



Source: www.executivehm.com
© 2010 GDS Publishing Ltd. All rights reserved.

Optimizing workflows & efficiency with digital OR integration

Skytron | www.skytron.us/skyvision.htm

No Comments

Increasingly, hospitals require more versatile operating room environments to support video, data and telecommunications, as well as to be immediately visible and at the fingertips of the surgical team. Digital OR integration provides tremendous advantages in improving clinical workflows, staff and operational efficiencies, accuracy, enhanced throughput, quality outcomes and safe patient care.



Determination of the OR integration and design plan should begin early, typically 2-3 years prior to projected opening and clinical use. In delivering a modern integrated OR, strategic determination must also be made for mounting structure placement of booms and surgical lights, conduit runs supporting the multiple HD flat panel displays (typically 4 or more). Flexibility for positioning HD images in and around the entire surgical field is critical to high value impact upon future surgical suite workflows and efficiency.

Considerations must include:

- Patient monitors
 - Wall camera(s) (SD, HD)
 - Surgical light camera (SD, HD)
 - No. of display monitors and locations
 - Printer, IPOD control station
 - Video conferencing
 - Stereo - speakers, microphone
 - Auxillary inputs, outputs
 - Digital image capture
 - Digital image streaming
 - Teleconferencing, room to room, OR to office, auditorium or other healthcare facilities
- Types of procedures being performed in the room
 - Equipment placement in room (booms, rack, cabinets)
 - Support for robotics, C-arm, microscopes, ultrasound
 - FTP Server, EMR, PACS PC, Data PC, other
 - Endoscope Image(s) to be managed
 - Frozen sections

- Conduit runs, junction locations & terminations
- Electrical requirements & locations



Space and construction cost should also be considered when looking for the right integration system. The system should be designed to reduce conduit sizes as well as the number of conduit runs required to install the desired functionality. With OR space at a premium, the integration system should offer design and installation flexibility to allow the system to be installed remotely outside of the OR, or within a Nurse Documentation Center. If the integration system is to be installed within the operating room, consideration of HVAC should be made, as well as the impact this may have on maintaining the OR temperatures.

There are various levels of integration available for purchase in today's market depending on the specific needs of each facility. A basic integration system enables clinical staff the ability to route video images within the Operating Room to LCD flat panel and wall mounted displays. Most of these are considered entry level systems and often times are not upgradeable or expandable in functionality. Buyers should be aware of this as these systems may be priced within a desired budget...but they may not meet future functional requirement goals of the facility.

The next level above "entry level systems" are advanced integration systems which offer the equivalent functionality of entry level systems, but provide a platform for growth both in the number of video and imaging devices which can be managed, as well as the flexibility of adding optional features such as image capture, recording, streaming, music accessories, hands free phone, video conferencing and more. Advanced systems can range in price based upon the options defined and those that best meet clinical needs.

Your IS and clinical staff should be involved throughout the integration selection process as they will provide beneficial input regarding the workflow of the operating room. Many integrated ORs incorporate stationary PCs for Electronic Health Records and PACS, in addition to a number of mobile devices, including:

C-arms, microscopes, ultrasound and laparoscope systems. These devices need to have an input location which may be located on a wall or equipment boom. Defining the right location for the inputs within the operating room creates maximized efficiency and safety.

Knowledge of how the system operates and selection of inputs and outputs helps promote a clinically manageable system that is vital to equipping a successful integrated operating suite.

Hybrid suites are another high value application for digital integration. These specialty suites are equipped with sophisticated imaging equipment and diagnostic tools that are not typically designed into conventional ORs. The goal of hybrid rooms is to save the clinicians valuable time, provide greater flexibility and increase procedure efficiencies for the high risk patient. Hybrid suites require the use of a C-arm and specialty imaging table, together with multiple HD flat panel displays to deliver surgical and radiological images where they are needed most. Hybrid suite images include those that support of complex diagnostic equipment, such as fluoroscopy (reference image), 3D rotational angiography (RA), fluoroscopy (live image), physiological, XperCT, EMR, endoscope, surgical light and wall cameras, and more.

SkyVision Hybrid II is the first and only fully fiber optic, all digital system available on the market today and features a patented, "future proof" design technology that enables today's older technology input sources as well as digital input sources to be connected to the fully fiber optic digital system via a single strand fiber cable. Easy swap out expansion ports provide for simple, future upgrades; thereby streamlining patient care efficiencies. SkyVision II's design architecture is fully fiber optic and therefore insures the highest quality image - without the inherent copper cable signal degradation and noise (interference) of analog or combination analog/digital systems. Instead, SkyVision II provides a simple upgrade path for future, highest quality, fully digital fiber optic technology.

SkyVision II provides the easiest user interface and system software on the market for clinical staff to not only perform image routing, but also for communication to remote areas on the hospital network and outside the facility, archival and documentation of still capture and video recordings, picture in picture, hands free phone calls, audio features and more. SkyVision II service leadership includes the highest clinical satisfaction ratings for system performance, system reliability, ease of installation, implementation, applications training, service response time and service repair quality. SkyVision Hybrid II provides state-of-the-art, OR communications leadership designed to be easiest to use, optimizes clinical workflows, staff and operational efficiencies, accuracy and enhances patient care and safety.

More Article Images



View slideshow

Disclaimer: All comments posted in a personal ce

POST A COMMENT

In order to post a comment you need to be registered and signed in.

[Register](#) | [Sign in](#)

Disclaimer: All comments posted in a personal ce

No Comments Have Been Submitted

In order to post a comment you need to be registered and signed in.

[Register](#) | [Sign in](#)