CASE STUDY

Steep rise in efficiency of car dealership's service to customers thanks to license plate recognition system.

Major car dealership adopts "Vehicle Vision", and improves customer service.

Organization:
Major car dealership

Location:
Okayama City, Okayama Prefecture, Japan

Industry segment:
Retail

Application:
Merchandising and operations, license plate recognition

Axis partner:
PMC

Mission

The major car dealership sells over 5,000 new cars in Okayama prefecture each year. The car dealership has more than 10 stores in Okayama prefecture, and customer satisfaction is an important index by which they evaluate each store's results. The company conducts customer surveys each month and places 50% satisfaction as a major goal. In 2009, they were considering to introduce the license plate recognition system in order to improve customer satisfaction.

Solution

The major car dealership introduced PMC's license plate recognition system "Vehicle Vision" with two AXIS Q1755 Network Cameras in July 2009. PMC's "Vehicle Vision" license plate recognition system processes images based on video recorded by the network camera, and automatically detect a car's license plate and scans the numbers. This system is composed with a Windows PC and Axis network cameras, and has greatly reduced costs compared to conventional systems.

Result

At the main branch, the license plate of a car is scanned when a customer enters the parking lot, informing sales staff at once that there is an incoming customer. Because of this, sales staff can immediately start customer service without making the customer wait. In addition, not only does this system notify sales staff that customers are arriving, but it also displays information about car maintenance such as car inspections, statutory inspections, oil exchanges and tire exchanges, and information on recent visits so that the sales staff can appropriately conduct customer service.

Before introducing this system, data about customers who visited the store was manually added to a database, and customer service was conducted after checking this information. Currently customers do not need to wait because an incoming message is sent to sales staff at the same time that customers enter the parking lot.

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"Network cameras with auto-focus function and a 16:9 aspect ratio were necessary for the car dealership's license plate recognition system. I feel certain that AXIS Q1755 was the best choice."

Mitsuki Shigesaki, Deputy-Director of Information Systems Department, PMC.

With a high-precision vehicle identification engine, the system can recognize sequences of numbers, katakana, classification numbers, and Land Transport Office names of license plates of large-size, standard and light vehicles. With a limit of 50 km per hour on speed, and with light greater than 150 lux, the system has accomplished a 95% recognition rate.

Two AXIS Q1755 Network Cameras selected

In the main branch, two AXIS Q1755 Network Cameras have been installed in the original PMC cases in the parking lot. Cameras from other manufacturers have been compared with Axis network cameras, and the main reasons that the major car dealership selected Axis products was because they allow recognition of license plates with HDTV high picture quality, and have auto-focus function and a 16:9 aspect ratio which are necessary for the license plate recognition system the company required.

The major car dealership has developed a nation-wide sales network in Japan, but branches that have incorporated the license plate recognition system are still rare. Many other branches have shown interest in the reasonably-priced system consisting of a PC and Axis network cameras.

Conducting data analysis to improve customer satisfaction

There is a noticeable difference in the number of customer visits between weekdays and weekends. There are many cars going in and out on weekends, and this results in a lot of customer service. In order to improve customer satisfaction there is a need to conduct analysis of data regarding the number of visitors for each time period and each day of the week, how often customers visit the store, how long they are in the store, the relationship between weather conditions and other events being held and the number of visitors, and to utilize this data in customer service and the placement and scheduling of customer service representatives. A year after the system was put in place, the company is just beginning to work on analyzing the data. However, in the future they plan to utilize this information and look toward improved customer satisfaction and increased sales revenue in one to two years time.

Detail screen of Vehicle Vision

Planning for expansion to other branches

"Customer service in the main branch has taken a great leap thanks to the license plate recognition system. Customer satisfaction is usually around 30%, but in the main branch it has improved to greater than 42%. Because our sales staff is contacted with necessary information upon the customers' arrival, they can call the customer by name and know if the customer has a reservation for such things as oil changes. Before, mail was sent directly to customers based on the sales representative's experience and judgment but now, with data analysis we are able to decide on things like whether it would be more appropriate to send notifications once a month, or once every three months. For instance, if there are three customer cars in a row, we may have to make them wait. However, because we know when which customer entered the store, it is possible for sales representatives to approach them after a certain amount of time has passed. In general, we keep in contact with customers for 8 to 10 years before they replace their car. We hope to utilize this system in the future to make customers feel happy that they chose our store," says Mr. T, Manager, Main Branch, Major Car Dealership. The company plans to expand and develop this system to include other retailers in Okayama prefecture.

AXIS Q1755 in the original PMC housing, installed facing the entrance to the parking lot.

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