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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
CLOUD KITCHENS
AND CATERING
COMPANIES

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 commonly used by cloud kitchens (a commercial kitchen space that provides food businesses the facilities and services needed to prepare menu items for delivery and takeout) and catering companies 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 CLOUD KITCHENS

1. Food contamination and other issues:

Cloud kitchens are vulnerable to deliberate or accidental contamination, such as tampering, adulteration, or introduction of harmful substances. This poses risks to public health and can have severe consequences for businesses.

2. Theft and robbery:

Food products, ingredients, and supplies can be targeted by thieves due to their value and demand. This includes theft of raw materials, finished products, or equipment.

3. Compliance issues:

Ensuring compliance with food safety and hygiene regulations is essential for cloud kitchens. Violations can lead to closures, fines, or damage to the reputation of the business.

4. Fire safety:

The presence of cooking equipment increases the risk of fire. Fire prevention measures, regular equipment maintenance, and staff

training on fire safety are critical.

5. Employee safety and security:

Providing a safe working environment for employees is crucial. Challenges may include incidents of workplace violence, harassment, ergonomic issues, and safety protocols in the kitchen.

6. Waste management:

Proper disposal of food waste and adherence to waste management regulations are essential. Inadequate waste management practices can lead to sanitation issues and regulatory violations.

7. Data Security:

Cloud kitchens rely heavily on digital platforms for online orders, payments, and customer data management. Protecting sensitive information, such as customer details and financial transactions, from cyber threats is essential for maintaining trust and compliance with data protection regulations.

8. Insider threats:

Cloud kitchens 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.

CHALLENGES FACED BY CATERING COMPANIES

1. Unauthorized access and theft:

Catering venues, whether temporary or permanent, may be vulnerable to unauthorized access, leading to theft of equipment, supplies, or valuable items. Securing access points and employing surveillance helps mitigate this risk.

2. Venue security and layout:

Catering events often take place in diverse venues, each with its own security challenges. Outdoor events, for example, may lack secure perimeters, making it challenging to control access and monitor the surroundings.

3. Food contamination and other issues:

Catering companies have to face the challenge of deliberate or accidental contamination, such as tampering, adulteration, or introduction of harmful substances. This poses risks to public health and can have severe consequences for businesses.

4. Compliance issues:

Ensuring food safety and compliance with hygiene standards is critical in catering. Challenges may arise in maintaining the proper storage, handling, and transportation of food, requiring strict protocols and monitoring.

5. Staff safety and training:

Staff safety is a priority, especially in busy kitchen environments and during off-site events.

6. Cash handling and payment security:

Catering companies often involve transactions, and handling cash or electronic payments poses a security challenge. Proper procedures, surveillance of transaction points, and secure cash handling practices are essential to prevent theft or fraud.

7. Equipment security:

Catering companies rely on various equipment, including kitchen appliances, serving utensils, and mobile catering units. Securing equipment against theft, damage, or misuse is crucial for maintaining operational efficiency.

8. Event crowd control:

Catering events with large crowds pose challenges for crowd control and maintaining order.

9. Data security and privacy:

Catering companies often handle sensitive information, including customer details and payment data. Protecting data from unauthorized access and ensuring compliance with data privacy regulations is crucial for maintaining trust.

10. Insider threats:

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

11. 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 CLOUD KITCHENS

Most cloud kitchens have video surveillance covering the following areas:

- Entry and exit points
- Cooking areas
- Storage areas
- Delivery and pickup areas
- Cashier and payment areas
- Server rooms
- Staff rooms
- Waste disposal areas
- Parking areas

USE OF VIDEO SURVEILLANCE BY CATERING COMPANIES

Most catering companies have video surveillance covering the following areas:

- Entry and exit points
- Dining areas within the premises of the catering establishment (if any)
- Cash register area
- Kitchen
- Storage areas
- Delivery and loading areas
- Server rooms
- Event spaces and banquet halls
- Parking areas

Further, the concerned stakeholders at cloud kitchens and catering companies need to review and analyse recorded CCTV video footage from time to time for investigating incidents of slips, falls, other accidents, fights, staff negligence in order to corroborate evidence and avoid any potential lawsuits, as well as assisting Police/Law Enforcement Agencies.

REMOTE VIDEO AUDITING

Some cloud kitchens utilize remote video auditing services as part of their operational and security management strategies. Remote video auditing involves the use of video surveillance technology to monitor and assess various aspects of operations, compliance, and

performance. Here are ways in which remote video auditing services are commonly used:

1. Quality control:

Remote video auditing allows operators to monitor kitchen operations, food preparation processes, and adherence to quality standards. This helps maintain consistent food quality and ensures that operational protocols are followed.

2. Operational efficiency:

By remotely auditing video footage, cloud kitchen operators can identify operational inefficiencies, bottlenecks, or areas for improvement. This information can be used to streamline workflows and enhance overall efficiency.

3. Compliance monitoring:

Video auditing aids in monitoring compliance with health and safety regulations, hygiene standards, and operational protocols. It provides a means to verify that the cloud kitchen is adhering to industry regulations and internal guidelines.

4. Employee training and evaluation:

Remote video auditing can be used for training purposes by reviewing employee performance and identifying areas for improvement. It also allows for ongoing evaluation of staff adherence to standard operating procedures.

5. Security and loss prevention:

Continuous remote monitoring of surveillance footage helps identify security risks, potential theft, or unauthorized access to sensitive areas.

This proactive approach enhances security and aids in loss prevention.

6. Customer service improvement:

Reviewing video footage remotely enables operators to assess customer interactions, order fulfillment, and overall service quality. This information can be valuable for improving customer service and addressing any issues promptly.

7. Evidence in dispute resolution:

In the event of disputes or customer complaints, remotely audited video footage can serve as valuable evidence. It provides an objective record of events and aids in resolving discrepancies or misunderstandings.

8. Customized monitoring:

Remote video auditing systems can be customized to focus on specific areas of interest, such as high-traffic zones, critical operational processes, or security-sensitive locations.

9. Cost-efficient oversight:

Remote video auditing eliminates the need for physical presence on-site, making it a cost-efficient way to oversee multiple cloud kitchen locations or respond to issues in real-time without the need for immediate on-site intervention.

LIVE MONITORING – CHALLENGES

Some cloud kitchens and catering companies 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:

- Accidents/Causes of potential accidents
- Potential causes of fires
- Housekeeping issues
- Recces/suspicious movements/activities
- Insider job/security lapses
- Unauthorized/unlawful activities/visitors
- Compliance issues
- Health and safety issues
- Fraud/loss/corruption/theft
- Unclaimed/unattended baggage/objects
- Potential food contaminating factors
- Quality assurance issues
- Negligence
- Human rights violations
- Inattentive staff (e.g. guard sleeping)
- Issues with female staff
- 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 the concerned stakeholders of cloud kitchens and catering companies report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of all cloud kitchens and catering companies.

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 authorised security personnel deployed at the cloud kitchen or the catering company.
2. List of authorised staff (with their duty timings and allotted locations) at the cloud kitchen or catering company.
3. List of habitual offenders/suspects likely to visit the premises of the cloud kitchen or catering company (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.'**