



**1<sup>st</sup> Meeting of the LRIT NCA's**  
**Agenda item 7**  
**Lisbon, 19-20 October 2009**

## **OPERATIONAL ISSUES**

### **"Ship Integration and ship reporting"**

**Submitted by EMSA**

<i>Action to be taken</i>	Take into consideration the ship integration problems presented in this paper and EMSA proposals for improvement.
<i>Related documents</i>	<ul style="list-style-type: none"><li>• Conditions of Use to use the EU LRIT DC</li><li>• MSC.1/Circ. 1307 (9 June 2009) – Guidance on the survey and certification of compliance of ships with the requirement to transmit LRIT information, revoking MSC.1/Circ. 1296</li><li>• Getting started for the EU LRIT Ship database</li></ul>

## **1. INTRODUCTION**

- To explain the new developments since the last meeting:
  - MSC.1/Circ. 1307, revoking and replacing MSC.1/Circ. 1296
  - Re-integration costs are now borne by EMSA
- To explain the monitoring of reporting: not reporting, under-reporting, over-reporting, abnormal reporting
- To explain the integration process, the problems so far, including:
  - Ship particulars still missing/incorrect in ship DB;
  - Problems encountered during integration due to tests indicating that equipments are not LRIT compliant or not reporting according to LRIT performance requirements, despite having a valid CTR.

## 2. INTEGRATION OF EU FLAG SHIPS IN EU LRIT DC

### 2.1 - What's new?

The MSC.1/Circ. 1307 revokes and replaces MSC.1/Circ. 1296. The main changes are:

- (8.8.5) shipborne equipment of a type approved by the Administration is required to undergo conformance testing;
- (15) if there are difficulties in conducting conformance testing:
  - o Inability to complete the conformance testing should not be considered as making the ship unseaworthy;
  - o Administrations are urged to report to the IMO the areas and circumstances under which conformance testing cannot be conducted.

Following approval from EMSA management, the re-integration (when integration has to be done more than once) costs are now borne by EMSA.

2.2 – Monitoring the ship reporting and associated definitions: not reporting, under-reporting, over-reporting, abnormal reporting (see the document "Getting Started with EU LRIT DC" downloadable from the EU LRIT DC User Web Interface)

**Not reporting:** The ship has been integrated successfully, but is not reporting for some reason: equipment switched off, shadow area, LRIT equipment not appropriate (i.e.: Inmarsat C in polar area).

**Over reporting:** A ship is over-reporting if the number of reports provided during the reference time window is 25% more than the number of scheduled position reports. For the time being the reference time window is set to 3 days.

**Under reporting:** A ship is under-reporting if the number of reports provided during the reference time window is 25% less than the number of scheduled position reports. For the time being the reference time window is set to 3 days.

**Abnormal reporting:** The reports received by the ASP from the shipborne equipment are not compliant with IMO technical specifications (i.e. it is sending additional reports in addition to the normal LRIT reports, it is sending messages in another format, the ship is reporting with a non recognized MEM code (Macro Encoded Message). This is the case for some Inmarsat terminals when the SSAS service is activated (MEM code 93) or when the ship is out of the satellite visibility area (storage mode (MEM code 70): non IMO compliant).

The monitoring procedure for troubleshooting under, over, abnormal or not reporting is described below:

1. Whenever a problem occur with the reporting rate, CLS will try to solve the problem at ASP level by itself;
2. If it can not be solved then CLS:
  - i. stops the equipment if needed (over-reporting or abnormal reporting)
  - ii. updates the status of the ship in the UWI (menu ship management/ship reporting)

- iii. sends to MSSO the data of the involved ship and the nature of the problem;
3. The MSSO forwards the information on the status of the ship/problem to the relevant CG (LRIT operational contact point cc: LRIT NCA)
4. The CG ensures that the shipborne equipment is checked, repaired if needed (through the shipowner, ship manager...) and thereafter informs the MSSO accordingly;
5. The MSSO informs the ASP (CLS) that problem was solved so they can start/restart the equipment.

The MSSO only communicates with the CG and has no direct contact with ships or shipowners and there is no direct contact between CLS and ships and shipowners or with the CG (for problems related to the DC: integration, abnormal reporting).

