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| From: VTS Committee | VTS37-14.1.1.6 rev1 |
| To: ANM Committee | 20 September 2013 |
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Liaison Note

Update to Chapter 1 (Definitions and Glossary of Abbreviations) and Chapter 5 Vessel Traffic Services (VTS) of the NAVGUIDE

# Introduction

The VTS Committee has reviewed the content of the NAVGUIDE. Please find the suggested text to chapter 1 (Definitions and Glossary of Abbreviations) and chapter 5 (Vessel Traffic Services) in the annex.

The definition for VTS Authority was added, and the remaining VTS related definitions were verified to exactly match IMO Resolution A.857(20), Guidelines for Vessel Traffic Services. The only definition that varied, beyond minor word differences, between this resolution, the IALA Dictionary, and the VTS Manual was “VTS Operator.”

1. IMO Resolution A.857(20), Guidelines for Vessel Traffic Services & the IALA Dictionary state: “An appropriately qualified person performing one or more tasks contributing to the services of the VTS.”

2. IALA VTS Manual states: “An appropriately qualified person carrying out VTS operations on behalf of a VTS authority.”

# Action requested

The ANM Committee is requested to note the suggested text to chapters 1 and 5.

And make the suggested changes to the NAVGUIDE at the next review.

1. Vessel Traffic Services (VTS)

## Introduction

In accordance with the Purpose and Scope of the NAVGUIDE this chapter provides a first point of reference and guidance on more detailed guidance from IMO and IALA.

## Purpose

According to IMO Resolution A857(20), *Guidelines for Vessel Traffic Services*:

“The purpose of vessel traffic services is to improve the safety and efficiency of navigation, safety of life at sea and the protection of the marine environment and/or the adjacent shore area, worksites and offshore installations from possible adverse effects of maritime traffic.”

## Definition

A VTS, as defined by IMO Resolution A857(20), *Guidelines for Vessel Traffic Services*, is:

“A service implemented by a competent authority, designed to improve the safety and efficiency of vessel traffic and to protect the environment. The service should have the capability to interact with the traffic and respond to traffic situations developing in the VTS area.”

## VTS Manual

The IALA VTS Manual is acknowledged by the VTS community as being the most comprehensive guide to Vessel Traffic Services (VTS) as well as a point of reference for further detailed study.

The contents are aimed at a wide readership to encompass all who are in any way involved with the policy for provision, operation and effectiveness of VTS, including those with management responsibility at national level and those who deliver services to the mariner.

## Objectives of a VTS

At its simplest, the main objectives of a VTS are to:

* aid the mariner in the safe use of navigable waterways;
* afford unhindered access to pursue commercial and leisure activities; and
* contribute to keeping the seas and adjacent environment free from pollution.

Experience shows that, in general, these ideals are subject to potentially greater and more intense risks in coastal waters particularly at shipping congestion points and at the interface with ports and estuaries. The benefits derived from VTS can be of considerable value and, when properly implemented, outweigh the costs of provision.

## Functions of a VTS

VTS functions can be subdivided into internal and external functions. Internal functions are the preparatory activities that have to be performed to enable a VTS to operate. These include data collection, data evaluation and decision-making. External functions are activities executed with the purpose of influencing the traffic characteristics. They relate to the primary traffic management functions of rule-making, allocation of space, routine control of vessels and manoeuvres to avoid collisions, as well as to other management functions such as enforcement, remedial and ancillary activities.

Amongst the most important functions that a VTS may carry out are those related to, contributing to and thereby enhancing:

* Safety of life at sea;
* Safety of navigation;
* Efficiency of vessel traffic movement;
* Protection of the marine environment;
* Supporting maritime security;
* Supporting law enforcement;
* Supporting allied and other services; and
* Protection of adjacent communities and infrastructure.

## Vessel Traffic Services

An authorised VTS will be capable of offering one or more of the following types of service:

### Information Service (INS)

An Information Service provides essential and timely information to assist the on-board decision-making process.

### Traffic Organization Service (TOS)

A Traffic Organization Service is a service to provide for the safe and efficient movement of traffic and to identify and manage potentially dangerous traffic situations. A Traffic Organization Service provides essential and timely information to assist the on-board decision-making process and may advise, instruct or exercise authority to direct movements.

### Navigational Assistance Service (NAS)

A Navigational Assistance Service may be provided in addition to an Information Service and/or Traffic Organization Service. It is a service to assist in the on-board navigational decision-making process and is provided at the request of a vessel, or when deemed necessary by the VTS. It is a service that provides essential and timely navigational information to assist in the on-board navigational decision-making process and to monitor its effects. It may also involve the provision of information, warning, navigational advice and/or instruction.

**Vessel Traffic Services**

**Vessel Traffic Services**

Local Port Services

Traffic

Organization

Service

Information Service

Navigational Assistance Service

Safe use of the waterway

Efficiency of traffic movement

Protection of the marine and adjacent environment

Providing marine information

(broadcast or as required)

**Local Port Service**

**Providing Traffic:**

**INFORMATION**

**WARNING**

**ADVICE**

**INSTRUCTION**

REQUESTED

OBSERVED

or

**Providing Navigational:**

***INFORMATION***

***WARNING***

***ADVICE***

***and/or***

***INSTRUCTION***

**Providing local information, e.g.**

Environmental data & Port information

**OBJECTIVES**

**FUNCTIONS**

Safe and efficient port operations

NON VTS

1. Overview of types of VTS service and functions

## Surveillance requirements for the VTS area

The extent of the VTS area should be taken into account with regard to the surveillance equipment necessary. In principle the equipment should be able to cover an area well in excess of the designated VTS area, to allow for any decrease in performance in poor weather conditions. The surveillance equipment in most common use continues to be radar although other systems, such as the Automatic Identification System (AIS) and CCTV, are used to good effect.

