10 for 2010: Top Video Surveillance Industry Predictions for the Year Ahead

Alastair.Hayfield@imsresearch.com

www.imsresearch.com

IMS

2010: The Year For IP Video Surveillance as a Service?

It has a host of names – Managed Video as a Service (MVaaS), Video Surveillance as a Service (VSaaS), Remotely Monitored Video – but whatever the name, 2010 will be the year it moves out of the shadows into the limelight.

Software as a Service (SaaS) and cloud computing are common currency in the IT world. Simply put, software is run and data is managed on a remote server rather than a local PC. When applied to video surveillance, cameras can be used to monitor a location but the video will be managed and stored remotely. This technology should prove to be attractive to alarm monitoring centres, telcos/ISPs and installers/integrators alike. It will open up new revenue streams, particularly as video verification of alarms becomes more popular, and new applications such as 'lone worker protection' or 'video bodyguard' are requested.

VSaaS could be the disruptive force needed for network surveillance to penetrate the low-end of the surveillance market. The current high price of network cameras and the need for reasonable IT skills is limiting the uptake of network video surveillance in smaller sized systems with low camera counts. With VSaaS, the initial system cost is reduced by removing the need for local management and storage, and replacing it with a subscription-based monthly service. Furthermore, users are not required to be proficient with IT as the system management is performed remotely.

Low camera count deployments in offices, retail outlets and commercial premises are currently the domain of analogue cameras. However, VSaaS has the potential to disrupt these markets by providing a similar cost product with the additional advantages of remote monitoring, added features such as 'lone worker protection', and no need for ongoing maintenance.

VCR...DVR...NVR...CameraVR?

In the consumer electronics world, inexpensive and relatively large capacity solid state storage media are taken for granted. Used in cameras, phones, and mp3 players; solid state disks are used in such great volumes that the price per unit has plummeted. Prices have now reached a point where they are much more attractive to the video surveillance industry.

A sizeable number of network cameras already feature SD card slots for storing video on the camera. This feature can be used to store video in the event of a network outage or to better manage network Quality of Service. With the falling price of solid state media, end-users are exploring the idea that centralised storage can be supplemented, and in some cases, abandoned in favour of storage in the cameras.

2010 will see more vendors offering a wider range of network cameras with SD card support. Furthermore, IMS Research predicts that end-users will start to exploit this feature in increasing numbers. Network cameras with onboard storage are an ideal solution in situations where bandwidth is limited, a day's worth of footage is all that is needed, or the camera is in a remote location with limited connectivity or power. Moreover, network cameras with SD cards are expected to be commonly used in VSaaS applications – further driving adoption of both technologies.

But what about the future? Will solid state media replace the workhorse HDD in video surveillance applications? The short answer is no, not in the short or medium term. HDDs continue to be the cheaper option for storing video surveillance footage in large quantities. Furthermore, the majority of video surveillance storage vendors remain committed to their existing HDD solutions. Whilst onboard storage is a great feature and will gain some traction in certain applications, the whirr of the HDD head will be heard for some time to come.

Brazil: The Nut to Crack

IMS Research is picking Brazil as the market to watch in 2010. Brazil's quick emergence from recession and infrastructure stimulus plans mean spending on capital equipment such as video surveillance will be strong. IMS Research forecasts video surveillance market revenues in Brazil will grow by an average of 20% per year for the next five years. In fact, by 2013 Brazil is forecast to be the fastest growing major market for video surveillance, outstripping China, India and Russia.

Brazil's utilisation of it's abundant natural resources means that development of manufacturing and process facilities will continue apace. Such facilities typically require investment in video surveillance and will provide opportunities throughout the next five years. In addition, development of other utilities (such as power generation) to meet the demands of Brazil's economically developing populace will require security investment.

The FIFA 2014 World Cup and the 2016 Olympic Games will both be hosted by Brazil. If the examples set by Beijing and London are followed, both events will require significant infrastructure devlopement and expenditure on security. In fact, Brazil's Justice Minister Tarso Genro recently announced that the Rio de Janeiro state will receive 900 million Reais (US$511 million) to ensure security of the 2016 Olympic Games.

Finally, Brazil is looking to combat rising crime levels with public area surveillance. 2010 will likely see more city-surveillance projects announced, further fuelling demand for video surveillance cameras.

Network Camera Prices to Drop

Undoubtedly, network video surveillance solutions are gaining major traction in large scale deployments where the lower total cost of ownership, integration benefits and improved resolutions are clear advantages over analogue solutions. But in the lower-end market, network cameras remain too expensive, with network models being more than four times the price of like-for-like analogue models.

