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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  
THE MANUFACTURING  
SECTOR

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 is commonly used in the manufacturing sector 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 screenshot 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 screenshots, 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.

#### ALCOA – THE AMERICAN ALUMINIUM GIANT - HOW 'SAFETY' QUINTUPLED ITS INCOME

Safety and security are two sides of the same coin, as both aim to prevent incidents and keep people and assets safe. This was exemplified by Alcoa CEO Paul O'Neill, who emphasized worker safety as a top priority, leading to a safer and more efficient work environment. This focus on safety led to improved profits, as the company examined and improved its manufacturing processes. O'Neill's philosophy was to prioritize safety as a pre-condition, not just a priority, and to fix any potential hazards as soon as they were identified.

#### MANUFACTURING SECTOR CHALLENGES

##### 1. Worker safety:

Manufacturing facilities would have many hazards, such as heavy equipment, elevated work areas, and hazardous materials.

##### 2. Theft and sabotage:

Manufacturing facilities may be targeted for theft of raw materials, finished products, or valuable equipment. Further, they face threats

by disgruntled employees or outside actors who may attempt to sabotage manufacturing processes or equipment.

##### 3. Unauthorized access and industrial espionage:

Manufacturing facilities need to ensure that only authorized personnel are allowed inside the premises, and that visitors do not have access to restricted areas. Additionally, the risk of industrial espionage exists, where competitors or other entities may try to gain unauthorized access to sensitive manufacturing processes or intellectual property.

##### 4. Product tampering and quality issues:

Manufacturing facilities need to ensure that their products are not tampered with, either intentionally or accidentally, during the production process. Also, manufacturing facilities need to monitor for quality control issues or product defects.

##### 5. Theft of intellectual property:

Manufacturing facilities need to protect their intellectual property, such as patents, trademarks, and trade secrets, from theft or infringement.

##### 6. Fire issue:

Manufacturing facilities can be at high risk of fires due to the presence of flammable materials and welding activities.

##### 7. Workplace violence:

Manufacturing facilities can be prone to workplace violence incidents, including

employee disputes, harassment, or external threats. Implementing workplace violence prevention programs, security protocols, and fostering a safe and respectful work environment are essential to mitigate these risks.

#### 8. Compliance issues:

Manufacturing facilities must comply with various regulations and safety standards.

#### 9. Insider threats:

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

#### 10. 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.

#### COVID-19 PANDEMIC

The pandemic severely impacted the manufacturing sector worldwide. Owing to restrictions/lockdowns, several manufacturing facilities experienced disruptions to their supply

chain, making it difficult for manufacturers to procure raw materials and components for manufacturing. Also, there was a reduced demand for products considered non-essential leading to decreased production levels and losses. On the other side, there was an increased demand for products such as personal protective equipment (PPE) and medical supplies. Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

#### USE OF VIDEO SURVEILLANCE AT MANUFACTURING FACILITIES

Most manufacturing facilities have video surveillance covering the following areas:

- Entry and exit points
- Loading docks and shipping areas
- Production lines
- Storage areas
- Laboratories and research facilities
- Server rooms and other critical infrastructure areas
- Restricted areas
- Parking areas

Further, the concerned stakeholders of manufacturing facilities need to review and analyse recorded CCTV video footage from time to time for investigating incidents and/or accidents, staff negligence etc., in order to corroborate evidence, as well as assisting Police/other Law Enforcement Agencies

### REMOTE VIDEO MONITORING

Some manufacturing facilities use remote video monitoring services to keep an eye on their facilities and equipment 24/7.

Remote monitoring can help to identify potential security threats or equipment malfunctions in real-time.

### REMOTE VIDEO AUDITING

Remote video auditing (RVA) is being increasingly used in the manufacturing sector for a variety of purposes, including quality control, compliance monitoring, and process improvement. RVA involves the use of remote video technology to conduct audits or inspections of manufacturing processes and facilities, often by third-party auditors. The video footage is transmitted in real-time to the auditor's location, where it can be analyzed and evaluated against predetermined quality standards or regulatory requirements. This allows for faster, more efficient audits that can be conducted remotely, reducing the need for on-site inspections and saving time and costs.

### LIVE MONITORING – CHALLENGES

Several manufacturing 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 CCTV surveillance to monitor compliance issues and audit recorded 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.

### AUTOMATED SOFTWARE – WHY THEY WILL NOT WORK IN ISOLATION

In the wake of the Christchurch shooting incident, several high-profile places of worship considered deploying gun detection technology. However, there are concerns about its efficacy,

since it may not be able to detect all types of weapons, or the perpetrator could still create damage before being detected. Similarly, automated systems like video analytics, AI/ML can only detect what they have been programmed for. What about the rest? Again, these technologies are prone to triggering huge amounts of false alarms. Also, since the permutation combinations of exceptions can be vast and varied, it becomes almost impossible to automate every kind of exception. Facial recognition technology also raises ethical and privacy concerns, and has been found to produce inaccurate results, especially for certain ethnic groups. Therefore, experts suggest that while automated technologies will continue to grow, human intervention and intelligence will still be necessary to verify alerts and ensure their efficacy.

“CCTV SURVEILLANCE 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:

- Quality control issues
- Operational issues
- Accidents/Causes of potential accidents
- Potential causes of fires
- Compliance issues
- Health and safety issues

- Loss/fraud/theft
- Recces/suspicious movements/activities
- Insider job/security lapses
- Violence/disputes
- Unauthorized/unlawful activities/visitors
- Intrusions, especially by animals
- Unruly workers/security guards
- Unclaimed/unattended objects
- Housekeeping issues
- Staff negligence
- Inattentive staff (e.g. guard sleeping)
- Issues with female staff or visitors
- 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 video 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 manufacturing facilities report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of the manufacturing sector.

## 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/storage device 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 authorised staff.
2. List of authorized security personnel deployed at the manufacturing facility.

3. List of habitual offenders/suspects likely to visit the manufacturing facility (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.

## CONCLUSION

“You see, but you do not observe” is a quote by Sherlock Holmes in A Scandal in Bohemia (1891, written by Sir Arthur Conan Doyle). COM-SUR makes 'observation' far effortless and effectual leading to superior results.

"Cameras don't lie" - but how will you know unless you 'see' what the cameras 'saw'? Audit CCTV - why suffer!

Get award-winning COM-SUR now. Don't wait for things to go wrong!

**Finally, allow us to present three important mantras that change the landscape of video surveillance:**

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