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Results of the EU project for an effective Container Inspection at Border Control Points (C-BORD) in Support to Customs

An efficient non-intrusive inspection (NII) of containerised freight is critical for customs, as freight containers are potential means of smuggling, illegal immigration or even trafficking nuclear material and chemical warfare agents. Thousands of freight containers and trucks pass every day at any small to medium port or border within the EU which potentially makes them an ideal means for the illicit transport and trafficking of radioactive and nuclear materials (including waste and contaminated commodities) as well as for the smuggling of drugs and narcotics, tobacco, weapons, explosives, chemical warfare and humans. This creates many challenges for customs and border control authorities who must ensure that adequate inspection means and solutions are in place for an optimum interdiction chain that is safe, practical, and cost-effective and on the other hand remain non-intrusive in order to facilitate trade on one hand and ensure safety and security of the society.

Thus an efficient non-intrusive inspection (NII) of containerised freight is increasingly important to trade and society, as the criminal disruption of supply chains can severely harm the economy, as well as endanger public health and safety. The current methods for container NII combine intelligence-supported risk analysis and X-ray technology to combat illicit trafficking. However, this approach is limited due to health and safety regulations, long operator processing time to manually check containers in case of a doubt and a lack of reliability due to insufficient ability to distinguish between innocent items and threats.

The objectives of C-BORD was to enable customs to deploy comprehensive and cost-effective solutions for the NII of containers in order to protect the European Union sea and land borders. To that effect and following the success of earlier EU projects such as SCINTILLA, the Effective Container Inspection at Border Control Point (C-BORD) project was launched in June 2005, funded (11.8 M€) within the EU H2020 programme to support a consortium of eighteen partners (industry, universities, research centres, users) and from nine EU member states not only to develop but also integrate five detections and inspection technologies. The technologies selected and pursued namely the next generation cargo X ray, tagged neutron interrogation, evaporation (or sniffer), advanced radiation portal monitors and photo fission were tested in laboratories such as at the JRC-Ispra, CEA (France) and EK (Hungry) followed by extensive field testing (on targeted use cases) prior to closure of the project by a well-attended public workshop which included a demonstration at the Rotterdam harbour. Most importantly and for the first time, the data generated by the five technologies were collated very conveniently in a single graphic user interface to simplify, speed up and an effective and correct customs decision-making.

This paper will describe the project, its structure and the technologies developed and integrated and will give its main results and conclusions.

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