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The theatre at the Jakarta International Expo is looking to raise the bar for performance venues in APAC

LABOUR OF LOVE

Hurrairah bin Sohail finds out how a passion for music on the part of the end user and a dedication to craft from the integrator helped Jakarta International Expo raise the bar for performance and event venues in APAC.

Jakarta International Expo [Jiexpo], located in Indonesia, comprises a convention centre and theatre. The venue is geared to do it all, from exhibitions to classical music performances. AV systems at Jiexpo have been deployed by integrator Kairos Multi Jaya.

Leo Tanzil from Kairos Multi Jaya knew that the scale of the project would be the first challenge the integrator would have to surmount. He says: “From the beginning, we knew that we would have to split our efforts and basically we had two teams that were independent and working simultaneously. One was responsible for the theatre and the other was handling the installation for the convention centre.”

The convention centre features a ballroom, junior ballroom and meeting rooms. Damaran Kristanto from Kairos Multi Jaya says: “As the integrator we were responsible for providing all the AV systems. The key requirement from the client was that all the different spaces be interconnected. They wanted the

audio and video to be available anywhere in the whole convention centre.”

To deliver on these client requirements, Kairos went down the route of AV over IP. Dante enabled Peavey Media Matrix DSPs form the core of the audio system. RCF ceiling speakers and Community ceiling speakers are used to provide audio.

Amplification is provided by Powersoft amplifiers. Tanzil says: “We required a fair bit of amplification and we have used a number of different Powersoft amplifiers. We’ve used them previously and never had any issues with them. For the Jiexpo, we deployed a range of Quattrocanali and Ottocanali models and they have been performing superbly.”

Panasonics projectors mounted on ceiling lifts and motorised screens provide visuals. Tanzil details: “We used projection for the spaces because it is flexible and versatile. It can be used for a variety of functions and events.” Video is transmitted over the IP network with the help of Just Add Power encoders and decoders.

BrightSign players handle digital signage. Tanzil says: “We have been burned in the past by different signage systems and not receiving the required support from the manufacturer when things go wrong. We chose BrightSign for Jiexpo because of their demonstrated strong support for integrators in the region.”

Control for the AV systems is provided by a Crestron system. Kristanto says: “We have designed an intuitive GUI where the end user can control the entire system with the simple press of a button.”

Moving on to the theatre, the client requirements completely shifted.

Prajna Murdaya from Central Cipta Murdaya, the developer for Jiexpo, says: “The idea for the theatre was first initiated by my parents because it would be a nice complement to the convention centre. But I saw it as an opportunity to turn it into a venue that has never been seen before in Indonesia. I’ve been to a lot of concerts in Asia and I was always left with having to



I wanted the theatre to be a place where the Indonesian community of artists could have a stage that supported their work and that could showcase it without any compromises.

Prajna Murdaya, Central Cipta Murdaya

imagine how good things could sound if thought and care was put into the whole operation of a venue so that people could just sit there and get lost in the music. Why couldn't we have a world class performance venue in Indonesia? Ultimately, that was the drive behind the theatre."

He continues: "At the same time, I wanted the theatre to be a place where the Indonesian community of artists could have a stage that supported their work and that could showcase it without any compromises so that there is no barrier between them and the audience, so that they don't have to worry about acoustics or the sound system or the overall comfort of the venue. Just a space where they can put the full force of their work and their expression to the audience."

Murdaya's love for music is clearly evident from his days singing acapella in college, collecting classic recording microphones to launching one of Indonesia's most successful music incubators from his bedroom. This love translated into him directing the eventual form and function of the theatre at Jiexpo.

Murdaya knew that the selection of sound system for the theatre was crucial. He says: "I was interested in making the theatre a venue for classical music and that became the starting point for my campaign for Meyer Sound Constellation."

The stars aligned for Murdaya as he details: "It turned out that the owners of Meyer Sound, John and Helen, were doing a 50th Anniversary tour around the world and they were in Singapore where there is a deployment of the Constellation system at the Singapore American School."

Murdaya flew down to experience the Constellation system in person and narrates: "I remember how natural it sounded and the flexibility it had and how much it enhanced the sonics. Seeing the Constellation system in action showed me how it could take the acoustics of a space from dead to hair-raising and after that I was definitely sold."

