Lecture hall transmission from the Operating Room
Digitization in hospitals is progressing. The opportunities and possibilities of digital technologies are still not used in many places. To study content and to convey surgical techniques as realistically as possible, students are still being crammed into operating rooms. For the medical staff, this „demonstration lesson“ is always associated with disruption. In addition to an increased amount of time when moving into the sterile area, the often prevailing lack of space and the resulting poor view for the students, the hustle and bustle is a clear disadvantage for the surgical team.
Modern technical transmission systems provide access to innovative learning and exchange platforms. They offer teaching and junior staff new perspectives. Video conferencing systems make learning content digitally accessible. Via „livestream“ it is possible to transmit lectures and operations in real time safely and without disruption to the internal network or lecture halls with the appropriate hardware and software. If you want to provide your students and employees with the best possible knowledge, professional image and video management in the OR are indispensable.

- Lack of space in the operating room
- Time spent going in and out
- Bad view for the students
Right in the middle of it instead of just there: Anyone who wants to convey knowledge clearly to students and employees without having to bring them into operating rooms should rely on professional image and video management. Innovative video conferencing systems make learning content digital and accessible in real time.
The challenge with a lecture hall transmission is a completely secure, encrypted and stable connection. Both the video and the audio signal must be transmitted error-free, encrypted and fail-safe. High image quality requires high image resolution. This leads to large amounts of data that need to be compressed accordingly.

The safety requirements and hygienic aspects in the operating room are another challenge. The hardware must also be easily and safely cleaned or disinfected.

In addition, the freedom of movement and independence of medical staff must not be impaired.

Video conferencing systems must always be integrated into existing network structures to enable trouble-free data exchange. In that sense, perfect integration into existing systems is another challenge.
There are some challenges in a lecture hall transmission. An error-free and stable connection is of the utmost importance and helps to make the contents accessible.
As a system service provider, Rein Medical offers holistic solutions from a single source. A lecture hall transmission at the highest level is only possible through carefully coordinated hardware (OPERION) and software (SMART OR). The interaction of the Rein Medical products OPERION and SMART OR leads to a considerable improvement of the workflow.

The program for lecture hall transmission is intuitive and can of course be used for other applications such as conferences and training. The safety tests required for the medical environment are implemented by external testing laboratories.
Demonstration lessons from a safe distance: Via „livestream“, operations can now be transmitted to the lecture halls in real-time without interference.
OPERION®
Systems that pay off

- Class 1 medical device (in accordance with MDD 93/42-EEC Annex IX, Rule 12
- Monitor sizes from 19” to 75”
- Integration in wall systems, drywall or as a surface-mounted solution for existing operating theatres
- Hygienic control
- 4k resolution for displays with 55” and 75”
- Various modes such as Picture-in-Picture (PIP) and Picture-Outside-Picture (POP)

The OPERION series includes professional wall monitors and workstations for every operating room. With screen diagonals from 19” to 75”, a clear overview is guaranteed for every room and space. OPERION systems have an optional PC unit and can be installed on a mobile trolley if required. They have connections for displaying various modalities and are optionally equipped with a height-adjustable camera. The input devices are available in many variants, either hinged and with hygienic mouse, touchpad, USB port, optical drive and barcode reader. OPERION monitors and workstations are also available with touchscreen on request. With a computing power adapted to the requirements, the corresponding interfaces and expansion options, the OPERION workstations create the prerequisites for the highest quality lecture hall transmissions.
Mobility
Quality
Hygiene
SMART OR®

Software that streams manages and archives

> Conversion of the image data to an AVC/H.264 livestream in Full HD quality
> Management of all video sources in the OR
> Complete integration into the network
> Availability on all popular output devices
> Intuitive user interface and direct access on ceiling cameras, room cameras and other modalities
> Integrated rights management
> Easy-to-use archiving system
> Medical document management

SMART OR is a pure medical software solution that provides one-stop video and signal management. The software handles the routing and streaming of audio and video data and manages all video sources in the OR area. SMART OR transmits all signals to the network. The OR staff controls videos, pictures and data via an intuitive command centre. The archived data can be retrieved, stored, linked and processed further. Document management is tailored to the special needs of medicine. SMART OR is individually configurable and can be used both as a stand-alone system and in the operating room as a multi-user system.

With this software, a quick exchange with doctors and colleagues is easily and conveniently possible.
Easy to use

Efficient livestreaming

Scalable configuration
The advantages at a glance

> Holistic solutions from a single source
> Improvement of the workflow in the OR area
> Encrypted and thus secure data transmissions
> More flexibility through easily positionable systems
> Compliance with hygiene standards and little cleaning effort
> Intuitive user interface
> Safety check by external testing laboratories
> Also useful for conferences, training and other applications
Everything from one source: From planning to delivery

With OPERION and SMART OR, Rein Medical offers a holistic solution for lecture room transmissions.

In the planning phase, a requirement profile is created. In addition to an inventory of the spatial conditions and the existing technical equipment as well as the expected data volume, the appropriate hardware and software are put together in close consultation with the client.

During the installation phase, the necessary adjustments and system tests are carried out. Through training and documentation a professional operation is ensured. The handover is completed when a trustworthy handling of the hardware and software as well as error-free operation is guaranteed.

- No lack of space in the operating room
- No time spent entering and leaving
- Better view for all students
Founded in 1994, Rein Medical GmbH, headquartered in Mönchengladbach, Germany, is a manufacturer and developer of software and hardware solutions for medical IT. The range of services extends from medical computer systems via diagnostic and viewing systems to clinic-wide image and video management.

Rein Medical is a system service provider that can implement holistic IT solutions for clinics and medical practices from planning to handover. Around 50 employees work in Germany, Switzerland and Spain. Since April 2018, Rein Medical GmbH has been part of the international electronics group JVCKenwood.
Do you need an individual solution for your clinic or hospital? Then contact us! Our staff is always at your disposal and will advise you personally.

Just make an appointment for a free initial consultation at www.reinmedical.com. Alternatively, send us an e-mail at info@reinmedical.com or call us at +49 2161 6984-0

We're looking forward to seeing you!
German headquarters
Rein Medical GmbH
Schwalmstraße 301
[Monforts Quartier 23]
41238 Mönchengladbach
T  +49 2161 6984-0
F  +49 2161 6984-259
M  info@reinmedical.com

Switzerland
Rein Medical AG
Büfederstraße 1
CH-8370 Sirnach TG
T  +41 71 929 55 99
F  +41 71 929 55 90
M  info.ch@reinmedical.com

Spain
Rein Medical Systems S.A.
C/ Téllez, 30
1a PlantaOficina 2 Puerta 3
28007 Madrid
T  +34 91 530 88 24
F  +34 91 574 32 93
M  info.es@reinmedical.com