STM User Guide
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Operational Services

Interreg Baltic Sea Region

EUROPEAN UNION
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DOCUMENT STATUS

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1 General Information

Important

The information provided below is a guide only. The owner, operator, charterer, master, or person directing the movement of a vessel remains at all times responsible for the manner in which the vessel is operated and maneuvered, and is responsible for the safe navigation of the vessel under all circumstances. Compliance with test bed procedures including service interactions is at all times contingent upon the exigencies of safe navigation.

Nothing in the STM operational services is intended to relieve any ship, owner, operator, charterer, master, or person directing the movement of a vessel from the consequences of any neglect to comply with applicable law or regulation (e.g. the International Regulations for Prevention of Collisions at Sea, 1972COLREGS) or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

If there are any difference between the information in the STM operational services and procedures and the relevant laws, the relevant laws should be followed.

For more information

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Home page: STM – Sea Traffic Management -

Service Instance Name: STM Validation Centre

An updated STM User Guide is always available on STM User Manual - STM – Sea Traffic Management

2 Introduction

This document will describe how to act by using the STM functionalities and services that are available at Navelink operational. The document will also describe the expectations on the participating ships in the STM Balt Safe project. It will furthermore briefly describe the Shore Center roll in the project and the available services supplied by different service suppliers.

For in depth deeper information please visit STM Validation user forum. User Forum - STM – Sea Traffic Management

You will also find a PDF document and video with definitions and clarifications at "Introduction to STM" on the website. Introduction to STM - STM – Sea Traffic Management

3 1. Voyage plans handling from ship side

3.1.1 Sharing voyage plan

The STM Ships are expected to share their voyage plan, VP with shore centers, SC close to the VP geographically. To use the different services you have to share your VP to the service NB please add a valid schedule otherwise, the service cannot be effusively used. The different services are listed below in this document.

Introductions for how to share VP is to be found in respective **ECDIS manufactures manual**. STM Instruction videos - STM – Sea Traffic Management

3.1.2 When should a ship share the voyage plan?

STM-ships are expected to share their voyage plan (VP) with shore centers that are concerned by the VP. The STM-ships are also expected to make use of any appropriate STM-service. The decision to share VP and to whom will always be made onboard the ship by the OOW/Captain. But during the STM Balt Safe project we request you to share your voyage plan as often as possible in order all to have the possibility to collect as much data as possible and evaluate the SOP in shore center.

3.1.3 Sharing VP when there are changes changing in the route segments

When the route segment is changed e.g. a major re-routing the updated VP (with the same unique voyage id UVID) should be created and sent to the SC. If a new port of call is decided the new VP is required with a new UVID,

3.1.4 Sharing VP when there are changings in ETA

When new planned ETA differs from original distributed ones, the STM ships are requested to send a new/update VP with the updated information. This is requested when the new planed ETA has changed more than 1h from the original planed ETA. The updated VP is published indicates with the same UVID.

3.1.5 Definition: Voyage and UVID=unique Voyage ID in STM validation test bed

A voyage is a “route” that has a schedule ”attached”, including departure and arrival time/date

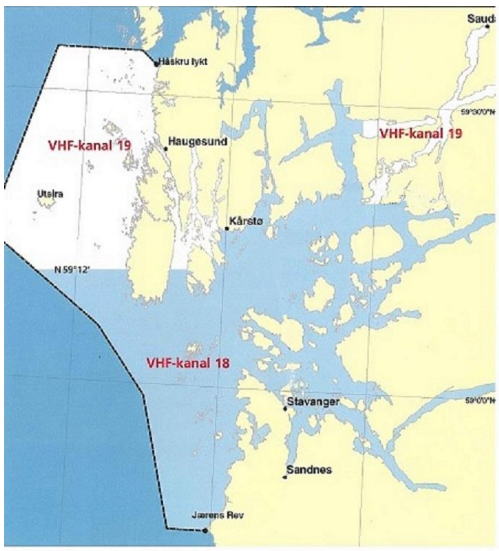
One Voyage ID (UVID) per voyage between two consecutive ports, berth to berth

New Voyage when?
A new voyage is ”started” when departing from a destination. A new Voyage ID must be set, automatically or manual, on the new voyage when it is planned and shared with other actors.

4 1. Services available in STM and how to use

4.2 1Kvitsøy VTS Not yet deployed

Receive VP and provides enhanced monitoring of VP from STM ships passing or entering the Kvitsøy VTS area. Send and receive Text message and area Polygon to STM ships passing or entering the Kvitsøy VTS area.



Kvitsøy VTS Service coverage area

4.2.2 Tallinn VTS Not yet deployed

Receive VP and provides enhanced monitoring of VP from STM ships in the Estonian territorial waters and the Baltic Sea. Can send proposed VP to STM ship and can send Text message to STM ships in Estonian territorial waters and the Baltic Sea.

