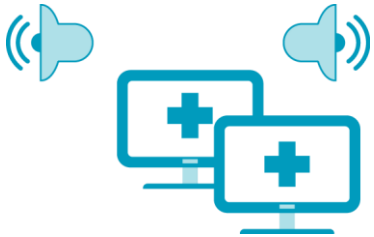
Remote collaboration tool for medical professionals

www.medvc.eu

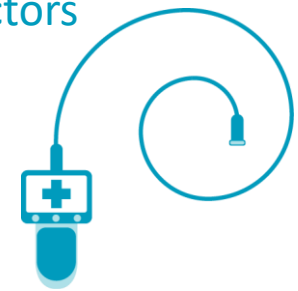
What is medVC?

medVC



Real-time audio-video collaboration for doctors

Remote consultations and medical education



Video from medical devices
2D and 3D

Pausing, drawing, remote control, snapshots, recording, live streaming

Compatibility

Medical cameras, microscopes, endoscopes, C-arms, surgical robots and other medical video devices, both in 2D and 3D

Storz, Olympus, Medrobotics, Zeiss,
Trumpf Medical, ConMed, Intuitive Surgical and others

Competition

cisco

VSee

Polycom

Less functionality

No integrated collaboration services: pausing, drawing, remote control, snapshots, recording, live streaming

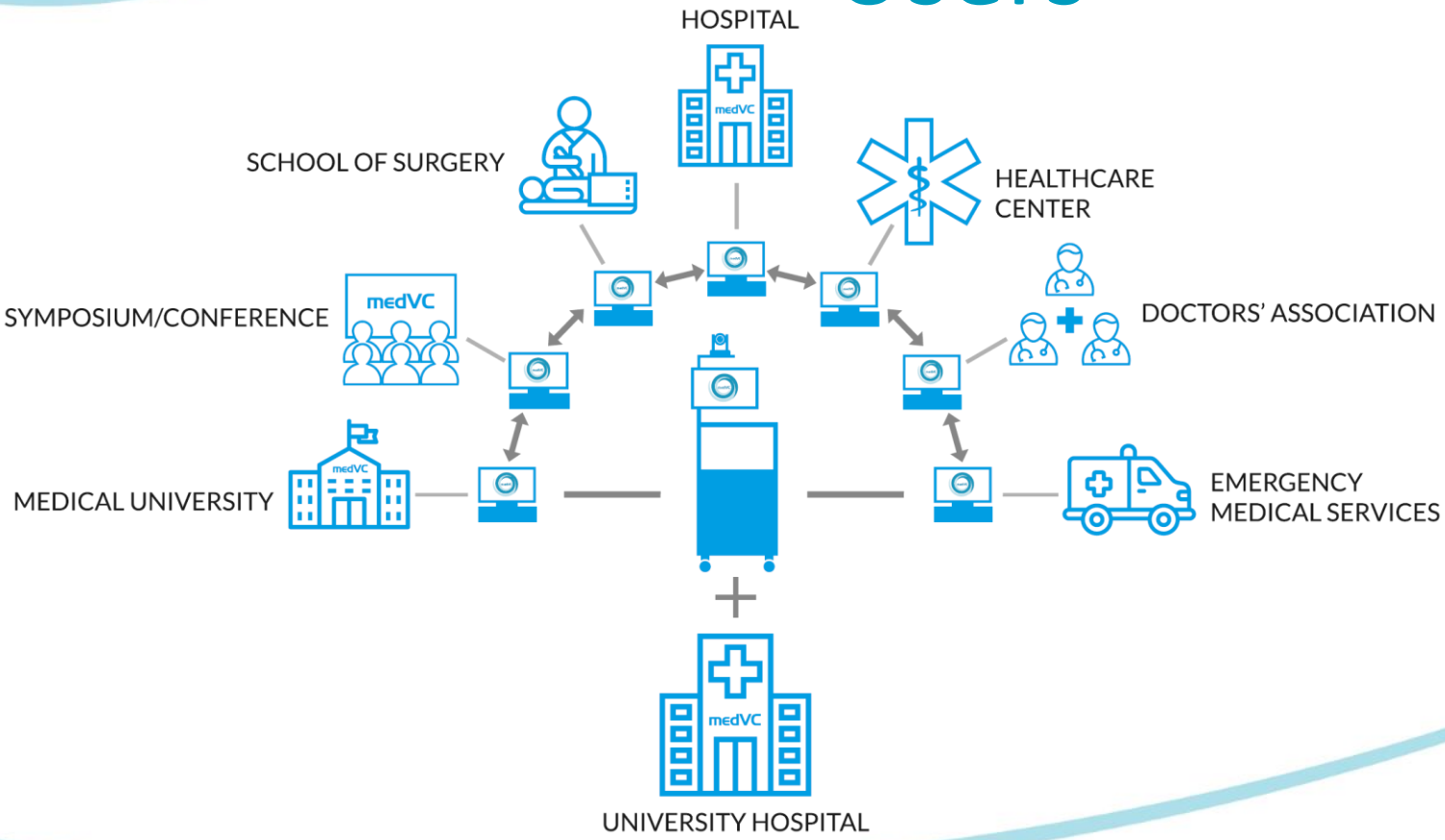
No separately encoded video streams for highest medical quality

