e-NAV10 Input paper

Agenda item 16

Task Number 31

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The Regulatory process for e-Navigation

# Background

A note was provided to e-NAV 9 concerning ways to overcome the problem of the lengthy regulatory process causing delays to the introduction of e-Navigation.

Three possible solutions were suggested:

* a completely open-systems, market-led approach;
* an over-arching performance standard, referencing existing equipment performance standards and test specifications;
* a complete review of the processes to speed them up and make them more flexible, for example using a requirements register and modular structure (like INS) and/or generic performance standards and test specifications.

It was recognised that there could be other solutions and that the best option might be a combination of one or more approaches.

# RELATED PAPERS

## e-NAV 10/INF 16

This paper is entitled ‘e‐navigation – a vision and its practical implementation?’ and sets out a very pragmatic approach to the implementation of e-Navigation. This paper recognises that one of the practical difficulties is the development of standards. The solution proposed is a single e‐navigation display to accompany the existing radar and ECDIS equipment displays and it is envisaged that this would require a relatively simple standardisation process:

*‘An essential function required for the initial fit single e‐navigation display will be that it will provide at least the portrayal of a to‐be‐defined standard e‐navigation integrated navigation system display, which is termed here INS S‐Mode.’*

*‘…the e‐navigation display must also be able to operate with the digital messages based on the current standards issued by the International Electrotechnical Commission (IEC).’*

Thus only one new standard would be needed. This is essentially the second of the three approaches outlined above, a single over-arching standard, although it also allows for the introduction of non-regulated applications, an element of the open-systems, market-led approach. It should be stated that this is seen as a first step – a way of making the implementation of e-Navigation attractive and achievable over a relatively short time-scale.

## e-NAV 10/11/3

is a Liaison Note to other Committees and to PAP, entitled:

Findings, assessments, recommendations and suggestions for specific future decisions regarding ‘e-Navigation’ and ‘maritime transportation’. This paper explains the concepts of Maritime Service Portfolios, Products, the IALA e-Navigation stack and the Common Maritime Data Structure. The following section is particularly relevant to the regulatory approach:

*‘For IMO and thereby to the maritime community at large, the recognition of the ‘product’ concept as part of their e-Navigation strategy would be beneficial. It would allow for a more precisely defined work distribution between different international organisations, i.e. a more precisely defined work delegation while maintaining the IMO desired governance. The product concept would allow IMO to relinquish statements regarding specification in their instruments, namely in IMO SOLAS rules, IMO Performance Standards, and IMO Circulars, using references to the ‘product specifications’ developed by different international organisations instead. This would also be required in order to avoid potentially conflicting statements regarding ‘product specifications’.’*

*‘This could include assigning or delegating certain responsibilities to appropriate international organisations and to competent authorities combined with amendments to relevant regulations. Such adjustment might include the introduction of the Maritime Service Portfolio concept, the product concept, flexible processes for certification of manufacturers and service providers, and so on. Notwithstanding such changes, IMO would need to maintain overall governance of the e-Navigation.’*

This is essentially the third of the approaches outlined above – a complete review of processes to speed them up and make them more flexible.

# Generic performance standards

Although superficially attractive, the open-systems, market-led approach has not been seriously advocated, even by industrial players who might stand to gain competitive advantage from it. However, some of the flexibility and ‘light-touch’ standardisation offered by this approach could be obtained by adopting generic rather than system-specific standards. A current example is the continuing need to introduce new standards for position-fixing system receivers and to maintain the relevance of existing standards in the face of rapidly changing technology.

Current IMO GPS and GLONASS receiver performance standards (MSC.112(73) & 113(73)) were produced for standalone, single system receivers and their own displays and data input facilities. The Galileo standard (MSC.233(82)) is more recent and could be used for devices embedded within an integrated navigation system. Other GNSS, such as Beidou/Compass are coming soon and all have the option of augmentation by other systems (ground or satellite based). It is not feasible to produce individual performance standards for every system and combination of systems and it is generally accepted that systems will not be used in isolation in future. Therefore a generic standard covering all of them would provide a potential solution that would remain valid for many years and could significantly reduce the cost of testing and type approval.

This option is currently being promoted for navigation receivers, but could have much wider application.

# Conclusions

In order to benefit from an early introduction of e-Navigation, several measures will be necessary to avoid regulatory delays. A single over-arching standard may allow a rapid first-stage implementation, but a complete overhaul of standardisation processes may be necessary in the longer-term. In parallel the adoption of generic standards and non-regulated applications may provide early benefits and efficiencies.

# Action requested of the Committee

The Committee is requested to:

Note the information provided in this paper when considering regulatory processes for e-Navigation.