



CASE STUDY

Extron NAV Forms the AV over IP Backbone for a Global Equine Veterinary Campus in Normandy

Extron



The architecture blends period farm structures with modern medical and training spaces, unified by a fiber-connected AV network.

The National Veterinary School of Alfort (ENVA) transferred its equine division to the international horse campus Normandy Equine Valley (NEV) to build a high-performance, digitally connected campus. As a result, the International Equine Campus in Goustranville, Normandy, is a world-class center for equine health research, education, and clinical care. It is home to over 250 veterinarians and researchers and treats more than 2,000 horses each year. The campus also houses ANSES, France's national agency for food, environmental, and occupational health safety, and the French National Horse Racing Federation Laboratory (LCH), a globally recognized laboratory specializing in anti-doping analysis for horse racing and the Medical Imaging and Research Centre for Equine Locomotor Conditions (CIRALE).

What started as a single auditorium installation quickly evolved into a campus-wide AV infrastructure. AV integrator Auvisys, working with digital technology consulting firm, Scenarchie, selected Extron technologies to meet the expanded scope.



A wall-mounted TouchLink® Pro touchpanel in an exam room provides intuitive AV system control during clinical teaching sessions.

“Designing a campus-wide AV system for continuous clinical use required a solution that combined reliability, flexibility, and intuitive control. With Extron’s NAV platform, we delivered a high-performance infrastructure that supports everything from live surgeries to collaborative research, all within a secure, scalable framework.”

Christopher Colin
Sales Manager
Auvivsys

CHALLENGES

The campus faced several technical and instructional challenges which impacted the AV system design. First, the site brought together four distinct institutions (NEV, ENVA, ANSES, and LCH) each with its own IT infrastructure. This required an AV system that would allow for cross-institutional collaboration without compromising network independence or data security. Signals had to move freely between buildings while respecting the boundaries set by each organization’s IT policies.

Second, the teaching model posed several logistical limitations. Equine surgical procedures take place in sterile environments where only a small number of students can be physically present. To provide broader access to more students, instructors needed a reliable way to transmit live video and audio from operating rooms to multiple destinations, including the main auditorium and nearby classrooms. It was important that video distribution could support 4K video and maintain audio lip-sync to ensure that remote viewers could follow complex procedures in real time.

Large, clearly labeled icons on the TouchLink Pro touchpanel interface give instructors and clinicians direct control over display selection, system power, and room functions.



A centralized AV equipment rack houses Extron NAV endpoints and other AV system hardware.

Third, the system had to support 24/7 operation with minimal risk of downtime. In clinical and research settings, the AV infrastructure is often mission-critical. Any failure could compromise a surgical procedure, interrupt a lecture, or block a research demonstration. To reduce this risk, the integrator had to design for full redundancy across all key AV components, while also maintaining low latency and consistent performance under heavy load.

Finally, the system had to be easy to use. Veterinarians, educators, and researchers with varying levels of comfort with technology needed to operate the AV system without assistance from IT staff. This required easy-to-use control interfaces that could manage source and display selection, audio levels, and recording with minimal training. The interface also had to be accessible from both fixed touchpanels and personal devices.

DESIGN SOLUTION

To meet the campus's requirements, Auvisys designed a distributed, high-performance AV over IP system anchored by Extron's NAV® system. The solution spans multiple buildings, each operating its own secure audiovisual sub-network connected via a campus-wide fiber optic and Category 6A backbone. This design provides the flexibility to share video and audio signals across institutions while preserving network segmentation and security policies.

The AV infrastructure includes more than 50 NAV endpoints, a combination of NAV E 121 and NAV E 501 encoders and NAV SD 101 and NAV SD 501 scaling decoders. These endpoints transmit high-resolution video and audio from source devices



An equine water therapy and rehabilitation pool (Cirale Facility) supports recovery and diagnostics, with AV integration for monitoring and instructional purposes.

“Teachers and researchers have redefined their teaching methods, offering students unprecedented access to live demonstrations and practical training. The Equine Valley Campus now stands as a global center of excellence in equine veterinary education and innovation, with strong international demand for study and research opportunities.”

