



REPUBLIC OF INDONESIA

INFORMATION PAPER

MARINE ELECTRONIC HIGHWAY (MEH) IT SYSTEM

Noted by Indonesia

For

**THE 5th MEETING OF CO-OPERATIVE MECHANISM
ON SAFETY OF NAVIGATION
AND ENVIRONMENTAL PROTECTION
IN THE STRAITS OF MALACCA AND SINGAPORE**



**DIRECTORATE GENERAL OF SEA TRANSPORTATION
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Marine Electronic Highway (MEH) IT SYSTEM

Submitted by Indonesia

BACKGROUND OF THE MEH PROJECT

The Straits of Malacca and Singapore (SOMS), situated between Sumatera Island and Malay Peninsula, are approximately 1000 kilometers long, 300 kilometers wide at their north-west entrance, and just 12 kilometers wide at their south-east entrance, between Singapore and Indonesia's Riau Archipelago.

The Straits of Malacca and Singapore are shallow, with narrow channels, irregular tides and hence are hazardous to navigation for large ship

Despite their difficult navigational features, the Straits are the shortest and hence the preferred shipping route between the Indian Ocean and the South China Sea, and for oil tanker trading between the Persian Gulf and the fast-growing countries of East Asia

Although the current maritime safety infrastructures and regulatory mechanism in place in the Straits of Malacca and Singapore have reduced the frequency of ship collision, grounding and oil spills, occasional incidents have occurred in recent years and some of these incidents have caused by oil spills.

An innovative approach to improve the management of maritime traffic and marine environment protection in the Straits could ameliorate these impacts and enhance the carrying capacity of the Straits for various uses and activities.

MEH IT SYSTEM IMPLEMENTATION

Since MEH Data Centre IT System in Batam handed over from IMO to the Government of Indonesia in this case the Directorate General of Sea Transportation on 3 August 2012, the operation of the MEH IT System performed by 3 operators who have an Information Technology background and have been trained the operation of MEH Data Centre assisted by staff of PMO Batam MEH Data Centre. It is expected that it will maintain the continuity and availability of services to users MEH IT System.

The electricity power supply from main source and backup power are available and also upgrading electrical network installation by adding components of electrical safety to protect the system from electrical overload.

In order to enhance the performance of the MEH IT system, Indonesia Government will install an Automatic Transfer Switch (ATS), which functions to maintain the continuity of supply of electric power, increased storage capacity of data server as much as 12 terabytes, improved temperature and humidity of server room, upgrading intranet network and upgrading the coverage area of AIS Receiver MEH IT System. All of the above items will be installed next month. Upgrading the bandwidth of the Internet from 3 Mbps to 10 Mbps will

be held next year in anticipation of an increase in users who will access the Web Server MEH Data Centre and also room renovation in terms of interior design.

To realize one component of the MEH IT System, oil spill modeling software will be installed in October 2012 (MOHID and AQUASAFE). This software is concerned with the modeling of oil spills caused by tanker. And as a follow up of the software that has been installed in MEH IT System, there will be training at the end of October.

THE NEED FOR ESTABLISHMENT OF MEH PROJECT

Recent enhancements in maritime safety infrastructure and regulatory mechanisms have improved navigational safety and traffic flow. Indonesia, Malaysia and Singapore have built infrastructure is efficient enough to monitor the ships sailing in the Strait of Malacca. However, the threat of collisions and groundings and of consequent environmental damage is still significant and, with rapid traffic growth, is increasing.

THE BENEFIT OF MEH PROJECT

The Marine Electronic Highway project aims to establish a regional mechanism in the Straits of Malacca and Singapore for enhanced maritime safety and marine environment protection with a sustainable financial component in a co-operative arrangement with the three littoral States of Indonesia, Malaysia and Singapore and partnership with the Republic of Korea, the International Hydrographic Organization (IHO), the International Association of Independent Tanker Owners (INTERTANKO) and the International Chamber of Shipping (ICS).

The MEH system with its environmental modules can be used in marine pollution response and control such as to predict the direction and speed of oil spill and aid in response and clean-up. It is also possible to use it to identify and track ships that illegally discharge their bilges or dump other oily wastes.

HAND OVER MEH IT SYSTEM

1. Through an agreement between the IMO and the GMT Cybernetics of Korea, Marine Electronic Highway (MEH) IT System with supporting functions has been setup in the Project Management Office (PMO) in Batam, Indonesia. A technical component of the system and the upgrading was completed in June 2012.
2. The implementation of hand over MEH IT System from the IMO to the Government of Indonesia has also been made by the Secretary General of IMO on August 3, 2012 in Batam, which was attended by the three littoral states, World Bank, Republic of Korea, ICS, INTERTANKO and the representatives of the concerned and interested parties.

THE FUNCTIONS OF MEH IT SYSTEM

The main function of MEH IT System is to integrate the data from Indonesia, Malaysia and Singapore in the form of dynamic data and Environmental Marine Information Overlays (E-MIOs) for the user. MEH portal test run was conducted using data from Malaysia and Singapore as well as domains that www.mehsoms.com

1. EyeMap-Web

EyeMap-Web features have four main elements:

- a. Electronic chart
- b. Top menu
- c. Bottom menu
- d. Weather information display

Through the EyeMap-Web, we can search ships around the Strait of Malacca and Singapore by using some functions such as COG, SOG, position (latitude and longitude), Nationality, CPA, TCPA, etc., and also can find out the weather conditions in the surrounding waters of the Straits of Malacca and Singapore such as wind speed and direction, tide, air temperature, and current.

2. Features of E-MIO Objects

Through this feature we will be able to know about the mangrove, coral reef, marine protected area, vessel accident place and fishery areas

3. Situation Management System (SMS) Function

This function is associated with the management of situations includes recent news, recent notices, status reports, situation reports statistics and links for subsystems

4. Database Management System

This function is associated with vessels management system, user registration and sensor data.

THE COMPONENT OF MEH IT SYSTEM

1. MEH System Design, Coordination and Operation
2. MEH System Development
3. Ship Board Equipment and Communications
4. Marine Environment Protection
5. Information Dissemination, Evaluation and Scale Up

CONTINUATION OF MEH PROJECT AND FINANCIAL SUPPORTING

1. MEH Demonstration Project Phase will end in December 2012, which had been the Decision Maker Agency is MEH Project Steering Committee (PSC), which meets once a year, consisting of the Coastal State, IMO, World Bank, the State Observer Users and Stakeholders.
2. In the future, after the MEH Demonstration Project Phase terminate, we propose that TTEG can take over the role of the PSC decision. Since placing the role of decision-making and coordination MEH under TTEG will be consistent with the coastal state responsibility for the safety of navigation and environmental protection in SOMS
3. The need for financial support from various parties (IMO, Littoral States and MEH User) for the continued operation of the MEH IT System that are not necessarily absolute and continue to be the responsibility of Indonesia Government for example the salary cost of IT Specialist and Administrative Assistant about \$5000 per month. Consider MEH IT system itself not just for the three littoral states but also for users at the Strait for safety navigation and environmental protection in the Straits of Malacca and Singapore.