



John Dewar and Sons uses wireless cask management system to comply with health and safety guidelines



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John McKee, IT Manager, John Dewar and sons

The company: Bacardi Group - John Dewar and Sons

John Dewar and Sons, part of the Bacardi Group, is a leading whisky producer based in Glasgow, Scotland. The Dewar's brand was established in 1846, and the company opened Aberfeldy Distillery in 1898. The portfolio today includes the premium blends of Dewar's 12 and 18 and Signature, as well as Aberfeldy Single Malt, in addition to Dewar's White Label. In 2006, Dewar's whisky won a total of 28 awards at independent international competitions. In 2007, the Aberfeldy 12 Year Old Single Highland Malt Whisky was voted the best Single Malt Scotch Whisky for under £30, by Scottish Field's Whisky Challenge. This independent competition has an internationally renowned judging panel, who blind-tasted over 200 whiskies to reach their conclusions.

The challenge: Updating whisky cask management system

Whisky has one of the longest shelf-lives of any food or beverage and therefore presents a completely different set of supply chain challenges to perishable products. An effective cask management system is essential in order to produce premium blends effectively and to manage the storage of whisky casks of differing ages until the product is mature enough to be bottled. In a distiller of Dewar's size this means storing 1,300,000 (72,000 casks of whisky in one warehouse) at the sites in Glasgow, Scotland.

Cask management is even more challenging when the product is so easily ignited. In order to store such a flammable product, strict health and safety guidelines must be adhered to. In 2006, Dewar's started to replace some of its warehouses in order to comply with guidelines stating that they needed a fireproof environment, and that the company also needed to create a cable-free environment to ensure that no sparks could ignite the whisky.

Customer profile



Company

John Dewar and Sons

Location

Glasgow, Scotland

Industry

Whisky manufacturer

Motorola products

- MC9000
- AP300
- WS5100

Applications

- Brideloglex LLC Solutions RTCIM

Partner

- RealTime DC Ltd

Benefits

- Increased staff productivity, health and safety compliance



Up until last year Dewar's had relied on a paper-based system to identify the location of each brand of whisky and its age, with the added challenge that whisky is held as bonded stock, and therefore Customs and Excise require details of all its movements. Therefore, when building its new warehouses, the team at Dewar's wanted to take advantage of the new start and upgrade to a technology-based system. Each warehouse stores up to 72,000 casks of whisky and using the paper-based approach was not the most efficient method of stock management. The team at Dewar's was finding that it was taking far too long to sort through papers and then identify a particular cask. It was decided that it would be beneficial to use technology to automate this process and give everyone access to location information at the touch of a button. To maximize storage space it was also decided to not use racking, and instead store the casks vertically in columns of up to seven, producing a solid volume of casks 63Wx22Dx7H=9702 in 8 bays. This presented a potential problem for the wireless connectivity as wet wood, liquid and little airspace would absorb the signal.

In addition, when looking into a new system the Dewar's team had to consider the harsh environment that devices would operate in. In the warehouses, there are thousands of casks being constantly moved around. Many of the staff using the devices would be operating forklift trucks, and they would also need to be able to cope with any spillages that might occur.

"Upgrading the warehouses offered the perfect opportunity to upgrade our IT systems too," said John McKee, IT Manager, John Dewar and sons. "Technology has moved on since the warehouses were originally built so we wanted to embrace this and put in a state-of-the-art system that would save us time in identifying casks. Along with this came the challenge of finding products that would survive in such a harsh environment, whilst also complying with various health and safety requirements."

