

CUSTOMER

Shell South Africa (Pty) Ltd. is a wholly owned Shell subsidiary company. The South African company manages the activities of several affiliates in Southern Africa. Shell is one of the major oil companies in South Africa with extensive marketing and refining assets and a product portfolio that comprises a full range of fuels, lubricants, bitumen, solvents and other chemicals. Shell has a strong position in the Southern African gasoline and automotive diesel sectors, holding a 17.8% share of the market with over 800 retail sites. These are distributed throughout the region and include sites with convenience stores and several highway site locations. One of the company's latest revamped retail locations is the Shell Petrol service station located in Kensington, Johannesburg, South Africa.

CHALLENGE

The keys to successful planning and construction of a new petrol station involve the cost efficiency of the labor, the structural engineering of the facility, and the safety and security of patrons and employees. With a high probability of incidents in such a heavily trafficked venue, video surveillance is a necessity to accurately monitor daily activities for identification purposes in the event of an incident. These criteria applied when developing the revamp concept for Shell Petrol service station in suburban Johannesburg. The contracting company, together with AV Enforce Electronics (AVEE), sought out the most comprehensive and cost-effective security video surveillance solution for the new Shell Petrol location.



Look Closer™
Case Study

Arecont Vision Megapixel Cameras Provide Panoramic Coverage of South African Gas Station

Arecont Vision's 180-Degree and 360-Degree Panoramic Cameras Capture Every Detail Clearly



Shell is one of the major oil companies in South Africa with extensive marketing and refining assets.

MEGAPIXEL SOLUTION

Arecont Vision's multi-megapixel cameras were the clear choice based on their superior imaging performance, extended coverage capabilities and overall ROI. Arecont Vision Megapixel cameras provide panoramic views of the new Shell Petrol service station located in Kensington, Johannesburg, South Africa to cover the facility's four pump islands and convenience store. The additional pixels and subsequent resolution these megapixel cameras provide translate into pristine image detail

for video surveillance and forensic investigations in both real-time and in playback modes.

Alex De Barros of AV Enforce Electronics (Pty) Ltd. designed the system, which was installed by the company's team of technicians. AV Enforce Electronics is South Africa's largest privately owned black-empowered security company and a systems integrator that supplies access control, video and fire detection systems. Mr. De Barros selected Arecont Vision megapixel cameras for this application for their performance, reliability, versatility and overall value.

AV8360 8 Megapixel Panoramic Camera

Key Features

- 1600(H) x 1200(V) each sensor
- 6400(H) x 1200(V) Total
- 5.5fps @ 6400x1200
- 22fps @ 1600x1200
- 88fps @ 800x600
- H.264 (MPEG 4, Part 10) and JPEG compression
- 0.2 Lux @ F2.0
- Image cropping
- Substitute up to twenty-five analog cameras





The 360-degree panoramic view megapixel camera is used to provide a bird's eye view inside the convenience store

Watching over the exterior of the new Shell Petrol service station are three Arecont Vision 180-degree panoramic view cameras while an Arecont Vision 360-degree panoramic view camera keeps watch over all activities inside the store. The cameras are strategically positioned to offer panoramic views providing the ability to digitally zoom in for a close-up of specific areas of the larger image – such as a person's face or a license plate number – without losing detail. An additional AV2100 2-megapixel camera is used to monitor activities at the convenience store's cash registers.

The cameras at the Shell station in Kensington, South Africa, are networked to digital video recorder (DVR) with 6 terabytes of storage, supplied by Envision Surveillance, a Pretoria, South Africa-based company that specializes in the installation and supply of video surveillance systems. Wireless transmission of digital images at the Shell service station facilitated by a Nanostation Ethernet Wireless Transmitter from Miro Distribution, a Midrand Gauteng-based company that has grown to be one of South Africa's leading distributors of wireless, networking, voice-over-IP and IP video products. The system is monitored locally from a management office on-site.

Arecont Vision's picture quality on recorded video is the same as live video providing detailed forensic evidence for presentation in court when required. The Arecont Vision panoramic cameras also provide an overall view of the Kensington Shell Station that is useful as a management tool for end-user Joe Bishop and his staff to monitor traffic patterns and to help maintain the facility.

"We installed the Arecont Vision megapixel cameras to demonstrate the solution as a proof of concept at this test site,"

said Tracey De Barros, Key Accounts Manager for AV Enforce Electronics. The installation was performed with a view toward rolling out the upgrade to other sites operated by Shell (Pty) Ltd.

The cameras used outside the Shell station in Kensington are 8-megapixel, 180-degree panoramic IP network cameras enclosed in 6-inch domes. Each uses four 2-megapixel sensors and provides up to 6400x1200 resolution at 22 frames per second (fps). Light sensitivity is 0.2 lux at F2.0, and the cameras provide image cropping and up to four regions of interest. The cameras feature Arecont Vision's MegaVideo® technology, and processes billions of operations per second.

The 360-degree panoramic view megapixel camera is used to provide a bird's eye view inside the convenience store. Its capabilities are similar to the 180-degree panoramic model, except that its 8 total megapixels (four 2-megapixel sensors) in a 6-inch dome to provide 360-degree coverage. The camera also provides light sensitivity of 0.2 lux at F2.0, and image cropping with up to four regions-of-interest.

The 2 megapixel camera deployed at the cash registers employs a 1/2-inch CMOS sensor to provide 1600x1200 resolution video at 24 fps, with light sensitivity of 0.1 lux at F1.4. Other features include forensic zooming on archived video, region-of-interest, image cropping and motion detection.

