



Monitoring the health of Spain's palm trees with BlackBerry solution

Founded 15 years ago at the Agronomist School in Cordoba, Fertinyect developed an injection system to provide an antidote for trees suffering from nutritional deficiencies and disease. The success of the technology led the company to be awarded with the silver medal at the 16th International Exhibition of Inventions, New Techniques and Products in Geneva.

Fertinyect developed an application method for nutrition and plant health solutions that allows the antidote to be inserted directly through the trunk into the tree's vascular system using low pressure injections. The technique does not involve any upfront investment or maintenance expenses, and the only cost is related to the number of doses required for the trees being treated.

The Challenge

The Red Palm Weevil is currently the most serious disease affecting palm trees in Spain. Although this plague originated in the tropical areas of South East Asia and Polynesia, it has also inhabited the Arab mainland for the last twenty years. More recently, it has spread, colonising the majority of countries in the Mediterranean basin as a result of the mass importation of palm trees from infected areas. The disease was first discovered in Spain in 1994 in Almuñécar, Granada.

Since the introduction of the Red Palm Weevil to Spain, several thousand palm trees have died across the country. The scale of the blight is largely due to the difficulties faced when trying to identify affected trees, especially during the early stages of infection, as well as the complexity involved in treating them. The challenge was to find an efficient and effective way of monitoring and controlling the plague in order to prevent it from spreading to other areas, and ensure that the new, stricter import regulations were being adhered to, which had come into EU law since the introduction of the disease.

Benefits

Solution to monitor trees

Up-to-date information on the move

Better planning through GPS

Data uploads through Bluetooth

Reduced time & costs

The Solution

In order to improve the methods being used to monitor this plague and combat the Red Palm Weevil disease, Fertinyect called upon AtelMedia, a member of the BlackBerry® Alliance Program, to create an application for the BlackBerry® smartphone, through a web service, to provide a completely mobile and accurate and ultimately very efficient, monitoring solution to the problem.

AtelMedia has extensive experience in developing applications for BlackBerry smartphones using RFID (Radio Frequency Identification) technologies to configure IT programs. Fertinyect was quick to understand how such technologies could be used to help monitor the plague and in turn combat the Red Palm Weevil disease.

The application is made up of two basic components; firstly, an individual electronic identification device – a tag or chip – is inserted into the palm tree to act as a data storage device. The BlackBerry smartphone then acts as a reader/recorder of the chip's data, via Bluetooth, and synchronises this data on-line with Fertinyect's central management software. In addition, the BlackBerry smartphone can be used to take photographs to produce a more accurate record of visible symptoms of the disease. Using the AtelMedia application on BlackBerry smartphones, it is possible to carry out a complete assessment of the health of the palm trees, as well as control the treatments applied to each tree in accordance with its geographical location, whilst on-site.

Juan Barbado Montero, manager of Fertinyect said, "The BlackBerry application makes it possible to produce a detailed medical history of each tree from the point of entry into the European Union to the exact location where the tree is planted. This reliable information system ensures that we are complying with the most recent regulations implemented by the European Commission concerning this plague".

The Benefits

Although Fertinyect has not calculated a financial return on investment, they understand the benefits rely on a more precise tool to monitor palm trees with immediate access to treatment information and therefore reducing costs.

An up-to-date record of each palm tree's treatment history is available at all times. Specific data from each palm tree is refreshed in real-time and recorded on the move. This provides Fertinyect with precise information at the time of analyzing palm trees. Computers are used by treatment specialists to monitor the progress of each palm tree, via the RFID tag and specific GPS coordinates. The time needed to process data is also reduced thanks to the online synchronisation available through the central software function.

Cost reduction has also been a key benefit. Specialists responsible for monitoring and treating palm trees can plan their work route more efficiently and locate trees that need to be treated more easily and quickly, by doing this they avoid unnecessary travelling and they can prioritize their visits. The quality in client service has improved. The inventory which is carried out for each tree is recorded along with the GPS location, so that the geographical location, health report and photographic evidence are all recorded together, making resource management more efficient.

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Manager
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AATELMEDIA offers a wide range of products and services under two categories: AtelMedia IT, for network design and computer security, and AtelMedia Solutions, whose efforts are focused on custom software development, especially in BlackBerry smartphones.