The solution: Implementing a wireless cask management system

Dewar's worked with RealTime, a distributor, to identify a solution that would meet these requirements. RealTime was already working with Dewar's on its main ERP system, so Dewar's was keen to work with the company in the implementation of the cask tracking system too. The solution chosen needed to operate within European regulations governing Atmosphere EXplosives (ATEX) and therefore comprises 12 AP300 wireless access points installed in ATEX1 approved enclosures. The ATEX1 Antenna solved the RF and Environmental issues, whilst 2 WS5100 wireless switches in the computer communications room managed the network, allowing additional capacity as more warehouses are built. The AP300s create a comprehensive wireless network which is easy for the team at Dewar's to manage, via the WS5100 wireless switch. The wireless switch contains state-of-the-art security measures, including smart

intrusion detection and protection against denial of service attacks, so the IT team at Dewar's can be sure that the network is always safe from intruders.

The team at Dewar's chose the ATEX MC9000 mobile computer for use in the warehouses because of its wireless capabilities, built-in barcode scanner and rugged form. A wireless device would enable a cable-free environment in the warehouses and therefore ensure that Dewar's was compliant with regulations concerning fireproofing. In addition, the MC9000 allows employees to have the freedom to move around the warehouse for example to check cask information, whilst still having access to the same information that would be available if they were sitting in the office.

"A few years ago a wireless system in the whisky industry was unheard of and didn't seem feasible. Now it is a reality for us. All the cables are located outside of the warehouse, making the company fully compliant with health and safety requirements," continued John McKee. "The MC9000s allow our staff to pull up a 3D layout of the warehouse at the touch of button so they can pinpoint the exact location of a cask in seconds. In addition, the new solution links back to our core ERP system, meaning that all employees have real-time access to the information they need."

To make sure that the system met all of Dewar's requirements, Motorola, RealTime and Dewar's worked together closely on the design and implementation of the final solution, ensuring that Dewar's had all the functionality it wanted. The most important aspect of this was the ability to know exactly where a cask is located in the solid wall of casks stored, as once a cask is lost, it may never be found again. The ability to plan how casks could be withdrawn from stock minimizing the number of movements is also vital (a cask starts with 250 litres of whisky), as it may be many years before a cask is required again. The staff at Dewar's reviewed many systems from different suppliers, but the solution from Motorola and RealTime provided everything the company needed.

In addition to the wireless network being set up in the warehouse, the Dewar's IT team took the opportunity to overhaul all of its operations, and installed Motorola's wireless network in its factory and its offices. This was to enable seamless communications and access to company-wide systems from any part of the site.

The results: Saving time with wireless

The IT team at Dewar's has found that the stock control system is now more robust following the introduction of the Motorola wireless solution. With the new solution, employees are no longer reliant on paper-based information to find casks, which speeds up the entire process and frees up employees' time to focus on other tasks. Additionally, employees now have the capability to immediately update the system as soon as a cask is moved.

As the staff at Dewar's were involved in every aspect of the system design, they were able to specify and control the steps and processes in the application running on the mobile computers. This meant that should these processes change, for example, the stock checking procedure, the in-house IT team can easily update the application accordingly. In addition, the wireless network has allowed the team at Dewar's to update the central system easily, and then roll out these updates to all the devices instead of having to visit each device individually.

"Being able to see the solution for ourselves at Motorola's offices before purchasing it was a big bonus. We knew it would work and any problems could be ironed out in the testing facility before implementation," concluded John McKee. "Now it's in place, we are so impressed with the way it is working and the time it is saving us, we are looking to roll it out to another five newly-built warehouses. In addition, we are also looking into using the system to control all of our stock, including bottles and labels, as well as the casks."

About Motorola

Motorola is known around the world for innovation in communications. The company develops technologies, products and services that make mobile experiences possible. Our portfolio includes communications infrastructure, enterprise mobility solutions, digital set-tops, cable modems, mobile devices and Bluetooth accessories. Motorola is committed to delivering next generation communication solutions to people, businesses and governments. A Fortune 100 company with global presence and impact, Motorola had sales of US \$36.6 billion in 2007. For more information about our company, our people and our innovations, please visit www.motorola.com.

About RealTime DC Ltd

RealTime is a distributor of Automated Identification and Data Capture products comprising the best solutions for major ERP products such as BAAN and BPCS, combined with the hardware and services to provide a complete turnkey solution to its clients.



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