MEGAPIXEL BENEFIT

Each Arecont Vision panoramic megapixel camera can take the place of a dozen or more standard-resolution network cameras or analog cameras, thereby contributing to an overall lower system cost. The use of fewer cameras also requires less labor and cabling while providing dramatically higher resolution. Using fewer cameras to cover larger areas also translates into cost savings related to infrastructure (cables, mounts, housings, etc.), providing extreme efficiency and ROI.

The system at the Shell Petrol Service Station in Kensington has already proven its value by providing positive identifi-

“ [Arecont Vision camera's] performance and video clarity has been fantastic ”

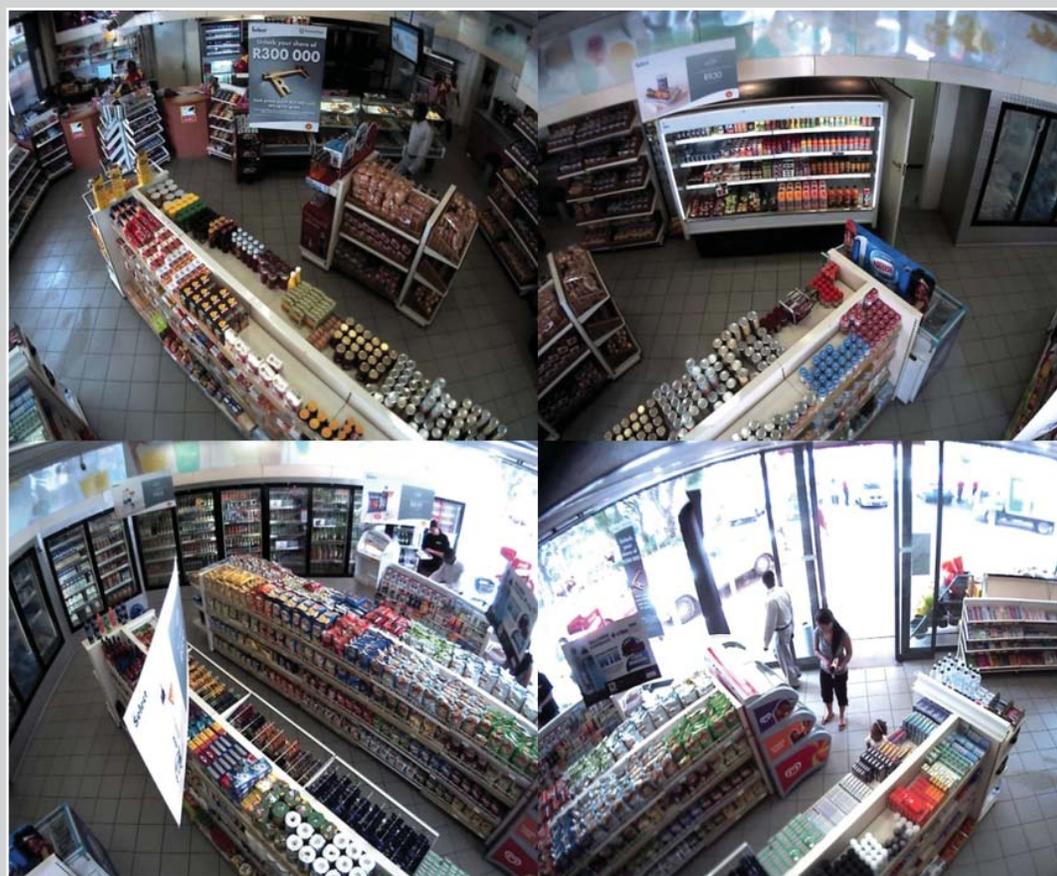
cation in a situation involving employee pilferage and to positively identify a drunk driver to authorities. "The performance and video clarity has been fantastic," said Mr. De Barros. He also acknowledged good assistance from Arecont Vision's sales representative for Africa, and the Arecont Vision technical team in

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supporting the installation and implementation of the system. Mr. De Barros also acknowledged Arecont Vision's wide offering of megapixel camera solutions at prices that are comparable to standard-resolution network cameras. Arecont Vision's camera line ranges in image resolution from 1.3 to 10 megapixels, including camera models providing advanced capabilities such as dual day/night and panoramic viewing. The Arecont Vision line also includes the MegaDome™ Series of all-in-one dome

cameras and a new compact JPEG series of cameras to address cost-sensitive applications.

"The Shell Petrol Kensington site represents a new trend in systems design employing megapixel cameras over wireless IP," said Ethan Maxon, Middle East & Africa Regional Sales Manager of Arecont Vision. "We believe the implantation of this system configuration will be the model for similar installations in the future."



**AV8185 3 Megapixel
IP Camera**

Key Features

- 1600(H) x 1200(V) each sensor
- 6400(H) x 1200(V) total
- 22fps @ 1600 x 1200
- 88fps @ 800x600
- H.264 (MPEG , Part 10), Motion JPEG
- 0.2 Lux @ F2.0
- Motion Detection
- Vandal Resistant

Arecont Vision is the leading manufacturer of high-performance megapixel IP cameras and associated software. Arecont Vision products are made in the USA and feature low-cost massively parallel image processing architectures MegaVideo® and SurroundVideo® that represent a drastic departure from traditional analog and network camera designs. All-in-one products such as MegaDome® and MegaView™ provide installer friendly solutions. Compact JPEG and H.264 series of cameras address cost sensitive applications. These innovative technologies enable Arecont Vision to deliver multi-megapixel digital video at IP VGA camera price points.

 **Arecont Vision**
megapixel technology...
beyond imagination