Limited support of 3D medical devices

More expensive

Scenarios

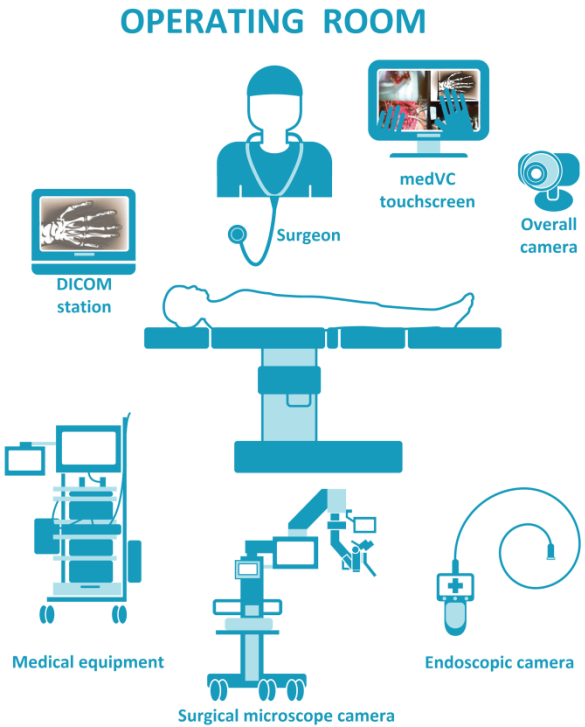
Users

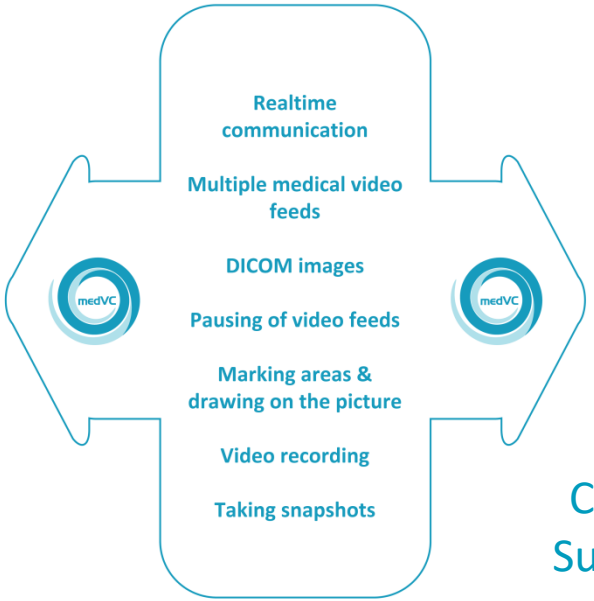

HOSPITAL
SCHOOL OF SURGERY
HEALTHCARE CENTER
SYMPOSIUM/CONFERENCE
DOCTORS' ASSOCIATION
MEDICAL UNIVERSITY
EMERGENCY MEDICAL SERVICES
UNIVERSITY HOSPITAL

