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Integrating X-ray Technologies with Intelligent Transportation Systems for the Maritime Security

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ABSTRACT

Although X-ray scanning technology is proven to be useful for automatic detection of potential dangers or illicit contents inside containers, its usefulness may be constrained unless it can be embedded within the system-wide decision support tool. Such a tool includes an intelligent transportation system (ITS) which is designed to improve transportation safety and mobility through the seamless integration of information and communication technology, transportation infrastructure, and shipping vessels. This paper is one of the first to combine X-ray scanning technology with ITS for cargo inspection procedures and gauges its usefulness for enhancing maritime security in global supply chain operations.

KEYWORDS: Maritime logistics, supply chain security, intelligent transportation system, cargo inspection, X-ray technology