



European Maritime Safety Agency

Med AIS Workshop no 4
4/MED/10
Lisbon 4 June 2007

STIRES

3 & 4 July 2007

STIRES study - SRIT Pilot Project

Submitted by EMSA

<i>Executive summary</i>	This document provides information on the proposed future EMSA pilot project for development of the Short Range Identification and Tracking (SRIT) module; including the anticipated benefits from the services that will be offered to the Member States
<i>Action to be taken</i>	As per paragraph 6
<i>Related documents</i>	STIRES final draft report (for 2 nd Review) available at: http://www.emsa.eu.int/end906.html

1. INTRODUCTION

This paper provides detailed information on the development of the Short Range Identification and Tracking (SRIT) module. This new module should be implemented as a result of the STIRES study under the SSN project.

Article 9 of Dir. 2002/59 establishing a Community Vessel traffic monitoring and information system states that "Member States shall ensure that the appropriate equipment for relaying the information to and exchanging it between, the national systems of Member States shall be operational at the latest" by end 2008.

EMSA has been tasked by Regulation 1406/2002 to facilitate cooperation between MS and the Commission in the fields covered by this Directive and in particular to "develop and operate any information system necessary for attaining the objectives of that Directive".

Moreover, the EMSA work programme indicates that "the development of the traffic monitoring tools will also take into account the need to support an effective investigation of ship-sourced pollution through satellite monitoring and surveillance".

Regional (e.g. HELCOM, North Sea, and Mediterranean) or bilateral initiatives have taken place in Europe to exchange the AIS messages automatically on an image-based format

and with a high frequency. The STIRES study contracted by EMSA in 2005-2006 aimed at proposing technical solutions that would allow for integration of these regional systems into a new EU module within the SafeSeaNet System to enlarge the image-based picture of the traffic. The study was presented to MS' experts during a first experts' review meeting in November 06, when it was well received. The study will be completed in May 07 after the second experts' review meeting.

2. PROJECT OBJECTIVE / BASIC PROJECT REQUIREMENTS

The specific objective for EMSA is the creation of a new EU server, the SRIT (Short Range Identification and Tracking) module, that will enable the "exchange and relay" of information initially between the MS's national AIS servers prepared to participate in the system.

In addition to creating a traffic image on a GIS background, the SRIT image at EU level will also offer a platform for additional services provided for the benefit of MS. by enabling the superimposition of satellite pictures onto the vessel traffic image and by attaching SSN alerts and warning messages to the targets.

After considering the results of the study, EMSA will proceed towards making the application materialize based upon the following requirements:

- a. The existing regional servers of the Baltic and North Seas will be linked to the SRIT node that will be installed, maintained and managed at the EMSA premises. The development of the application including the first year of maintenance and hosting should be contracted externally. The SRIT will collect and store (with an update rate of 6 minutes) the traffic data of these two regions, (in the same way that the MS of these regions themselves already receive the data). Similar standards, procedures and technical measures will be used to connect other future EU regional servers (e.g. the Mediterranean).
- b. One MS national server will be directly linked with the SRIT node to test the way of connecting an "independent" MS i.e. not associated to any regional group. This follows a suggestion made in the study, based on an assumption that some MS may choose not to participate in any regional group and the need to technically verify the feasibility of different categories (national/regional).
- c. The system should be open to enable the later connection of other regions /countries.
- d. The EU server will compile an EU traffic image based on the traffic images of the two regional servers and the independent MS, with an initial update rate of 1 hour. The resulting composite EU traffic image will be relayed to the MS of the two regions and to the "independent" MS.
- e. Traffic data collected at the SRIT will be transformed into XML format and in so doing it will be made accessible to the SSN EIS. Consequently, through the existing SSN EIS, the traffic data in those regions will become available to MS' SSN users on request.
- f. The AIS data will be linked with SSN information and by doing so, the SSN

information will be distributed to the MS' traffic displays through STIRES. Specific SSN information (alert messages and warnings messages such as HAZMAT information) will be shown as highlighted or in a distinguished colour.

