

IALA seminar

The IALA e-navigation seminar was held from 2 to 4 July 2007 at Trinity House, London. Eighty-two delegates attended, among them representatives from 23 countries.

The seminar was based on a series of presentations on the subject of e-navigation. Information about the individual components was presented and the seminar explored legal and training issues related to e-navigation. It identified 13 conclusions and nine recommendations.

Conclusions

1. There is widespread support for the concept of e-navigation, which is seen as an attainable goal. The global maritime community must continue to maintain momentum in the evolution of e-navigation.
2. The development of e-navigation must be driven by user requirements; it should be informed but not led by technology. The development of user requirements must be given the highest priority.
3. E-navigation should not be pursued to reduce operational shore side personnel, crew numbers or their competencies.
4. Standardisation (data formats and communication standards) of navigation systems is very important, but this must not inhibit innovation.
5. The S-mode of operation should be supported.
6. Independent and fully redundant position fixing and timing systems are vital for the implementation of e-navigation. Enhanced Loran (eLoran), a terrestrial radionavigation system, is an independent system and dissimilar to GNSS that is capable of meeting the

positioning, navigational and timing requirements for e-navigation.

7. Marine inertial navigational systems (INS) cannot be considered as a primary back up system to GNSS. It can assist in accurate navigation, but for a limited period of time. However, Marine INS can improve a ship's operational efficiency, for example, by providing movement information to the ship's auto pilot and measuring squat and heel accurately.
8. Systems exist for increasing the volume of data communications with ships. But it is important to ensure that existing safety communication resources are adequately protected.
9. There is evidence of increasing coverage of the world's navigable waters by ENCs. By 2010, some 85 to 96 per cent of the main shipping routes should be covered by ENCs. Therefore, it is anticipated that there will be adequate ENC coverage to support the e-navigation strategy.
10. A vessel traffic management framework needs to be in place to accommodate the shore component of e-navigation.
11. Mandatory training, both ashore and afloat, as well as the on-going assessment of personnel, is critical to the success of e-navigation. It is equally important to ensure that trainers and training curricula are kept up-to-date.
12. In developing e-navigation technical standards, intellectual property rights must be respected; the creation of monopolistic situations must be avoided.
13. The development of e-navigation must give due regard to international law, including UNCLOS.

Recommendations

1. Working in close cooperation with international organisations like IMO and IHO, IALA must continue to play an active role in the evolution of the e-navigation concept.
2. IALA must take a pro-active role in the evolution of e-navigation in areas where it has the expertise - marine aids to navigation and VTS; high priority must be given to the users' requirements and the human element.
3. E-navigation equipment manufacturers should consult extensively with shipmasters and shipowners to ensure that user requirements are understood and met.
4. IALA should support the development of the S-mode of operation.
5. IALA should support / take the lead in the development of an international standard for eLoran.
6. IALA should develop the VTM concept in the context of the expanding role of VTS and MEH (marine electronic highway).
7. Authorities should ensure that training of shore side operating personnel and shipboard personnel remains current with developments in e-navigation and is documented in accordance with existing conventions, guidelines and recommendations.
8. Authorities should ensure that simulation is used for proof of concept testing and training.
9. IALA should consider conducting a seminar on e-navigation in approximately two to three years' time.

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