# FORENSICS IN VIDEO ANALYTICS
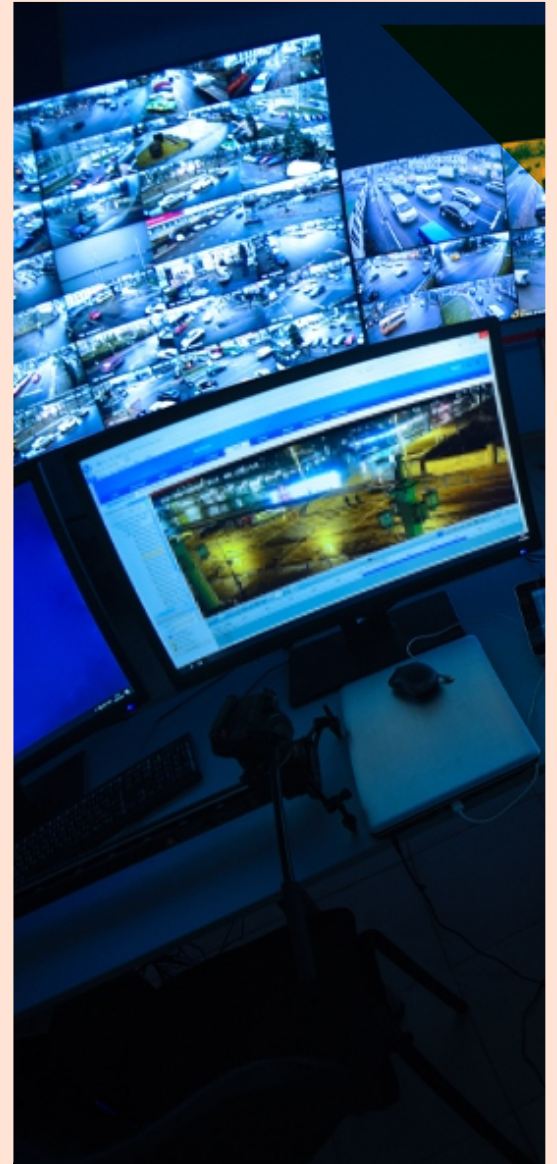
**WAVESYS**

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# FORENSICS IN VIDEO ANALYTICS

## Doubling Efficiency, Tripling Safety with Reduced Effort

Security systems have brought a great deal of relief to the investigation departments as well as individuals and organisations. The ready availability of CCTV footage allows even a simpleton to recognise and act in the event of undesirable incidents; not to mention the amount of the effort it saves the police and other investigative departments in trivial matters.

But do the security systems equalise the requirement of the investigative agencies? No! And hence the invention of several Analytical tools and features, one of them being the WVCA Forensics. The Forensics feature serves the user well during post-event searches using detailed analytical metadata relating to all objects under tracking from the WVCA Server.

Detection of the object of interest without using the Forensics feature could be compared to the task of searching a needle in a haystack- not impossible but tedious, time consuming and patience-testing and impracticable. But the Forensics feature enables task completion in reasonable time. The system facilitates both local and remote search processes, trails multiple cameras, creates audit trails, and highlights objects of interest in just minutes by retrieving and reviewing high-resolution footage of objects from the stored Metadata taken from existing onsite cameras.

## Wavesys Analytics Servers with Forensics Function

Wavesys Global's IP 30 series (Intelligent Video Analysis at Edge) and IP 50 series (Multi Layered Deep Learning AI Analytics at Edge) come with the embedded forensics service feature. The feature uses object metadata to create an intuitive appearance search, records metadata, and snapshots without need for post processing, and enables change of search criteria in just a click, thereby reducing the forensic evidence search time to a very great extent.

The forensic search features include a Metadata database, VMS playback, and an intuitive appearance search tool with filters that allow refining the available footage based on date and time, object identity, color, and zonal specifications- all of this in addition to the basic AI features. The mentioned forensic search service is offered as an optional service with the all-in-one, stand-alone WVCA ETS AI based Analytics Server.

**www.wavesysglobal.com | sales.americas@wavesysglobal.com**

# FORENSIC SEARCH FEATURES

| Search Tabs | Colour | Zones | Date/time filter | Object filter | Metadata database | VMS Playback |
|---|---|---|---|---|---|---|

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Wavesys VCA solutions already employ advanced Machine Learning & Artificial Intelligence algorithms that enable people detection, head tracking, vehicle type identification, abandoned bag detection, hand-held object detection, slip and fall sighting, and shelf clearance offering great search advantage. The added Forensics function with deep learning modules only add extra power to the Analytics solutions.

Another prominent advantage of the WVCA Forensics solution is that it eliminates the need for any additional investment on a new camera setup as it uses footage and data from the user's existing CCTV cameras. It uses a very simple UI that makes the search-find-export process easy and quick.

Adaptive searching helps accelerate the search process. Once objects/ humans of interest resembling the search criteria are identified, the system would allow export of its snapshots along with the metadata description of the identified object. The same is also encrypted and stored into safety for future retrieval.

| Class: | Person |
|---|---|
| Torso Colour: | Blue |
| Leg Colour: | Black |
| Has Bag: | No |
| Time: | 13:45:23 28.04.23 |
| Camera: | North Entrance |

## REDUCE YOUR FORENSIC EVIDENCE SEARCHES FROM HOURS DOWN TO MINUTES

It even creates searches for objects you never knew you were looking for. Imagine that!

# Hardware Specification for Embedding WVCA Forensic Search Feature

| WVCA Deep Machine Learning Artificial Intelligence Analytics & Forensic Software Hardware Requirement | | | | | | | |
|---|---|---|---|---|---|---|---|
| Camera Series | Number of Cameras | Application | Processor | Graphic Card | Storage | Memory (DDR RAM) | NVME |
| IP-30 | 16 | Machine Learning DLOT + Forensic Server and Client Application at Single Hardware | i5-12600KF | 8 GB RTX3050 | 20 TB ( 7200rpm) | 32 GB | 512 |
| | 32 | | i9-12900KF | 8 GB RTX3070 | 30 TB ( 7200rpm) | 64 GB | 512 |
| IP-50 ( Ai Deep Learning) | 32 | Machine Learning DLOT on Edge / Forensic Server and Client Application at Single Hardware | i5-12600KF | 8 GB RTX3050 | 20 TB ( 7200rpm) | 32 GB | 512 |
| | 64 | | i9-12900KF | 8 GB RTX3070 | 30 TB ( 7200rpm) | 64 GB | 512 |

Although currently offered as an optional feature to the Video Content Analytics Server, the Forensics feature is promising enough to become a packaged feature in our video analytics tools in the near future.

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