Document Revisions (Title style)

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**IALA Guideline No. ####**

**On**

**Use of decision support tools in VTS**

**Edition 1**

**[Date issued]**

**[Previous Edition; Date issued]**

Revisions to the IALA Document are to be noted in the table prior to the issue of a revised document.

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| **Date** | **Page / Section Revised** | **Requirement for Revision** |
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|  |  |  |
|  |  |  |

Table of Contents

White requires work, input or rewriting

Yellow requires structuring or more work and review

Green has been reviewed by the Task Leader

Blue has been reviewed by WG

[Document Revisions (Title style) 2](#_Toc334606484)

[Table of Contents 3](#_Toc334606485)

[Index of Tables 4](#_Toc334606486)

[Index of Figures 4](#_Toc334606487)

[Use of decision support tools in VTS 5](#_Toc334606488)

[1 Introduction 5](#_Toc334606489)

[1.1 Aim 5](#_Toc334606490)

[1.2 Purpose 5](#_Toc334606491)

[1.3 References 5](#_Toc334606492)

[2 Definitions 5](#_Toc334606493)

[3 Purpose 6](#_Toc334606494)

[4 Application of decision Support tools 6](#_Toc334606495)

[4.1 Introduction 6](#_Toc334606496)

[4.2 Formal Safety Assessment 6](#_Toc334606497)

[4.3 Quality of decision support tools 6](#_Toc334606498)

[4.4 Audio 6](#_Toc334606499)

[4.5 Information portrayal 6](#_Toc334606500)

[4.6 Logging and Replay 7](#_Toc334606501)

[4.7 Training 7](#_Toc334606502)

[5 decision support tools 7](#_Toc334606503)

[5.1 CPA/TCPA 7](#_Toc334606504)

[5.2 Collision alerts 7](#_Toc334606505)

[5.3 Grounding alert 7](#_Toc334606506)

[5.4 Anchor watch 7](#_Toc334606507)

[5.5 Area penetration 7](#_Toc334606508)

[5.6 Critical Waypoint Monitoring 7](#_Toc334606509)

[5.7 Speeding 7](#_Toc334606510)

[5.8 Route adherence 7](#_Toc334606511)

[5.9 Analysis and prediction 7](#_Toc334606512)

[5.10 Path time and track prediction 7](#_Toc334606513)

[5.11 Damaged vessel management 7](#_Toc334606514)

[5.12 Under keel clearance 7](#_Toc334606515)

[5.13 Air draught clearance 7](#_Toc334606516)

[5.14 Bridge/locks status 7](#_Toc334606517)

[6 Management and Planning 8](#_Toc334606518)

[6.1 Traffic analysis 8](#_Toc334606519)

[6.2 ? 8](#_Toc334606520)

[6.3 ? 8](#_Toc334606521)

[7 Conclusions 8](#_Toc334606522)

[ANNEX A Example decision support tools 9](#_Toc334606523)

[APPENDIX 1 Appendix title 10](#_Toc334606524)

Index of Tables

[Table 1 Title required 3](#_Toc216488847)

Index of Figures

[Figure 1 Title required 3](#_Toc216488874)

Use of decision support tools in VTS

# Introduction

In 1997 the IMO Maritime Safety Committee adopted Regulations for Vessel traffic Service (VTS) that have since been included in SOLAS Chapter V (Safety of Navigation) as Regulation 12. This Regulation specifies the responsibilities of contracting governments to arrange for the establishment of VTS in certain vulnerable areas under their control.

This guideline has been produced as a result of the IALA VTS Committee identifying a need to provide guidance on the “Use of decision support tools in VTS” during work package 2006-2010.

After human error, the main cause of maritime accidents has been identified as “Loss of situational awareness”. The most common maritime accident is a collision and groundings.

The use of decision support tools in VTS is a growing trend as shown during the IALA 12th VTS Symposium, which recommended …... It is a concern that the introduction of new tracking technologies such as AIS Class B and satellite based AIS together with pressures on VTS manning may result in the VTSOs workload increasing.