The overall transition to HD/megapixel cameras and dome-type cameras will see the average price of network cameras fall slowly – because the product mix is moving to higher value products. However, IMS Research forecasts that like-for-like network camera prices will start to fall significantly in 2010 – by at least 15% in some instances. Increasing competition; lower cost imports from Korea, Taiwan and China; and a desire to penetrate price-sensitive markets will all play a factor. Furthermore, the adoption of open standards, such as ONVIF and PSIA, by lower cost camera suppliers means that inexpensive cameras can easily be supported by most VMS platforms. This means end-users will have a wider choice of low cost solutions to choose from.

It is likely that established manufacturers will announce 'basic' or 'economy' lines in 2010 to help maintain their competitive positions against lower-cost rivals. Furthermore, the adoption of HD sensors in video surveillance cameras means that the economies of scale from the consumer world can be brought to bare on the prices of high-resolution network cameras.

VCA Market to Find Its Way With Searchable Analytics

2009 was a year of consolidation for the Video Content Analysis (VCA) industry. The difficult economy and confusion about the real capabilities of analytics has resulted in relatively few announcements of new video surveillance projects using analytics software. At the same time, video motion detection, camera tamper detection and system health checks have became standard features on many network cameras and encoders. So what does the future hold for the video content analysis market in 2010?

According to IMS Research, the biggest trend for video analytics in 2010 will be searchable or forensic analytics. In the same way that search engines created mass appeal for the internet, searchable analytics are predicted to change the way that stored video is searched by making it quicker, easier and more cost effective.

Searchable analytics work by creating a meta-data stream in parallel with the video stream. The meta-data acts like an index of the video, storing event information such as object size, colour, type, speed and the event duration. This allows the user to quickly search the stored video for a specific object, for example "red cars". This trend will be driven by markets such as homeland security which require fast data retrieval and analysis in the event of major incidents.

Searchable analytics will also gain traction in markets that regularly analyse large volumes of video data, with it increasingly making its way into commercial applications as the technology matures.

2010 will see the continuing polarisation of the VCA market. Basic analytics algorithms such as tripwire and object detection will become commodities which are downloaded onto video surveillance equipment in the same way as mobile phone applications. Axis Communications' announcement that it has opened its video encoders and network cameras to third party analytics companies, will further increase competition between dedicated software developers. This will have the effect of driving VCA prices down, resulting in further separation between high-end analytics and the more basic, functional applications.

All Change At The Top?

Following the raft of announcements in the later half of 2009; merger and acquisition (M&A) activity and partnerships are predicted to become increasingly important for companies wishing to grow or remain competitive in 2010. Some of the headlines in 2009 and early 2010 include:

- United Technologies Corp. (UTC) announced the acquisition of GE Security.

- GenNx360 Capital Partners purchased GVI Security Solutions.

- Panasonic Systems Solutions (PSS) and Panasonic Communications Company (PCC) merged to form Panasonic System Networks (PSN).

- Samsung Techwin absorbed Samsung Electronics' video surveillance business.

- Pelco and Cisco formed a strategic technology agreement.

- Siemens Security Solutions partnered with Bosch Security Systems.

- DVTel announced the acquisition of ioimage.

Increasing numbers of M&A and partnership activity is predicted in 2010, as these recent developments are expected to significantly alter the competitive landscape. In particular, mid-tier video surveillance manufacturers will face increasing competition and will be under pressure to merge or partner with other market players. IMS Research also predicts that at least one "established" vendor of video surveillance will withdraw from the market in 2010.

The structure of the video surveillance market is predicted to remain dynamic in 2010 with a number of different manufacturers vying for the market leader position. Whilst Pelco has been the global market leader for several years, the newly formed PSN and Samsung Techwin are likely to challenge Pelco for the top spot going forward.

IMS

2010 is HD Ready

The hype surrounding megapixel network cameras has subsided and the resolution sweet-spot has emerged in the form of HD network cameras. 720p and 1080p (full HD) cameras offer a good compromise between resolution and bandwidth, and manufacturers are beginning to exploit this opportunity. IMS Research believes that 2010 will see the megapixel and HD market reach a new level of maturity, with manufacturers focusing less on pixel count and more on other important factors, such as camera quality, low light capabilities, sensor size and dynamic range.

In IMS Research's "World Market for CCTV and Video Surveillance Equipment – 2009 Edition" report, one and two megapixel cameras are forecast to represent nearly three-quarters of megapixel camera shipments in 2010. Whilst HD network cameras currently account for a small percentage of these, IMS Research believes shipments will grow rapidly to represent the majority of the megapixel camera market.