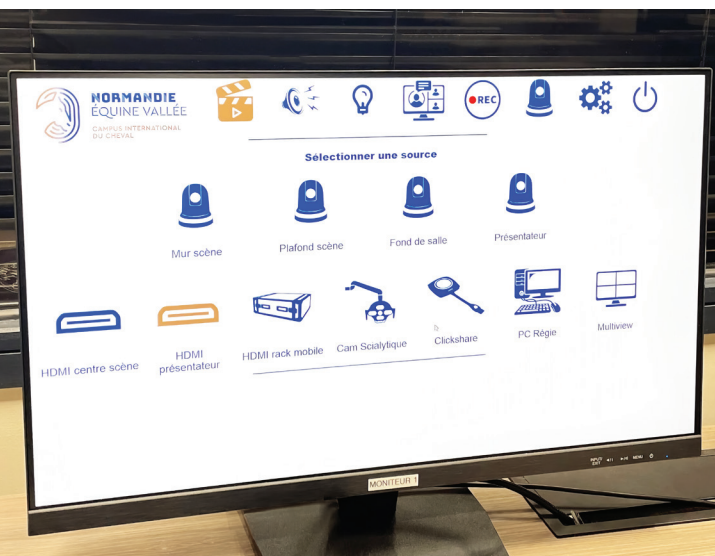
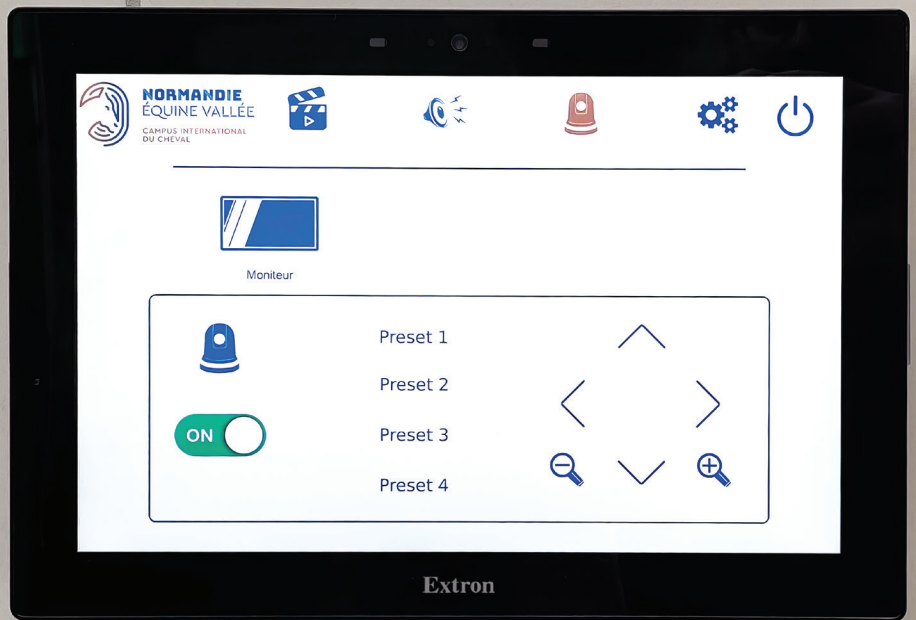
Christopher Colin
Sales Manager
Auvivisys

such as surgical cameras, media players, and presentation systems to various output locations including lecture halls, classrooms, and monitoring stations. The use of both HDMI-only and HDMI with USB models allows for precise integration depending on the needs of each space, such as USB connectivity for recording or control devices.

At the core of the system is the Extron NAVigator, deployed in the EVE building. This system manager configures, switches, and monitors all NAV endpoints, serving as the control center for signal routing across the entire site. Its built-in browser-based interface enables configuration, monitoring, backup/restoration, and troubleshooting.