Today, numerous traditional decision support tools already exist such as:

* **VTS**; CPA/TCPA, collision alerts, grounding alerts, anchor watch, etc as described in IALA Recommendation V-128
* **Environmental protection**; drift modelling, boom deployment, etc
* **SAR**; drift modelling, search planning, etc.

The training of users, such as VTSO, of decision support tools is paramount.

## Aim

Decision support tools aim to assist the VTSOs and other stakeholders without interfering with their current tasks.

Decision support tool should “support” decision making and not actually make the decisions.

## Purpose

The purpose of this Guideline is to provide guidance in the:

* utilization of decision support tools in VTS and
* provide a list of example decision support tools a VTS authority may consider.

## References

The following primary references have been used in the production of this Guideline:

* IALA VTS Manual
* IALA Recommendation V-128
* IALA Guideline 1018
* *Add others*.

# Definitions

The following definitions are provided:

**Alert** - A visual or audible indication that a developing situation has occurred and that a decision is required.

**Decision support tool** - A VTS decision support tool assists the [decision-maker](http://en.wikipedia.org/wiki/Decision-making) in rapidly changing environments at an operational, planning and management level.

It should be noted this definition includes “management, operations, and planning”. As such decision support tools may support strategic planning as well as the more obvious tactical VTSO level.

**Decision-maker** – a person or group with the power or authority to make decisions.

**Hazard** – an unwanted event or occurrence, a source of potential harm, or a situation with a potential for causing harm, in terms of human injury; damage to health, property, the environment, and other things of value; or some combination of these.

# Purpose

The purpose of this Guideline is to provide guidance in the:

* application of decision support tools in VTS and
* provide a list of example decision support tools a VTS authority may consider.

# UTILIZATION of decision Support tools

## Introduction

Decision support tools are not mandatory so they may differ depending on the needs and functions of the VTS. In order to assist VTSOs fulfilling their tasks of surveillance in a specific context, some decision support tools may require user input such as the vessel(s) concerned or the area supervised. On the contrary, some more generic tools or basic warning systems, such as CPA or TCPA, are permanently estimated and should warn the VTSOs if the vessels courses closes within the predefined limits.

Some of these tools may be classified as critical risk assessment tools because they reflect the risk of collision or groundings, those are for instance CPA, TCPA, grounding alert. Other decision support tools are not so critical because they are linked to local regulations or recommendations.

## Formal Safety Assessment

FSA should identify what decision support tools are required to mitigate the risks – ref IMO Guideline for FSA/ MSC/Circ 1023-MEPC/Circ 392

Create link to type of VTS. Levels of capability ….

## Quality of decision support tools

Robust, consistent, tested, proven, approved by VTS authority,

## Audio

???

## Information portrayal

3D perspective

## Logging and Replay

Return of experience, lessons learnt, training, etc

## Training

Refer back to v103, That staff should be adequately trained to the type of service provided

# decision support tools

Blah about operational applications of decision support tools in vts

## CPA/TCPA

??

## Collision alerts

??

## Grounding alert

??

## Anchor watch

??

## Area penetration

??

## Critical Waypoint Monitoring

## Speeding

??

## Route adherence

??

## Analysis and prediction

??

## Path time and track prediction

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## Damaged vessel management

??

## Under keel clearance

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## Air draught clearance

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## Bridge/locks status

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## Space and slot management

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Management and Planning

Blah about management and planning applications of decision support tools in vts

## Traffic analysis

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## ?

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## ?

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# Conclusions

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1. Example decision support tools

Guidelines should have Annexes. Appendices are attached to Annexes.

ANNEX HEAD1

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* Office 2003, go to Format / Bullets and Numbering / Restart numbering (lower left in the box)
* Office 2007, go to down arrow next to Numbering icon and select Set Numbering Value

Annex Heading 2

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