In the meantime, on the integrator's side, the theatre project was progressing smoothly. Aurellia Faustina from Kairos Multi Jaya says: "We had actually worked for the same client on a project, which was a similar expo space, and that was a really successful project for us. In fact, the Jiexpo project was a reunion of sorts as we were working with the same consultant as well. So, there was a natural partnership between all parties."

The decision to go with Meyer Sound however threw a spanner in the works. Tanzil details: "When we first started discussions about the Jiexpo project, it was a normal theatre with a PA package and theatre package encompassing intercom, patching, lighting and the usual

systems. This was not meant to be a theatre with a Meyer Sound Constellation system at the start."

Faustina provides further details: "The redesign was handled by the consultant with input from Meyer Sound. Making the decision to go with the Meyer Sound Constellation meant that there would have to be a lot of readjustments and this is also where the Jiexpo project started to deviate from the other exhibition halls that we have worked on."

She continues: "For example, there was a very lengthy discussion regarding subwoofer placement which was had with all parties. Initially, they wanted the subwoofer to be located in the centre of the proscenium like the prior expo space but that was not possible due to the guidelines we had to follow. Finally, we found a unique location for the subwoofer that satisfied all the parties involved. It ended up behind the main speaker."

As the theatre project progressed, the exacting requirements of installing and deploying a Constellation system became evident to Kairos. Tanzil details: "We had 238 speakers and 51 microphones that had to be installed as part of the Meyer Sound Constellation system. First, every single speaker had to have its own line, there is no speaker being run in parallel. Second, the Constellation system requires perfection in terms of deployment. The microphone placements had to be exact.



Tech-Spec

Video

Blackmagic Design Micro Converter SDI to HDMI

BrightSign HD223 digital signage media players

Datavideo PTC-200 PTZ cameras and RMC-180 control unit

Just Add Power transmitters and receivers

Panasonic PT-RW930 and PT-RW330 projectors

Sony VPL-PWZ10 projector

Somason MS-100AUR projection screens and BCL-A260 projector lifts

Control

Crestron PRO3 and CP3N control systems and TSW-1060-B-S control panels

Audio

Clear-Com HelixNet intercom system
Community D10 ceiling speakers
DPA microphones
Meyer Sound Constellation sound system

Peavey MediaMatrix NION nE DSPS and CAB 4n Dante breakout boxes

Powersoft Quattrocanali and Ottocanali amplifiers

ROF PL 8X ceiling speakers

Solid State Logic L550 consoles, and ML 32.32 Dante stage boxes



We decided to move away from an analogue intercom system for the theatre at Jiexpo and it made life a lot easier.

Leo Tanzil, Kairos

The noise floor had to be exact. Having never previously deployed a Constellation system this was a new experience for us. The tolerances for every aspect of deployment and installation are very small and have to be followed precisely.”

To compound matters, the integrator was also under a time crunch. Kristanto says: “We didn’t have a lot of time to complete the project. The theatre was going to open in December 2019 with a concert by Yo-Yo Ma so there was a concrete deadline for all the works to be completed. During the course of the project there were a lot of delays and there were a lot of parties working. A lot of coordination was required to ensure that the Meyer Sound Constellation and other AV systems were all up and running in time.”

The solution to these challenges was hard work. Faustina says: “There were a lot of challenges but that is part of the integrator’s job. As always, we had to coordinate with a lot of other parties working on the project, such as the interior designer, to ensure that project was completed.”

Clear-Com intercom systems provide communications for the theatre. Tanzil says: “This is the first time we have deployed a Clear-Com system. In the past

we have used multiple different intercom products and the Helix works very well. We decided to move away from an analogue intercom system for the theatre at Jiexpo and I must say it made life a lot easier.”

Back of the house audio is handled by a Peavey Media Matrix DSP. It is used for announcements and artist calls that help the theatre operate.

Solid State Logic L550 consoles are used to manage front of house. Murdaya details: “It is definitely a choice that goes against convention and popular opinion, the recommendations I got were to go with Digico or Avid. But sonically, after testing all the options, the SSL came out on top. It is much easier to get a good sounding mix using the SSL. So, now my responsibility is to make sure that the engineering community is familiarised with the equipment and can take advantage of it.”

