

e-navigation Strategy Implementation

Report by:

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**XXTH IMPA CONGRESS
Brisbane
18 November, 2010**

First, I would like to underline the excellent work performed in respect of e-navigation by my good friend Albrecht Kramer, from the German Pilots' Association, and the assistance he provided me in preparing this presentation. His common sense and solid judgment are much appreciated. Thank you Albrecht.

Pilots have always supported the development and adoption of advanced navigation technology to help achieve the objective of safe and efficient navigation. The situation is not different with e-navigation.

In fact, I believe that some of the most compelling initiatives involving e-navigation around the world are led by pilots. At the same time, while pilots are experienced practitioners in this field, they are also aware of the cautions that must surround it.

As such, pilots are well-placed to help effectively move forward e-navigation and to discern what works best in terms of how it should be integrated to our profession.

This requires being engaged, however, and – as Albrecht emphasized at a meeting he was attending on this subject last October in Rostock – pilots are committed to play a leadership role in respect of e-navigation and to partner with other stakeholders to help steer the initiative in the right direction.

As defined by the IMO, the concept of e-navigation is the *“harmonized collection, integration, exchange, presentation and analysis of maritime information on board and ashore by electronic means”*.

I believe pilots are already familiar with this. The reason why I say this is because we have already adopted electronic marine navigation. We make extensive use of it through systems such as high-integrity electronic positioning systems, electronic navigational charts and related display information systems, and vessel traffic monitoring capabilities.

It is important to note, however, that the IMO concept of e-navigation is much broader than these specific systems.

Essentially, the IMO concept seeks to promote integration, standardization and best management practices both for ship-based and shore-based systems and information, in order to foster the most effective use possible of all electronic navigation equipment and associated know-how.

The objective is not only the safest and most efficient navigation system possible, but also one that remains always open to improvement and change, based on the latest technology available.

To achieve this objective, IMO has developed and approved a strategy and an implementation plan.

The key components of the strategy call for:

- 1- a statement of user needs – to better understand the requirements of both shore-based and on-board users;
- 2- an analysis of existing system architecture – to better appreciate the scope of the currently available technologies;
- 3- a gap analysis between existing and required technologies – to identify what additions are required to meet the needs of users; and, finally;
- 4 - a cost and risk analysis – to better appreciate the effect of any proposed changes.

To undertake the work related to these four components, two IMO Sub-Committees established working groups: the Safety of Navigation Sub-Committee – NAV – and the Radiocommunications and Search and Rescue Sub-Committee – COMSAR. A Correspondence Group, coordinated by Norway, has been assisting these two working groups.

The Correspondence Group produced a comprehensive report of the working groups' findings and recommendations. This report was reviewed by NAV this past summer at the Sub-Committee's 56th Meeting.

NAV 56 approved the report, providing a pathway for the implementation of a harmonized and holistic e-navigation system, designed to enhance safe and efficient navigation.

I think we should take special note, however, of the choice of words used in the report from the NAV Sub-Committee to the Maritime Safety Committee (MSC), following NAV 56.

While NAV clearly endorsed the work conducted so far in respect of the four main components of the strategy, the Sub-Committee's report also emphasized the serious concerns expressed by the IMO Secretary-General that "extraneous issues were being introduced into the e-navigation deliberations which could distract the attention (...) from the tasks at hand".

This was primarily in reference to representations made by some stakeholders that vessel traffic management needs to be re-thought, with the idea in mind of controlling and centralizing information at **on-shore** locations.

In such proposals, it's only a small step to go from controlling and centralizing information on-shore to actually transferring **decision-making**, from the bridge to the shore.

For example, the views expressed by Pieter Paap, a senior official of the Dutch Ministry of Transport, at a recent meeting of the IALA's eNav Working Group, illustrate why IMPA must remain vigilant on this matter. Mr. Paap called for a fundamental shift in the role of VTS operators, from "traffic monitoring" to "traffic planning".

In this perspective, VTS operators should move from an "operational level" – in which information is shared freely between stakeholders – to a "tactical or strategic" level – where all information is centralized with VTS and controlled by it.

The risk of encouraging a shift from on-board decision-making to a shore-based decision-making model, however, is not limited to vessel traffic management and even proposals developed in good faith by pilots themselves might, in the end, have such consequences.

This is why while recognizing the value of better electronic aids to navigation and shore-based support, IMPA has consistently maintained that the decisive role of pilots on-board vessels must not be compromised or usurped by shore-based decision-making models.

The presence on the bridge of a well-trained, independent, pilot who is free to exercise his expert professional judgement remains the best guarantee there is for safe navigation in compulsory waters and the best protection possible for the environment and the public interest.

This philosophy underlies IMPA's Position Statement on the IMO's e-navigation strategy and will guide our participation in the work that continues in respect of its implementation.

The Position Statement sets out three principles that IMPA believes must guide any e-navigation strategy.

1. Predominance of the Human Element

E-navigation must reflect the fact that mariners are the most critical factor in safe navigation. This means that the expert human element on the bridge must be at the centre of decision-making.

2. Meeting the Needs of the Bridge Team and the Pilot

E-Navigation must give priority to responding to the needs of the bridge team and the pilot and facilitate the tasks they perform.

3. Looking Out the Window Remains Essential

E-navigation must recognize the value of information obtained through **other** means. To ensure safe navigation, e-navigation data must be

complemented and validated through such traditional means as looking out the window.

I would like to conclude my remarks on the implementation of the e-navigation strategy by acknowledging the commitment made by the European Maritime Pilots' Association to work in close collaboration with IMPA on the e-navigation file.

The e-navigation working group of the European Maritime Pilots' Association provides professional input and assistance to the e-navigation process based on the proficiency and competence of pilots working in the ports and fairways of Europe.

As the member of the IMPA executive designated to follow the e-navigation file, I am personally grateful for the spirit of collaboration EMPA is showing. In particular, I welcome the invitation to participate, as an observer, to the deliberations of the EMPA e-navigation working group.

Beyond this, however, it remains fundamental that pilots speak with **one** voice to IMO and other international organizations on e-navigation, as on other matters affecting pilotage at the international level.

The contribution of other pilot groups will also continue to be important as the IMO-led strategy implementation moves forward. As an example, I have in mind the proposal put forward by the American Pilots' Association for standardized features on what was originally called the "S-mode" and which has now been rebranded as the "Default Mode".

The APA proposal – which was presented to the IMPA executive and endorsed by it – was to have two, instead of one, standardized features on the navigation display.

This would allow users to select either the "default mode" – which is a clean slate or basic settings starting point always available to the pilot or the mariner – or the "saved settings mode" – which allows the user to save his own preferences. In this case, if anyone were to change a setting, the user could always revert back to those preferred settings through a "back button".

This involvement of pilots in such an important international initiative that affects the entire industry is certainly good for the process. What is just as gratifying, is to see the value that others are placing on the work pilots are doing. Our continued engagement in the e-navigation strategy implementation is our best assurance that what comes out of it serves pilots well and is in the interest of safe navigation.