OR Visualization

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When considering the features of a surgical video and visualization system, it’s important to remember there are a number of critical elements that impact the overall quality of the video equipment chain. From the endoscopic camera or other source, through the various levels of distribution and processing equipment, and onto your display, surgical imagery must be captured and reproduced accurately and consistently.

As we transition to a fully digital world, there are still many pieces of analog equipment in use. This means each device in the video chain must be compatible and allow the system to handle high-definition (HD) and standard-definition (SD) signals, in both analog and digital formats. By choosing equipment based on modular design to maximize format and signal flexibility, an OR can build in the appropriate amount of future-proofing according to its needs.

Clinically accurate and relevant images, delivering a high benchmark of color, contrast and brightness, can enhance a surgeon’s ability to perform a procedure, as well as recognize tissue abnormalities and make the right decisions in real time. With advances in surgery techniques allowing for an increasing number of minimally-invasive procedures, surgical staff will rely more and more on the quality of the visualization system.

Access to multiple sources of imagery is also of key importance for the modern OR. Scans, ultrasounds, x-rays and other patient data may be required during certain procedures, giving the surgeon a more complete picture. But bringing all of this

imagery into the field of view instantly can be challenging. The OR video equipment chain must be able to provide picture-in-picture, split-screen imagery, format conversion and scaling, as well as display different video formats on the same screen (Multi-Modality Imaging). In previous years, ORs were cluttered with numerous pieces of video processing equipment to make this happen. The future trend is toward consolidation of myriad processing tasks into more advanced, compact, multi-purpose platforms designed to deliver lots of processing capabilities while saving valuable space.

Another technology advancement seeing rapid adoption is wireless video in the OR. By switching to HD wireless video transmission, today's modern OR can see a dramatic reduction in cables and wires. Removing video cables from the floor alleviates tripping hazards, reduces cleaning time between procedures, and makes the OR more streamlined and efficient. Wireless video transmission gives the surgical staff tremendous flexibility as to where they place a monitor and allows for quick adjustment or maneuvering of displays on booms and stands even during procedures.

By taking an integrated approach to video equipment planning and upgrading, ORs can at last get rid of those oversized, obsolete A/V racks, eliminate cables and wires, and consolidate older equipment into more energy-efficient space-saving devices. The result is HD-quality images distributed from compact integration appliances and a safer, more efficient OR for both patient and surgical staff.

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