



SATELLITE CONTAINER TRACKING



New device sends radio from inside steel containers

Container ships are the life blood of global trade, transporting raw materials and manufactured goods across the globe. But with fewer than 2 per cent of containers x-rayed or physically checked at customs, they also present a security risk. Thanks to an EU-funded project, cutting-edge tracking technology designed to make cargo shipping significantly safer and more efficient, could soon be commercially available.

The original ISOTRACK project, which was completed towards the end of 2011, successfully developed a new system of monitoring and tracking containers throughout the supply chain. Major innovations include the development of a composite container door that is transparent to radio frequency, embedded electronic systems to monitor the internal condition of the container, and the wireless transmission of information from inside the container without the need for an external antenna.

There are already a number of different tracking devices on the market that enable businesses and authorities to determine, say, the location or status of a particular container. What makes ISOTRACK technology so innovative is that it is capable of getting a radio frequency (RF) signal out of a steel container. "This device is also the only one that we know of that is integral to the container; there are no external bits that can be knocked off or tampered with, unlike a lot of existing systems," says project coordinator Dougie Bryce.

The main objective of the ISOTRACK II project, which began in January 2013 and is due to end in December 2014, is to demonstrate, through field tests, how the new tracking technology works in practice and to underline the potential benefits to business and authorities.

In effect, the project is a good example of EU funding bridging the gap between product development and the realization of a successful commercial outcome, something that is not always straightforward for many SMEs.



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Dougie Bryce - Project coordinator

“The moment something is put in the container it is tracked and reported, from anywhere that has GPS coverage,” says Bryce. “The device is fitted with low-level radiation detection as standard, in addition to heat, CO2 sensing etc. If every container was kitted with this technology, this would constitute a huge step forward in countering terrorism.”

ISOTRACK also provides clear benefits to business, by offering detailed tracking and ensuring that every product is accounted for. “If you put 500 TVs in a container, you’ll know if you still have 500 when you unload,” says Mr Bryce. “You’ll also have instant stock control and instant inventory available - electronic documents can be sent to port and customs as soon as the container is loaded.”

Of course, many an innovative idea – particularly from the SME sector – has failed to see the light of day because of high R&D costs, low industry profile and lack of support. The purpose of ISOTRACK II is to give the consortium a helping hand in moving from the product development stage to market.

“We are big fans of EU funding initiatives,” says Bryce. “Without it, we simply could not have got started. It would have been impossible to have developed a prototype, with no way of taking this prototype to market. Without this current project, our innovation would have withered on the vine.”

Sea trials began in April 2014. It is envisaged that around 100 containers will be used in the demonstrations, on ships ploughing regular freight lines. “This all costs money of course,” says Bryce. “And again, without the EU this would have been impossible. We’ll also be continually developing and testing the software, and expect to have a product ready for market by the end of 2014.”



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