com sur™

the missing piece of CCTV

THE FOOTAGE WHISPERER

"SEE WHAT THE CAMERA SAW"

100+ TOPICS – AIRPORTS TO ZOOS

UTILITY VALUE OF COM-SUR™ FOR SMART CITY INITIATIVES

WELCOME

AUDIT HOURS OF FOOTAGE IN MINUTES
FIND OUT HOW COM-SUR WILL HELP

CCTV and other forms of video surveillance are commonly used in smart city initiatives 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/ SURVEILLANCE VIDEO FOOTAGE AUDITING, SMART BACKUP, AND STANDARDIZED INTELLIGENT INCIDENT REPORTING SOFTWARE – THE MISSING PIECE OF CCTV/SURVEILLANCE VIDEO

COM-SUR is the world's only CCTV/surveillance 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/surveillance video 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/surveillance 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 and other surveillance 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.

ISSUES ADDRESSED BY SMART CITY INITIATIVES WITH THE HELP OF VIDEO SURVEILLANCE

1. Public safety and crime prevention:

Video surveillance systems help enhance public safety by deterring criminal activities, monitoring public spaces, and providing evidence for investigations.

2. Traffic management and congestion:

Video surveillance cameras are used for traffic monitoring and management.

3. Emergency response and disaster management:

During emergencies and disasters, video surveillance systems play a crucial role in providing situational awareness and facilitating emergency response.

4. Crowd management and event security:

Video surveillance helps in monitoring crowded areas, such as event venues, stadiums, and public gatherings. It assists in crowd management, ensuring public safety, and identifying any potential security threats or suspicious activities.

5. Infrastructure monitoring and maintenance:

Video surveillance is used to monitor the condition and maintenance needs of critical infrastructure, such as bridges, tunnels, and public facilities.

6. Environmental monitoring:

Some smart city initiatives incorporate video surveillance for environmental monitoring purposes. For example, cameras are used to monitor air quality, detect pollution sources, or observe wildlife habitats. This data can inform decision-making processes related to environmental protection and resource management.

7. Public space management and utilization:

Video surveillance helps in managing public spaces effectively. By monitoring footfall, utilization patterns, and adherence to regulations, authorities can optimize public space usage, plan infrastructure improvements, and ensure a safe and comfortable environment for residents and visitors.

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 smart city initiatives grappling with the immense volume of surveillance footage.

COVID-19 PANDEMIC

The pandemic severely impacted smart city initiatives worldwide. Smart city initiatives had to adapt quickly to support public health and safety measures implemented during the pandemic. With restrictions on movement and social distancing measures in place, remote monitoring of critical infrastructure, public spaces, and transportation systems became even more crucial. Further, there arose a need to build more resilient infrastructure, including video surveillance systems, to respond effectively to future crises. Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

USE OF CCTV SURVEILLANCE BY SMART CITY INITIATIVES

Smart city initiatives use CCTV surveillance to monitor the following:

- Public spaces such as parks, squares, and recreational areas for public safety and crowd management

- Busy intersections and traffic points to monitor traffic flow and enforce traffic regulations

- Transport hubs including airports, train stations, and bus terminals for security and surveillance

- Government buildings and critical infrastructure for protection against potential threats

- Residential areas and neighborhoods to enhance community safety and deter crime

- Commercial areas and shopping districts for theft prevention and public safety

- Air quality, noise levels, waste management, and other environmental factors for better environmental management

- Emergencies and disasters for co-ordinating rescue efforts

Further, the concerned stakeholders of smart city initiatives need to review and analyse recorded video footage from time to time for the following purposes:

1. Investigations:

Recorded video footage is crucial in investigations related to criminal activities, accidents, or other incidents that occur within the smart city.

2. Incident response:

In the event of emergencies, such as natural disasters, fires, or public safety incidents, reviewing recorded video footage helps understand the sequence of events, identify potential causes or contributing factors, and guide effective incident response efforts.

