

DIGITAL OT - MEDICAL EDUCATION FOR YOUR CAMPUS



HIGH DEFINITION LIVE SURGICAL
TRANSMISSION & BROADCASTING



HD
HIGH DEFINITION

"An integrated solution which takes care of all your high definition transmission and broadcasting requirements"

Limitations of Legacy method of surgical training



- ✓ Limited Number of surgeons can be trained in an Operation Theatres
- ✓ Limited visibility of surgical procedures and hand movements
- ✓ Chaos due to additional crowd of doctors
- ✓ Difficult to observe and concentrate on entire procedures by all students in operation theatre
- ✓ Needs more space in Operation theatre so only bigger size OT can be useful, it becomes more difficult in small size OT rooms
- ✓ Surgeon voice is only clear to students standing closer to the main surgeon, others may not have clarity.
- ✓ Extra time and effort is required post surgery for revising and re-explaining same surgical procedure.

WATCHWITZ LSG Streamer

FEATURES

- ✓ Full Audio Visual Digital Media Services Integration
- ✓ Live HD transmission of Surgeries within campus
- ✓ Complete hassle free Mock OR Setup
- ✓ Team Surgical Training becomes more easier
- ✓ Increase OR Efficiency
- ✓ Live 2-way interaction with classrooms and seminar hall
- ✓ Fully Integrated Facility
- ✓ Recording for future references and training
- ✓ No Chaos – complete your surgeries with peace
- ✓ Systematic approach for next generation OT

Use your operation theater for:

- ✓ Tele-consultation
- ✓ Tele-medicine
- ✓ Tele-mentoring
- ✓ Virtual Proctoring
- ✓ Surgical Training Lab





LSG STREAMER is a unique integration of Information technology, latest Audio-Visual technology and HD transmission-broadcasting system designed and developed for tele-mentoring, tele-proctology and live surgical workshops for continual medical education. Live Surgical Gateway will provide a shortened pathway to gain autonomous proficiency through a unique learning methodology

LSG Streamer will help medical teaching institutions in providing appropriate training, attaining competence, and gaining privileges for advanced surgical procedures which are not learned during a formal residency program.

With LSG Streamer Teaching Faculty can conduct demonstration of surgical or other medical procedures, didactic lectures, and demonstration of uses and handling of surgical equipment and instruments as well as consultation, diagnosis, or deliberations.

A real time and live interactive surgical teaching within campus and live interactive transmission to other medical colleges/district hospital will offer platform to learn from teaching faculties from their workplace on their mobile phones, tablets and other devices through one-way transmission from anywhere in the world that way it offers continuous surgical and medical education to the surgeons practicing in other cities.





LSG STREAMER provide excellent training opportunities, as they allow the audience to view an operation conducted by expert faculty, and have the ability to interact with them in real time ,and participants get an opportunity to observe the live procedure with decisions taken on real time, they are also exposed to unexpected challenges and other unforeseen intricacies of a surgery.

It is an efficient way to demonstrate, explain and teach surgical or medical techniques to an audience of students, peers watching it from various locations. It will help medical teaching institutions for the dissemination of surgical knowledge.

As India heads towards achieving newer milestones in the healthcare industry and medical education, it is crucial to share knowledge and experiences within other medical campuses and to practicing medical fraternity. Live transmissions of surgeries offer educational value in showing the various cases, decision-making processes, surgical techniques, surgical equipment, and surgical support systems.

Technology of **LSG STREAMER** to demonstrate surgery - that too to share knowledge and experience among the students and doctor community and medical fraternity is quite a remarkable achievement for any medical college and will create a dynamic educational platform.

As It is also important to us that we don't restrict the knowledge flow just to our campus, we need to look beyond and reach out to the lesser privileged cities to empower the medical fraternity.





