


SMART OR

VIDEO AND SIGNAL MANAGEMENT FROM A SINGLE SOURCE
ROUTING | ENCODING | STREAMING | ARCHIVING



SMART OR manages all OR (operating room) video sources, displays them on a variety of output devices and provides network-wide access to the images. SMART OR also makes it possible to archive video streams and connect to HIS, RIS and PACS.

FOUR CENTRAL

ROUTE

The routing paths, which can be individually tailored to suit your needs, give the OR team full control over signal flow and output devices, with no need to worry about the complex networking and elaborate technology at work behind the scenes.

ENCODE

Professional hardware encoding converts all image, video and audio signals for further processing in the SMART OR network.

Video routing and archiving from a single source

Multimedia technology is increasingly taking centre stage in the design of modern surgical facilities. Image and video-supported operations and examinations are safer and easier and offer new possibilities in terms of both documentation and interaction.

However, monitoring an increasing number of systems and their complex signal and media distribution is not easy. SMART OR does this for you, monitoring each system and transmitting all signals to an IP network. The staff conducting the OR purposefully control videos, images and data using a simple command centre.

FUNCTIONS:

STREAM

Ultra-fast network streaming designed to conserve resources allows for both live transmission and space-saving archiving in FULL HD quality. SMART OR CLIENTS linked to the network can access the multimedia streams from any location and also engage in bidirectional communication with one another.

ARCHIVE

Data in the central archive can be accessed, saved, linked and processed both locally and remotely. Remote access is achieved using networked CLIENTS which work independent of physical location. Document management is designed specifically to work with digital medical documentation, and can be linked to HIS, RIS and PACS.

Central video routing

SMART OR's video routing allows you to centrally direct all the images collected from the OR: You can use it to determine which signal will be sent to which monitor, and who can access which live stream.

SMART ARCHIVING

Video conferencing and messaging

True to the principle of consultation, SMART OR enables communication with doctors, colleagues and team members at other locations. You can engage in such conversations via video chat with sound transmission or internal text messaging.

Clinic-wide streaming

The number of image-producing devices and applications used in modern ORs is steadily growing. SMART OR makes managing this wealth of information easy with clear and concise imaging. A few simple taps are enough to determine which image will be displayed on which monitor and where. Presets allow you to save recurring layouts permanently, so that you can access them at any time. Presets may be specific to a room, a treatment or a doctor.

Central control of room functions

SMART OR offers integrated controls to manage your essential AV devices (for example, crossbars, scalers and converters) and network components (switches and so on). In addition, the intuitive user interface grants you direct access to ceiling and room cameras, as well as OR cameras. You can also control the swivel functions for any connected PTZ cameras directly using the SMART OR touch panel.

