



European Maritime Safety Agency

## Technical Note 8

# PROCEDURES FOR SHIP CREATION, INTEGRATION AND REPORTING

VERSION 2.0

03-03-2016

<b>Change History</b>		
<b>Version</b>	<b>Description</b>	<b>Author</b>
Version 1.0	20-05-2010	VGU
Version 1.1	26-04-2011 Updates with new version of EU LRIT Ship DB; new definition Integrated; new status Waiting 1st position; Re-integration, Restart, DNID upload done by CGs	VGU
Version 1.2	08-02-2012 "DNID downloading protocol failed" replaced by "DNID upload failed"; "Re-integrate Ship" replaced by "Continue integration"; "GPS issue" and "Shipborne equipment not responding" added to the causes of non-integration. Various updates	VGU, YTE
Version 2.0	03-03-2016 Removal of references to Inmarsat D+, replaced with Inmarsat IsatM2M; removal of over-reporting due to SSAS; update of Annex 2 with AAS; removal of references to Satpro. Full restructuring of the document and various updates	VGU, DMO

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## **I. EXECUTIVE SUMMARY**

This document provides technical **recommendations** to help Contracting Governments (CGs) dealing with ship creation in the European Union LRIT Ship Database (EU LRIT Ship DB), ship integration in the European Union LRIT Cooperative Data Centre (EU LRIT CDC), and ship reporting issues.

The procedures describe the steps to be followed for particular situations related to ship integration as well as for ships which are not reporting in the EU LRIT CDC according to their expected frequency.

The procedures describe the roles of:

- the CGs participating in the EU LRIT CDC;
- the EMSA Maritime Support Services (MSS);
- the Application Service Provider (ASP).

EMSA invites CGs to implement these procedures within their LRIT operational activities in order to achieve a better integration and reporting performance.

This version supersedes the Technical Note 8 v1.2 dated 09-02-2012.

## **II. COMMUNICATION WITH EMSA AND QUESTIONS FOR ASP**

The single Point of Contact for CGs to deal with ship integration and reporting issues is the MSS, available 24/7. The contact details of MSS are the following:

- Phone: +351 211 209 415
- Fax: +351 211 209 480
- Email: [maritimesupportservices@emsa.europa.eu](mailto:maritimesupportservices@emsa.europa.eu)

MSS mailbox is linked with a ticketing tool. Each new email arriving in MSS mailbox is uniquely identified with a ticket number, which appear in the subject of the email when MSS replies. For tracking purposes, it is important to keep this ticket number in the subject of the email.

In case of questions for the ASP the above contact details should be used, then MSS will forward the message to the ASP. This is needed to ensure a proper tracking and follow-up of the requests.

To clearly identify the emails you send to MSS when related to a specific ship, please remember that the subject of the email should be, in this order:

**IMO number – Radio ID (IMN, ISN, IMEI) – Ship name – Flag – Object of the ticket**

This convention is already used between MSS and the ASP and has proved to be efficient; it should be used as much as possible.

- **Radio ID:** the Radio ID can be found:

- in the EU LRIT CDC User Web Interface (UWI): menu **Ship management**, tables **Ship integration** or **Ship reporting**. The column "Radio ID" must be enabled. Only the LRIT NCA and any role including "Flag Full" have the necessary access rights to see the tables *Ship Integration* and *Ship Reporting*; users who do not have these roles cannot see these tables, and should request their LRIT NCA to give them a role containing "Flag Full".
- or in the EU LRIT Ship Database UWI: after having selected a ship, in section LRIT Radio Equipment, Radio identifier.

It is very important to mention the Radio ID, because several terminals are installed on board the same ship. Only the Radio ID allows identifying the correct terminal.

- **Flag:** to reduce the size of the subject, if possible use the 3-letter ISO code of your country; this code is already used in the UWI (List of ships, Manage users...).

- **The object of the ticket** must be precise: please avoid general wording like invalid reporting. The issue can be:

- Stopped for dry-dock
- Ship stopped reporting
- Over-reporting (SSAS)
- GPS issue
- ...

If you receive an email from MSS, simply reply to it, the subject is already correctly entered in the email, together with the ticket number, allowing a proper tracking of the request by EMSA.

### III. REMARKS

1. **Monitoring the fleet by CG.** After the successful integration of shipborne equipment (first position report was received by the EU LRIT CDC), monitoring its reporting status is the responsibility of the Flag State (CG). The UWI of the EU LRIT CDC provides, through the menu **Ship management**, real-time information to CGs for detecting ships not complying with the planned reporting rate. The CG should regularly (daily if possible) check the information provided by the UWI and take appropriate action, as guided by these procedures, whenever a ship is not reporting properly. MSS and the ASP assist and advise CGs in order to carry out their tasks.
2. **Monitoring the fleet by EMSA:** In case a CG has not the necessary resources in terms of time and/or staff, it may delegate the monitoring of its fleet to EMSA. A simple email from the LRIT NCA to MSS is enough to activate the delegation. Then EMSA, with the support of the ASP, will weekly check new

terminals which stopped reporting since the last 7 days, and apply the procedures listed in this document. A report on the actions taken by the ASP, and actions that should be taken by the CG, is sent monthly to the CG. This implies no extra cost for the CG having done the delegation.