Patient consultation

Best advice for the patient
Saves time and money
eliminating the need to travel

Remote supervision





Consulting from the office
Supervising young surgeons
Instant advice

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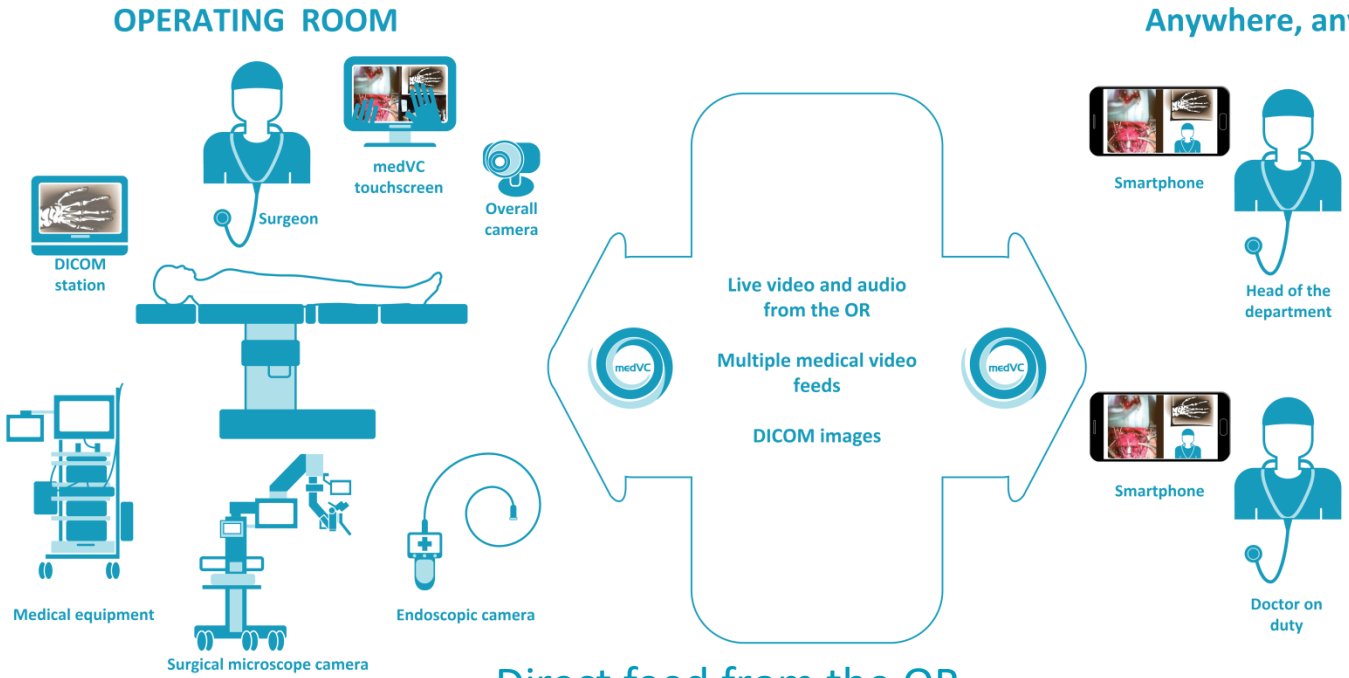
Smartphone supervision