ADVANTAGES

- ✓ Complete AV integration for 4 operation theatre and 4 classrooms within campus
- ✓ Increase user participation in every live surgical procedures
- ✓ World-class experience for surgeons as well students
- ✓ Complete digital conversion of Operation Theatre, Classrooms & Seminar Hall for live interaction with surgeons in Operation theatre
- ✓ Compatibility - Compatible to High Definition and Standard Definition surgical cameras and inputs
- ✓ Create a chaos free educational experience for all medical students of your institution
- ✓ Conduct regular surgical workshops in high definition and real-time interaction with students





Live 2-way interactive transmission for

- Bariatric Surgery
- Breast Surgery
- Colon and Rectal Surgery
- Endocrine Surgery
- General Surgery
- Gynecological Surgery
- Hand Surgery
- Head and Neck Surgery
- Hernia Surgery
- Laser Surgery
- Microscopic Surgery
- Minimally Invasive Surgery
- Neurosurgery
- Orthopedic Surgery
- Ophthalmological Surgery
- Outpatient Surgery
- Pediatric Surgery
- Plastic & Reconstructive Surgery
- Robotic Surgery
- Radiology
- Thoracic Surgery
- Trauma Surgery
- Urology Surgery
- Vascular Surgery



LSG Streamer is unique transmission & broadcasting solution for your operation theater (OT). Transform your OT to deliver interactive surgeries, virtual proctoring sessions along with one way broadcasts to deliver HD+SD contents to worldwide audience



COMPLETE SETUP TO MAKE OT LIVE FOR INTERACTION

Conduct interactive live surgery sessions

- **Fully user customizable**
- Connect to expert surgeons across globe for live interaction from your Operation Theatre
- You can add multiple camera inputs into system which includes external as well as surgical cameras, allowing perfect view of surgeries
- Avoids chaos in OT and disturbance for surgeon
- System being interactive proctor can ask questions give his valuable inputs like in any international medical conference
- **Works on high speed internet connection**
- Demonstrate complex surgeries and procedures and get expert advise
- Hi-Tech infrastructure designed specifically keeping in mind surgeons requirements

WATCHWITZ LSG Streamer Features

Cost effective technology

- Cost effective technology works on existing internet connection (works on 3 to 4 mbps upload)
- Conduct Live interactive sessions and Surgeries from your operation theatre
- No recurring costs of transmission, connectivity or technology for usage.

Multiple HD+SD Video inputs

- Up to 2 Video inputs
- All HD / SD / OT / Surgery Cameras supported

Network Compatibility with

- Internet
- LAN/WAN
- VPN
- Fibre Optic (point-to-point)
- Wireless/4G



Supported all standard A/V Input Types

- Direct Video Camera input
- Any Audio Mixer/Amplifier input
- HD/SD Audio-Video Mixer Input
- HD/SD Audio-Video Recorder Input

Built-in Video Digital Mixer (HD / SD)

- Built-in video mixer does not require hardware mixer for mixing video inputs HD and SD capable
- Mix surgical camera inputs with external camera views in real-time
- Real-time Video Switching & PIP modes
- Support for scrolling text marquee





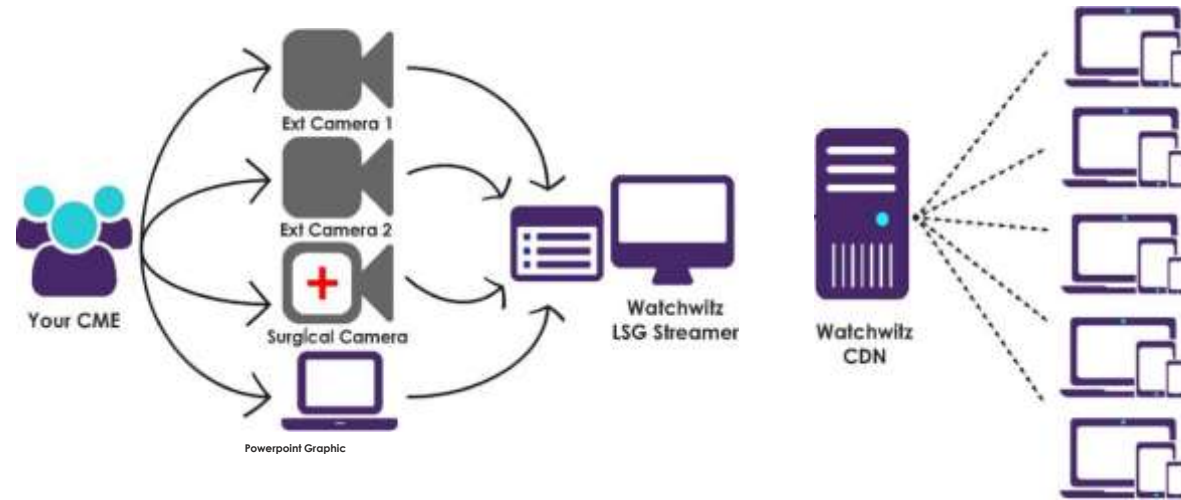
- **Built-in live broadcasting system** for delivering one-way live broadcast of entire session to large number of audiences
- **Intelligent bandwidth detection & suggestion**
- **Multiple resolution support** to enhance user experience
- Smooth video experience (No buffering)

