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**sur**

the missing piece of CCTV

# THE FOOTAGE WHISPERER

# "SEE WHAT THE CAMERA SAW"

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GAUTAM D. GORADIA



UTILITY VALUE OF  
COM-SUR™ FOR  
HOSPITALS AND OTHER  
MEDICAL FACILITIES

WELCOME



AUDIT HOURS OF FOOTAGE IN MINUTES  
FIND OUT HOW COM-SUR, THE BEST  
'MOUSETRAP' WILL HELP

["Seeing is believing - See what the camera saw"](#)

CCTV surveillance is common in hospitals and other medical facilities world over, but footage is often only reviewed reactively. Our company realized this problem early-on and has developed the world's only CCTV video footage auditing software that encourages daily auditing (hours in minutes) of CCTV footage, filling the gap for a complete "workflow". The software works with existing cameras and VMS, regardless of type/brand, and provides a standardized approach for intelligent incident reporting. Our software also offers exceptional investigative capabilities.

'COM-SUR' – THE WORLD'S ONLY CCTV VIDEO  
FOOTAGE AUDITING, SMART BACKUP, AND  
STANDARDIZED INTELLIGENT INCIDENT  
REPORTING SOFTWARE – THE MISSING PIECE  
OF CCTV

COM-SUR is the world's only CCTV video footage auditing, smart backup, and standardized intelligent incident reporting software that serves as a complete workflow and force multiplier. It helps audit 24 hours of footage in minutes, reduces data size, creates standardized intelligent reports, and delivers business intelligence. COM-SUR helps unlock hidden information in CCTV footage and enables people to gain actionable intelligence, improve homeland security, prevent crime and losses, identify and mitigate threats and hazards, and improve operational efficiency. It empowers people to gain new jobs as CCTV video footage auditors and start new businesses of auditing video footage. Like MS Office, COM-SUR is an enabler that makes it easy to work with CCTV cameras in a standardized way, leading to better decision-making. It also offers exceptional investigative capabilities.

HOW COM-SUR SMARTLY REDUCES 'VIDEO'  
STORAGE SIZE

COM-SUR employs an innovative approach to smartly reduce the amount of video to be

audited and consequently the storage size of videos. Regardless of the video's frame rate, COM-SUR captures a single image of the consolidated 'moment' of 'that' one second, when the I, P, and B frames come together. This method significantly reduces data size without sacrificing vital information. It goes without saying that when multiple cameras are displayed in a grid view, say 4x4, the storage size is further reduced since all the cameras are captured as a single image. Since no suggestion is being made to replace the actual video with images, COM-SUR acts as a wonderful supportive technology both to audit (review) just 86400 frames representing 24 hours and reducing the data size at the same time.

#### CHALLENGES FACED BY HOSPITALS AND OTHER MEDICAL FACILITIES

##### 1. Patient safety and security:

Ensuring the safety and security of patients is a top priority for hospitals and other medical facilities. This includes preventing unauthorized access to patient areas, protecting patients from any kind of harm (including patient self-harm), sentinel deaths, violence, and so on, and thereby maintaining a safe environment for patient care. Further, there are concerns about children being vulnerable to kidnapping.

##### 2. Theft:

Hospitals have valuable assets, including medical equipment, pharmaceuticals, and patient records, which can be targets for theft.

##### 3. Workplace violence:

Hospitals and other medical facilities can be prone to incidents of workplace violence, whether from patients, visitors, or even staff members.

##### 4. Drug diversion:

Hospitals and other medical facilities face the risk of drug diversion, where healthcare workers misuse or steal medications intended for patients.

##### 5. Patient privacy and data security:

Hospitals and other medical facilities handle sensitive patient information, making them vulnerable to data breaches and privacy violations.

##### 6. Emergency preparedness:

Hospitals and other medical facilities must be prepared for various emergencies, including natural disasters, fires, and public health crises.

##### 7. Insider threats:

Hospitals and other medical facilities have to deal with insider threats from disgruntled employees or even unwitting staff who fail to follow proper security and safety measures.

##### 8. Humongous growth of surveillance video:

The exponential growth of surveillance cameras has resulted in an unprecedented surge in surveillance video. Effectively managing this data has become a daunting challenge due to the massive storage capacity required, especially considering the prolonged retention periods necessary for security, incident investigation, or legal purposes. Furthermore, the prevalence of high-resolution video with increasing megapixels compounds the storage demands, making efficient data management an urgent priority for organizations grappling with the immense volume of surveillance footage.