As network camera manufacturers increase the number of low megapixel and HD network cameras in their product portfolios, IMS Research predicts the price of these cameras will begin to fall sharply in 2010.

HD to Drive Adoption of H.264

H.264 is no longer a new compression technology in video surveillance. In 2008, over half of the world's fifteen largest vendors of video surveillance equipment (by sales revenue) offered H.264 products and in 2009 this increased to eleven of the top fifteen. Although H.264 is widely available, its use has not been as widespread as the marketing hype suggests.

However, IMS Research predicts the use of H.264 will grow rapidly in 2010. Unsurprisingly, the adoption of H.264 is linked to the increased proliferation of HD and megapixel network cameras in the market. These will necessitate the use of H.264 (and variants of H.264, such as H.264 SVC) as a means of regulating bandwidth and storage. Furthermore, IMS Research believes that new HD or megapixel cameras released in 2010 without H.264 will be a rarity, as even non-premium vendors of megapixel cameras are beginning to include H.264 in their products.

Open Standards Will Open the Market

In mid 2009 IMS Research released estimates of the relative market shares of two major open standards bodies, ONVIF and PSIA, and it was apparent that ONVIF held a significantly larger percentage of the total video surveillance market. One would assume that, as with VHS and Betamax, one standard (typically the less well supported one) would perish. However, IMS

Page: 6

Research believes that both standards will coexist in the short to medium term. The PSIA, whilst possessing a smaller share of the video surveillance market than ONVIF, has a much broader scope, with includes establishing standards for area control, analytics and storage; thereby resulting in a more diverse membership with market players from security equipment manufacturers to security integration firms. The ONVIF membership is almost exclusively comprised of network video surveillance equipment manufacturers. There is also a general consensus among security manufacturers that the existence of two standards is much preferred to none at all.

What will be the end game? With a large number of companies being members of both standards, one possible outcome could see ONVIF's standard and the PSIA's video surveillance standard coalescing. Whilst IMS Research does not foresee this occurring in 2010, it should not be ruled out for the longer term.

Open standards will positively impact the video surveillance industry in a number of ways. Firstly, open standards will accelerate the transition from analogue CCTV to network video surveillance by reducing current installation complexity and introducing "plug and play" compatibility. Secondly, open standards will lower the barriers to entry for both VMS vendors and network camera manufacturers. As a result, IMS Research expects an influx of new suppliers and this will drive prices down.

Video Management Software to Further Evolve

IMS Research predicts 2010 will see video management software (VMS) providers further expand the functionality of their products in order to differentiate themselves in an increasingly crowded market. 2009 provided indicators that the VMS market was moving towards converged security management with OnSSI launching its Ocularis management platform, Genetec launching its unified security platform Security Center, and Nice Systems' acquisition of the PSIM (Physical Security Information Management) specialist Orsus. We expect this trend to continue into 2010, with VMS providers focusing on:

- Further integration and support for analytics

- New sales platforms

- More PSIM-like functionality

- Innovative user interfaces and functionalities

- Further improvements in ease of use through refinements of machine/user interfaces

VMS vendors will face increasing competition as more DVR suppliers make the move into the IP video surveillance market. Furthermore, there is an increasing trend for low cost network camera manufacturers to offer low functionality VMS free of charge. In the longer term, the move to open standards, such as ONVIF and PSIA, will lower the barrier to entry for the VMS market, further increasing competition. Moreover, as open standards gain traction, support for hundreds of network cameras will no longer be a unique selling point. VMS vendors will have to focus on advanced functionality in order to remain competitive.

IMS RESEARCH

Founded in the 1980s, IMS Research has established itself as a highly regarded and trusted source of quality market intelligence.

Our initial success as a provider of market research was heavily influenced by analyst ties to the semiconductor industry. Over the last decade of remarkable growth, we have expanded into most other sectors of the electronics industry, with dedicated analyst teams focused on the automation, automotive, communications, computer, consumer, industrial, medical, power, and security markets. In addition, we have broadened our research capability to encompass custom research and consultancy. We now publish more than 120 reports annually and sell to more than 45 countries worldwide.

Today IMS Research has over 70 analysts spread across three locations: Austin, Texas, USA; Shanghai, China; and Wellingborough, UK. Our global presence enables us to provide clients with comprehensive and detailed research on today's international markets.

IMS CONFERENCES

IMS Conferences focuses on the organization of international summits and conferences that explore the real world implementations of leading edge technologies. IMS Conferences brings together international executives from technology companies, content & service providers, operators, policy & standard makers, distributors, analysts, and retailers. **www.imsconferences.com**