

Designed for high-end home security by Cernium Corp., Archerfish® Solo is an affordable analytics based surveillance solution that can tie in central station monitoring. Photo courtesy Cernium

Video Analytics: Integrator-Ready!

Refinements relieve the 'black eye' and add integrity

Let's be honest. Several years back no one wanted to touch analytics, or if they did they weren't sure if they could rely on them for an installation without having a constant headache in the way of false alarms or customer call backs. Now, more than ever, it's safe to say its become an integrator's friend, helping with license plate recognition and people counting and other specific tasks that handily get the job done and add incredible value to an installation—just in time.

The black eye on the technology that permeated the industry has disappeared and advancements in the way of new algorithms and software have helped make it a much more reliable technology that targeted properly, satisfies a variety of end-user specifications. Is it ready for mainstream? It could very well be. Case in point is a product designed for high-end home security by Cernium Corp., Reston, Va., called Archerfish® Solo. It's affordable video surveillance that uses Homeland Security technology and artificial intelligence in the camera, which actually 'thinks' and pays close attention to unexpected events. The camera looks for what you tell it to look for and will only send alerts on what you request. Whenever something out of the ordinary happens, Archerfish Solo sends video alerts to mobile phones or e-mail addresses, which is a beautiful way of managing alarms. Users can log onto a Web portal to view live or event video, change preferences or manage users from any Internet-connected computer, iPhone or Android.

For the professional installer crowd and central stations, Cernium introduced the CheckVideo Software Service. CheckVideo is a hosted intelligent video alarm verification solution that's integrated with central station automation software. It uses video analytics technology to look for pre-specified events and presents event video in real time to monitoring personnel, reducing false alarms, enabling priority response from the police with verified alarms and helping stop crimes in progress. The integrator installs CheckVideo at the site being monitored and connects it to the Internet, cameras and DVRs. CheckVideo allows integrators to offer more security and enhanced services to their customers, while increasing their monthly service revenue.

According to Craig Chambers, president and chief executive officer of Cernium, the analytics embedded in Cernium's products dynamically adapt to changes in the camera's field of view, so the days of tuning and adjustment are "long past." "Video analytics has become an enabling technology for an array of applications," Chambers said. "The video content analysis algorithms at the core of Archerfish are identical to those employed in Cernium's ExitSentry product for airport terminal security," he said. The perception-based analytics approach automatically tracks and classifies all the objects moving in the field of view; the user simply selects the kinds of objects and the patterns of movement that are to be reported. "There is no programming required in Archerfish," he

continued. “All the configuration is done with point-and-click by simply drawing detection zones and checking boxes to specify what kinds of activities get reported to the user,” he said. CheckVideo, he added, is sold to the alarm monitoring industry in support

of all of its customers, both residential and commercial. It is currently compatible with Sureview, MicroKey, Bold and SIMS, with others in test.

Maturation point is now

According to Itsik Kattan, chief ex-

ecutive officer of Agent Video Intelligence (AgentVi), Rosh Ha’ayin, Israel, video analytics has matured over the past several years as a result of the penetration of IP video and increased security concerns, brought about by large scale deployments of hundreds and thousands of cameras.

“Such size installations require video analytics to be at the very core of the video surveillance network,” Kattan said. “We are seeing the winning video analytics solutions are those that focus more on being applicable to large scale deployment—in terms of the solution architecture, performance and labor associated with the installation process. Agent Vi focuses on automating most of the processes during the installation phase, saving significant installation time typically associated with manual calibration. In addition, a significant and constant improvement is made to reduce false alarms and increase overall system performance, since those become critical in the user’s ability to effectively make use of a video analytics system,” Kattan commented.

According to Dick Salzman CPP and vice president of Marketing for Keeneo, Potomac, Md., today’s analytics are especially suited to detect security scenarios in real time, allowing the user to take instant action.

“Vendors of video analytics have been gaining better understanding of what they need to do to improve their software to reduce or avoid unwanted alarms,” he continued. “In addition, users have been gaining experience with the use of video analytics and now better understand how it can best be used and what its realistic limits are,” Salzman said.

A good example of the metamorphosis of the use of video analytics is its use not for security applications but for business intelligence or operation logistics applications. “The biggest use is for counting of people and

for calculating related metrics about their movement,” he said.

Another interesting element of video analytics is the place where the processing of the images occurs, that is, the actual analytic operation. “Some companies have their video analytics solely installed and performed in centralized or distributed servers while others have it uploaded or embedded into the camera itself,” Salzman said. “There are benefits to both approaches. The best use for server-based or camera-based analytics depends on the application and its installation. An example of this is with Keeneo’s Easy Count model for people line counting applications where there are versions both for server based and a version using an Axis camera with uploaded Keeneo Easy Count video analytics.”

People counting is certainly a growing and respected application. But there are many different variables that integrators have to get to know in order to write a specification properly for proven results.

“Although we fall under the same category as analytics (e.g. software for quickly locating specific events in recorded video), BriefCam differentiates between Video Synopsis, which presents all events and engages the human operator in making the judgment call, and those rule-based technologies that filter out or issue alerts based on those rules,” said Dror Irani, chief executive officer of BriefCam, Neve Ilan, Israel. “As such, Video Synopsis is free from false alarms, meaning that the operator sees all these events and can quickly decide what is suspicious and what is not. We don’t replace the human eye or brain. We just make them hundreds of times more efficient. So, in our case, greater resistance to false alarms means developing a technology whereby these events are seen but they don’t matter,” he said.

Irani said security cameras are becoming more ubiquitous and more

accepted. “At the same time, the price of IP cameras is dropping fast, which means more small- and medium-sized enterprises will be buying cameras and software suites that include analytics serving not only their security needs but other areas as well: customer behavior

tracking, monitoring personnel and the like. Our vision is to be able to enable anyone—in the home, at work or on the go—to take just a few minutes and review hours of footage remotely from the cameras protecting their property and loved ones,” Irani said.