Direct feed from the OR

Supervising young surgeons

Any device - smartphone, tablet, PC

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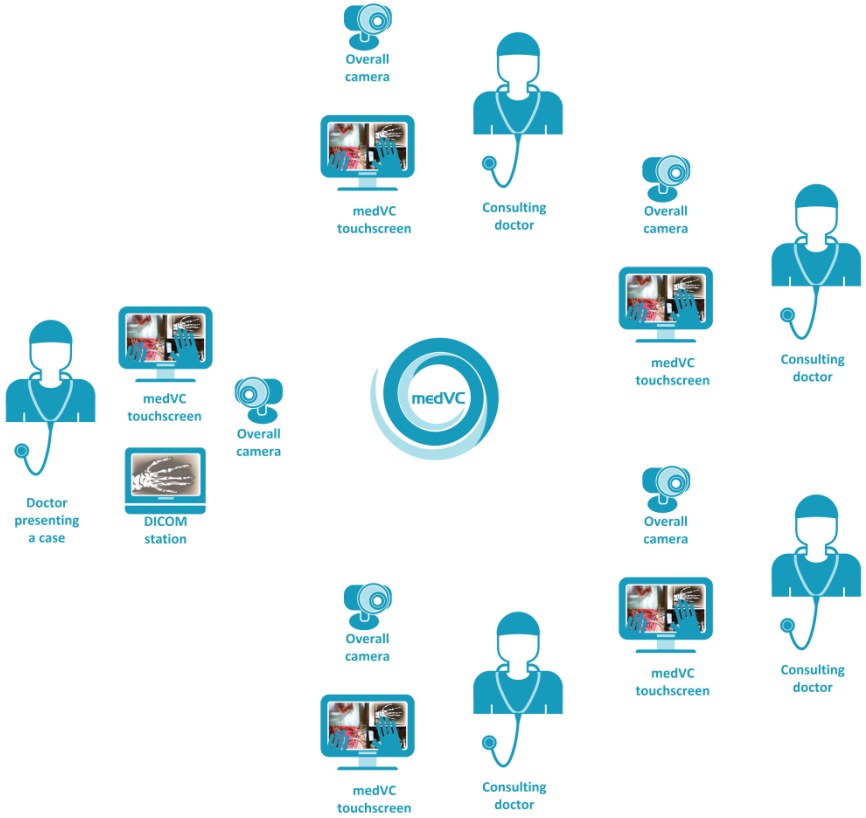
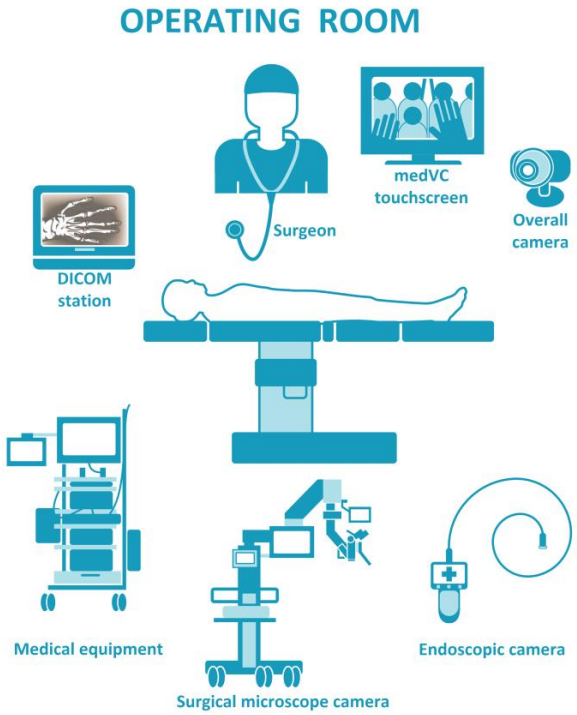
Case conference



Discussing a difficult case
Preparing for the surgery
Multidisciplinary advice
Involving specialists from various hospitals

