

# Christie Terra with SDVoE Technology Empowers Immersive Educational Environment at IRCAD 3

Nestled within the University Hospital of Strasbourg, IRCAD (Institut de Recherche contre les Cancers de l'Appareil Digestif) is a globally recognized surgical research and training institute dedicated to minimally invasive surgery. Founded in 1994, more than 8,800 surgeons of all surgical specialties are trained annually at IRCAD. In Fall 2021, IRCAD introduced a new 26,000 square foot building dedicated to robotic surgery. IRCAD 3 is the latest extension within the University Hospitals of Strasbourg, featuring an array of high-end AV technology to deliver an immersive learning experience.

## Challenge

DEYA, a French integrator with nearly 30 years of experience, was selected by the University Hospital of Strasbourg to complete the AV design and integration for IRCAD 3. IRCAD tasked DEYA to create a center of prestige and excellence equipped with the latest audiovisual technologies. The integration required an ultra-connected auditorium with 4K 3D projection to support learning. In addition, a high-definition video conferencing system and an ecosystem of IP-connected technologies was essential to support the training of surgeons, both in-person and remotely. IRCAD and DEYA collaborated closely to research the available technologies that could deliver on the ambitious brief.

## Solution

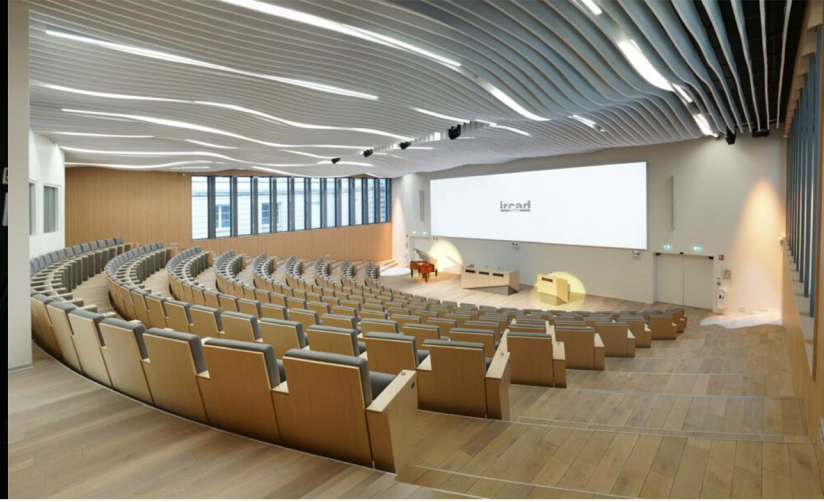
DEYA selected two Christie Mirage 4K40-RGB pure laser projectors to create a 38-foot display as the centerpiece of the 237-seat auditorium. Software Defined Video over Ethernet (SDVoE), was selected to deliver a flexible, reliable and unified AV-over-IP platform. DEYA established an AV control room and implemented an ecosystem of equipment throughout the building, all connected over IP with an integrated feature-rich Christie Terra AV-over-IP solution. The auditorium, which also features six 4K cameras, can live stream operations in 3D with 4K resolution, with no compression or latency.

"We were looking for a laser projector with beautiful colorimetry and strong 3D capabilities," explained Hiltenbrand. "The choice naturally turned to Christie, who was the only manufacturer at the time to offer this type of product. We also switched to video over IP throughout the building, and that's a complete paradigm shift. It's based on various aspects that were new to us, so we had to train and surround ourselves with the right people to learn. It was a big IT investment in switches to have a good sustainable base on which we will be able to use different video over IP technologies. We chose SDVoE technology which we felt was most mature in terms of integration and HDCP management."

*"The aims of the auditorium were above all to deliver both 4K and 3D, but also to ensure a very immersive experience. We wanted, unlike our other auditoriums, to have a large, wide projection area so we could display at least five or six images to provide versatility."*

*- David Hiltenbrand,  
audiovisual technician at IRCAD*





The team worked with the architect to ensure other elements all integrated seamlessly into the project, including microphones that are installed within the premium auditorium seating. Additional meeting rooms feature systems for video conferencing and wireless content sharing, designed to allow users to easily plug in their devices and enable a fluid user experience. DEYA designed a system to allow the technology in the modular rooms to be configured with an iPad. Further AV is installed throughout the building, with the AV-over-IP solution managing the broadcast of live content throughout.

“The fact that we needed to broadcast images in 4K meant that the required infrastructure was unprecedented,” said Matthieu Renfer, development engineer for DEYA. “We relied on the SDVoE AV-over-IP technologies that allow us to have a certain flexibility in the infrastructure. We have a 10G network core, which gives us flexibility in the system and the ability to deliver 4K at 60Hz. So we now have an innovative solution that is up-to-date and completely scalable.”

The outcome is a highly specified center of prestige and excellence, equipped with powerful AV technology, which has blended the required high levels of performance while maintaining the ultra-modern aesthetics of the building. The integrator, architect, and designers were all involved early in the process, having held hundreds of meetings together to deliver a successful result.

“We had the chance to really work together with the technical teams, and to offer something really high end,” noted Renfer. “There is this desire to always be at the highest level, and we had carte blanche to do everything we wanted with this project. We came up with something which is, in my opinion, truly exceptional.”

## Benefits of SDVoE Technology for IRCAD Installation

SDVoE technology, as implemented through Christie’s Terra solutions, allowed for full high-quality 4K60P and 4:4:4 video with near-zero latency across all video content throughout IRCAD 3 to create an immersive and engaging educational experience. SDVoE is the only AV-over-IP solution that can match the performance of a matrix switch. SDVoE boasts flawless technology and zero latency that eliminates compromises in performance.

## About Christie

Christie Digital Systems USA, Inc. is a global visual and audio technologies company and a wholly-owned subsidiary of Ushio Inc., Japan (JP:6925). Consistently setting the standards by being the first to market some of the world’s most advanced projectors, complete system displays, and cinema audio solutions; Christie is recognized as one of the most innovative visual technology companies in the world. From retail displays to Hollywood, mission critical command centers to classrooms and training simulators, Christie display solutions and projectors capture the attention of audiences around the world with dynamic and stunning images, accompanied by awe-inspiring sound.

For more information about Christie’s Terra line of SDVoE solutions, visit [www.christiedigital.com](http://www.christiedigital.com).



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