MARINE ELECTRONIC HIGHWAY
IN THE STRAITS OF MALACCA AND SINGAPORE

DEVELOPMENT OF SUPPORTING ELEMENTS FOR FUTURE AND SUSTAINABLE OPERATION

submitted by

DIRECTORATE GENERAL OF SEA TRANSPORTATION
OF THE REPUBLIC OF INDONESIA

7TH COOPERATION FORUM

UNDER THE COOPERATIVE MECHANISM ON SAFETY OF NAVIGATION
AND ENVIRONMENTAL PROTECTION IN THE STRAITS OF MALACCA AND SINGAPORE

LANGKAWI, MALAYSIA 22 SEPTEMBER 2014

BACKGROUND

- Growing Traffic of the Straits
- Characteristics of the Straits
- Efficient Passage through the Straits
- Biodiversity of the Straits
- Ratification of UNCLOS, SOLAS & MARPOL
- Marine Incidents and Oil Pollutions in the Straits
- STRAITREP

DEVELOPMET of the MEH-SOMS

- 1996 Concept of MEH
- 2005
  - MOU on Development of Regional MEH-DP (3LS & IMO)
  - MOA (3LS, IHO, INTERTANKO, ICS)
- 2006 Implementation MEH-DP
- 2012 Hand Over MEH Data Center in Batam by SG-IMO (Supported by IMO & ROK)
- 2012 - 2014 Enhancement by 3 LS

GENERAL FEATURES

- Links shore-based marine information and communication infrastructure
- Enable the integration of marine environmental management and protection systems
- Precision navigation system (ENC, ECDIS, DGPS and AIS Network)
- Allows for an integrated digital navigation for the provision of vital marine information such as tides and current to ships on a "real-time" basis

OBJECTIVES

Enhance maritime services, improve navigational safety and security and promote marine environment protection and the sustainable development and use of the coastal and marine resources of the straits' littoral states, indonesia, malaysia and singapore.

Enhance the transparency of navigation and overall traffic control and will provide a basis for intensive monitoring of the real-time situation of navigation, which would help in the efforts of relevant countries to reduce piracy and armed robbery in the straits and enhance maritime security throughout the region

GENERAL SYSTEM OVERVIEW

- MEH Data Center in Batam
- MEH System in Indonesia, Malaysia and Singapore
- Back-Up Data Center in Malaysia and Singapore
- IP Detector in Batam
- Weather Sensors and Tide Gauge (*One Fathom Bank, Pulau Undan, Tanjung Pagar, Raffles, Horsburgh, Tanjung Medang, Hiyu Kecil and Nongsapura*)
- AIS Base Station at Batam and Tanjung Medang
- Oil Spill Modeling Software
- Differential Global Positioning System (DGPS) at Dumai
- Ocean Data Buoy at The Entrance of Phillips Channel


EYEMAP-WEB - Windows Internet Explorer
http://172.16.1.8/meh/portal/webVms.do
2014.09.11.THU
10 : 57 : 07
MEH
E 104° 15' 11.95"
N 1° 12' 42.31"
Iyu Kecil
Wind 24.0 kts
162 °
Temp 29.2 °
Humidity 0 %
Pressure 1005 hPa
Current 0.0 kts
0 °
Tide 0.0 m
Time 09-11 10:27
Tanjong Pagar
0m
Raffles
2.6m
Nongsa Point
3m
Horsburgh
Weather Information
Weather
View
Sensor
Nation
Position
Nongsa Point Indonesia E 104° 05'26.81" / N 1° 12'10.80"
Pulau Undan Malaysia E 102° 20'06.24" / N 2° 02'51.66"
Raffles Singapore E 103° 44'29.29" / N 1° 09'36.43"
Horsburgh Singapore E 104° 24'26.64" / N 1° 19'49.02"
Iyu Kecil Indonesia E 103° 21'03.78" / N 1° 11'17.10"
Tg. Medang Indonesia E 101° 39'54.36" / N 2° 07'31.01"
One Fathom Bank Malaysia E 100° 59'44.92" / N 2° 53'22.49"
Iyu Kecil Indonesia E 103° 21'03.78" / N 1° 11'17.10"
[Control]
1 : 200,000
V 1.0.6.2 (21 APR 2012)
http://172.16.1.9\ISAPI_KCS.dll\
Program started : 11-09-2014 09:54:41
E-MIO loaded! (Loading time : 03 minutes 20 seconds)
Done
Internet | Protected Mode: Off
140%
10:57 AM

POTENTIAL ROLES OF MEH-SOMS

- ***INTEGRATED MARINE INFORMATION SYSTEM*** ***that utilizes information system based technology so that it is*** ***OPEN FOR FURTHER EXPANSION*** ***as well as integration with other data, communication and information systems.***

- ***STRATEGIC MODALITY*** ***for the*** ***FUTURE IMPROVEMENT*** ***of Safety of Navigation and Marine Environmental Protection in regard with current international concerns and developed issues such as the development of e-Nav, UKC-RTM, global single windows, higher accuracy PNT, shore based (cloud) information center for the benefit of navigating vessel and shipping industries, and in particular the increasing of marine traffic and activities.***

CHALLENGES

- Intensify the operation of the MEH-SOMS and the use of services it provides
- Sustainable operation and improvement of operational performance
- Gaps on the implementation of sustainable operation and performance improvement
- Gaps on the preparedness for expansion of service and integration with other technologies and systems

PROPOSED SOLUTIONS FOR CURRENT SITUATION

- Capacity building
- Development of standard operation and procedure
- Development of manual for users
- Standardization for system architecture, applications, database and data exchange interface
- Invite voluntary or recommendatory participation
- Exploration of the most possible, affordable and reliable data transmission network

METHODS
(ways forward)

- **Management, Operator and Technical Trainings**
- **Study and Formulation of Standard, Manual and SOP**
- **Study and Formulation of the Straits Network**
- **Formulation of Concept for Effective Implementation of MEH through the Continuous Participation of Ships**

BENEFITS

- ***Sustainable and reliable operation, effective implementation and optimized utilization of the MEH-SOMS***
- ***Progressively actuate and provides more guarantee on the effective and successful implementation of any high-technology based system for the improvement of safety of navigation and environmental protection in the Straits***
- ***Enhanced preparedness of system and human resources for future implementation of advance technology to support the safety of navigation and environmental protection for the international navigation in the Straits.***

VIEWS & OPINION ?

PARTICIPATIONS &
CONTRIBUTIONS !!!

THANK YOU