

Video integration in the surgical operating room

8 ways IP outwits AV



In the surgical operating room (OR), the need for efficiency and precision is paramount. Bringing together multiple disciplines and technologies, the OR requires thorough integration to make everything and everyone work together seamlessly. The need for integration in the OR is understood but the way it is done is under scrutiny. New operating rooms are replacing their current AV (Audio Visual) solutions with smarter integration over the IP network. Here's why...

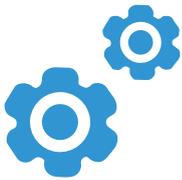
Simplicity



Many operating rooms use Audio Visual (AV) systems to integrate equipment. While these systems have been used in the OR for many years, they require a large amount of cabling and complex configurations

in order to secure full integration. IP solutions require just one universal cable, to distribute audio, video and data across the network. Simplicity is key. It allows OR staff to concentrate on patient care instead of dealing with technical issues.

Efficiency



Healthcare is about efficiency – doing more and performing better with less. In AV systems, multiple video standards (jpg, mp4, h264...) exist, increasing complexity when setting up the OR. Changing between

procedures and preferences takes time and technical ability. Video integration over the IP network is much more transparent – there's only one common standard – making it easier to switch between procedures and devices and reducing the risk of error.

The pros of Nexxis are ease-of-use, ultra-low latency, a high degree of flexibility, and the ability to integrate every signal type.

St. Elisabeth - Catholic Hospitals Rhein-Ruhr

Flexibility



In an age and environment where technology is constantly evolving, how can the OR accommodate innovation without compromising on quality? With the constant influx of advanced technologies, e.g. 4K imaging, OR systems

must be flexible enough to integrate new technologies. AV is a very static system, making it resistant to new standards. In comparison, IP is more flexible. It can accommodate new technologies and enhance functionality, without the need for external converters, extenders or splitters.

4K imagery



IP integration offers more flexibility when it comes to the integration of 4K imaging technology in the OR. With IP, there are no cable length limits and no transmitters are needed for distances over 30 ft. When

working with multiple video signals – which is usually the case in the OR – (high-end) IP systems can handle this variety seamlessly. It means HD and 4K can be mixed without downscaling the signal to allow it to pass through the network.

Collaboration



The requirements of the OR are constantly changing. Demand for surgery is rising, while the complexity of procedures is increasing. The OR looks to benefit from new technologies that can help to improve

workflow and boost collaboration. IP-based integration allows for the instant sharing of content anywhere in the OR and even amongst operating rooms as well as across different specialties, building collaborative relationships between peers to share medical expertise and improve the delivery of care.

Remote capabilities



As with any other IP application, IP integration in the OR offers remote management capabilities that are hugely beneficial to the OR. It offers the possibility to install, proactively monitor, troubleshoot and even upgrade the most complex configurations without entering the operating room, ensuring maximum utilization of the OR. Other capabilities include video distribution to remote locations, such as other hospital sites or training auditoriums for consultation and education purposes as well as networked recording for documentation purposes and clinical research.

Scalability



The future of the OR is an environment that is easily adaptable and interchangeable to meet future requirements. It must be flexible enough to accommodate the most recent technologies, like 4K imaging, without shutting down current infrastructures. IP technology supports easy modification and expansion as imaging technologies and techniques for general, minimally invasive and interventional surgery evolve.

Nexxis allows us to easily integrate new technologies whenever needed, at an affordable price.

Maastricht University Medical Center

Nexxis contributes to the economic viability of our new operating rooms.

Augsburg Hospital

ROI



Next to better health outcomes, increased simplicity, efficiency, flexibility, and scalability also translate in economic gains for the hospital. In addition, research done by independent healthcare consulting agency HICT revealed that the overall investment cost for an IP video integration solution is significantly lower than for comparable AV systems. Especially when taking into account other costs, such as for energy, modifications, expansion, disruption, and training.

TCO cost breakdown