- g. The composite traffic image of the SRIT will be superimposed and displayed on the EMSA GIS infrastructure. The possibility of distributing the same picture to MS will also be examined.
- h. SRIT images at EU level will be made available to be superimposed upon the EMSA satellite pictures (collected through the EMSA project CleanSeaNet), using the vessel traffic image together with a GIS background.

3. PREPARATION PHASE

3.1 Access rights and MS' participation

The Agency has gained full access rights to the traffic data of the Baltic and North Sea. These rights are reflected in the MOUs signed by all MS of those regions. Access is enabled through installation within the IT infrastructure of the Agency, special software put into service by the Danish Administration on behalf of the Baltic and North Sea States. Accordingly, this software is also offered to all Baltic and North Sea countries.

EMSA staff actively participates in the work of the HELCOM and North Sea groups, aiming to positively present and further promote the STIRES concept.

3.2 Basic access to HELCOM data

EMSA requested Denmark to install the software at the Agency's IT infrastructure that would allow access to the current HELCOM AIS data. A representative of the Royal Danish Administration of Navigation and Hydrography (RDANH) visited EMSA on 26/3/07 when the necessary installation was made. The subscriber proxy software allows continuous reception of HELCOM AIS data. The subscriber proxy was installed on an EMSA PC with brief familiarization being also provided on the installation process to EMSA staff.

The software applications provide EMSA with experience in using the HELCOM applications and will ultimately improve drafting the technical specifications for the future system (SRIT node).

3.3 Basic access to the North Sea subscriber proxy software

The same procedure will be followed for obtaining access to the North Sea traffic data. EMSA has gained access to the North Sea AIS data from the RDANH. This should be possible remotely without the need for a further meeting.

4. MAIN EXPECTED RESULTS

By the end of 2008, EMSA is expected to have the unified traffic image of the Baltic, North Sea and an independent MS (with an update rate of 6 minutes) superimposed on a GIS platform and with satellite pictures developed in the framework of the CleanSeaNet project. This picture will cover the coastal traffic of at least thirteen MS (Estonia, Lithuania, Latvia, Finland, Sweden, Norway, Denmark, Germany, Poland, UK, France,

Belgium and the Netherlands) and the independent MS.

The system will be open for voluntary participation of any additional region or MS.

The unified traffic data will be relayed to the above mentioned MS with an update rate of 1 hour. Additionally they will be linked to the SSN EIS and all MS can access similar data on request. The latter will create an immense increase in the number of AIS messages (to nearly to 4 million per month).

The project will relieve the Baltic, North Sea and the independent MS of their obligation to provide (in fact the majority of their ship notification messages) to the SSN core through the XML interface, since this data would be transferred automatically at EU level through the interface between the SSN core and the SRIT.

The SSN messages will be displayed to the HELCOM, the North Sea and the independent MS countries at their national AIS server applications.

5. LEGAL INTERPRETATION

Member states will participate in the project on a voluntary base. The project will offer value added services, assisting MS in their compliance with Article 9 of Directive 2002/59. The project will be developed based on the HELCOM and North Sea regional servers, from which EMSA has already secured access to their AIS information. Based on that information, EMSA will create the SRIT node and will connect it to the SSN EIS only for the AIS data of those MS who wish their AIS information to be sent to the SSN EIS. Those MS will consequently be relieved of their obligation to send AIS notifications through existing SSN channels.

Those MS who do not agree to have their AIS messages sent to the SSN EIS, will be required to send their AIS notifications to SSN by following the existing SSN procedures (and at their own additional cost). For those MS who do not wish to share their AIS data with the other MSs through the SRIT node, EMSA will filter out their data.

6. ACTION REQUIRED

Members State participants are invited to note the information provided and take appropriate decisions.