comsur™

the missing piece of CCTV

THE FOOTAGE WHISPERER

"SEE WHAT THE CAMERA SAW"

100+ TOPICS - AIRPORTS TO ZOOS

UTILITY VALUE OF COM-SUR™ FOR THE MINING SECTOR

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 the mining 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/ 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.

MINING SECTOR CHALLENGES

1. Worker safety:

Mining sites are inherently dangerous places. Hence, it is important to ensure that workers are following safety protocols, as well as identify any unsafe conditions or actions.

2. Theft:

Mining sites may be targeted for theft of minerals, supplies, and/or valuable equipment.

3. Unauthorized access:

Mining sites need to ensure that only authorized personnel are allowed inside the premises, and that visitors do not have access to restricted areas.

4. Equipment maintenance:

Mining equipment is expensive and needs regular monitoring and maintenance to operate efficiently.

5. Compliance issues:

Mining sites must comply with various regulations and safety standards.

6. Worker productivity issues:

Mining sites need to monitor whether workers are performing their duties efficiently and identify areas where improvements can be made.

7. Insider threats:

Mining sites 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.

COVID-19 PANDEMIC

The pandemic severely impacted the mining sector worldwide. Owing to restrictions /lockdowns, several mining facilities experienced disruptions to their supply chain, making it difficult to procure critical equipment and supplies for mining activities. Also, several mining companies had to temporarily close their operations or run in a limited capacity. Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

USE OF VIDEO SURVEILLANCE AT MINING SITES

Most mining sites have video surveillance covering the following areas:

- Entry and exit points
- Processing plants
- Storage areas
- Underground tunnels and shafts
- Haulage and transportation routes
- Hazardous areas
- Waste disposal areas
- Critical infrastructure areas

Further, the concerned stakeholders of mining 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

The mining sector uses remote video monitoring to monitor mining operations and ensure worker safety. Remote video monitoring allows for real-time monitoring of multiple sites and equipment from a centralized location, providing a more efficient and cost-effective way of managing mining operations. It can also be used to detect and respond to security breaches, safety incidents, and environmental hazards. Additionally, remote video monitoring can be used to monitor compliance with regulations and identify areas for improvement in mining operations.

OTHER FORMS OF VIDEO SURVEILLANCE USED IN THE MINING SECTOR

The mining sector uses various forms of video surveillance for different purposes as follows:

1. Drones:

Drones are increasingly being used in the mining sector for surveillance purposes, particularly in open-pit mining operations. Drones equipped with cameras can capture high-resolution images and videos of mining activities, which can be used for monitoring production, detecting safety hazards, and conducting inspections of hard-to-reach areas.

2. Body worn cameras:

Some mining companies use body worn cameras to monitor the activities of workers on-site. These cameras can capture footage of workers performing their tasks, which can be used for training purposes and to identify areas for process improvement.

3. Thermal imaging cameras:

Thermal imaging cameras are used to detect heat signatures and identify temperature changes in mining operations. These cameras can be used to detect equipment malfunctions, identify hotspots in processing plants, and monitor the temperature of equipment and materials.

4. Vehicle cameras:

Vehicle cameras are commonly used in the mining sector to monitor the movement of vehicles, such as trucks and excavators.
These cameras can be used to monitor vehicle performance, detect safety hazards, and prevent theft or unauthorized use of vehicles.

LIVE MONITORING – CHALLENGES

Some mining sites 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:

- Operational and productivity issues
- Accidents/Causes of potential accidents
- Potential causes of fires
- Compliance issues
- Health and safety issues
- Loss/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
- Issues with female staff
- 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 all mining sites report incidents in a standardized

template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of the mining sector.

3) ENSURE DISASTER RECOVERY OF CCTV AND OTHER SURVEILLANCE VIDEO FOOTAGE – LIKE A 'BLACKBOX'.

CCTV and other surveillance 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 mining site.

3. List of habitual offenders/suspects likely to visit the mining site (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 video - why suffer!

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

