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e-Maritime for automating legacy shipping practices

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Abstract

The European Commission has been actively promoting the competitiveness of the European maritime transport sector and a more efficient use of resources through the better use of Information and Communicating Technologies (ICT), with a core vision to enable seamless communication in the sector. This paper describes how the FP7 eMAR project successfully developed, tested and assessed tools to further streamline maritime operations. These tools included an an eMAR Ecosystem, the Inlecom i-Ship Intelligent Ship Reporting Gateway, and two specific interoperable platforms: the DANAOS Collaboration Platform and the InleMar Ecosystem. These applications will help transmit information to all relevant stakeholders (authorities, agents, ship masters, of/onshore shipping company facilities) in an automated and smart manner. The transmitted information, which includes legally required information such as the IMO FAL Forms, as well as business related information, such as Estimated Time of Arrival or Port of next call or availability, will significantly improve not only the shipping related operations but also the entire upstream and downstream supply chain operations.

Keywords: e-Maritime, seamless communication, maritime operations, interoperable platforms, intelligent ship reporting formalities

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1. Introduction

Europe's e-Maritime initiative focuses primarily on the shore-based facilitation and on the development of electronic technology, processes and services to facilitate the flow of goods over sea, and consequently the ships that carry these goods to and from and around Europe. The European Commission supports the development of applications for administrations, ship operations, ports/terminals, transport logistics and improving life at sea and promoting seafaring.

The European Commission's e-Maritime initiative therefore aims at optimising maritime related processes and reducing the administrative burden. This will be done by identifying existing practices and regulations and by proposing improvements and simplifications deriving from use of electronic systems and information, making use of Maritime Single Windows and SafeSeaNet. The supporting EU polices and legislation for the implementation and streamlining of maritime operations using advanced Information and Communication Technology is explained as well as the role of Maritime Single Windows.

eMAR project was to support the EC's e-Maritime initiative and develop an e-Maritime Strategic Framework and to further streamline maritime operations. eMAR successfully delivered market driven solutions for enhanced collaboration in maritime transport, including the e-Maritime Strategic Framework (EMSF), which described processes, recommended standards, and built technologies that enable advanced Information and Communications Technology, based on cooperation among all the maritime transport stakeholder groups. It also delivered an eMAR Ecosystem, the Inlecom i-Ship Intelligent Ship Reporting Gateway, and two specific interoperable platforms: the DANAOS Collaboration Platform and the InleMar Ecosystem.

The two fully interoperable platforms will significantly reduce IT complexities and costs and accelerate wider adoption of advanced information and communication technologies by different users throughout the maritime and the supply chain industry. All of these e-Maritime applications will help transmit information to all relevant stakeholders (authorities, agents, ship masters, of/onshore shipping company facilities) in an automated and smart manner.

Nomenclature	
AnNA	Advanced national networks for administrations project
COMCIS	Collaborative Information Services for Container Management project
eCompliance	electronic compliance project
e-Freight	European e-Freight capabilities for Co-modal transport project
EPC	Electronic Product Code
eMAR	e-Maritime Strategic Framework and Simulation based Validation project
CRS	Common Reporting Schema
EMSA	European Maritime Safety Agency
EMSF	E-Maritime Strategic Framework
IMO	International Maritime Organisation
MESA	Maritime Europe Strategy Action
MSW	Maritime single window
NSW	National single window
PCS	Port Community System
SKEMA	Interactive knowledge platform for maritime transport and logistics project
SME	Small to medium enterprise
SSN	SafeSeaNet
SW	Single window
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
UNCTAD	United Nations conference on trade and development
VTMIS	Vessel Traffic Monitoring System
WCO	World customs organisation