Tallin SC Service coverage area

4.2.3 Finland VTS **Not yet deployed**

Receive VP and provides enhanced monitoring of VP from STM ships in the Finnish territorial waters and Gulf of Finland the Baltic Sea and Can send proposed VP to STM ship and can send Text message to STM ships.

4.2.4 St Petersburg VTS

Receive VP and provides enhanced monitoring of VP from STM ships in the Gulf of Finland the entrance to St Petersburg. Can send proposed VP to STM ship and can send Text message to STM ships.

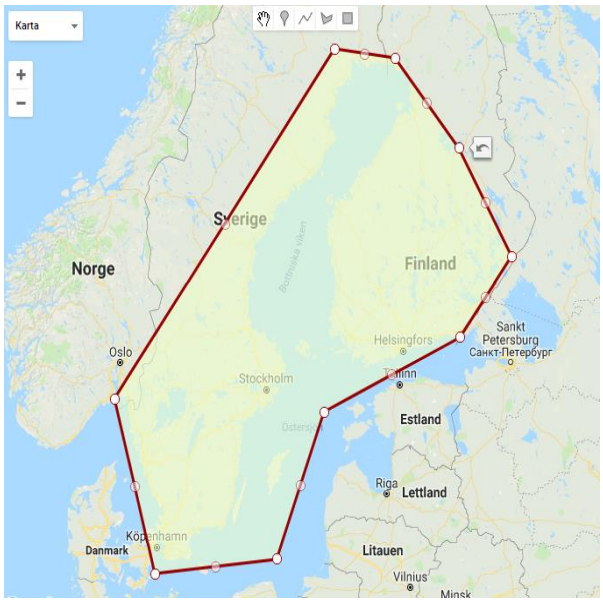
4.2.5 Gothenburg SC

Receive VP and provides testing and support to STM ships in the Swedish territorial waters and Baltic Sea. Can send proposed VP to STM ship and can send Text message to STM ships in the Swedish territorial water and Baltic Sea.

Gothenburg SC Service coverage area

4.2.6 Pilot Route Service

The Pilot Route Service, PRS, is an onshore service that provides pilot routes to ships when planning their voyages. The ships can send their voyage plan to PRS and receive back one or several pilot routes in return. The ships responsible personnel can chose among the returning routes which to add to their voyage plan. If the ships voyage plan is planned from/to the berth, PRS will calculate the best pilot route(s), if the voyage plan ends near a pilot boarding point, all pilot routes from that boarding point will be returned. When the voyage plan reaches from port to port within Swedish waters, Finish waters and the bay of Oslo in Norway, PRS will return both departing as well as arriving pilot routes.



Pilot Route Service coverage area

4.2.7 Baltic Navigational Warnings Service, SMA

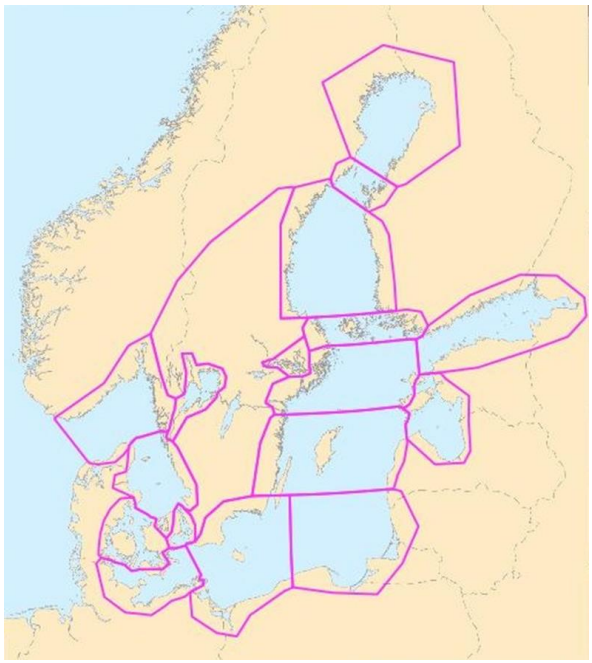
The Baltic Navigational Warning service provides navigational warnings to concerned STM ships in the Baltic Sea. The service is initiated when a ship shares its Voyage Plan (VP) with the Baltic Navigational Warning service. In response, the Baltic Navigational Warning service initially provides the ship with all related safety notices in the concerned area(s), and then continuously all updates in the concerned area(s). Notices that are within the sub-areas that the route crosses, see figure for sub-area division, are deemed as relevant and returned to the ship. Notices in other sub-areas will not be returned.

When ship has left the service coverage area, the Baltic Navigational Warning service stops sending updates to the ship.