IN TOP QUALITY

Access your data at any time with a SMART OR CLIENT

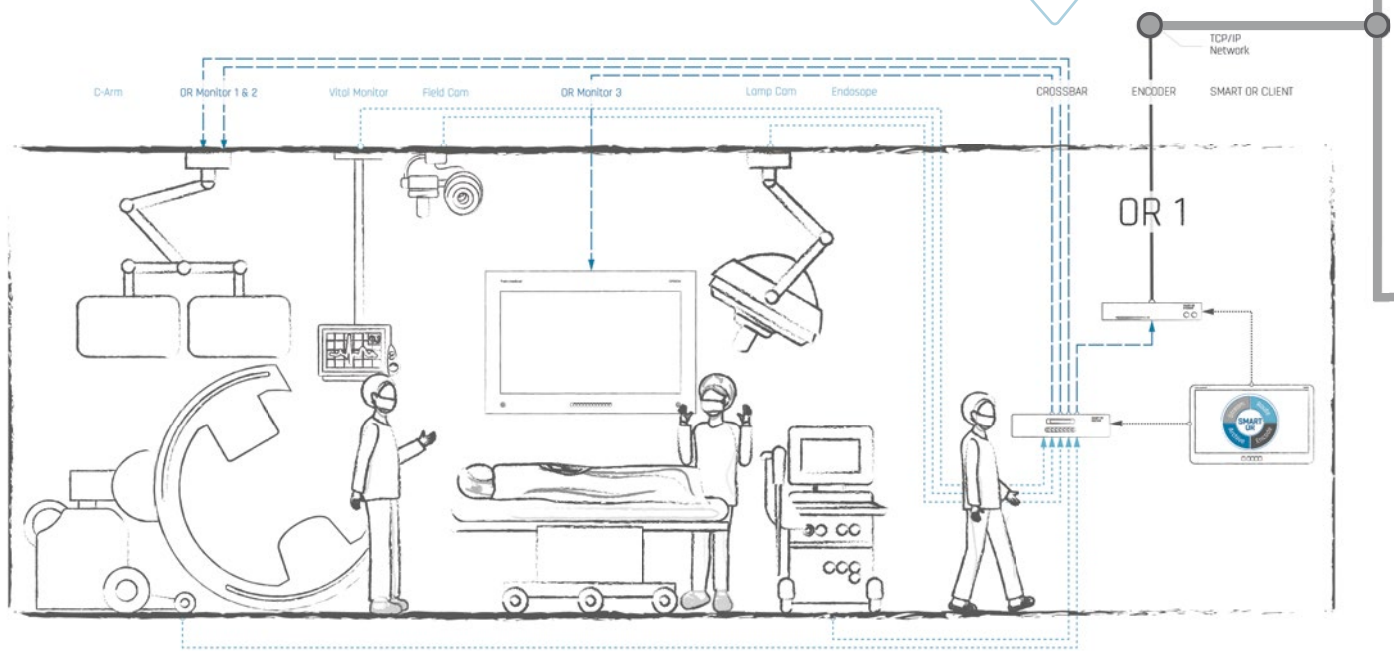
SMART OR CLIENTS are the user interfaces for working with SMART OR. The CLIENTS use the network to access central video management functions. Every CLIENT user can access available live images or archive material via any PC that is connected to the network and display this material on a screen. So, for example, the chief physician or student in a lecture hall can observe the OR without actually being in the room.

Streaming with authorisation system

NETWORK SUITE has an integrated authorisation system, which allows the attending doctor to define who may see which live stream via their CLIENT. Up to 16 video streams can be shown simultaneously in HD quality on a single monitor. The 'On-Air' display provides the attending doctor with a simple tool for determining if anyone outside the OR is currently accessing the local video signal.

SMART OR NETWORK SUITE

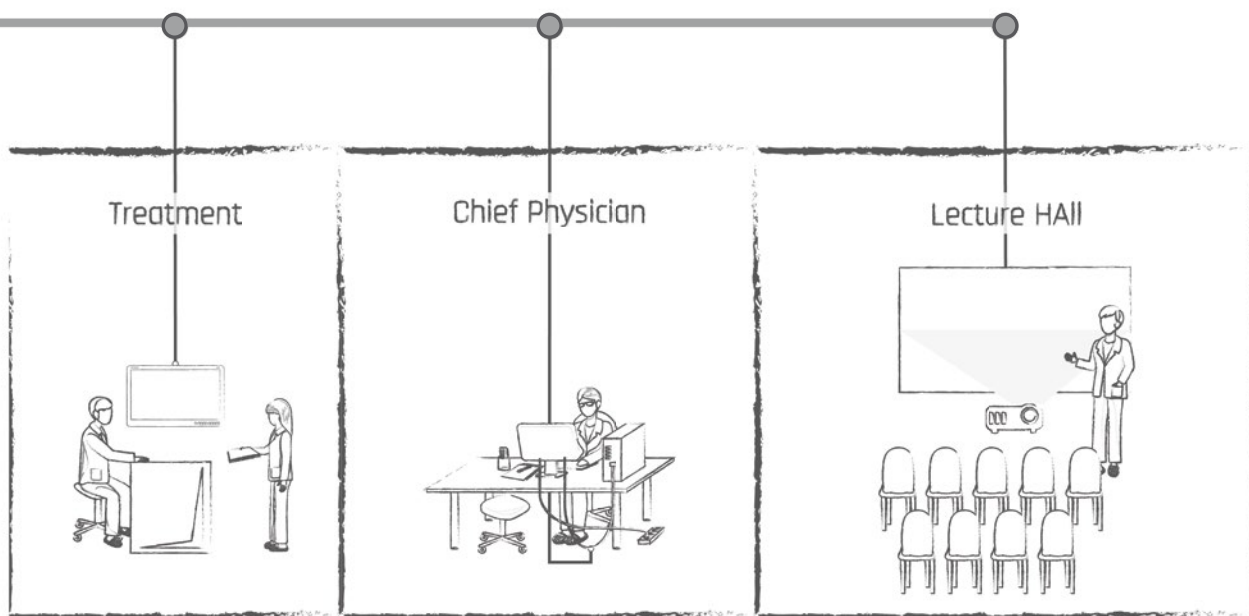
You can control the crossbar directly using the SMART OR CLIENT. The crossbar is a device that collects image data from different sources such as OR cameras, endoscopes or vital signs monitors and sends this information to various monitors and to the hardware encoder.