- **Scalability on CDN** available for thousands of number of participants. Reports of visitors participating in broadcast
- **Detailed log** including user information & IP address etc.





INTEGRATED LIVE BROADCASTING SYSTEM



Live Broadcast Features:

- Live webcast for up to 1000 online viewer devices using WTPL CDN Servers
- Compatible to Windows, Mac, Linux, Android and Smartphone devices
- Live Broadcast Setup Contents
- Live Transmission Unit – HD /SD
- Live Video Encoder
- Live Media Recorder
- Multi-bitrate support
- Multiple broadcast resolution support based on viewer bandwidth
- Newsletter facility for up to 20,000 doctors (optional)
- Payment gateway integration for paid broadcast (optional)
- Complete Technical setup of live webcast including server resources, transmission system, implementation team, online integration and back-office support

Useful for:

- Virtual proctoring
- Live HD+SD transmission
- Live interactive surgeries
- Live Workshops & CMEs
- Live broadcasts

WATCHWITZ LSG Streamer Virtual Proctoring

Virtual proctoring is a next generation tool of education where the teachers from across the world can be live and interactive with the surgeon performing a surgery and give suggestions and mentoring, virtually at real-time.

The virtual proctoring initiative of **LSG Streamer**, enables proctoring during the practice of new surgeons on mannequins or animals, to be conducted in presence of world renowned eminent surgeon.

The process of Virtual Proctoring also resolves the problem of learning due to unavailability of cadavers or animal labs or simulators. Through Virtual Proctoring not only you get better insight into live surgical procedures but also the performing surgeons get better prospects of becoming future mentors.



The Learning curve of surgical procedure starts with introduction to the procedure in different conferences & CME's & ends with handholding & proctoring by experts.



Imagine, an eminent surgeon who usually in regular proctoring process would be beside you in OT, is now 2000 miles away but still live as though besides you. This initiative entails interested people to get enrolled . The LSG Streamer would get in touch with interested candidates & explain the process of registration to the virtual proctoring.

Implementation Cost Analysis with other commercial rented solution (All prices in INR)

Daily surgery recording in HD	Days	Rate/day	Commercial Cost
@ 5 days a week	261	10000	2,610,000
Live HD transmission with 2-way interaction	Days	Rate/day	Commercial Cost
@ 2 per month	24	65000	1,560,000
@ 3 per month	36	65000	2,340,000
@ 4 per month	48	65000	3,120,000
@ 5 per month	60	65000	3,900,000

LSG Streamer implementation for Live transmission with 2-way interaction of surgeries can save huge amount on commercial cost within a year. Above statistics is based on two to five days per month live surgical transmissions.

LSG Streamer implementation for daily recording of surgeries can save huge amount on commercial cost within a year. Above statistics is based on five days per week surgical sessions.

