Title Abstract: VTS and e-Navigation: Traffic organisation by moving haven

Topic: Navigation safety in a digital world
By: Mr Thomas PORATHE | Norwegian University of Science and Technology
Contact e-mail: thomas.porathe@ntnu.no

Dr Thomas Porathe is professor of interaction design at NTNU, the Norwegian University of Science and Technology in Trondheim, Norway. He is specialising in maritime human factors and design of maritime information systems. He has an Information Design PhD from Malardalen University in Sweden on the work "3-D Nautical Charts and Safe Navigation." After working with the Maritime Human Factors group at Chalmers University of Technology in Sweden he 2014 joined the Department of Design at NTNU. He has been working with e-Navigation since 2006 in EU-projects like BLAST, EfficienSea, MONALISA, ACCSEAS, SESAME II and the unmanned ship projects MUNIN, SAREPTA, LOAS and IMAT. He is presently heading the "Human Factors and Remote Operation Centre" work package of the nationally funded AutoShip Centre for innovation driven research at NTNU.

Abstract:

In November 2018 a Norwegian warship collided with a tanker leaving birth at a WestNorwegian oil terminal. The accident happened in an area surveyed by VTS. Luckily there was only material damage and no lives were spilled. However, the frigate involved became a total loss. This accident raises some interesting questions regarding VTS and whether innovations in resent e-Navigation testbeds can be used to enhance the traffic organization service (TOS) and make vessel movements in congested areas safer.

Route Exchange is a means by which voyage plans can be exchanged between ships and between ships and shore. In the recent e-Navigation projects EfficienSea, MONALISA and ACCSES route exchange was investigated and tested with end-users both at sea (in Korea) and in simulators (in Sweden and Germany). The methods allow for routes to be sent from pilots or VTS directly to a ship's ECDIS. As a result of tests in these projects the new route plan exchange format – RTZ - was published by the IEC in 2015. The format allows voyage planes to be time coordinated.

Such coordination can be done by Moving Havens which is a visualisation method used by submarines to ensure that they do not collide under water. This paper proposes to use an adapted version of Moving Havens to organize vessel traffic in an e-Navigation context.

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