 Input paper: [[1]](#footnote-1) ENAV18-13.14.1

Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **□** ENG **□** PAP **x** Input

**x** ENAV **□** VTS **x** Information

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Technical Domain / Task Number 2 3.1.4

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IALA Guideline No. #### on high accuracy systems and services in ports and harbours

# Summary

## Purpose of the document

The present working program of IALA eNav Committee [ENAV17-7.2] contains several tasks intended as IALA’s contribution for the further enhancement of the maritime PNT system and listed in the strategic technical domain 3.1 “Resilient PNT shore services - DGPS, e-Loran, other”.

The purpose of this guideline (ENAV18-13.14.2) is the description and application of systems and services in port and harbour areas supporting high accuracy positioning and navigation. Therefore the guideline will provide information concerning applicable systems, services and techniques as well as dedicated applications, with an exclusive focus on high-precision applications.

The guideline also summarizes recommendations to service providers and port/ harbour authorities, such as when and how the provided service data should be used. This forces the clarification of responsibilities and dependencies between shore-side and ship-side parts of such systems under consideration of the possible diversity on performance requirements.

## Related documents

This document use references to existing and future recommendations and guidelines from IALA dealing with the development, deployment and operation of PNT-relevant services including technical specification of communication interfaces between services and users.

# Background

Port and harbours have to be considered as essential hubs for the worldwide trade and shipping. Specific applications or manoeuvres, as for example automatic docking but also the passing of vessels in narrow bands, require very accurate and precise positioning information for their safe and efficient execution.

Based on the interest of port and harbours to increase their capacity as well as the density of passing vessels by cost efficient systems and services without decreased requirements on safety, solutions for high accuracy (cm) navigation and positioning are inquired.

# Discussion

The guideline is following the strategic item S3 to provide relevant inputs for the further development of VTS, e-Navigation and short range aids to navigation, taking into account new technologies and sustainability and is focussed on priority P3 to develop guidance on positioning, communications, Maritime Service Portfolios and data modelling for e-Navigation.

In detail the guideline covers:

* requirements for high accuracy systems and services serving for port and docking manoeuvres as contained in IMO resolution A.915 for future GNSS
* integrity aspects for safe systems used in port and harbour areas
* suitable systems (hardware) and its architecture
* techniques and methods (software)
* appropriate service concepts for port stakeholders
* Interface specifications covering output channel, data format, required bandwidth etc.
* operational aspects
* as well as application aspects.

# References

1. ENAV Committee Work Plan 2014-2018 ENAV17-7.2 (formerly ENAV 16-14.1.19)
2. ENAV Work Programme task register ENAV17-7.1 (formerly ENAV 16-14.1.20)

# Action requested of the Committee

The Committee is requested to:

1. note the information provided,
2. support the coordination of work item 3.1.4

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)