## VTS equipment

Traffic density and structure, navigation hazards, local climate, topography, environmental requirements, commercial aspects and the extent of a VTS area sets the requirements for VTS equipment and these factors will have substantial impact on life cycle costs of a VTS and the acquisition of VTS equipment. Equipment may include:

* Communications;
* Radar System;
* Automatic Identification System (AIS);
* Electro Optical Systems (EOS);
* Radio Direction Finders (RDF);
* Hydrometeo Equipment;
* VTS Data System;
* Recording and replay systems.

## VTS personnel

VTS Operators, masters, bridge watchkeeping personnel and pilots share a responsibility for good communications, effective co-ordination and understanding of each other’s role for the safe conduct of vessels in VTS areas. They are all part of a team and share the same objective with respect to the safe movement of vessel traffic.

Depending on the size and complexity of the VTS area, service type provided, as well as traffic volumes and densities, a VTS centre may include VTS Operators, VTS Supervisors and a VTS Manager. It is for the Competent/VTS Authority to determine the appropriate levels in order to meet its obligations and to ensure that appropriately trained and qualified personnel are available.

## Promulgation of VTS information

Information on VTS areas and procedures can be found in internationally recognised marine publications, individual websites and the IALA World VTS Guide.

## Summary

Readers are encouraged to refer to the:

* IALA VTS Manual and
* IALA World VTS Guide.

# Chapter 1 Definitions and Glossary of Abbreviations

# DEFINITIONS

|  |  |
| --- | --- |
| Aid to Navigation (AtoN) | Any device or system, external to a vessel, which is provided to help a mariner determine position and course, to warn of dangers or of obstructions, or to give advice about the location of a best or preferred route. |
| Automatic  Identification  System (AIS) | A broadcast transponder system, operating in the VHF maritime mobile band by which a vessel communicates a range of ship and voyage information. |
| Competent Authority | The authority made responsible, in whole or in part, by the  Government for the safety, including environmental safety, and  efficiency of vessel traffic and the protection of the environment. (IMO Resolution A.857(20) |
| Mandatory Ship Reporting System | A ship reporting system that requires the participation of specified vessels or classes of vessels, and that is established by a government or governments after adoption of a  proposed system by the International Maritime Organization (IMO) as complying with all requirements of  regulation V/8–1 of the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS),  except paragraph (e) thereof. |
| Stakeholder(s) | Any individual, group, or organization able to affect, be affected by, or believe it might be affected by a decision or activity. The decision maker(s) is a stakeholder. |
| Under keel clearance | The minimum distance between the bottom of a ship and the seabed |
| Vessel Traffic  Service | A service implemented by a Competent Authority, designed to  improve the safety and efficiency of vessel traffic and to protect the environment. The service should have the capability to interact with the traffic and respond to traffic situations developing in the VTS area – IMO Resolution A.857(20) refers. |
| VTS Area | The delineated, formally declared service area of the VTS. A VTS area may be subdivided in sub-areas or sectors. |
| VTS Centre | The centre from which the VTS is operated. Each sub-area of the VTS may have its own sub-centre. |
| VTS Operator (VTSO) | An appropriately qualified person performing one or more tasks contributing to the services of the VTS. |
| VTS Authority | The authority with responsibility for the management, operation and coordination of the VTS, interaction with participating vessels and the safe and effective provision of the service. |

# GLOSSARY OF ABBREVIATIONS

|  |  |
| --- | --- |
| AIS | Automatic Identification System |
| AISM (see IALA) | Association Internationale de Signalisation Maritime (Title of IALA in the French language) |
| AtoN | Aid(s) to Navigation |
| COLREGS | International Regulations for Preventing Collisions at Sea |
| DGNSS | Differential Global Navigation Satellite System |
| DGPS | Differential Global Positioning System |
| ECDIS | Electronic Chart Display and Information System |
| ECS | Electronic Chart System |
| ENC | Electronic Navigation Chart |
| EEZ | Exclusive Economic Zone (Defined in UNCLOS) |
| GLONASS | Global Navigation Satellite System |
| GLOSS | Global Sea Level Observing System |
| GPS | Global Positioning System |
| IALA  (see AISM) | International Association of Marine Aids to Navigation and Lighthouse Authorities |
| IHO | International Hydrographic Organisation |
| IMO | International Maritime Organization |
| IMPA | International Maritime Pilots’ Association |
| IMSO | International Mobile Satellite Organisation |
| INMARSAT | International Maritime Satellite Organisation |
| ISO | International Standards Organisation |
| ITU | International Telecommunications Union |

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| ITU-R | International Telecommunications Union – Radiocommunications Bureau |
| LRIT | Long Range Identification and Tracking |
| MRCP | IALA Maritime Radio Communications Plan |
| MTBF | Mean time between failures (in hours) |
| MTTR | Mean time to repair (in hours) |
| PIANC | The World Association for Waterborne Transport Infrastructure |
| PSSA | Particularly Sensitive Sea Area |
| RACON | Radar transponder beacon |
| RCDS | Raster chart display system |
| RNC | Raster navigation chart |
| SOLAS | IMO *Convention on the Safety of Life at Sea* 1974 |
| SRS | Ship Reporting System |
| UNCLOS | United Nations Convention on the Law of the Sea |
| UTC | Universal Time Co-ordinated |
| VHF | Very High Frequency (radio in the 30-300 MHz band) |
| VTS | Vessel Traffic Service |
| VTSO | VTS Operator |