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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  
MINTS AND CURRENCY  
CHESTS

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 mints and currency chests 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.

### CHALLENGES FACED BY MINTS AND CURRENCY CHESTS

#### 1. Counterfeiting:

Mints are vulnerable to counterfeiting attempts, where criminals try to replicate or produce counterfeit currency. This threat necessitates stringent security measures to protect the integrity and authenticity of the produced currency.

#### 2. Unauthorized access:

Unauthorized access to mints and currency chests poses a significant security risk. Intruders may attempt to gain entry to steal currency, tamper with production equipment, or engage in other malicious activities.

#### 3. Theft and robbery:

Mints and currency chests are potential targets for theft and robbery due to the high value of the currency they store. Criminals may attempt to steal cash, raw materials, or valuable equipment/assets.

#### 4. Tampering with production processes:

Tampering with the mint's production processes can lead to the production of substandard or compromised currency.

#### 5. Fire and natural disasters:

Mints and currency chests must consider the risk of fire and other natural disasters, which can cause significant damage to facilities and the currency stored within.

#### 6. Transportation security:

Transporting currency between mints, currency chests, central banks, and other distribution centers is a critical phase where security risks are heightened. Robbery, hijacking, or loss during transit pose significant challenges.

#### 7. Cash handling risks:

Currency chests deal with large volumes of cash, which poses inherent risks in terms of cash handling. Risks include errors in counting, sorting, or tracking cash, as well as internal theft or mismanagement. Proper cash handling protocols, rigorous auditing processes, and employee training are necessary to mitigate these risks.

#### 8. Insider threats:

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

#### 9. 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 mints and currency chests worldwide. Owing to government restrictions/lockdowns, mints faced disruptions in their production processes. In case of currency chests, due to fewer cash transactions, the flow of cash into currency chests decreased. This posed challenges in managing cash inventories and maintaining sufficient levels of cash for distribution. Further, for both mints and currency chests, the handling of cash raised concerns regarding the potential transmission of the virus. Mints, currency chests, and central banks worked to address these concerns by implementing guidelines for the safe handling and processing of cash, including disinfection procedures and promoting digital payment alternatives. Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

### USE OF VIDEO SURVEILLANCE AT MINTS AND CURRENCY CHESTS

Most mints and currency chests have video surveillance covering the following areas:

- Entry and exit points
- Vault rooms

- Production areas (applicable in case of mints)
- Cash handling areas
- Secure zones and other restricted areas
- Parking areas

Further, the concerned stakeholders at mints and currency chests generally need to review and analyse recorded CCTV video footage from time to time for investigating incidents and/or accidents, and other issues in order to corroborate evidence as well as assist police/law enforcement agencies.

### MOBILE VIDEO SURVEILLANCE FOR CASH-IN-TRANSIT VEHICLES

Mints and currency chests often employ specialized video surveillance systems to safeguard cash in transit. Cash-in-transit vehicles are equipped with mobile video surveillance systems that consist of multiple cameras strategically positioned inside and outside the vehicle. Interior cameras are installed within the vehicle's cabin and cargo area to monitor the activities of the crew members and ensure the integrity of the cash handling process. Interior cameras may capture the driver's area, passenger area, vault, and other critical locations inside the vehicle. Exterior cameras are positioned on the exterior of the vehicle to monitor the surroundings and potential blind spots. These cameras capture video footage of the vehicle's immediate vicinity, including the front, sides, and rear. They help detect any suspicious activities or attempts at unauthorized access to the vehicle. The cameras record the captured video

footage onto a local storage device within the vehicle, which serves as crucial evidence in case of incidents, investigations, or audits. Also, these cameras are monitored live by the personnel at the command center of the mint or currency chest.

#### LIVE MONITORING – CHALLENGES

Mints and currency chests 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.

#### 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 IS NOT ENOUGH – WE MAKE IT WORK FOR YOU”

While it is not being suggested that optimal use 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:

- Recces/suspicious movements/activities
- Insider job/security lapses
- Equipment malfunction/other technical issues
- Violence and vandalism
- Unauthorized/unlawful activities/visitors
- Accidents/Causes of potential accidents
- Loss/fraud/theft
- Intrusions, especially by animals
- Compliance issues
- Inattentive staff (e.g. guard sleeping)
- Unruly staff/visitors/outside workers /security guards
- Unclaimed/unattended objects
- Health and safety issues
- 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 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 mints and currency chests report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of all mints and currency chests.

### 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 authorized staff.
2. List of authorized security personnel deployed at the mint or currency chest.
3. List of potential suspects/miscreants likely to visit the premises of the mint or currency chest (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'.