The FOF CLIENT guarantees that the SMART OR routing functions will still be available even if the server or network is down. For use when you require extra security and availability.

With the communication module, the CLIENTS exchange messages with one another via text, audio and video. Audio transmission allows, for example, students in a lecture hall to follow an attending doctor's 'live' commentary during a procedure.

The SMART OR hardware encoders compress image data to a minimum without compromising image quality.

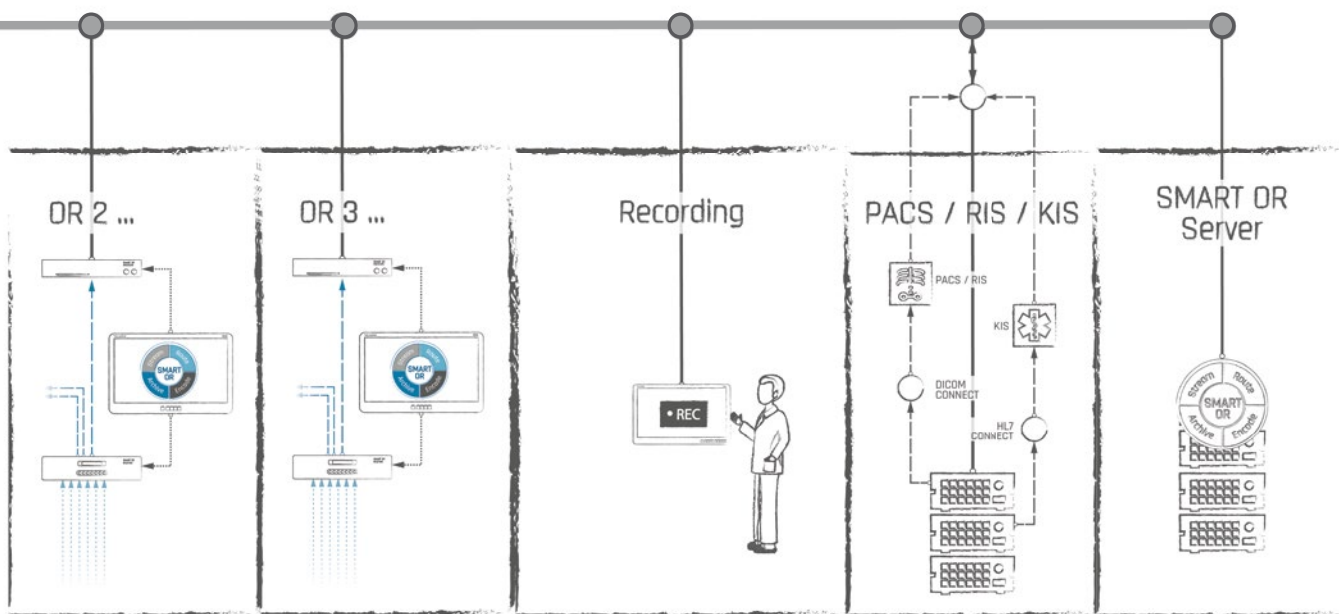


The video streams created in the OR can be accessed throughout a clinic. This means you can also display the images captured in the OR in treatment rooms or in lecture halls. Doctors, lecturers and nurses can use a CLIENT connected to the network to access image archives. The number of CLIENTS is practically unlimited.

There is also no limit on the number of ORs that can be integrated into the network. The efficient compression of data ensures that the network is not overloaded.

Each CLIENT can begin recording one or more live streams – you can even record multiple streams in parallel. The CLIENTS can also export any video or image data to USB media, or onto DVD or Blu-ray.