In surgical suites, Panasonic 4K PTZ and medical-grade surgical cameras feed directly into NAV encoders. The encoded video travels across the fiber infrastructure to displays in teaching spaces, with NAV scaling decoders driving HDMI outputs to monitors and projectors. These rooms also incorporate Shure Dante microphones for precise audio capture, with signal routing and processing handled by an Extron XMP 240 DSP Matrix Processor. This configuration allows live voice pickup, mixing, and zone-specific distribution for instruction or remote conferencing.

The touchpanel user interface in the rehabilitation zone mirrors those in clinical and teaching areas, providing consistent control of AV and environmental settings.



The LinkLicense for User Interfaces Upgrade enables the use of a desktop computer as primary AV system control interface. Staff members can also use a mobile device to control the AV system.

Each operating room includes an Extron TLP Pro 1025M 10" Wall Mount TouchLink® Pro touchpanel to provide staff with an intuitive control interface. These touchpanels are paired with IPCP Pro 250 xi control processors, three of which are deployed across the campus. These processors manage local automation tasks such as powering displays, switching sources, and starting or stopping recordings. Each is licensed with the LinkLicense for User Interface upgrade, enabling browser and mobile-based control via the Extron Control App. This allows staff to control the AV system using their personal devices, an essential feature in clinical environments where mobility and hygiene are critical.

To support hybrid learning and content archiving, the system incorporates an Extron SMP 111 streaming media processor and an Extron MediaPort® HDMI and Audio to USB scaling bridge. Located in the EVE building's AV rack, these devices enable live streaming, lecture capture, and integration with conferencing platforms such as Microsoft Teams or Zoom. Audio and video can be fed directly into conferencing applications, enabling live interaction with off-site participants or remote students.

All devices are integrated into a fully redundant network architecture. Backup processors, distributed control, and dual-network pathways help preserve operational continuity in both scheduled and emergency scenarios. The design not only meets current educational and clinical needs, but also allows for seamless expansion as the campus grows. Additional NAV endpoints, control processors, and touchpanels can be added without overhauling the existing infrastructure, making the system adaptable to future demands.



Encoded video is distributed via the fiber infrastructure to displays in teaching spaces, with NAV scaling decoders driving HDMI outputs to monitors and projectors.



To support hybrid learning and content archiving, the system incorporates an Extron SMP 111 streaming media processor and an Extron MediaPort® HDMI and Audio to USB scaling bridge.

RESULTS

The completed installation delivers real-time video and audio transmission with ultra-low latency, high reliability, and straightforward control. Students in classrooms, remote lecture halls, or even off-site can access live surgical content. The NAV-based design also allows for easy system expansion as new buildings and teaching areas are added.

This unified audiovisual backbone has redefined how teaching, research, and clinical practice intersect on campus. Faculty now deliver demonstrations to all students regardless of physical location, removing access barriers while improving content quality. The infrastructure supports continuous recording and streaming for asynchronous review, hybrid learning, and external collaboration.

Future phases are planned to extend AV capabilities to additional classrooms, student housing, and a sixth surgical suite focused on necropsy training. Extron's platform has positioned the International Equine Campus for continued growth as a model for veterinary medicine education.

FEATURED EXTRON PRODUCTS

Model	Description
NAVigator	NAV System Manager
NAV LinkLicense	NAVigator Endpoints Upgrade
NAV E 121	1G Pro AV over IP Encoder - HDMI
NAV E 501	1G Pro AV over IP Encoder - HDMI, Ethernet, and USB
NAV SD 101	1G Pro AV over IP Scaling Decoder - HDMI
NAV SD 501	1G Pro AV over IP Scaling Decoder - HDMI, Ethernet, and USB
XMP 240	Dante Audio DSP Matrix Processor
SMP 111	Single Channel H.264 Streaming Media Processor
MediaPort 200	HDMI and Audio to USB Scaling Bridge
AXI 22 AT	2 Input, 2 Output Dante Audio Interface
TLP Pro 1025M	10" Wall Mount TouchLink Pro Touchpanel
IPCP Pro 250 xi	IPCP Pro xi Control Processor
Control System LinkLicense	User Interfaces Upgrade Kit

Extron
www.extron.com/education

Follow us on: 