In step 2, when it is written "CLS stops the equipment", that means CLS performs an action equivalent to the action "Stop", in the menu Ship management/Ship reporting.

**This does not mean** that the terminal on board is switched off. If the equipment used to transmit LRIT data is also used for radio communication in the framework of the GMDSS, this equipment can still be used for this purpose. Only the LRIT communications are stopped.

This buttons "Stop" and "Restart" are also available for the LRIT NCA. They have the possibility, like CLS, to stop any shipborne equipment from reporting LRIT positions, if necessary for various operational reasons.

### 2.3 – The integration process

The integration procedure and the way communication is currently done between CGs, CLS and MSSO are according to the following steps:

1. The CG (Ship DB Manager) upload/update a ship in the LRIT Ship DB;
2. Whenever a change occurs in the Ship DB, a new version is sent to the EU DC;
3. CLS checks that the data provided in the LRIT Ship DB is correct;
4. If the data is not correct, CLS informs the MSSO;
5. The MSSO informs the CG (ship DB manager, cc: LRIT NCA) that they have to correct the data in the LRIT ship DB;
6. The CG corrects the data in the LRIT ship DB;
7. The updated information from the ship DB is received by CLS/EU DC;
8. CLS tries to integrate each vessel which is correctly registered in the Ship DB: the DNID is downloaded into the shipborne equipment;
9. If the initial integration fails, CLS will repeat the integration after a certain period of time (usually around 1-3 days) During this period the status of the ship in the UWI (menu ship management/ship integration) should be "Integration in progress";
10. CLS tries to integrate the vessel a second time;
11. If the second attempt fails, the status of the ship is changed to "Integration failed" and the reason should be detailed in "comments" column;
12. The CG (National LRIT Operational contact point / LRIT NCA) checks this table on the UWI on a regular basis, and takes any action needed (update in LRIT ship

database, check of the terminal on board through the ship owner, ship manager...);

13. The CG informs the MSSO accordingly when the third (or more) re-integration can be done;
14. The MSSO passes this information to CLS, so that they can continue with the re-integration process;
15. CLS tries to integrate the vessel a third time (or more);
16. If the integration fails for a third time (or more), CLS informs MSSO, and MSSO passes the information to the CG, and go to step 11;
17. If the ship is integrated, the status is changed to "integrated".

### **Important remark:**

In step 6, "the DNID is downloaded into the shipborne equipment" means the address of the ASP (CLS) is written into the shipborne equipment (DNID: Data Network Identification), so that the equipment knows where to send the LRIT reports.

### **Problems encountered so far:**

- Wrong Identification number (IMEI for Iridium, ISN for Inmarsat D+, IMN for Inmarsat C) is entered in the LRIT ship DB: if this is the case it is impossible for the ASP to communicate with the terminal.
- Also, it is necessary to enter the serial number of the equipment, so that the ASP knows there is a new terminal which has to be integrated. New shipborne equipment does not have the DNID downloaded, so it will not know where to send the LRIT reports and therefore will be presented in the web interface as "not reporting".
- A bug was detected in the web interface obstructing the automatic update of the ship status in the menu "Ship management/Ship reporting". For example, ships that were stated as over-reporting were not updated after the problem with the shipborne equipment was solved. CLS is fixing this bug.

### **3. ACTIONS REQUIRED**

- CGs should inform MSS when they know a ship will stop reporting for a long time. The information is then forwarded to CLS, so no specific action will be intended by CLS to restore the communication with the shipborne equipment. A new status is foreseen in the menu "Ship management/Ship reporting", column Status: "Stopped by the CG";
- CGs should have a look on a regular basis at the menu "Ship management/Ship integration", so that they know if an update in the LRIT ship DB is needed;

- CGs having declared Overseas Territories should register their ships under the correct flag: the flag of the Country, or the flag of the Overseas Territories. Otherwise, the ships will appear under the same flag in the EU LRIT DC;
- CGs should check the terminal when informed to do so by the MSS in case of a reporting problem;

#### **4. CONCLUSION AND ACTION REQUIRED DURING MEETING**

The ship integration procedures and associated UWI and LRIT Ship DB menus will be adjusted according to feedback received from end users.

The LRIT NCA Group is invited to note the above information and to provide their comments and discuss during the meeting.