USE OF VIDEO SURVEILLANCE AT HOSPITALS  
AND OTHER MEDICAL FACILITIES

Most hospitals and other medical facilities have video surveillance covering the following areas:

- Entry and exit points
- Infant nurseries and emergency/trauma rooms
- Waiting areas
- Records sections
- Revenue sections
- Kitchen and canteen
- Medication storage and pharmacy areas
- Other critical areas that house expensive equipment and other public access areas deemed important
- Interior corridors, common building hallways and elevator lobbies
- Parking areas

It may not be out of place to mention here that hospitals and other medical facilities have to work with several flammable materials, take care of lots of cable management and electrical wires/power cords, need to ensure that the equipment is calibrated regularly, and adhere to protocols that may require complex interaction and teamwork. In view of this, exercising adequate caution and regular monitoring are of crucial importance.

Further, the concerned stakeholders at

hospitals and other medical facilities need to review and analyse recorded CCTV video footage from time to time for investigating incidents, accidents, fights, staff negligence in order to corroborate evidence, as well as assisting Police/other Law Enforcement Agencies.

CCTV IN OPERATION THEATERS/ROOMS

While there is debate in some countries on whether to deploy CCTV in operation theaters/rooms, an increased number of individuals even in several advanced countries like the United States are advocating the use of cameras in operation theaters/rooms for improving patient safety (with due consent from patients).

REMOTE MONITORING (TELE-SITTING)

Some hospitals deploy tele-sitter solutions where a 'tele-sitter' remotely monitors several patients at a time (using CCTV and two-way communication) in order to intervene instantly (real-time) to prevent harm. This helps reduce the costs of 'patient sitters'.

REMOTE VIDEO AUDITING

Some hospitals have deployed third-party services of Remote Video Auditing (RVA) primarily for hand hygiene compliance among healthcare workers. This entails placement of cameras at views of every sink and hand sanitizer dispenser, and sensors in doorways which identify when individuals entered or exited. Third-party video auditors observe healthcare workers performing hand hygiene activities and assign a pass or fail using a strict definition of hand hygiene. Several studies have shown that there have been significant

improvements in hand hygiene compliance in hospitals which have deployed Remote Video Auditing (RVA). Some hospitals are even using RVA to improve overall patient safety and hygiene.

#### LIVE MONITORING – CHALLENGES

Several hospitals and other medical facilities have a dedicated control room with operators, set up for live monitoring of CCTV cameras. However, live monitoring comes with its own set of challenges of video blindness, poor attention span, boredom, operator bias, false alerts, and so on.

Moreover, these cameras continuously capture and record humungous amounts of video data. It therefore becomes a daunting task for the operators to review and analyse this data whenever the need arises. Thus, it may be noted that benefits from video surveillance systems can accrue only when they are used optimally, suggestions for which are enumerated further on, in this document.

#### COMPLIANCE - GENERAL

Conformity or compliance in any organization means adherence to laws and/or rules and regulations, various standards, as well as data storage and security requirements as laid down by government bodies, governing bodies of the respective industry, or the management of the organization. When an organization complies with the requirements mandated by government and/or governing bodies, then it is termed as 'regulatory compliance' which enables the organization to run in a legal and safe manner.

#### COMPLIANCE - AUDITS

Several organizations carry out compliance audits on a regular basis to avoid the potential consequences of non-compliance. A compliance audit examines how well an organization adheres to compliance requirements. Some organizations use video surveillance to monitor compliance issues and audit recorded CCTV video footage from time to time for investigating and preventing compliance issues. Auditing CCTV provides actionable insights on the level of compliance within the organization.

#### AI - HOW TO MAKE IT MORE EFFECTIVE

The solution to making AI more effective lies in continuous learning from real-world incidents through post-event auditing. COM-SUR provides exactly this capability, enabling AI models to evolve based on audit findings and incidents that go beyond real-time detection. By auditing daily footage, capturing exceptions, and feeding this data back into AI models, the accuracy of AI systems can be significantly improved, helping to reduce false alarms and enhance detection capabilities.

Auditing ensures that AI learns from what might have been missed in real-time, allowing it to adapt to the unique requirements of different environments. Whether it's improving facial recognition accuracy or refining anomaly detection, this continuous feedback loop makes AI smarter and more reliable over time.

However, it's essential to recognize that AI, like any automated technology, can only perform tasks it's programmed for. It cannot account for every possible scenario or exception, leaving certain areas outside its programmed scope.

This is why human intelligence and intervention will always play a vital role in verifying and refining AI outcomes.

“CCTV IS NOT ENOUGH – WE MAKE IT WORK FOR YOU”

While it is not being suggested that optimal usage of video surveillance can cure all issues, several issues of the following kind can be addressed by doing just a little 'more' with respect to making the optimal use of video surveillance systems:

- Health and safety issues including hygiene issues and patient self-harm
- Issues with compliance to COVID-19 precautions
- Patient falls, eloping, suicidal and homicidal tendencies
- Compliance and legal issues
- Negligence
- Issues of patients with diminished faculties
- Sentinel deaths, skin colour change, shallow breathing
- Human rights violations and patient abuse
- False accident/injury claims
- Fraud/loss/corruption/theft
- Insider job/security lapses
- Violence by patient's kin
- Kidnappings/kidnapping attempts

- Recces/suspicious movements/activities
- Unauthorized/unlawful activities/visitors
- Inattentive staff (e.g. guard sleeping)
- Cameras/recorder malfunctions

So, what is the 'more' that needs to be done?