Regarding video systems in the theatre, Tanzil says: “The intended use of the theatre, primarily for music performances, orchestra and opera, meant that installed video systems were not required for the stage or performance area. However, we have installed a display system around the theatre for those who might be coming to the venue late.”

Datavideo PTZ cameras are used to capture proceedings. The video feed is then distributed throughout the building using Blackmagic products via SDI. For the signage system in the theatre, the SDI signal is converted and distributed over IP with the help of Just Add Power encoders and decoders.

With the theatre open and hosting performances, Murdaya reflects on the fruits of his labour: “When we brought Yo-Yo Ma for the opening of the theatre, his rider required two pairs of microphones and a PA to amplify his cello. But when they played the cello in the theatre before the performance to test the acoustics with just the Meyer Sound Constellation system his team made the decision to proceed with the performance completely unamplified. That is a testament to the Constellation system.”

Tanzil concludes: “When we started the project, we did not know what installing a Meyer Sound Constellation meant. We didn’t have a clue about the details or the expectations or the guidelines. It was a challenge for us to get up to speed. But now that we have completed the Jiexpo project, I feel confident in saying that we are one of the few integrators in Asia Pacific that can successfully deliver a system as complex and intricate as the Meyer Sound Constellation.”

processors. This returns to our earlier comments: ISE 2020 demonstrated a more software-driven industry looking to move away from costly hardware solutions.

There were some nice support product launches for the IP world, such as the new SWR2310 range of Stackable Managed Network Switches from Yamaha - tour-ready IT. Neutrik brought a Milan OEM module to the show, as well as a new ruggedised AG NPS-30W Gigabit PoE injector to support the burgeoning array of PoE devices appearing across the full product spectrum.

A prime example of that trend is the Genelec Smart IP range, which came to market last year, but that continues to develop with new speakers added to the line. The 4420 and 4430 are happy to speak Dante, AES67, and ST2110-30, and feature a single connection installation by using PoE or PoE+ as a power source. Both speakers feature 50W Class D amplifiers and Genelec's onboard room EQ system. To support that, Genelec does

some clever power storage in the speaker power supply, so peaks can be adequately supplied, even with the limits of PoE.

An important commercial entry in the IP area was the new Praesensa IP-based public address and voice alarm [PAVA] system from Bosch. The system features four and eight-channel amplifiers with flexible power assignment where the available power can be divided as per need among the outputs. Each device has its own Ethernet switch and the system's multifunction power supply features a single 12V battery backup solution.

Meanwhile away from the audio launches, Datapath highlighted its Arqa KVM system in its first public showing, a hard KVM system that uses video over IP transport technology to allow maintenance teams to have all PCs housed in one location.

One control technology is features, which allows users to switch between up to 16 independent sources without button presses, allowing the system to behave as an IP matrix

with up to 2,000 endpoints in the system.

For the first time at ISE, Crestron highlighted its 'future innovation' zone, showing concepts which are in development that may be on the market in the future and put a focus on its HDBaseT concepts, showcasing the E760 HDBaseT to AV-over-IP solution and NVX as software, capable of showing thumbnail images of streams. An 8K AV-over-IP software decoder prototype was also demonstrated.

Harman came to the show with the message that the future is AV-over-IP but also showed matrix switchers with a nod to customers that will need to accommodate legacy systems as they switch to IP signal distribution in future roll outs.

Loudspeakers

Possibly one of the most significant launches was Kara II from L-Acoustics. This evolves one of the best-ever selling L-Acoustics products by introducing adjustable directivity via the company's tried and tested

Panflex system. This gives four selectable horizontal directivities: 70-degree / 110-degree and 90-degree L/R. The 70-degree option comes with a bonus 2dB extra SPL for even further throw. Polar stability is also improved over Kara 1, and of course the new model is completely compatible with the original so can be easily integrated into existing rental stock.

d&b audiotechnik launched a full, high-end installation-specific line array system. The KSLi range includes the KSLi8 / KSLi12 full range speakers [80- and 120-degree horizontal dispersion, respectively] with claimed pattern control down to very low frequencies; and the KSLi-SUB and KSLi-GSUB subwoofers. This launch was combined with the unveiling of the ideal KSLi partner - the new 40D installation amplifier, which is the most powerful four channel Class-D installation amplifier in the d&b range.

Meyer Sound introduced the Ultra X20 self-powered full-range point-source loudspeaker - a



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