling Speakers: Tannoy VX-6 Wall Mount Speakers are used for Royal Box, which is private seating for VVIP attendees and Tannoy CMS503ICT LP ceiling speakers are used for backstage and green rooms.

Lightware AV Over IP for Video: Lightware AV Over IP technology offers high-definition video distribution, making it ideal for projecting presentations, videos, and live feeds seamlessly across multiple screens. Lightware VINX-120-HDMI-ENC/DEC are used to taking incoming stream from other areas in the campus and to distribute the stream from the auditorium to other Venus over the campus.
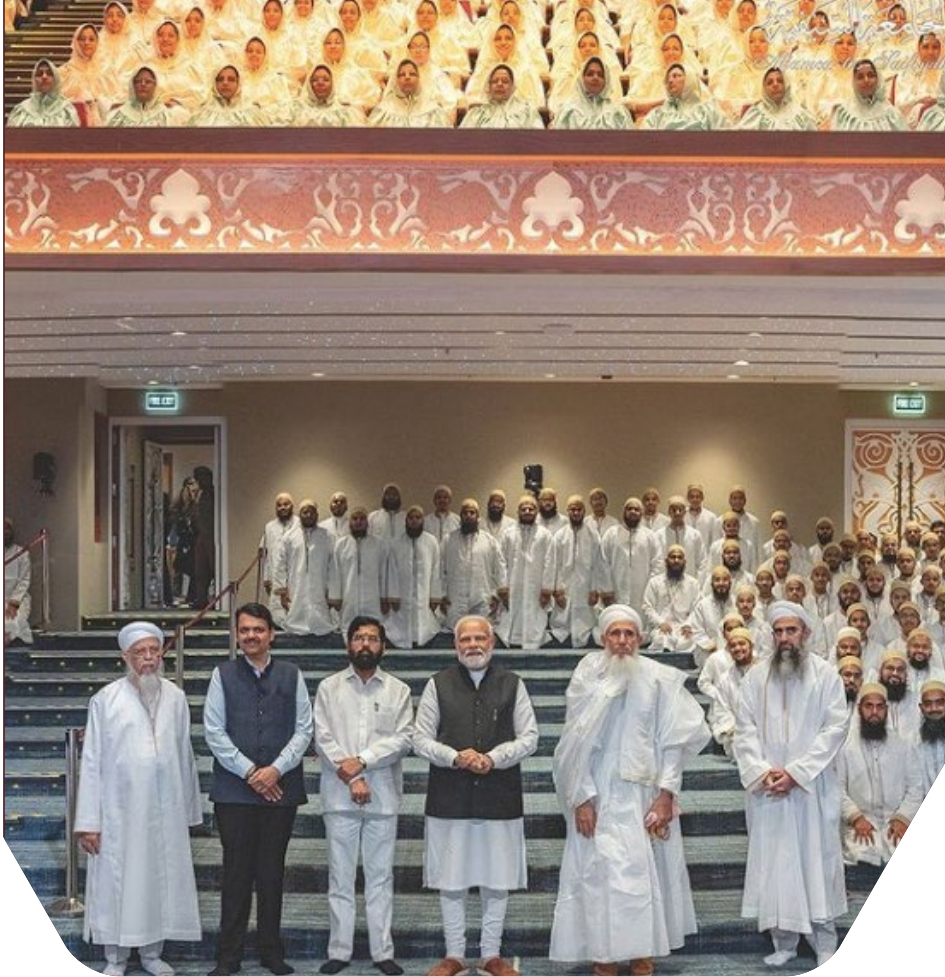
Blackmagic Video Mixer and Recorder: The Blackmagic Video Mixer offers professional-grade video mixing and production capabilities. With multiple camera angles and advanced mixing, the auditorium provides stunning visuals for the audience, whether it is for live streaming, recording, or presentations. **Atem 4M/E Broadcast Studio 4K** is used for video mixing of content and cameras. Video Mixer can be easily controlled over the IP and provide default built in pre-sets for easy switching and mixing. **Hyderdeck studio 4K pro** is used for recording.

