



REPORT

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Aids to Navigation Knowledge and Innovations

**From the Torre de Hercules to e-Navigation
and Beyond**

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10 rue Gaudines
78100 Saint Germain en Laye, France
Telephone: +33 1 34 51 70 01 Fax: +33 1 34 51 82 05
e-mail: contact@iala-aism.org Internet: www.iala-aism.org

15.5 Increased Sustainability of Sea Transport by Integration of ICT and ITS Solutions: The MONALISA 2.0 project

Author and presenter



Mr Mr Anders Brödje, Swedish Maritime Administration, Sweden.

Abstract

Efficiency of ship operations can be further enhanced by the introduction of Sea Traffic Management (STM). The MONALISA 2.0 project contributes with a holistic approach to the maritime domain by developing means for the sharing of information in order to distribute, elaborate and process common data within the whole transport chain. Through the introduction of ICT and ITS solutions, STM is further advanced by the development of new tools enabling more efficient planning, booking, monitoring of sea traffic, cargoes and passengers. It is crucial that these e-solutions are developed in a common manner and experiences from the EU-project SESAR, within the aeronautical domain, is used in order to find the safest and most cost effective solutions. As a carrier of information, the voyage numbers will provide the ultimate keys for efficient cross sector intermodality, in order to obtain real sharing of maritime related information. By the implementation of this enhanced STM service it is envisaged that the environmental footprint of sea transport will be reduced even further while still reducing costs and raising safety levels.

The key points of the presentation were:

1. Flow Management is established by: Single ship reporting areas, Area management (dynamic No-Go-Areas), Enhanced monitoring in critical areas, Arrival/departure management, and Capacity management.
2. Strategic Voyage Management Effective voyage management will, in full effect, allow for non-stop voyages at most economic speed from departure to arrival, with ports available and ready from loading/unloading “on-time” upon arrival. Strategic Voyage Management is enabled by: Single voyage ID, and Voyage ID assignment.
3. Dynamic Voyage Management builds on a Strategic Voyage Plan and Tactical Route Exchange. The Strategic Voyage Plan is an iterative operation between involved parties to be: Optimized, Supervised, Assisted, and Validated. The Tactical Route Exchange is a Dynamic Voyage Plan in conning mode on-board and builds on; Anti-collision purpose, AIS for transmission, Involves only parts of the voyage plan, Captain is always in command, and COLREGS are always in force.
4. Port CDM (Collaborative Decision Making) enables four collaborative arenas facilitating sustainable transports as a whole: Collaboration among actors operating within the port, Collaboration between the port and actors realizing sea voyages, Collaboration between the port and actors realizing inbound & outbound transportation (besides sea voyages), and Collaboration between ports within each collaborative arena.
5. SWIM (System Wide Information Management) facilitates the sharing of information between different systems supporting the STM make the right information available at the right place and at the right time.

Questions

A question was raised regarding contracts already in existence that need to be taken into account when optimising shipping to save money such as bunkering or chartering contracts which may not be an incentive to ship owners and operators. The speaker said that the project had produced a report on Charter Party aspects that highlighted possible changes such as sharing benefits of just-in-time arrival but he acknowledged that it was a legitimate issue that needs to be further investigated.

16 Technical Session 3.4 – Global Navigation (4)

Chair: Mr Michael Hoppe, Federal Waterways and Shipping Administration, Germany.

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