Medical education



Realtime communication

Multiple medical video feeds

DICOM images

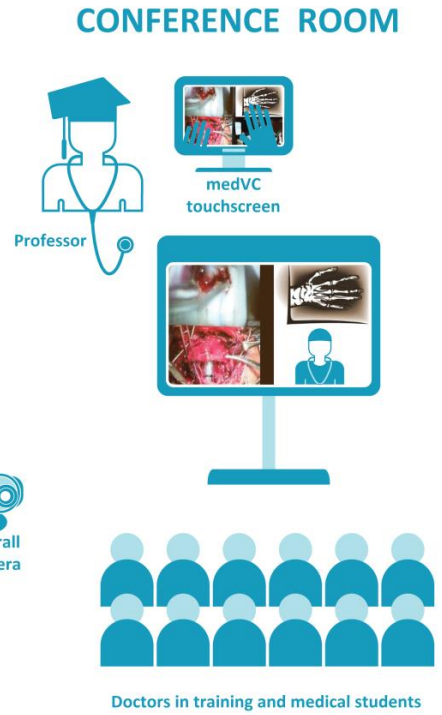
Pausing of video feeds

Marking areas & drawing on the picture

Live video streaming & recording

Taking snapshots

Stereoscopic 3D video



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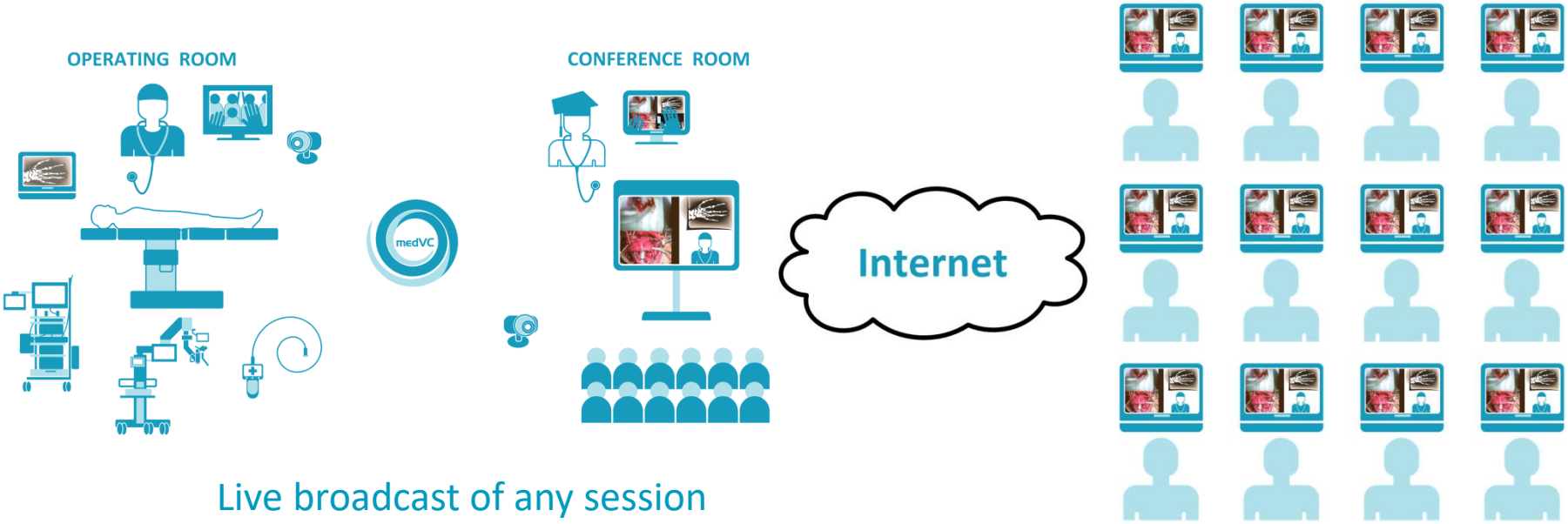
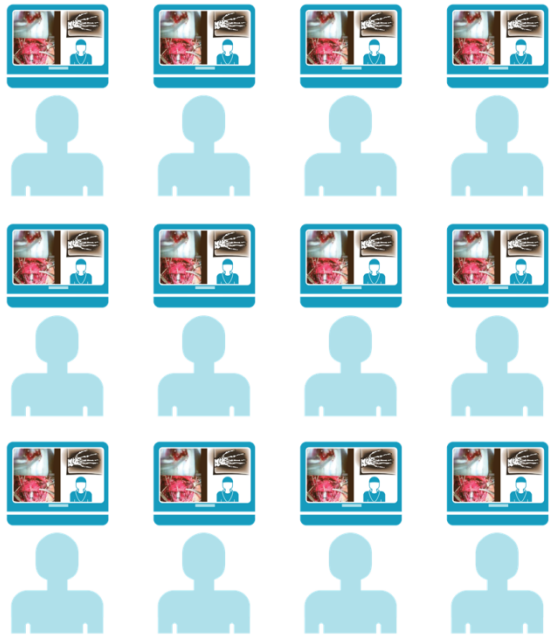
Interactive Medical University



