



St. Cloud State University (SCSU) St. Cloud, Minnesota

St. Cloud State University (SCSU) is Minnesota's second-largest university, with over 16,000 students from 80 nations. Located about an hour northwest of Minneapolis, the 100-acre campus resides along the west bank of the Mississippi River.

In the spring of 2005, SCSU allocated funds to upgrade classrooms and a major AV technology revamp took place during the 60-day summer break.



Technology "clean slate"

SCSU's Learning Resources & Technology Services (LR&TS) used this opportunity to turn a critical eye to their existing infrastructure. Technology just wasn't working; there was a hodgepodge of different touchpanels and remote controls, and teachers found them difficult to use. 90 rooms had mostly AMX in them, set up by different programmers with different touchpanels and different equipment (projectors and switchers). Basically, each room had its own configuration, so ultimately there were different problems with every room.

The Electronic Classrooms (E-Classrooms) team, part of LR&TS, decided to use this opportunity to set as their primary goal uniformity in technology across all the e-classrooms. The next decision was to go with Crestron. SCSU replaced the AMX equipment in all 90 rooms and added Crestron to an additional 45. This was accomplished with a crew of 10-12 students over the summer break. The 135 rooms got the same wiring pulled to the projectors, and while there are rooms that don't have speakers in them, the speaker wires are already there for ease of installation. During installation and final wiring processes, a third crew handled the programming and testing. At the same time, a team was working on the remote management programming and setup. Subsequently, 25 more rooms were added, and 30-40 more

rooms are expected to be brought online in the next two to three years. SCSU also took this opportunity to outfit every room, at a minimum, with identical PCs, a touchpanel, phone, and projector. VCRs, sound systems and document cameras are all add-on options. DVDs and combo units can also be accommodated.

The Crestron equipment list for a basic classroom contains:

- (1) TPS-3000, lsys® 6.4 tilt touchpanel
- (1) AV2, dual bus control system
- (1) ST-PC, dual power control modules
(on/off control for AC powered devices)
- (1) C2N-VEQ4, four-channel volume/EQ control module with signal routing
- (1) C2ENET-1, single port Ethernet card, providing Ethernet connectivity to enable the control system's built-in Web server and e-Control® 2 capabilities
- (1) ST-RMK, rack mount kit and (1) HBK-3000, the rear cover accessory that conceals and protects connections at the base of the touchpanel



SCSU's programming "wizard"

All programming was performed by the school's own programmer, who added some unique "plug and play" functionality. If a piece of equipment needs to be replaced with a different model or manufacturer, the Crestron system was programmed to enable auto set up. If replacements need to be done they can be done quickly, without the need to re-program the systems in each room.

The concept was, instead of having a programmer come in and re-program modules, programs are already on site for the types of replacement gear in stock.

For example, if a room doesn't have DVD player in it and the instructor needs one, the SCSU student techs can access a hidden technician page through which the system is instructed to look for the added Sony DVD player. The system automatically recalculates the touchpanel to adjust the switchers, open up the IR ports, and tell the projector to go to video. Essentially, it re-programs itself for that room, including adding the associated buttons to the touchpanel's front page. Baud rate changes can complicate the process, but it generally works very well.

SCSU accommodates streaming video and/or audio into the classrooms using Adobe® Connect™. Six dedicated ITV rooms for distance/interactive learning are scheduled to go online February 2008, enabling students in multiple locations to conference into the ITV locations.

80% fewer escalations with RoomView®

Crestron RoomView® software provides a custom configurable interface to monitor, manage and control every device in every room remotely from any computer. Built-in reporting tracks resource usage for more effective purchasing and resource allocation. By performing system diagnostics remotely, instructors and presenters can send help requests directly from their touchpanel; technicians can respond with built-in instant messaging, then service and control devices remotely. Tasks that typically take days to complete are reduced to a few mouse clicks.

SCSU's help desk estimates that with Roomview software, there has been a reduction of about 80% in problems escalating from level one to two. Calls are answered and problems are solved more quickly, and there are fewer and fewer calls (usually from "newbies").

