
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 VINEYARDS AND WINERIES

## WELCOME

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

CCTV and other forms of video surveillance are common in vineyards and wineries (a vineyard is where grapes are grown to make wine and a winery is where wine is produced) 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/OTHER SURVEILLANCE VIDEO FOOTAGE AUDITING, SMART BACKUP, AND STANDARDIZED INTELLIGENT INCIDENT REPORTING SOFTWARE – THE MISSING PIECE OF CCTV/OTHER 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.

## CHALLENGES FACED BY VINEYARDS AND WINERIES

1. Unauthorized access:

Securing the perimeter of a vineyard and a winery to prevent unauthorized access by individuals or vehicles can be challenging, especially in large and remote locations.

2. Theft:

Vineyards and wineries may be targeted for theft of grapes and high-value wines, equipment, or other valuable assets.

3. Vandalism:

Vandalism, which entails the destruction of grapevines, irrigation systems, production facilities, wine barrels, or other equipment, can impact the productivity of vineyards and wineries and result in huge financial losses.

4. Wildlife damage:

Wildlife, such as deer and birds, can pose a threat to vineyards by damaging grapevines and consuming grape clusters.

5. Fire hazards:

Vineyards are susceptible to fire hazards, and wildfires can pose a significant threat.

6. Waste management:

Proper disposal of waste, including grape skins and other byproducts of winemaking, is essential. Inadequate waste management can lead to environmental issues and regulatory concerns.

7. Compliance issues:

Vineyards and wineries need to face a plethora of compliance issues encompassing alcohol beverage control laws, stringent wine labeling regulations, environmental standards, health and safety protocols, water rights and usage regulations and laws governing land use.

8. Employee safety and security:

The employees at vineyards and wineries may face occupational hazards, such as injuries from machinery, handling of hazardous substances, or workplace violence. Ensuring the safety and security of employees is crucial to maintain a healthy work environment.

9. Insider threats:

Vineyards and wineries 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 wine industry worldwide. Lockdowns and restrictions led to the closure of restaurants, bars, and retail outlets, disrupting sales and distribution channels for many wineries. Many wine-related events, such as tastings, festivals, and tours, were canceled or postponed due to social distancing measures. Moreover, the pandemic disrupted global supply chains, affecting the availability of materials and equipment needed for wine production. Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

## USE OF VIDEO SURVEILLANCE AT VINEYARDS AND WINERIES

Most vineyards and wineries have video surveillance covering the following areas:

Vineyards:

- Entry and exit points
- Perimeter of the vineyard
- Vine rows
- Critical equipment locations
- Weather stations
- Water sources

Winery:

- Entry and exit points
- Production areas
- Wine cellars
- Tasting rooms and retail areas
- Loading docks
- Waste disposal areas
- Employee areas
- Parking areas

Further, the concerned stakeholders at vineyards and wineries analyse recorded CCTV video footage from time to time in order to investigate incidents, accidents, and other issues as well as assist Police/other Law Enforcement Agencies.

## USE OF DRONES TO MONITOR VINEYARDS

Drones are increasingly used in vineyards, to provide efficient and comprehensive monitoring. Here's how drones are utilized to monitor vineyards:

1. Aerial Imaging:

Drones equipped with high-resolution cameras capture aerial images of the entire vineyard. This provides a comprehensive view of the vine rows, allowing farmers to assess the overall health and growth of the grapevines.

2. Crop health assessment:

Multispectral and thermal cameras on drones can capture data beyond the visible spectrum. This data helps assess the health of the crops, identify areas with potential stress or disease, and optimize irrigation and nutrient management.

3. Canopy management:

Drones can assess the density and health of the canopy (parts of a grapevine visible above ground), providing insights into vine growth and identifying areas where pruning or canopy management may be required. This helps optimize sunlight exposure and air circulation for grape quality.

4. Mapping and surveying:

Drones can create detailed maps and surveys of the vineyard, providing valuable information for land management, planning, and resource allocation.

5. Irrigation management:

Thermal imaging from drones can assess variations in soil moisture, helping vineyard managers optimize irrigation practices and conserve water resources.

6. Drought monitoring:

Drones assist in monitoring the impact of drought conditions on vineyards by capturing data on plant stress and water availability. This information informs water management strategies.

7. Vineyard mapping for precision agriculture:

Drones contribute to precision agriculture by creating detailed maps that highlight variations in soil composition, topography, and microclimates. This allows for targeted interventions and customized farming practices.

8. Monitoring ripeness and harvest timing:

Drones can be used to monitor the ripeness of grapes by capturing high-resolution images. This information helps in determining the optimal timing for harvest, ensuring the production of high-quality grapes.

9. Pest control:

Drones can be equipped with technology for precision pest control, allowing for targeted spraying of pesticides or beneficial substances. This reduces the overall use of chemicals and minimizes environmental impact.

10. Security and surveillance:

Drones can enhance security by providing aerial surveillance of the vineyard. This is particularly useful for large properties where traditional ground-based monitoring may be challenging.

## LIVE MONITORING – CHALLENGES

Several vineyards and wineries 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 video footage from time to time for investigating and preventing compliance issues. Auditing video footage 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:

- Intrusion, especially by animals
- Fraud/loss/corruption/theft
- Potential contaminating factors
- Vandalism
- Quality assurance issues
- Compliance and legal issues
- Accidents/Causes of potential accidents
- Negligence
- Human rights violations
- Insider job/security lapses
- Recces/suspicious movements/activities
- Unauthorized/unlawful activities
- Housekeeping issues
- Potential hazards
- 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 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 vineyards and wineries report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of the wine industry.

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 security personnel deployed at the vineyard or winery.

2. List of authorised staff (with their duty timings and allotted locations) at the vineyard or winery.

3. List of habitual offenders/suspects likely to visit the vineyard or winery (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!