



Singapore Management University Transforms Higher Learning with Extron DTP Systems and Streaming

“The Extron DTP System was designed to free faculty from concentrating on the equipment, so that they can focus on teaching. At the touch of a button, the brain behind the system coordinates each and every AV device in the room like an orchestral performance.”

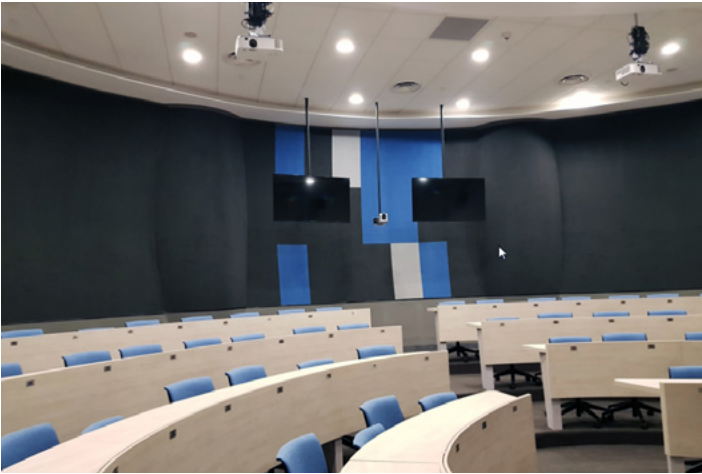
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Challenges

Singapore Management University – SMU aims to be a great and iconic global-city university in Asia that excels in tackling the world’s complexities. They seek to impact humanity positively, produce leaders of tomorrow through transformative education and multi-disciplinary research, and provide insights in solving problems worldwide. As part of its overall efforts to achieve these goals, SMU embarked on a two-year campus development project. They added new learning, teaching, and group study spaces and a sports complex. The project also included the deployment of advanced AV systems and technologies throughout the campus. Based on past experience, SMU placed a high value on ease of use and reliability.

Technology within the redesigned classrooms, seminar rooms, amphitheater, and social gathering spaces needed to facilitate an augmented style of teaching and energize student learning. Some rooms became active learning environments, while others received enhanced AV technologies. The multi-room Gym Studio within the new three-story gym was designed with sound-proof spaces for orchestral rehearsals, musical/multimedia productions, and open jam sessions. Each space would include an independent AV system.

With the new design, each room would provide a document camera, a DVD player, AV connectivity for instructor and student devices, and between two and four projectors or flat panel displays, depending on space size. System requirements included digital video switching, an audio system with mixing and sound reinforcement, and user-friendly AV system control. Specific



Within each learning space, an Extron DTP CrossPoint 108 4K IPCP MA 70 10x8 presentation matrix switcher provides video scaling, as well as AV and control signal switching and distribution.



The instructor uses the Extron TLP Pro 720M 7" Wall Mount TouchLink Pro Touchpanel to easily control the system, including setting image windowing and activating streaming/lecture capture.



To stream and capture content from presentations and the various video sources, an Extron SMP 351 is mounted in each room's equipment rack.

rooms would also support presentation of multiple images on a single display, videoconferencing, or lecture capture/recording capability.

Solution

SMU wanted AV systems that allowed the faculty to focus on teaching, not the delivery system. They engaged NCS Communications Engineering Pte Ltd as the system integrator for this project. The designer selected the Extron DTP CrossPoint 108 4K IPCP MA 70 10x8 presentation matrix switcher with built-in scaling and processing features. This HDCP-compliant model was selected for its capabilities to fulfill important application and performance requirements, such as support of 4K video resolutions on inputs and outputs along with scaling on DTP® outputs to accommodate multiple classroom displays. Its Vector™ 4K scaling engine ensures consistent high-quality images that match each display's native resolution.

SMU specified the Extron MGP 464 Pro DI multi window processor for rooms that required the ability to show multiple sources on one display device. It accepts graphics and video content from one or more HDMI sources, scaling images up to 2K. Each image appears in one of four windows, and Extron technologies ensure fast and reliable signal switching among the various sources. This functionality, in combination with the audio and IP Link® Pro control processing built into the DTP CrossPoint® matrix switcher, streamlined integration and ensured easy system operation for the instructors and staff.

An Extron SMP 351 H.264 Streaming Media Processor with both internal solid-state storage and network storage enables lecture capture and recording for live streaming and video on demand. It is linked through SMU's learning management system. The streaming media processor simultaneously captures presentations and AV source content of different resolutions and scales the source images. When using the internal 80 GB solid-state drive, up to 160 hours of lecture material and videoconferencing feeds are stored for later transfer to the network storage directory.

Results

The two-year project was divided into three phases to minimize impact on classes and events. Each phase allocated less than a month for AV system integration. SMU and NCS praised the ease of installing and of commissioning the Extron equipment, especially in view of the integrated signal scaling and processing capabilities of the DTP CrossPoint presentation matrix switcher.

Instructors have compared use of the new AV systems to a symphony. With a touch on the screen or press of a button, they can orchestrate each AV device effortlessly to create a harmonious learning environment. "Extron DTP systems and the SMP 351 streaming media processor have the combination of features and capabilities that we needed to transform our seminar rooms and classrooms into highly successful active learning environments," says Wong Ying Boon, Senior Manager, Learning Space Technology Services/Integrated Information Technology Services at SMU.

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