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Hurrairah bin Sohail speaks with Vichai Trading 1983 to find out how the integrator provided AV systems for the auditorium at the Chulalongkorn University in Bangkok, Thailand.

# Royal treatment

Established in 1917 and named after a king, Chulalongkorn University is one of the oldest educational establishments in Thailand. Vichai Trading 1983 was employed to handle an upgrade of the main auditorium where the convocation ceremony for graduating students is held.

## Tech-Spec

### Audio

Allen & Heath GL2800 mixing console

Audio-Technica ATWDA49 wireless microphone system

Biamp Audia Flex, RED-1, Expo

Tannoy VQ64MH, VQ85DF, VS218DR, VS15DR, VX12, VX8, CVS6, VX6, Reveal 502 speakers

Tascam CD-200iL CD recorder

QSC CX602V, CX254, RMX2450, RMX5050, RMX1450 amplifiers

The stakes for the project were high from the start. The auditorium's aesthetics reflect the heritage and tradition of Thai art and had to be preserved. In addition, the guest of honour for the convocation ceremonies at the university is the princess of Thailand, Maha Chakri Sirindhorn. The AV solutions chosen and deployed had to meet royal standards in terms of quality and functionality.

Vichai Trading 1983 became

“There were a number of aesthetic and practical considerations to be considered when installing the speakers.”  
- Pichit Ngantubtim, Vichai Trading 1983

involved with the project in January 2015 and the project was completed and delivered in May 2015. All the old equipment was replaced and the integrator started building the new systems from scratch with the aim to allow all attendees to experience the convocation ceremony in the best possible way.

Before the main auditorium, the university boasts two separate atriums which are also used as seating areas for the convocation ceremony. These atriums have been provided with wall mounted speakers and Sony 50-in and 32-in LCD displays. The video and audio signals from the convocation ceremony in the main auditorium are relayed to audiences in the atrium

using these AV systems.

The atriums walls have been constructed using glass and this allows for a large amount of natural light to enter the areas. After the installation, it became apparent that the sunlight was washing out the displays. Pichit Ngantubtim, who was the manager for this project from Vichai Trading 1983, explains how this is being rectified: “We are in talks with Chulalongkorn University to replace the LCD displays with LED video walls and hopefully the project will be implemented before the new year. The proposed solution employs Unilumens LED displays.”

In the main auditorium itself, Tannoy speakers have





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[Left] Control over the AV systems is exercised from a dedicated communication room which houses the server and solution racks. [Above left] Da-Lite screens of varying sizes have been used for projection in the main auditorium. [Above center] Sony LCD displays can be found in the atrium. These are to be upgraded to LED video walls in the future. [Above] Tannoy speakers are tasked with handling audio in Chulalongkorn University's auditorium.

been used. Ngantubtim talks about the choice of audio solution: “Tannoy speakers deliver on quality and have good SPL which made them ideal for the job. The install location of the speakers was also quite high, so the speakers needed to perform to a high degree in order to deliver audio to the whole auditorium.”

The façade in front of the stage also provided a set of challenges related to aesthetics. Vichai Trading 1983 took special steps to ensure that the look of the façade remained intact. Ngantubtim narrates: “There were a number of aesthetic and practical considerations to be considered when installing the speakers. Firstly, we had to be careful when drilling holes for installing the speakers so as to not damage the façade which uses marble in its construction. Secondly we had to hide the speakers away behind mesh grills so that the look of the façade would not be disrupted.”

A total of seven Tannoy speakers have also been mounted on the roof and balcony of the auditorium to support the audio from the façade. On the back-end a Biamp Audia Flex handles processing duties while QSC amplifiers are also used.

The audio signals are distributed over copper infrastructure. Ngantubtim says: “This was a simple

installation with regards to distribution of audio. No zoning capabilities were required which is why audio over Ethernet solutions were not considered. We kept it simple and used copper wires to transmit audio signals to the speakers.”

Audio-Technica ATWDA49 wireless microphones have been used for capturing audio and an Allen Et Heath GL2800 mixer manages inputs and outputs.

With regards to visual systems, Panasonic projectors of varying brightness along with Da-Lite screens have been used. The main stage boasts a 400-in Da-Lite screen in combination with a Panasonic projector capable of delivering 12,000 lumens. This setup serves as the main display for auditorium. Four smaller 112-in Da-Lite screens have also been installed around the auditorium to help provide better viewing for all seated attendees. Two of the smaller screens work in tandem with two Panasonic 6,000 lumens projectors while the others work in tandem with a Panasonic 4,000 lumens projector each.

Ngantubtim talks about the position of the Da-Lite screens: “Originally we had planned to have the Da-Lite screens on the top level of the auditorium, slanted at an angle to provide the best viewing angle. However the architecture of the roof meant that that was not possible so we went with our next best design.”

It is also interesting to note that the projectors have been mounted without projector lifts. Ngantubtim details: “We wanted to use projector lifts to house the projectors but once again the architecture of the roof

meant that large parts of it would have to be destroyed in the process to install the lifts. Seeing that the end-user wanted to retain the aesthetics of the auditorium this was not an option.”

The video system is rounded out by a Sony CCTV system. A Wolfvision Proveos presentation controller is used to manage the sources when the video system is in operation.

An AMX Netlinx NX-3200 serves as the core of the control system used to manage the AV systems. An AMX Enova DGX 16 video switcher is used to manage the different sources. An interesting addition is the Extron IMG P 464 graphics processor which allows for picture-in-picture (PIP) display. This allows the university to more accurately display the convocation ceremony. Kramer VM-114H4C receivers and transmitters are used to transmit the video signals from the control room to the projectors.

To conclude, Ngantubtim says: “All things considered, there were no real challenges for the Chulalongkorn University project. The installation was straightforward and we just had to give special consideration to the aesthetics of the premises. The AV systems are fully functional and the university is happy with the end results.”

## Tech-Spec

### Video

AMX Enova DGX video switcher  
Da-Lite projection screens  
Extron IMG P 464 PIP graphics processor  
Panasonic PT-DZ13K, PT-DW11KE projectors  
Sony 50-in, 32-in LCD displays  
Wolfvision ProVeos presentation controller

### Control

Apple iPad  
AMX Netlinx NX-3200 processor