

UNIVERSITY OF TEXAS HEALTH Cizik School of Nursing

A CASE STUDY BY LEVEL 3 AUDIOVISUAL

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SIMULATION CENTER

UT Health presented Level 3 Audiovisual with plans to build a state-of-the-art simulation center within their high-profile nursing school. This project would become the largest simulation center within the UT Health organization and the largest simulation project for Level 3 Audiovisual.

The simulation center at the Cizik School of Nursing has a total of 70 cameras and over 120 audio devices networked across 5 control stations, 14 OSCE exam rooms, 16 simulation training rooms, 4 dedicated debriefing spaces, and 1 debriefing station located in the director's office.



UT wanted our team to adapt our integrated AV recording debriefing system to operate on their enterprise network. One major challenge of this project was the degree to which UT Health secures their IT infrastructure. As an example, all computer sources were required to be racked and terminated within their data center several miles off campus. We were also challenged to re-write our PULSE remote monitoring service onto a UT Health approved platform. We understood and respected UT Health's concerns and were challenged to provide solutions to their needs and expectations.

Another priority for the UT Health team was a desire to reduce the number of technology vendors required for this project. UT desired a single technology company, that understood simulation, to provide a turn-key solution. Most healthcare simulation projects require a software vendor, an AV vendor, a simulation consultant and often an IT vendor. Level 3 Audiovisual is the only healthcare simulation technology company capable of meeting this request by providing all four areas of expertise within a single entity. The importance of a wholistic and complete integration with a single source, who understood the complexities of simulation were a critical element in their decision-making process.

SIMULATION ROOMS (16), OSCE ROOMS (14)

Each simulation room and OSCE is fitted with two PTZ cameras and one fixed zoom-camera. All simulation rooms are equipped with a hidden PC driving a media screen displaying information and lab results crucial to the simulation. Each simulation room is fitted with an amplifier driving VOG speaker, and a ceiling microphone recording the room's sound. Wireless devices support each room with either a headset/microphone recording audio, or an in-ear receiver allowing private conversation from a trainer to an actor in the room. Additionally, each simulation room is equipped with a patient monitor displaying vital signs, and overall health and status of the patient.



DEBRIEFING ROOM (4)

Each debriefing room is equipped with a player-PC allowing the debriefing to be remotely controlled via a tablet. The player-PC's drive 4K displays and speakers are used to playback simulation recordings. Each debriefing room is equipped with one PTZ camera and one ceiling microphone.



CONTROL STATIONS (5)

The simulation lab is fitted with a room containing five control stations with dual monitors and headphones. Each control station can run a multi-room type simulation (i.e. OSCE) or log into single-room simulations. The operator can talk to the entire room (VOG) or privately to a trainer or actor in the room. The operator can display information on the simulation/OSCE room's media screens, utilize a tablet to annotate the live simulation recording, bookmark individual events and/or track performance via checklists. Both annotations and checklists can be used later during debriefing to jump to specific points in the simulation recording.



HEAD END SYSTEM

The head end system consists of a server handling all audio and video streams as well as encoding and storing recordings. All data can be accessed and managed from any room or device in accordance with the user rights as defined by the client.

ADMINISTRATIVE FEATURES

An active directory integration was implemented. All user-logins created by the client's IT automatically show up in SIMStation. Students entering the simulation rooms can log in by holding their keycard to a reader next to the room's entrance.

PULSE IDM

Pulse IDM was included to monitor the simulation system. With Pulse IDM in place, Level 3 can oversee all the technology installed to ensure it is working properly. If something should go wrong, they will be alerted and can remote in and fix the issue immediately. They utilize TeamViewer to securely connect to your simulation computers for any configuration changes or system repairs.



CUSTOMER REACTION

"It really did become an easy choice. Level 3 Audiovisual and SIMStation were by far the easiest to work with and the easiest system to use. It was very important to me to have an AV installer that understood what the needs of a simulation Lab were. Several of the other competitors out there they say they can record in 4K but they cannot playback in 4K. With SIMStation and Level 3 Audiovisual that was not the case. It records in 4K, it plays back in 4K and it is high quality video and audio that we're getting back out of the AV system."

- Eric Christiansen, Director, Simulation and Clinical Performance Lab

"I was surprised by how intuitive the software program was. I was in the bidding process and saw other softwares and this is one of the main reasons we chose it because this system is very easy to use and knowing that our employees can be trained within 20 minutes and know how to do their job is phenomenal."

Nena Fairbanks, Administrative Manager



This project won "[Best Healthcare Integration Project 2020](#)" in Commercial Integrator Integration Awards.