With Crestron, SCSU was able to achieve their most critical objectives: ease of management and commonality of touchpanels, along with all rooms programmed with the same look and feel. Once an instructor learns one room, he/she is comfortable with all of them. The interface's ease of use has made it possible to make operations all instructor-based.

The screenshot shows the RoomView Log application window. The title bar reads "RoomView Log C:\Crestron\RoomView\Db\RoomViewLog.mdb Page 4/628". The interface includes a menu bar (File, Edit) and navigation buttons (First, Back, Previous, Next, Forward, Last). The main area is a table with the following columns: Date, Time, Room Name, Attribute Name, Attrib..., Device, D., A..., Serial, and Comment. The table contains multiple rows of log entries for various rooms and attributes, such as "Security disabled", "Last Modified", "Proj Error String", "Proj Status", "Run Time (hrs)", and "LampLife".

Date	Time	Room Name	Attribute Name	Attrib...	Device	D.	A...	Serial	Comment
01/27/06	10:48:22	MC-114 / N...	Security disabled	Digital	None		1		
01/27/06	10:48:22	CH-202 / ...	Last Modified	Serial	None			1-05-06	
01/27/06	10:48:22	CH-202 / ...	Proj Error String	Serial	None			No Error	
01/27/06	10:48:22	CH-202 / ...	Proj Status	Serial	None			Standby	
01/27/06	10:48:22	CH-202 / ...	Run Time (hrs)	Analog	None		1		
01/27/06	10:48:22	CH-202 / ...	LampLife	Analog	Projector		328		
01/27/06	10:48:22	CH-202 / ...	Security disabled	Digital	None		1		
01/27/06	10:48:22	SH-210 / 8...	Last Modified	Serial	None			12-22-05	
01/27/06	10:48:22	SH-210 / 8...	Proj Error String	Serial	None			\0	
01/27/06	10:48:22	SH-210 / 8...	Proj Status	Serial	None			Power On 3	
01/27/06	10:48:22	SH-210 / 8...	LampLife	Analog	Projector		279		
01/27/06	10:48:22	SH-210 / 8...	Picture Mute	Digital	Projector		1		
01/27/06	10:48:22	SH-210 / 8...	Security disabled	Digital	None		1		
01/27/06	10:48:22	SH-210 / 8...	Proj Pwr	Digital	None		1		
01/27/06	10:48:22	CH-202 / 8...	Last Modified	Serial	None			1-05-06	
01/27/06	10:48:22	CH-202 / 8...	Proj Error String	Serial	None			No Error	
01/27/06	10:48:22	CH-202 / 8...	Proj Status	Serial	None			Power On 3	
01/27/06	10:48:22	CH-202 / 8...	Run Time (hrs)	Analog	None		2		
01/27/06	10:48:22	CH-202 / 8...	LampLife	Analog	Projector		19		
01/27/06	10:48:22	CH-202 / 8...	Picture Mute	Digital	Projector		1		
01/27/06	10:48:22	CH-202 / 8...	Security disabled	Digital	None		1		
01/27/06	10:48:22	CH-202 / 8...	Proj Pwr	Digital	None		1		
01/27/06	10:48:22	ECC-112 / ...	Last Modified	Serial	None			12-22-05	
01/27/06	10:48:22	ECC-112 / ...	Proj Error String	Serial	None			\0	
01/27/06	10:48:22	ECC-112 / ...	Proj Status	Serial	None			Standby	
01/27/06	10:48:22	ECC-112 / ...	Run Time (hrs)	Analog	None		2		
01/27/06	10:48:22	ECC-112 / ...	LampLife	Analog	Projector		92		
01/27/06	10:48:22	ECC-112 / ...	Security disabled	Digital	None		1		
01/27/06	10:48:22	EB-240A / ...	Last Modified	Serial	None			1-03-06	
01/27/06	10:48:22	EB-240A / ...	Program Version	Serial	None			Standard Classroom v2.0.01	
01/27/06	10:48:22	EB-240A / ...	Proj Error String	Serial	None			\0	
01/27/06	10:48:22	EB-240A / ...	Proj Status	Serial	None			Power On 3	
01/27/06	10:48:22	EB-240A / ...	Run Time (hrs)	Analog	None		1		
01/27/06	10:48:22	EB-240A / ...	LampLife	Analog	Projector		272		