

HYDRO INTERNATIONAL INTERVIEWS GURPREET SINGHOTA

e-Navigation for Increasing Safety



Gurpreet Singhota is Deputy Director/Head of the Operational Safety Section within the Maritime Safety Division of the International Maritime Organisation (IMO) and will therefore play a key role in directing the concept of e-navigation in the years to come. Singhota calls on industry, port authorities and shipping navigation to discuss their needs and requirements with the IMO.

What do you think of the progress made on e-Navigation so far?

The work is progressing quite well. The lead body is the Sub-Committee on Safety of Navigation, which will next meet from 2 to 6 July 2012. The e-Navigation concept is being developed in co-operation with the Sub-Committees on Radiocommunications, Search and Rescue (COMSAR) and Standards of Training and Watchkeeping (STW). At its recent

session in March, the COMSAR Sub-Committee agreed on a final draft list of gaps which are relevant to radiocommunications and search and rescue and of benefit to the work of STW. They also agreed upon further revision of the total list of identified gaps from the training perspective and the NAV for final consideration. The gap analysis identifies areas that the e-Navigation strategy should address, for example the possible lack of bandwidth and unclear assignment of adequate bandwidth for potential e-Navigation communication needs.

What, in your mind, will be the first features to be implemented for e-Navigation (Apps as they are sometimes called)?

It is too early to say. This will be something for the Member Governments of IMO to decide when the implementation strategy plan for e-Navigation is discussed.

Is the integration of AIS AtoNs essential?

This is one aspect. At its last session, the NAV Sub-Committee established a correspondence group to compose the first draft of a policy for Automatic Identification Systems (AIS) aids to navigation and to submit a report for consideration and review by NAV 58 in July 2012.

Rigidity in rules sometimes prevents manufacturers from being able to make further developments. What do you think of the balance between sets of rules and technical possibilities?

It is important to note that in the process of developing the e-Navigation strategy, it is not just the Member Governments that have a platform at IMO but industry too. Industry is represented by the international non-governmental organisations, which have a consultative status at IMO and this enables it to be fully involved in the development process.

The adoption of e-Navigation technologies might require a fundamental regulatory shift in the maritime industry, balancing rules, safety and innovation. Is IMO ready to tame the fast pace of technology?

IMO does not have a remit to 'tame' technology. IMO does, however, provide a forum to discuss and assess new technologies and to assist Member Governments in their careful consideration of the technologies which should be applied and the adoption of minimum performance standards and so on. It must be recognised, however, that e-Navigation development is based on identified user needs rather than technology-driven.

It has been stated that the major challenge for the implementation of e-Navigation is the human element. How is IMO taking this into account?

The role of the STW Sub-Committee is very important in developing the e-Navigation strategy and in ensuring that training and the human element considerations are taken into account. It is this Sub-Committee that has the remit to review all aspects of e-Navigation from the human element perspective, including training issues.

Everyone seems to agree that training will be crucial for the safe implementation of new e-Navigation technology. Are the newly implemented Manila Standards for Training and Competences in line with e-Navigation users' needs?

The Manila amendments were adopted in 2010 and were therefore up-to-date at that point. Clearly, training needs relating to e-Navigation need to be considered, which is why the STW Sub-Committee has a key role to play in this work.

The industry is currently concerned about the shortcomings brought about by ECDIS implementation. How can we 'sell' e-Navigation to industry stakeholders already worried about ECDIS?

As mentioned above, industry has a platform at the IMO via the international non-governmental organisations, which have a consultative

status at the IMO, so industry can be fully involved in the development process. Industry bodies should, therefore, bring their concerns to IMO via the Maritime Safety Committee and the relevant Sub-Committees.

How do e-Navigation and ECDIS work together and does e-Navigation have an influence upon the ECDIS Mandate?

All relevant aspects will be considered as part of the e-Navigation architecture. The e-Navigation strategy implementation plan aims to integrate existing and new navigational aids, in particular, electronic aids to navigation, in an all-embracing, transparent, user-friendly, cost-effective and compatible system. This will contribute to enhanced navigational safety and will have a positive effect on environmental protection and maritime safety in general, while simultaneously reducing the burden on the navigator.

A core element of the e-Navigation concept is enhanced communication between sea and land. How will IMO convey this to the stakeholders who are not normally represented at IMO, for example port authorities, shipping companies and national waterways administrations?

Yes, the concept embraces ship and shore-based elements. The current overarching e-Navigation architecture, as agreed by the NAV Sub-Committee, provides the shipboard and the shore-based parts connected through different links. It also identifies the concept of Maritime Service Portfolio (MSP) which defines and describes the set of operational and technical services and their level of service provided by a stakeholder in a given sea area, waterway, or port, as appropriate.

Other important stakeholders include the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), which address these issues through its own e-Navigation Committee and providing relevant information to IMO.

The International Hydrographic Office (IHO), which has 80 Member States and is usually represented by the national Hydrographer, or director of Hydrography, is also very much involved in the e-Navigation project. It is expected that the Maritime Safety Committee (MSC) will agree in May 2012 to use the IHO S-100 Geospatial Standard for Hydrographic Data as the baseline for creating a framework for data access and services within the scope of SOLAS, for exchange of real-time information and data. It has also been proposed to establish an IMO/IHO Harmonisation Group on Data modelling to consider matters related to the framework for data access and information services within the scope of SOLAS, using as a baseline IHO's S-100 standard. Port authorities and national waterways can make their views known via their own national authorities which attend IMO meetings as IMO Member Governments. It is the responsibility of the Member Governments to ensure that they consider all aspects when they bring their views and comments to IMO for discussion. Shipping companies are represented by the international non-governmental organisations which have a consultative status at IMO, so they should work through those bodies to present their views at IMO.

In essence, e-Navigation means the fully computerised bridge. Will IMO take note of this and adapt their rules and regulations to a software-driven environment which, as with software ashore, is subject to continuous technical maintenance?

Maintenance of key systems is always an important part of technology and the e-Navigation system will include elements relating to maintenance. IMO has already recognised the problem and issued relevant guidance regarding maintenance of ECDIS software, procedures for updating ship-borne navigation and communication equipment, including operating anomalies identified within ECDIS.

The term 'navigation' understood as the nautical processes to control a vessel from harbour A to harbour B appears to narrow for the concept of e-Navigation. What other processes of carriage at sea, for example cargo, machinery control or administration are affected by this concept?

E-Navigation could provide operational benefits, such as making available, in advance, detailed information on vessel arrival, cargo manifests and passenger lists etc; or the ability to ease throughput and thereby effectively increase capacity in ports, fairways and waterways. So there could be broader outcomes from e-Navigation.

Has the grounding of the Costa Concordia had any influence upon e-Navigation in your opinion?

I cannot give an opinion on this. It is not appropriate to make any comments on the Costa Concordia incident before the full investigation report has been submitted to IMO.

If you were to send out a message to our readership, what would it be?

E-Navigation has the potential to make a huge contribution to enhanced navigational safety and will have a positive effect on environmental protection and maritime safety in general, while simultaneously reducing the burden on the navigator. However, it must be developed in a co-ordinated and structured manner, taking into account all the relevant issues. All stakeholders will have the opportunity to contribute to this process, via their national delegations attending IMO or via the relevant international industry bodies.