



# 19<sup>th</sup> IALA Conference 2018

## Incheon, Republic of Korea

### ABSTRACT SUBMISSION — SOUMISSION DE RESUME

**Topic No. / Sujet n° : 2 or 5 or / ou**  
**proposed topic / sujet proposé: If it works in Singapore, it works anywhere**

#### AUTHOR / AUTEUR:

**Title / Titre :** Mr.

**Family name / Nom de famille :** Eliassen

**Surname / Prénom :** Cato

**Title / Titre :** Mr.

**Family name / Nom de famille :** Schuett

**Surname / Prénom :** Todd

**IALA member organisation / Organisation membre de l'ISM :**

Kongsberg Seatex (Mr. Eliassen)

Kongsberg Norcontrol (Mr. Schuett)

**Postal address / Adresse postale :**

Kongsberg Norcontrol  
Bromsveien 17  
N-3194 Horten  
Norway

Kongsberg Seatex  
Pirsenteret, Havnegata 9  
N-7010 Trondheim  
Norway

**Telephone / Téléphone (y compris codes national et régional)**

**KNC Office / Bureau :** +47 33 08 48 00      **Mobile :** +47 930 10 246 (Mr. Schuett)

**KSX Office / Bureau :** +47 73 54 55 00      **Mobile :** +47 930 68 981 (Mr. Eliassen)

**e-mail(s):** cato.eliasen@km.kongsberg.com & todd.schuett@kongsberg.com

#### ABSTRACT / RESUME:

If it works in Singapore, it works anywhere

The SESAME Straits e-Navigation Test Bed is a Norwegian-led and funded project that seeks to develop and validate a new method of ship traffic management through shared situational awareness and collaborative decision support. The project has recently concluded the Sea Trial of e-Navigation technology developed during the past three years, specifically ship-to-shore route exchange using the IEC 61174 format and use of the VDES standard (ITU-R M.2092).

Lessons learned in ship-to-shore route exchange were presented at the IALA-sponsored e-Navigation Underway International 2017 (on the Copenhagen-Oslo ferry), so this paper will focus on VDES, which has progressed to the point where it is possible to develop prototypes and test with real applications.



As part of the SESAME Straits project, Kongsberg Seatex developed such a prototype with support from the Norwegian Coastal Administration. The prototype was tested in both Norway and Singapore, using both ASM and VDE frequencies. While more testing is planned, the main purpose of the testing was to demonstrate the use of applications, not VDES as the communication bearer. Specifically, one goal was to pinpoint the role and benefits of VDES in the e-Navigation concept at an early stage and to promote creative and inventive uses of the system for the future. VDES is expected to replace AIS and reuse the antennas, so it is critical to understand how the VDES prototype works in the rather harsh communication environment onboard vessels, and at a physical shore station together with other VHF transmitters and receivers. Given the level of VHF traffic in Singapore, if VDES works well in Singapore, it will work just about anywhere.

This paper explores the lessons learned from the Sea Trial, including the results of the Sea Trial, a comparison between using ASM and VDE for different types of message transmission, and future e-Navigation test beds for the port of Singapore.

**PLEASE RETURN TO [contact@iala-aism.org](mailto:contact@iala-aism.org) by 31st March 2017**  
**VEUILLEZ RETOURNER A [contact@iala-aism.org](mailto:contact@iala-aism.org) avant le 31 mars 2017**