KONGSBERG NORCONTROL IT LAUNCHES ‘SESAME STRAITS’ E-NAVIGATION PROJECT

Kongsberg Norcontrol IT will lead a ground-breaking three-year project called SESAME Straits (Secure, Efficient and Safe maritime traffic Management in the Straits of Malacca and Singapore), to significantly improve the safety and efficiency of ship navigation across the world. An important test-bed for IMO’s e-Navigation implementation strategy, the objective of the SESAME Straits Project is to develop and validate a revolutionary concept for a next generation Ship Traffic Management System (STMS) in the Straits of Malacca and Singapore (SOMS).

Partly funded by the Research Council of Norway, through its Marine and Offshore (MAROFF) fund, the NOK 23 Million SESAME Straits project is the first to be delivered under the international Straits e-navigation Alliance. The Kongsberg Norcontrol IT-owned project will receive input and guidance from the Straits e-navigation Alliance High Level Advisory Board (HLAB) which met in London on 16th May. The HLAB includes governmental members from Singapore, Norway, Malaysia and Indonesia and experts from maritime organizations such as IMO, IHO, IALA, ICS, BIMCO, CIRM, IEC, and the Research Council of Norway. The HLAB is co-chaired by Norway and Singapore.

As one of the leaders in innovative development of maritime domain awareness software and Vessel Traffic Services (VTS) technology, Kongsberg Norcontrol IT has already established a best-of-breed C-Scope VTS system for the Maritime and Port Authority of Singapore (MPA). This experience will benefit the company’s work on the new SESAME Straits project, which will build upon the earlier IMO Marine Electronic Highway demonstration project.

Siddi Wouters, Chief Technology Officer and Project Manager for SESAME Straits at Kongsberg Norcontrol IT, commented, “The project will be a highly-important test-bed for IMO’s e-Navigation programme. It will provide contributions to its implementation and allow the project results to be demonstrated in a complete and realistic environment with key e-Navigation stakeholders participating.

“Inherent in the project goal is the ability to develop a new digital communication infrastructure for exchanging information between ship and shore. The new infrastructure utilises emerging new possibilities, including the VHF Digital Exchange System over terrestrial and potentially over satellite links as well as the e-Navigation S-100 framework for data exchange. This will be a critical enabling factor for the whole e-Navigation concept. “The project will revolutionise traditional VTS systems which today only provide information, organisation and assistance services locally. The
innovation of the proposed C-Scope system is to provide a co-operative platform that will be able to predict traffic for tactical as well strategic planning for several days in advance of arrival.”

The intelligent STMS for SESAME Straits will be based on shared situation awareness and co-operative decision making between the ship’s bridge team and shore personnel. Bringing these elements together through e-Navigation for ship and shore side will achieve the key objectives of just-in-time arrival and minimising vessel traffic hot spots. This will result in benefits including reduced ship bunkers, efficient traffic flow through narrow and restricted waterways, reduced navigation risk, reduced fuel consumption, reduced CO\textsubscript{2} emissions and better utilisation of port resources such as anchorages, berths and pilots.

John Murray, Director – Marine, International Chamber of Shipping (ICS) added, “The SOMS is one of the busiest waterways in the world, and our members have for many years been keen to see improvements such as those that SESAME Straits has the potential to provide. We look forward to participating with the SESAME Straits Project team as it seeks to further improve navigational safety and protection of the environment.”

Captain M. Segar, Assistant Chief Executive (Operations), Maritime and Port Authority of Singapore, added, “This project is a demonstration of the close co-operation among the littoral states and stakeholders of SOMS, all coming together with a common goal of enhancing navigational safety and protection of the marine environment in the Straits of Malacca and Singapore (SOMS). The MPA is pleased to be able to participate and contribute to this useful initiative. With Kongsberg Norcontrol IT’s strength and technology, and the expertise from the various stakeholders, I am confident that this project will enhance cooperation amongst the littoral states.”

Steve Guest, Business Development Director for Kongsberg Norcontrol IT, concluded by saying, “The primary objective is to develop and, more importantly, validate the new e-Navigation functionality that we will be developing for the C-Scope VTS system, by testing it in an operational environment. Safety and efficiency is the focus, achieved by identifying the traffic hot spots and recommending an optimal route for the vessel. We are leveraging the combined technologies available in the Kongsberg Group of companies for the SESAME Straits project. These include the ship’s integrated bridge system, ship to shore data communications, satellite based sensors and services as well as the world renowned shore-based C-Scope maritime domain awareness system...all of which are key for the implementation of e-Navigation.”

Picture caption 2
The Singapore Port Operation Control Centre uses Kongsberg Norcontrol IT’s C-Scope technology.