1) AUDIT CCTV VIDEO FOOTAGE DAILY AS A STANDARD OPERATING PROCEDURE

'Auditing' means 'seeing' what the cameras 'saw'. Auditing of CCTV footage should be done daily (continuous investigation) to identify potential issues and threats. Auditing is a dedicated and systematic process that helps address challenges related to live monitoring and alert-based systems. Auditing helps in evaluating analyzing incidents to improve existing policies, procedures, and processes. Concerned personnel should be trained to become CCTV video footage auditors, and the audit teams should be rotated to avoid complacency/collusion. Daily auditing of CCTV footage can also help in adhering to the principles of Kaizen and TQM for business improvement.

2) DOCUMENT AUDIT FINDINGS/INCIDENTS

Audit findings/incidents should be documented in a standardized template to find the root cause to prevent future recurrences. Historical data of such findings/incidents can reveal patterns that can help take better informed corrective and preventive action. If all hospitals and other medical facilities report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of all

hospitals and other medical facilities.

3) ENSURE DISASTER RECOVERY OF CCTV VIDEO FOOTAGE – LIKE A ‘BLACKBOX’.

CCTV video footage must be stored at multiple locations in order to ensure that even if the recorder is stolen, destroyed or tampered with the data is never lost. Further, any backed-up data must easily be searchable and retrievable; else, it is going to be a nightmare finding the relevant video.

4) DISPLAY DYNAMIC INFORMATION AT RELEVANT PLACES

Document and display details of information that is dynamic in nature in relevant areas.  
For example:

1. List of doctors on duty (with their emergency contact numbers).
2. List of authorized staff for each ward (with their duty timings and their allotted locations).
3. List of patients who need to undergo an operation/medical procedure (with their relevant details).
4. List of visitors (with their relevant details) expected to visit high-profile patients.
5. List of authorized security guards (with their relevant details).
6. List of habitual offenders/suspects likely to visit the hospital or medical facility's premises (a 'Watch out' list).

5) USE A POWERFUL NEW SIGNAGE

**"WE AUDIT CCTV VIDEO FOOTAGE EVERYDAY".**

One size, one color, one powerful message.  
Across the nation.

DE-CENTRALIZED SURVEILLANCE +  
CENTRALIZED SURVEILLANCE = OPTIMAL  
RESULTS

Organizations with multiple locations struggle with centralized video surveillance due to infrastructure cost, internet bandwidth, and operator limitations. De-centralized surveillance offers higher accountability at each location and better situational awareness, leading to more chances of discovering exceptions.

NEW SKILL – ‘CCTV VIDEO FOOTAGE AUDITOR’

In a groundbreaking move, the Ministry of Skill Development of India has established National Occupational Standards for the crucial skill of CCTV Video Footage Auditing. The Ministry of Education has also introduced a course to teach this skill to students in grades 11 and 12. This initiative will not only create new job opportunities and business ventures for those seeking a fresh career path but also for retirees from both the armed forces and the private sector. Additionally, this skill will help activate the millions of CCTV cameras currently underutilized, bringing them out of 'sleep mode' and enhancing their effectiveness.

AI WHERE YOU NEED IT, HI ALL THE TIME –  
THE AUGMENTED INTELLIGENCE MANTRA

The true power of COM-SUR lies in its ability to seamlessly integrate AI and Human Intelligence (HI) into a cohesive, Augmented Intelligence

system. With COM-SUR, AI can be leveraged when needed to enhance analysis and generate insights, while HI remains at the core of the system's operation, ensuring that the technology is always accessible, intuitive, and responsive to human needs. This balance between AI and HI is what defines Augmented Intelligence, making COM-SUR a revolutionary tool that elevates the entire surveillance industry.

### CONCLUSION

"You see, but you do not observe"—a famous quote by Sherlock Holmes in *A Scandal in Bohemia* (1891, by Sir Arthur Conan Doyle)—perfectly illustrates the need for human insight in surveillance. While computers can 'see,' it is human observation that truly interprets and acts on what is seen. COM-SUR simplifies and enhances this critical process, leading to more effective and insightful results.

"Cameras don't lie"—but how will you know unless you 'see' what the cameras 'saw'? Don't wait for things to go wrong. Start auditing your CCTV footage with award-winning COM-SUR today.

In closing, we present three guiding principles that will revolutionize video surveillance:

- 1. Auditing is fundamental—everything else is peripheral.**
- 2. Cameras have lenses—humans have eyes.**
- 3. Let's make cameras 'accountable.'**