NETWORK DIAGRAM



Medical College 1



Medical College 2



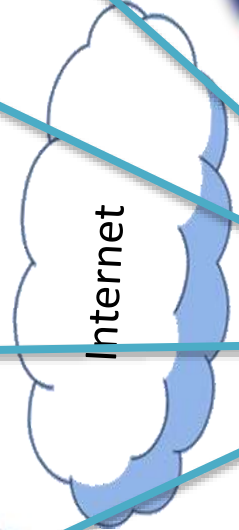
Medical College 3



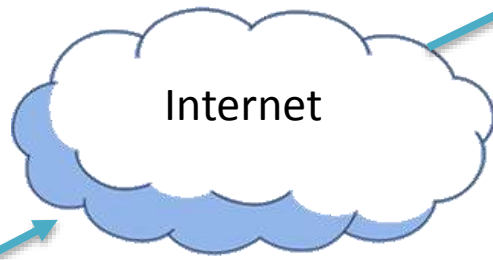
Medical College 4



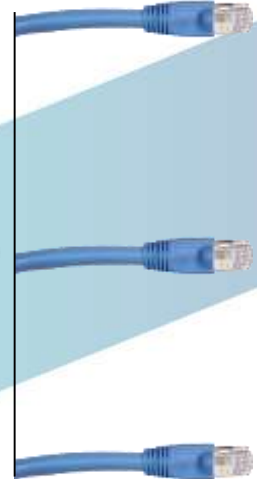
Operation Theatre



LSG STREAMER



Live 1-way Webcast
of surgeries



Classroom 1



Classroom 2

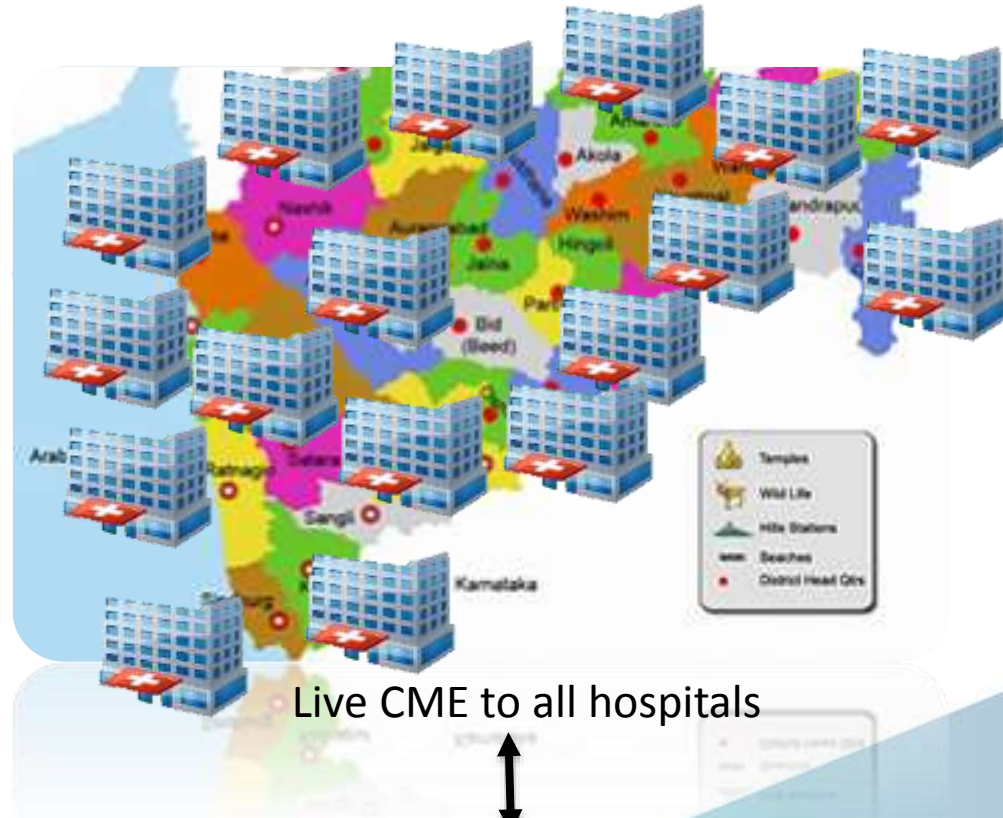


Classroom 3



WATCHWITZ
LSG Streamer

RESOURCE
CENTER FOR
REGION



Live CME to all hospitals



Your Medical
Campus



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