3. Performance monitoring and optimization:

Stakeholders may review recorded video footage to monitor the performance and efficiency of various systems and services within the smart city. For example, transportation authorities may analyze video feeds to evaluate traffic flow, identify bottlenecks, and optimize traffic management strategies. Similarly, urban planners may review footage to assess the usage of public spaces, identify areas of improvement, and make informed decisions regarding urban development.

4. Compliance and governance:

Reviewing recorded video footage helps ensure compliance with regulations, policies, and operational standards. It allows stakeholders to monitor adherence to security protocols, safety guidelines, and ethical practices.

5. Quality assurance and service improvement:

Stakeholders review recorded video footage to assess the quality and effectiveness of services provided within the smart city. For instance, reviewing footage from public transportation systems helps identify issues related to service delivery, passenger experience, or operational efficiency. This information can be used to implement improvements, enhance user satisfaction, and optimize resource allocation.

USE OF OTHER FORMS OF VIDEO SURVEILLANCE BY SMART CITY INITIATIVES

Besides CCTV surveillance, smart city initiatives also deploy other forms of video surveillance as follows:

1. Drones:

Drones are increasingly used for aerial surveillance in smart city initiatives. They provide a flexible and dynamic approach to monitoring large areas, gathering real-time video footage, and conducting surveillance in areas that are not accessible by traditional means.

2. Body worn cameras:

Law enforcement and public safety personnel use body worn cameras to capture video footage during patrols, security operations, or emergency responses. These cameras enhance situational awareness, provide evidence for investigations, and promote accountability.

3. Specialised traffic cameras:

Specialised traffic cameras are strategically placed at intersections, highways, and major roadways to monitor traffic conditions, detect congestion, and facilitate traffic management. These cameras help in monitoring traffic flow, detecting accidents or incidents, and optimizing transportation operations.

4. Mobile surveillance units:

Mobile surveillance units, equipped with cameras and communication systems, are deployed in specific areas or events to provide temporary surveillance coverage. These units are often used for crowd management, event security, or monitoring temporary construction sites.

LIVE MONITORING – CHALLENGES

Smart city initiatives have a dedicated control room with operators, set up for live monitoring of CCTV and other 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 video footage from time to time for investigating and preventing compliance issues. Auditing video 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 AND OTHER FORMS OF VIDEO SURVEILLANCE ARE 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:

- Recces/suspicious movements/activities

- Traffic issues

- Insider job/security lapses

- Unauthorized/unlawful activities/visitors

- Kidnapping/kidnapping attempts

- Accidents/Causes of potential accidents

- Loss/theft/fraud

- Potential causes of fire

- Unclaimed/unattended objects

- Staff negligence

- Inattentive staff (e.g. guard sleeping)

- Health and safety issues

- Instances of women and child abuse

- Intrusions, especially by animals

- Environmental issues

- Emergencies/disaster management issues

- Cameras/recorder malfunctions

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

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

'Auditing' means 'seeing' what the cameras 'saw'. Auditing of CCTV and other surveillance video 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 video footage auditors, and the audit teams should be rotated to avoid complacency/collusion. Daily auditing of CCTV and other surveillance 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 incidents are reported in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of all stakeholders of smart city initiatives.

3) <u>ENSURE DISASTER RECOVERY OF CCTV AND OTHER SURVEILLANCE VIDEO FOOTAGE – LIKE A 'BLACKBOX'</u>

CCTV and other surveillance 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) <u>DISPLAY DYNAMIC INFORMATION AT RELEVANT PLACES</u>

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

1. List of officials on duty.

2. List of authorized security personnel deployed at the respective area.

3. List of habitual offenders/suspects likely to visit the respective area (a 'Watch out' list).

5) <u>USE A POWERFUL NEW SIGNAGE</u>

"WE AUDIT CCTV VIDEO FOOTAGE EVERYDAY".

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

<u>DE-CENTRALIZED SURVEILLANCE + CENTRALIZED SURVEILLANCE = OPTIMAL RESULTS</u>

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.

<u>CONCLUSION</u>

"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 video - why suffer!

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