



i³ International captures video intelligence with Intel

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CHALLENGE

▪ **Digital surveillance** in businesses is increasing, and for more than just security. Credit card companies require longer storage of video feeds to prevent fraud while at the same time high resolution images are taxing bandwidth for retailers and fast food chains, who are struggling to make the best use of their camera investment.

SOLUTION

▪ **More Power = New Functions:** Toronto's i³ International* leverages Intel® technology to deliver smart solutions using a hardware controller and custom software to deliver business analytics that helps customers use video to make decisions.

IMPACT

▪ **Intel® Core™ i7** technology embedded into i³ International's hardware controller increases the number of cameras capable of delivering analytics from 16 to 32.
▪ **Servers with Intel® Xeon® 5400 processors** reliably deliver customer data in a hosted environment, while virtualization speeds development cycles.

When companies install surveillance cameras in their stores, it's often to address security issues like theft. i³ International Incorporated* knows a video security system can deliver more than theft deterrence, it can give retailers valuable business intelligence that can dramatically impact sales, profitability and employee performance by analyzing camera and point of sale (POS) data.

"Currently only 1% of the video recorded by stores is being used," says Vy Hoang, Executive Vice President of Sales & Marketing at i³ International. "By adding video analytics to security

systems, we can extract intelligent information and turn video into a decision-making tool."

Previously, a barrier has been the cost of outfitting each camera with enough processing power to analyze data. While most competitors install digital signal processing (DSP) chips in cameras, i³ International decided instead to put the processing power in a custom-built hardware device that seamlessly connects with analogue and IP cameras.

Hoang explains that DSP chip technology in cameras might not have enough processing power on each chip

Staffing, Merchandizing Adapts To Data



“Because of Intel®’s extensive research and development, we’re taking advantage of processing power that doubles almost every year. Innovation is limitless because we’ve hooked our wagon to Intel.”

to enable all the desired features, and if you wanted to add new features, you might need to replace the DSP chips with more powerful chipsets, adding costs for customers.

“We don’t have that problem with Intel. With an Intel® Core™ i7 processor, there’s more than enough power there to process 32 cameras on analytics,” says Hoang. “With Intel, we get more flexible processing power than competitors using DSP chips which means we can add new features for customers in a more cost effective way.”

“Intel Core i7 processors let us deliver 32 channels of full analytics, in addition to recording mega pixel video. With Intel, we aren’t limited by processing power and can turn on more functions for clients. And because of Intel’s extensive research and development, we’re taking advantage of processing power that doubles almost every year. Innovation is limitless because we’ve hooked our wagon to Intel.”

Despite the fact credit card companies require retailers to archive video feeds for longer periods of time to minimize fraud, i³ International is able to reduce storage requirements. Using customized software, cameras can be programmed using intelligence algorithms to records specific events, like customers coming in the doors.

“Using the Intel chipset, we can program units to record only when people are in the scene which drops recording requirements by 60%. On a 1 terabyte hard drive with Intel processing the analytics, we can transmit 40% more data while recording 40% less than anyone else in the market,” Hoang says, adding “we’re dropping the power levels and reducing the power consumption in all our units”.

Staffing, Merchandizing Adapts To Data

Customers of i³ International, including a large US tool retailer, use analytics software to analyze video feeds. With this real-time data, they can identify high traffic zones within the store and relocate high margin products, resulting in more sales. Another i³ International retail customer was able to increase sales staff efficiency by tracking store traffic against POS data, which allows managers to put top sales people on the schedule during busier store times. By delivering real-time data that can improve performance, i³ International clients take advantage of processing power of Intel Core i5 or Intel Core i7 technology to make business decisions that positively impact the bottom line.

“We can go into a store with our box and using the Intel chipset we can hook into their existing system and quickly start giving them analytics throughout the store,” explains Hoang. “We have shown a major fast food retailer the power of analytics. Our client was able to use video analytics and POS data to increase productivity by 34% and increased sales by 17% with no impact on customer service.”

To provide fast and reliable access to data, i³ International recommends Intel® Xeon® processors for servers and PCs powered by Intel 2010 Core processors. Internally, i³ International has four servers with Intel® Xeon® 5400 processors, two are used to host client POS and i³ International software analytics data. Another two servers are used for internal development and operations.

Store managers and executives can log into i³ International software and see real time sales, staff and customer information. The data, either hosted on i³ International servers powered by

Intel® Xeon® 5400 processors on the client's internal servers, can be sorted by key performance measures like staff efficiency or conversion from visits to sale.

"Clients can log in on the Internet and see everything in real time," says Hoang, adding they can also view video in real time or compare performance in two or more locations.

Since the servers integrate and feed back customer data, i³ International needs fast and reliable access to ensure clients get the data they need when they need it. "Performance and reliability are key when you're running client sites," says Hoang, noting they have power to spare with servers running Intel Xeon processors.

Leveraging Intel virtualization technology on its servers, i³ International can quickly create new customer environment to test software before installation without needing to build new hardware or impacting the rest of the organization.

Desktop Power Boost

i³ International not only depends on Intel® Core™ i7 processors for its video control system, the company relies on the speed and power of Intel for internal operations as well. The company recently added four desktop computers with Intel Core i7 processors to speed development and aid sales and marketing to render high production video or sales collateral.

For the developers, compiling source code for building custom software solutions for clients is faster than previous Intel Core technology allowing noticeably quicker turn-around time and reduced lag time by as much as 15%.

ABOUT I³ INTERNATIONAL INCORPORATED

Headquartered in Toronto, Canada, i³ International started as a video installation company and evolved into a manufacturer of IP video technology, video analytics and point of sale data management. The company integrates IP technology with sophisticated software analytics to help companies make real-time business decisions using video technology and customer purchasing patterns, while enhancing security.

SOLUTION PROVIDED BY:



For more information on Intel® Xeon® processors, visit: www.intel.com/go/xeon

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