VIDEO ANALYTICS

Video Content Analysis for the Mass Market

Less Can Be More to Get a Proven Solution

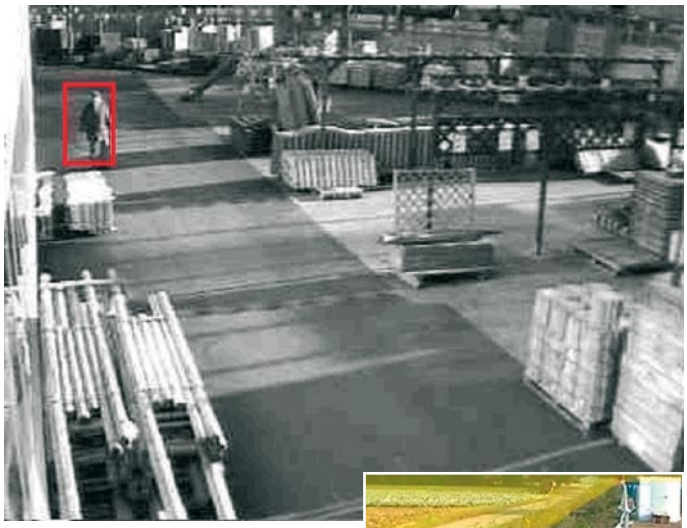
Intelligent analytics for video images are able to detect intruders in industrial plants, to recognise faces and to alert security staff in airports in cases of unattended luggage. According to the latest market survey of IMS Research, in the next years the market for video content analysis will grow with over 50% a year.

But what is really working? And first of all: What are the real requirements of the customers? How does this new technology bring business to installers, resellers and integrators as well as a real benefit to the customers? Sometimes, through the enthusiasm for very subtle and high-end referential projects, people forget that not everyone of this line of business has to secure the US-military, high security prisons, nuclear power stations or airports.

Only very few customers have the budget and are willing to spend thousands of euros for one sensor channel (per camera) – and this only for "intelligence". That is the reason why video content analysis nowadays is still an exotic high-tech for only a few special projects. By now new reliable solutions are available that can be used by a wide mass, since the prices per camera channel including hardware are between €150 and €600 – you just need to know exactly what these technologies are providing.

Motion Detection

In spite of all available theoretical high-end solutions: primarily 80% of all video content analysis customers need a reliable alarm for relevant movements. All manufacturers of cameras, video management systems and DVR/NVR already considered this need by offering integrated motion detection within their systems. For indoor applications good results were already achieved by using motion detection - but only as long as these rooms weren't influenced by external factors. Already a sunshine coming through a cloud cover and shining into the interior space, a fluttering curtain or a moth, which is passing closely to the camera objective, will raise an alarm. For qualified alerting this motion detection has too less intelligence and therefore is useless for the securing of outdoor areas.



Even before the human eye has recognised the intruder, the video sensor has already raised the alarm.

Midrange Sensor Technology

Compared to that, intelligent video alarm sensors are offering much higher ingenious analytical processes. They can filter out interfering effects e.g. the changing of day and night, sun, rain, snow, reflections of headlights, moving grass and bushes or too tall or too small objects. A major difference to the 2D motion detection is the use of a 3D-feature, which is taking the perspective distortion of the image into consideration. Thus the intruder, who is just a few pixels tall since he is trying to climb over the farthest fence, will cause an alarm while the cat, which is crossing directly in front of the camera, will not set off any alarm. The direction detection, which registers movements only in one direction, is a further feature of this sensor.

With a modern 3D-video sensor fences up to 50 m can be observed with one camera.

The most important capacity of high-quality alarm sensors is their suitability for outdoor areas. Big challenges for this sensor are the uncontrollable environmental influences, wind and weather. Since a whole area with up to 50 m of fence can be protected by only one video camera, a high-capacity video sensor is more cost-saving than a classical alarm detector. Unfortunately sensors that are able to reliably report real alarm signals in outdoor areas – this means real situations of danger – are often very expensive.

Suitable for the Mass Market

According to the software manufacturer, at present the via:sys alarm sensor is the only sensor which is offered for a suitable price for the mass market. All of the above mentioned performances are included in this sensor - that must be the reason why the via:sys alarm sensor was installed over 7,500 times e.g. in car dealerships, electronic markets, building centres, prisons and haulage companies. The customer gets a 3D alarm sensor, which is robust, adequate, suitable for outdoor areas, reliable and very low in reporting false alarms – that is why the sensor normally gets linked directly to the alert or monitoring centre. The sensor is available as handy and easy installable plug-and-play box for analogue cameras with dry contacts as well as IP-box for IP-cameras.

Especially the plug-in solution for Axis cameras and video encoders is very smart and well-priced. Here the identical sensor will be loaded as pure software plug-in onto the camera and therewith provides a full-featured 3D alarm sensor directly on the edge-device.

But for the vendor V.A.S. it is especially important to tell the customers what they will not get: The sensor cannot count; it cannot recognise faces or license plates and it cannot find forgotten suitcases. 80% of the users will not miss that and are pleased with a robust, well-priced and field proven alarm sensor.

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