Live broadcast of any session
Recordings published on dedicated portal
Content prepared by medical professors

Thousands of
students at home

Event broadcasts



Thousands of viewers worldwide

Participate in medical broadcast
Show interesting surgeries
Promote your hospital

Clients

Clients - Poland

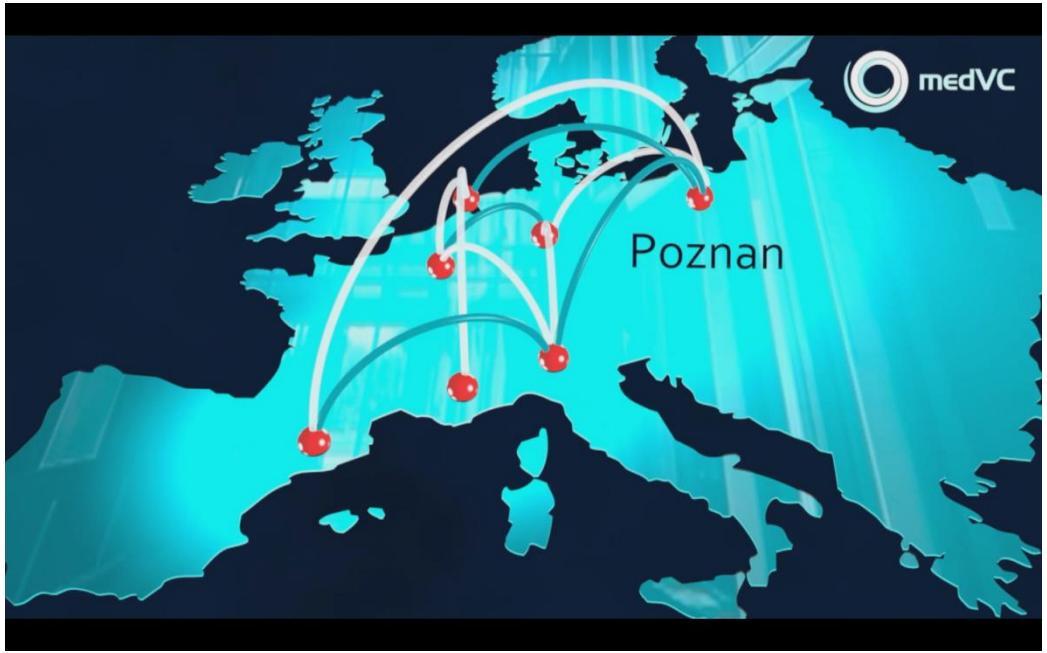
- Szpital Kliniczny im. Heliodora Święcickiego w Poznaniu
- Wielospecjalistyczny Szpital Miejski im. Józefa Strusia w Poznaniu
- Ortopedyczno-Rehabilitacyjny Szpital Kliniczny im. Wiktora Degi w Poznaniu
- Polskie Towarzystwo Urologiczne
- Szpital Uniwersytecki w Krakowie
- Specjalistyczny Szpital Miejski w Toruniu
- Szpital Uniwersytecki nr 1 im. dr Antoniego Jurasza w Bydgoszczy
- Samodzielny Publiczny Centralny Szpital Kliniczny w Warszawie
- Wielospecjalistyczny Szpital Wojewódzki w Gorzowie Wielkopolski