The SMART OR NETWORK does not just connect all CLIENTS to one another – it also links them to the Net Video Recorder (NVR). In addition, it provides you with access to image-producing video sources in the OR.



You can create separate user profiles for every OR, meaning you can create profiles specifically tailored to a procedure, a room or a user. Prepared work-lists are transferred and displayed in the OR. Images and findings collected during treatment can be linked to the information in PACS and viewed there.

The HL7 CONNECT and DICOM CONNECT plug-ins allow you to link the data available in the PACS, HIS and RIS with image data collected from the OR. You can then access both images and information across the entire network.



Live streams available everywhere

The SMART OR CLIENT grants access to the live streams created in the OR and to the archived data saved on a central server. In addition, each CLIENT can start recording streams and export recordings and reports to DVD or USB media.

INTELLIGENT VIDEO ROUTING

The SMART OR hardware ENCODER

The hardware video encoder automatically reduces incoming image and video files from image-producing devices to a fraction of their original file size. It converts the image data to an AVC/H.264 live stream with full HD quality. The amount of data is reduced by up to 97 per cent of its original size.

FLEXIBLE NETWORK DESIGN

SMART OR's configuration management allows the signalling network to be mapped flexibly according to the specific circumstances and organises the best possible signal paths.

SMART OR DICOM CONNECT

SMART OR DICOM CONNECT connects your SMART OR SUITE to the DICOM world. The DICOM CONNECT interface can, however, be adapted to meet individual and manufacturer-specific data demands. SMART OR allows the image material collected in the OR to be made available in PACS. In addition, patient data is transferred automatically from the worklists.

SMART OR HL7 CONNECT

With SMART OR HL7 CONNECT, SMART OR establishes a connection to your Hospital Information System (HIS). 'Health Level Seven' (or HL7) fosters communication and cooperation – not just between medical institutions, but also between the administration, the attending doctors and all other responsible parties within the hospital.

The image shows a modern operating room setup. A large, multi-panel monitor system is mounted on the wall, displaying various surgical feeds and data. Above the monitors, the 'rein medical' logo is visible. To the left, a smaller monitor shows a close-up of a surgical procedure. A keyboard and mouse are mounted on the wall below the main monitor. To the right, a smaller monitor is also visible. The operating table is in the foreground, and a mobile cart with a basket is to the right. The ceiling has a large, adjustable light fixture.

rein medical

A modular system solution that can be upgraded or expanded at any time – perfect for every requirement. SMART OR is freely scalable and is therefore compatible with a variety of integration scenarios. These solutions work with the same basic software and similar user interface. This allows users to adjust quickly without any retraining, even after changes or expansions to the SMART OR system.

SMART OR SOLUTIONS



SMART OR ROUTE

SMART OR ROUTE is a single PC solution that allows you to send video signals from different input sources (crossbars, scalars, ceiling, room and OR field cameras and so on) for display on different devices (monitors, projectors). ROUTE is perfect for situations that do not require any network connection, documentation or distribution.

SMART OR RECORDING

SMART OR RECORDING is the perfect solution for capturing images or recording videos in an OR and creating reports. Of course, you can also export the media you have recorded to a USB stick or DVD. In addition, your images and video recordings are also provided with an 'expiry date'. The result: Your computer remains 'clean' and effective.



SMART OR LOCAL SUITE

The SMART OR LOCAL SUITE offers a convenient introduction to professional video management for the integrated OR. Up to four users (SMART OR CLIENTS) can use the network to access available media streams from the OR and can even record them locally.

SMART OR NETWORK SUITE

The SMART OR NETWORK SUITE can handle complex integration scenarios with multiple ORs. Any number of SMART OR CLIENTS can access and share currently available OR streams. Media content archived on the central network can also be opened and managed using a CLIENT. The NETWORK SUITE's media archive can be transferred to specialised servers, to better prepare and protect your organisation's data.

The NETWORK SUITE also includes all ROUTE capabilities.

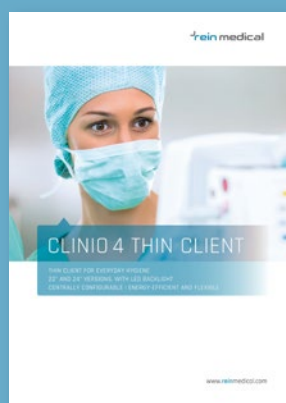


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