

**1<sup>st</sup> Meeting of the LRIT NCA's  
Agenda item 9  
Lisbon, 19-20 October, 2009**

## **OPERATIONAL ISSUES**

### **"INTEGRATION OF LRIT-AIS DATA "**

#### **Submitted by EMSA**

<i>Action to be taken</i>	MS are invited to take into consideration the issues brought up in this paper and to provide their comments as necessary.
<i>Related documents</i>	<ul style="list-style-type: none"><li>• Council Resolution of October 2007;</li><li>• Council Resolution of December 2008;</li><li>• Directive 2009/17/EC amending the Directive 2002/59/EC on establishing a Community vessel traffic monitoring and information system;</li></ul>

#### **1. INTRODUCTION**

The EU LRIT DC has entered the LRIT production environment on 1<sup>st</sup> of June 2009 and is now providing LRIT information to its users according to IMO and EU requirements.

In accordance with the LRIT Implementation Plan, EMSA is now ready to continue with the integration of the LRIT data with the AIS data within the SafeSeaNet (SSN) system.

The Council LRIT related resolutions indicate that, subject to the completion of necessary technical work, the EU LRIT DC should make use of the existing SafeSeaNet system communication platform in order to facilitate the sharing (internal routing) of LRIT information between Member States and if necessary, **the SafeSeaNet system should be modified, at central and national level, in order to ensure the appropriate level of security of LRIT data transmission and management and to fulfill the IMO requirements and to properly implement the Data Distribution Plan agreed by Member States.**

The Council also encourages **the integration of AIS (Automatic Identification System) reports into the data managed by the EU LRIT DC in order to enable saving of costs** and avoid unnecessary fitting of equipment on board ships sailing in maritime areas within the coverage of AIS monitoring stations and **agrees that LRIT and AIS information are complementary and, therefore, agrees to progress, in the context of the EU AIS Master Plan, towards an integration of these two systems.**

In view of the above decisions, **the Council invites the Commission and the Member States to continue working to achieve the availability of integrated LRIT and AIS data through the SafeSeaNet system** and to report on this work and on the use of the SafeSeaNet system for sharing information.

## **2. DISCUSSIONS AND PROPOSALS**

### **2.1 Integration of LRIT data into SSN**

The integration of the LRIT data into the SSN system, as described in the EU LRIT DC specification, is planned to be achieved by the development of an XML based interface between the two systems able to send the LRIT mandatory data of the EU flag ships into the SSN system. Once received, the SSN system will allow the distribution of LRIT data through the SSN User Interface (IF) only to SSN users which are entitled to receive the LRIT data (SSN users which are also registered as LRIT users in the EU LRIT DC).

The integration of the mandatory LRIT reports into SSN is in line with IMO requirements for internal sharing of data within a Regional/Cooperative Data Centre and represents a "partial" integration of LRIT-AIS data because:

- It allows only the distribution of mandatory LRIT data of the EU flagged ships;
- It does not provide data for non-EU ships;
- It does not provide LRIT request capabilities;

As the internal sharing of EU mandatory data is also possible within the EU LRIT DC User Web IF (UWI), there is little added value in developing such an interface as the SSN/LRIT users benefiting from receiving the EU mandatory LRIT data via the SSN IF will still have to use the EU DC UWI to request and access additional LRIT data.

**Consequently, EMSA proposal is to fully integrate the LRIT and AIS data through a Single User Web Interface (SUWI) to distribute either LRIT or AIS or both LRIT/AIS data to the users in accordance with established users' profiles and access rights.**

Such an approach will allow users to benefit from an integrated traffic monitoring picture permanently available through a unique user interface which makes the access to and the management of the data more easy and efficient.

### **2.2 Integration of AIS data into EU LRIT DC**

The use of AIS data as an alternative input for the LRIT report in order to save costs can be analysed from two perspectives:

#### **2.2.1 EU ships sailing ONLY in coastal waters covered by AIS systems**

According to the IMO LRIT Resolution MSC.202 (81) – Adoption of amendments to the SOLAS 1974:

"4.2 Ships, irrespective of the date of construction, fitted with an automatic identification system (AIS), as defined in regulation 19.2.4, and operated exclusively within sea area A1, as defined in regulation IV/2.1.12, shall not be required to comply with the provisions of this regulation."

Vessels falling under above regulation can be exempted from the compliance with the LRIT system at national level.

### 2.2.2 Ships on international voyage whilst sailing in EU AIS waters

EMSA has analysed the possibility of using the AIS data as an alternative input for LRIT reports. For example, whenever a ship is navigating within the EU AIS coverage area and LRIT data is requested by an EU user, the EU DC can check the latest AIS position available for that ship in the SSN database and if the available position meets LRIT criteria it can be used to generate the requested LRIT report, thus saving the costs of satellite communication.

Even if technically possible, we have to outline that such an approach is not compliant with IMO LRIT security requirements. The AIS position reports are broadcasted through an open communication system which is not protected against possible interception or frauds and therefore not secured in accordance with IMO LRIT standards.

As the EU LRIT DC is subject to a compliance audit by the LRIT Co-ordinator it is expected that the use of AIS data within the LRIT system may give rise on a major non-conformity against the LRIT security requirements.

**Therefore, the integration of the AIS information within the LRIT system is not possible due to communication security constraints.**

The AIS information can be used, when available, to minimise the use of LRIT reporting whilst the ships of interest are sailing within the EU AIS coverage. This can be achieved by switching the monitoring of ships from the LRIT system/user interface to the SSN system/user interface when the ship enters the AIS area. After the integration of LRIT and AIS data, the integrated data will be available through the single user web interface.

### 2.3 Single User Web Interface (SUWI)

Presently, the EU LRIT DC and the SSN systems are operated as stand-alone systems, each one having its own users and their own Web User IF for accessing the data. On each system, the management of users at national level is done by a National Competent Authority (NCA). Each MS has either a SSN NCA and/or an LRIT NCA.

**The integration of LRIT-AIS data at the user level is based on the development of a Single User Web Interface (SUWI) able to provide either LRIT or AIS or LRIT/AIS data in accordance with established users' profiles and associated access rights.**

**Apart from the LRIT-AIS data, the CleanSeaNet data is also planned to be integrated within the SUWI.**

The development and implementation of the new SUWI will be done as an additional enhanced feature of existing systems. Every MS will have the option to continue using the actual independent systems as operated today or to implement and use the SUWI providing integrated services.

For the implementation and operation of SUWI, it is worth considering having a single NCA at the level of each MS in order to achieve a coordinated management of the users at national level. The approach could be similar with the actual management of users within the EU LRIT DC but involving more roles, such like:

- SSN user - entitled to see only SSN data;
- SSN/LRIT user - entitled to see AIS/LRIT data;
- SSN/LRIT/CSN use - entitled to see AIS/LRIT/CSN data;
- More to be defined.....

In parallel with the SUWI to access the data of EMSA operational services (SSN, CSN, LRIT DC) we will also develop a Single Monitoring Tool (SMT) to be used by EMSA MSSO to monitor operational performances of all three systems and to provide 24/7 Help Desk as necessary.

### **3. ACTION REQUIRED**

The LRIT NCA Group is invited to note EMSA high level approach for the integration of SSN-CSN-LRIT data and to provide their comments.