Clients - Europe

- Centre Hospitalier Régional Universitaire de référence en Lorraine, Nancy (France)
- École de Chirurgie Nancy-Lorraine, Nancy (France)
- Hôpital Robert Schuman, Metz (France)
- San Martino – IST, Genoa (Italy)
- Assistance Publique Hopitaux de Marseille (France)
- Universitätsklinikum Essen (Germany)
- CHL Luxembourg (Luxembourg)
- Hospital de la Santa Creu i Sant Pau, Barcelona (Spain)
- Hospital Clinic, Universitat Autònoma de Barcelona (Spain)
- Leids Universitair Medisch Centrum, Leiden (The Netherlands)
- Universitätsklinikum Gießen und Marburg GmbH, Giessen (Germany)
- Facoltà di Medicina e Chirurgia dell'Università degli Studi di Cagliari (Italy)
- Krankenhaus Märkisch-Oderland, Strausberg (Germany)
- Hôpital Henri-Mondor AP-HP, Paris (France)

5th European Laryngological Live Surgery Broadcast 2019

Barcelona x2, Spain
Cagliari, Italy
Essen, Germany
Giessen, Germany
Genoa, Italy
Hamburg, Germany
Leiden, The Netherlands
London, UK
Luxembourg
Marseilles, France
Poznan, Poland
http://els.livesurgery.net



5th European Laryngological Live Surgery Broadcast 2019

- 6 hours of live broadcast
- 3 surgeries performed in parallel
- Presentation of surgical highlights
- Clinics equipped with medVC
- Professional TV studio in Poznań
- Over 35 000 viewers from 91 countries
- Professional post-production
- Multi-camera view
- Sponsors

medVC in action

- What is medVC? – explanatory video
  https://youtu.be/g-D6LxXVkyQ
- Orthopaedic Live Surgery Broadcast 2019 - orthopaedics
  https://url.medvc.eu/dega2019
- 5th ELS broadcast 2019 - laryngology
  https://url.medvc.eu/els2019
- SIU Live 2018 – urology
  https://url.medVC.eu/siu2018

Technical information

medVC OR Pro

- Main unit (2 video inputs)
- FullHD PTZ camera
- Medical touch-screen monitor
- Audio device
- Wireless headset microphone
- Loudspeaker
- Additional equipment according to needs

medVC OR Integrator set

- Main unit (2 video inputs)
- Medical touch-screen monitor
- Audio device

medVC Conf setups

- Main unit (2 video inputs)
- FullHD PTZ camera
- Touch-screen monitor
- Audio device
- Handheld microphone
- Loudspeaker

