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the missing piece of CCTV
THE FOOTAGE WHISPERER
"SEE WHAT THE CAMERA SAW"
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UTILITY VALUE OF COM-SUR™ FOR THE FASHION AND TEXTILE INDUSTRY

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 the fashion and textile industry 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

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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 FASHION HOUSES

1. Theft and robbery:

Fashion houses are susceptible to theft and robbery, targeting valuable clothing items, accessories, and merchandise.

2. Vandalism:

Fashion houses face the risk of vandalism, where individuals intentionally damage property, storefronts, or displays. This can disrupt operations and harm the brand's image.

3. Intellectual property theft:

Protecting designs, trademarks, and intellectual property from theft is a constant challenge for fashion houses. Counterfeit products can negatively impact brand reputation and revenue.

4. VIP and celebrity security:

Fashion houses dealing with high-profile clients and celebrities must address security concerns related to the safety and privacy of VIP customers during visits to stores or events.

5. Data breaches:

With the increasing reliance on digital technologies, fashion houses face the risk of data breaches, compromising sensitive information such as customer data, designs, and business strategies.

6. Insider threats:

Fashion houses have to deal with insider threats from disgruntled employees /rogue security guards or even unwitting staff who fail to follow proper security and safety measures.

7. 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 TEXTILE MANUFACTURING FACILITIES

1. Warehouse theft:

Warehouses storing raw materials, finished goods, and textiles are vulnerable to theft, pilferage, and unauthorized access.

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2. Intellectual property theft:

Trade secrets, such as unique textile designs and patterns, dyeing processes, fabric treatments, or material combinations, are valuable aspects of intellectual property. Unauthorized access to these secrets by employees or external actors can lead to intellectual property theft.

3. Cargo theft and tampering:

During transportation, textiles in transit may be targeted for theft and tampering, especially if security measures in place are inadequate.

4. Vandalism:

Textile manufacturing facilities and warehouses may face the risk of vandalism, leading to property damage and disruption of operations.

5. Technology and equipment security:

Protecting machinery and technology used in textile manufacturing from theft or sabotage is essential for maintaining operational continuity.

6. Fire and safety hazards:

Ensuring fire safety measures in textile facilities is crucial to prevent the loss of property and ensure the safety of employees.

7. Health and safety issues:

Textile manufacturing facilities encounter significant health and safety challenges for their workers, encompassing exposure to harmful substances, noise and vibration from machinery, potential hazards associated with machinery operations, ergonomic issues due to repetitive tasks, dust and airborne particles, fire and electrical risks, extremes of temperature, and inadequate working conditions.

8. Compliance issues:

Complying with regulations related to environmental standards, safety, and labor practices is a key consideration for textile manufacturing facilities.

9. Insider threats:

Textile manufacturing facilities have to deal with insider threats from disgruntled employees /rogue security guards 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.

USE OF VIDEO SURVEILLANCE AT FASHION HOUSES

Most fashion houses have video surveillance covering the following areas:

- Entrances and exits
- Sales floors and showrooms

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- Stockrooms and inventory area
- Employee workspaces
- Parking areas

USE OF VIDEO SURVEILLANCE AT TEXTILE MANUFACTURING FACILITIES

Most textile manufacturing facilities have video surveillance covering the following areas:

- Entrances and exits
- Production floors
- Storage areas
- Maintenance and equipment rooms
- Employee break rooms and common areas
- Parking areas

Further, the concerned stakeholders at fashion houses and textile manufacturing facilities 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.

USE OF CAMERAS IN THE FASHION DESIGNING PROCESS

Certain types of cameras play a significant role in specific aspects of the fashion design process. Here are some examples:

1. 3D scanning cameras:

3D scanning cameras are used to create three-dimensional digital models of physical objects. In fashion design, these cameras can be employed to capture detailed measurements and dimensions of garments or accessories, allowing designers to create accurate digital prototypes.

2. High-Resolution cameras for textile detailing:

High-resolution cameras with advanced imaging capabilities can be used by fashion designers to capture intricate details in fabrics, patterns, and textures. This helps in documenting and analyzing materials for design inspiration and creating digital mood boards.

3. Digital photography for lookbooks and portfolios:

Fashion designers often use high-quality digital cameras for professional photography to create lookbooks, portfolios, and promotional materials showcasing their designs.
This includes capturing detailed shots of garments for marketing and presentation purposes.

4. Digital fabric printing and imaging:

Cameras are integrated into digital fabric printing systems to capture and reproduce intricate patterns and designs onto fabrics.
This technology allows for the customization of textiles with high precision, enabling designers to create unique and personalized fabrics for their collections.

5. Augmented Reality (AR) and Virtual Fitting Cameras:

Cameras are utilized in augmented reality and virtual fitting technologies that enable

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consumers to virtually try on clothing items. Fashion designers may leverage these technologies to enhance the online shopping experience and visualize how designs look on different body types.

USE OF SPECIALIZED CAMERAS AT TEXTILE MANUFACTURING FACILITIES

Textile manufacturing facilities often utilize specialized cameras to address specific needs and challenges in the textile production process. Some types of specialized cameras used in textile manufacturing facilities include:

1. Machine vision cameras:

Machine vision cameras are equipped with advanced imaging capabilities and are integrated into machine vision systems. These cameras play a crucial role in automated inspection, quality control, and precision measurement of textiles during the manufacturing process.

2. Color matching cameras:

Cameras designed for color matching are used in dyeing processes to ensure consistent color reproduction and adherence to design specifications. These cameras are critical for maintaining quality standards in textile products.

3. High-speed cameras:

High-speed cameras capture rapid movements and processes with high frame rates. In textile manufacturing, these cameras may be used to analyze and troubleshoot fast-paced production sequences, such as the movement of fibers or threads.

4. Thermal imaging cameras:

Thermal cameras are employed to monitor temperature variations in machinery, identify hotspots, and prevent overheating. This is crucial for preventive maintenance and avoiding equipment failures.

5. 3D cameras:

3D cameras are used for three-dimensional scanning and imaging applications in textile manufacturing. They can capture the surface structure of textiles and assist in quality inspection and design processes.

LIVE MONITORING – CHALLENGES

Some high-profile fashion houses and textile manufacturing facilities 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

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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:

- Quality control issues

- Operational issues

- Accidents/Causes of potential accidents

- Potential causes of fires

- Compliance issues

- Health and safety issues

- Loss/fraud/theft

- Recces/suspicious movements/activities

- Insider job/security lapses

- Violence/disputes

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- Unauthorized/unlawful activities/visitors

- Intrusions, especially by animals

- Unruly workers/security guards

- Unclaimed/unattended objects

- Housekeeping issues

- Staff negligence

- Inattentive staff (e.g. guard sleeping)

- 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 fashion houses and textile manufacturing facilities report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of the fashion and textile industry.

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 staff at the fashion house or textile manufacturing facility.

2. List of authorized security personnel deployed at the fashion house or textile manufacturing facility.

3. List of habitual offenders/suspects likely to visit the premises of the fashion house or textile

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manufacturing facility (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.'

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