The Baltic Navigational Warning service provides the following navigational safety notices:

- **Coastal warnings** - Navigational warnings that apply to open waters are classified as coastal. The same information that today is transmitted on NAVTEX.
- **Local warnings** for Swedish waters - Warnings that apply only to waters inside the belt of the skerries are regarded as local. Today transmitted only on VHF.
- **Temporary and Provisional notices** for Swedish waters

NOTE: weather/ice information is not provided by the service. T&P notices are not included in the first release.



Baltic Navigational Warnings Service coverage area

4.2.8 Winter Navigation Service **Not yet deployed**

Winter Navigation Service provides ships ice routes and detailed information regarding icebreaker assistance in the northern Baltic Sea. Information will be provided from ice-coordination centers and directly from icebreakers.

In ice-covered areas, the coordinating icebreaker provides waypoints, which indicate the recommended route. The waypoints are set in order to help vessels navigate more easily and safely in ice conditions and in order to enable ships to navigate unassisted for as long as possible. Ships are, however, at all times responsible for their own safe navigation.

General ice waypoints for all ships will be available for all vessels for route planning. When ships are entering the ice covered waters, Shore Centers will send the up-to-date waypoints directly to the ship. Ships can also subscribe to receive all new ice routes. Ice routes won't change after they are published, but they can only be removed when they are not valid anymore.

Icebreaking authorities recommend that all ships that are bound for ports in ice-covered water send their voyage plan to the service. Information will be used for monitoring of the ships voyage in ice conditions and for planning of icebreaker assistance.

When needed, icebreakers will send detailed recommended ice routes to ships. These recommendations can be either short alternative segments for the planned route or the modifications in the ships original route. After receiving the information, ships navigational personnel can update the current voyage plan and send it to all interested parties.

In addition, icebreakers and coordination centres can send further information using text messages. This can include information such as; the position, name and VHF working channel of the icebreaker, recommended time of arrival to icebreaker meeting point, assistance order or other navigational instructions.

Winter Navigation Service Service coverage area

4.2.9 Port Synchronization management PCDM

STM ships bound for the following ports are encouraged to share their voyage plan/VP to the Port listed. By doing this, your ETA will be received by the ports and distributed to different stakeholders. Through exchanging voyage plan/VP with the listed ports, this will trigger the port call synchronization and collaboration between the ports stake holders. **Time schedule added to your voyage plane** is crucial for this service.

SEUME	**Sweden, Umea,**		
SEGVX	**Sweden Gavle**		
FIVVA	Vaasa, Finland	->	Not deployed yet in the STM Operational
SEGOT	Göteborg, Sweden	->	Not deployed yet in the STM Operational
ESBCN	Barcelona, Spain	->	Not deployed yet in the STM Operational
ESSAG	Saguntos Spain	->	Not deployed yet in the STM Operational
NOSVG	Stavanger, Norway	->	Not deployed yet in the STM Operational
CYLMS	Limassol Cyprus	->	Not deployed yet in the STM Operational

5 1 Ship to Ship Route Exchange (S2SREX)

Ships can, if so desire use Ship to Ship route Exchange and share routes with other STM ships (send and receive route segments) In this case the sending Ship will use the, exchange of route via the new route message (AIS ASM) and display them on ECDIS. Routes will not be displayed unless activated (might be automatic, depending on ECDIS manufacturer implementation) or clicked by other ship. The present route leg and the upcoming 6 route legs will be visible. Updating frequency etc. is further described below. Ship to Ship Route exchange should only be tested when it does not interfere with the safe navigation of participating ships which is up to OOW/Captain to decide.

5.1.1 When to share

The operator will be able to make a choice if the ship should share the route with other “STM-ships” or not. The implementation of this choice will differ between different ECDIS manufacturers STM Ship systems

5.1.2 To whom

When the choice has been made, that the ship want to share their route, the route will automatically be shared with other “STM-Ships” (and possibly Shore center/VTS)

5.1.3 Route Message broadcast

A new Route Message broadcast will automatically be initiated by ECDIS when any of the below events occurs:

- Six minutes have passed since last Route Message broadcast
- A Route Message interrogation was received and over one minute has passed since last Route Message broadcast on that channel
- Any of the data in the last Route Message broadcast has been changed
- When passing a waypoint
- The Monitored Route has been deactivated
- A Monitored Route is activated

Using STM to increase BALTic Sea SAFEty

Making the Baltic Sea even safer by improving the situational awareness on ships and shore, building tools that automate work and provide decision support to prevent risk situations and accidents.

Making STM happen!

SAFETY - ENVIRONMENT - EFFICIENCY

Swedish Maritime Administration ◦ VTS Finland ◦ Estonian Maritime Administration ◦ Norwegian Coastal Administration ◦ RISE Research Institutes of Sweden ◦ DNV GL

www.stmbaltsafe.eu

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