medVC Office setups

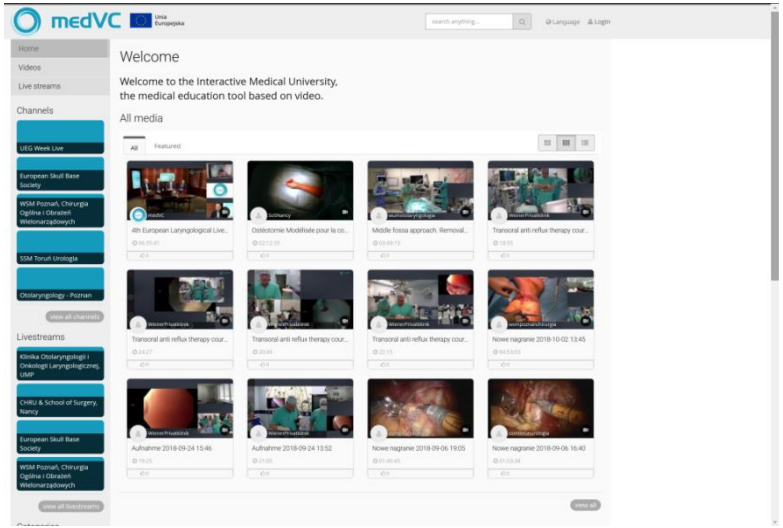
- Main unit (1 video input)
- FullHD USB camera
- Touch-screen monitor
- USB speaker-phone

medVC Recorder

- Main unit (4 video inputs)
- Medical touch-screen monitor
- Audio device
- Independent 4 streams recording
- Simple mixing
- Mix stream recording and streaming

Interactive Medical University

- Holistic platform
- 1-click recording
- 1-click streaming
- Video portal
  - Live channel
  - Private video archive
  - Easy publishing
  - Chapters, channels, workgroups
- https://edu.medvc.eu



Remote rehabilitation- beta

- WebRTC based
- Doctor – patient connections
- Exercise lists and videos
- https://rehab.medvc.eu

Technical data

- Easy to use touch-screen interface (like a smartphone interface)
  GUI demo video: https://youtu.be/8a-CyvF5aqs
- Connect any medical device with a video output
- Independent video streams with full quality
  - Transmission of up to 2 video streams from one terminal
  - Reception of up to 10 video streams
- Support for 2D and 3D video (e.g. from 3D endoscopes or the da Vinci robot)
- Transmission formats
  - HD 720p 25/30/50/60 fps (4-6 Mbps)
  - Full HD 1080p 25/30/50/60 fps (6-8 Mbps)
  - 4k resolution coming soon
- Professional audio quality

Technical data

- Medical collaboration functions
  - Pausing of a video
  - Marking points on a video
  - Drawing on a video
  - Remote control of medical computers
  - Snapshots
  - Audio-video recording and automatic upload
  - Live streaming to the Internet to any device

Technical data

- Accepted video inputs (additional scalers or converters may be needed)
  - HDMI / DVI
  - SDI (SD-SDI, HD-SDI, 3G-SDI, 6G-SDI)
  - VGA
  - Composite Video
  - Component Video
  - S-Video

Technical data

- MCU server enabling multisite collaboration (additional option)
  - non-recoding MCU - full quality of all video streams
  - symmetric 1Gbps connection needed
  - up to 3 dual-stream or 5 single-stream sites in 1080p (incoming traffic up to 48 Mbps, outgoing traffic up to 160 Mbps)
  - up to 5 dual-stream or 10 single-stream sites in 720p (incoming traffic up to 60 Mbps, outgoing traffic up to 540 Mbps)

Technical data

- Medical video portal (additional option)
  - publishing of recorded videos – public or private
- Local live streaming (additional option)
  - streaming from the OR to a chosen conference room or smartphones of the head of a department and the doctor on duty
- Live streaming (additional option)
  - broadcast to thousands of Internet viewers using practically any device, anywhere around the world

Security declaration

In medVC the Sensitive Personal Information is secure and cannot be known or transparently modified by other parties on the streams route. The stream transmission layer provides confidentiality and integrity (through message authentication and replay protection) by utilising the Secure Real-time Transport Protocol (SRTP). Each stream is encrypted using a one-time key, derived from 128-bit master keys and 112-bit salting keys. The actual encryption is done with 128-bit encryption keys using industry-standard AES in Counter Mode. This mode effectively results in each packet being encrypted with a distinct keystream segment. Authentication protection uses HMAC-SHA1 and the session authentication key length is 160 bits, while the authentication tag length is 80 bits.

Contact

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medVC.eu sp. z o.o.