Crestron Switcher: The Crestron switcher ensures seamless transitions between various video sources. Its user-friendly interface empowers operators to control and manage the AV components effortlessly, enhancing the overall efficiency of the auditorium. **Crestron HD-MD6X2-4K-E** is used for switching six HDMI inputs provided

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Inauguration of the auditorium took place in the presence of Prime Minister of India, Shri Narendra Modi, and Chief Minister of Maharashtra, Eknath Shinde

on the stage.

Panasonic Cameras and Joystick: True 4K cameras on 12G-SDI framework were deployed. A mix of Panasonic AW-UE150 and AW-UE-100 next-generation PTZ camera were used.

AOTO LED Wall with Video Processor: The AOTO LED Wall's high-resolution display ensures that every detail is vividly presented, captivating the audience, and immersing them in the content. An active LED wall of approx. 9m X 5m was planned to provide visibility across the auditorium in line with the AVIXA standards and with proper line of sight.

Allen and Heath Audio Mixer: The **Allen & Heath SQ6 Mixer** is a cutting-edge digital audio mixing console that combines powerful features and pristine sound quality in a compact and user-friendly package. With its intuitive touchscreen interface, the SQ6 offers seamless control over audio signals, making it ideal for live sound reinforcement.

Crestron Control System: For seamless control of the audio video system, **Crestron Control System of VC4** is used in the auditorium. Crestron provides the flexibility of building user-friendly UI, which benefits in developing the user interface as per client needs.

AV Design and Installation

The AV design had to run through various iterations to accommodate the changes in the interior design and functional aspects of the space. There was the design team, client team, and the operations team with their set of requirements. All of these had to be consolidated on a common platform. Further, the design required that the AV equipment be as invisible as possible. The design process took more than two years with various incorporated changes.

Sachin K. Jain, Principal Designer, PLAY, discussing on the challenges and experiences of the design team, stated, "Installation of the AV was very challenging. It was very important to maintain uniform sound distribution throughout the auditorium. To maintain that line array speakers were required to be installed at a very precise location and at a very precise angle so that a uniform sound dispersion is maintained throughout the auditorium." He added, "For an immersive video experience instead of going with the projector it was decided to install the Active LED video wall; the design of the LED video wall is so that the person seated at the far end is also able to view the content on the display without straining the eyes and the person seated on the first row will also have similar experience. The content is clearly visible to the people sitting on the extreme left and right rows as well. Installation of this LED wall was also challenging as each and every block of the LED wall had to be placed very precisely so that there are no gaps left between the two panels. Furthermore, due to the delay in civil works, the environment was dust free only a week before the opening date. The installation and commissioning had to be executed in this small-time frame."

Since the audio video system of the auditorium was supposed to be broadcasting the event throughout the campus and should be able to receive the content from any other venue throughout the campus, the team decided to build a network-based solution. For audio flow entire back-end system was designed and built on Dante and the video flow was designed and built using AV over IP technology.

"There was sufficient time for the design process, close to two years. However, for the install, there was not too much time due to delay in civil works. The areas were available for install in bits and pieces. Overall, we had around a month for installation, but not on a continual basis. About seven days were available for the final installation of LED wall and overall commissioning." shares Jain.

Conclusion

The final commissioning was done well in advance and a successful dress rehearsal was also carried out a day before the final showcase, that made it easy for the team to avoid any uncertain challenges at the inauguration. The auditorium was inaugurated by the **53rd al-Da'i al-Mutlaq Dr. Syedna Mufaddal Saifuddin**, and by Prime Minister of India, **Shri Narendra Modi** in presence of the Chief Minister of Maharashtra, **Eknath Shinde**, and Deputy Chief Minister of Maharashtra, **Devendra Fadnavis**.

In summary, the auditorium is a state-of-the-art facility that embodies excellence in audiovisual technology. The integration of top-tier brands like QSC, Shure, K-Array, Lightware, Blackmagic, Panasonic, Crestron, AOTO, Allen and Heath guarantee a seamless experience for any event, from lectures and presentations to cultural performances and multimedia exhibitions. This auditorium is a testament to the commitment to delivering the highest quality audio and visual experiences for its audiences and presenters alike.