3. To be compliant with SOLAS Chapter IV Radio Communications, some ships have duplication of equipment on board. In this case, if a terminal is not transmitting properly LRIT information, the duplicated equipment can usefully be employed. Note that the full process of integration has to be done again for this duplicated equipment;
4. If, for a given ship and issue, a procedure is repeated without success, it may be necessary to consult a radio-technician. Note that for shipborne equipment (also called "terminals" in this document) showing repeated reporting issues for a long time, their replacement should be contemplated. Dedicated LRIT equipment (used only to transmit LRIT information) and equipment used to transmit only LRIT information and SSAS alerts proved to have much less reporting issues;
5. See definitions and abbreviations in Annex.

#### IV. SHIP MANAGEMENT IN THE EU LRIT SHIP DB

Please take note of the following clarifications for the EU LRIT Ship DB when you are filling in the relevant ship information to ensure that erroneous information is not entered in the various fields which could make the integration process for your ships much longer.

Neither the Administrator of the EU LRIT Ship DB nor the ASP can create/update/delete ship data in the EU LRIT Ship DB. Therefore if any mistake is detected, the National LRIT Ship DB Manager is the only person able to make changes in the EU LRIT Ship DB.

##### 1. Ship creation

In the EU LRIT Ship DB, in the **Create Ship** window, you will find different boxes with fields to fill in. The blue fields are mandatory; you must fill them in, otherwise the creation of the ship is not possible.

Create Ship
?

**Ship Identification:**

IMO Number:

MMSI Number:

Call Sign:

Ship Name:

Flag State:

**LRIT Radio Equipment:**

Communication system:

Terminal model:

Serial number:

Radio identifier:

\*LRIT Mandatory:

\* In accordance with SOLAS regulation V/19.1

**Contact Person:**

Name:

Address:

Phone Number:

Alternative Phone:

Fax Number:

Email:

**Comment:**

**Automatic Alert Service (AAS):**

Activate the AAS system:

**Start of Service:**

Date:   
yyyy-mm-dd

**Transfer of Flag:**

Previous Flag:

**Shipborne equipment Type approval:**

Type approved by the Administration:  Type approval Reference number:

Certified by the Administration Conformance test report issued by the ASP:

Date of issue:   
yyyy-mm-dd

Shipborne equipment should be of a Type approved by the Administration or Certified by the Administration completing a Conformance Test as stated by IMO MSC.1 Circ. 1307

**I – Box: “Ship Identification”**

The information to fill in the fields can be found in the Conformance Test Report (CTR).

If the following error message appears after verifying the IMO number, it means that a ship with this IMO number already exists in the EU LRIT Ship DB. Send an email to MSS, then MSS will inform the other flag administration to update the EU LRIT Ship DB.



**IMO number verification error**

This IMO is associated with an active ship in the Ship DB, please go to the Update Ships section.



**II – Box: “LRIT Radio Equipment”**

The information to fill in the fields can also be found in the CTR.

**A – Communication system**

The **Communication system** field is the type of communication network used by the terminal. A drop-down list is available:

Avoid using the “Other” value.

**B – Terminal model**

It is the model of the terminal used to transmit LRIT information. A list of terminals associated with the communication system chosen above is available.

**C - Serial Number**

Free text; it is the serial number of the terminal above, necessary to integrate Inmarsat C and Inmarsat mini C shipborne equipment.

- For Inmarsat Standard C: use only the serial number of the terminal. There is no specific format (e.g.: 3852-3609).
- For Inmarsat mini C, the serial number (ISN) is composed by:

Maker	Composition	Examples
Furuno	Starts with “4FE” + 9 digits or letters	4FE08847CF41
JRC	Starts with “4JR” + 9 digits or letters	4JR180A46369
Thrane & Thrane	Starts with “4TT” + 9 digits or letters	4TT0910D6C06

To distinguish between Inmarsat Standard C and Mini C, check the 3 digits after the 2 letters of the maker:

- If < 81: Standard C      E.g: 4TT080xxxxxx: Standard C;
- If ≥ 81: Mini C            E.g: 4TT081xxxxxx: Mini C.

- For Inmarsat IsatM2M or Iridium, if the serial number is not present in the CTR, then copy in the Serial number field the radio identifier: ISN (Inmarsat IsatM2M) or IMEI (Iridium).

The serial number is the unique key to refer to a terminal; MMSI or radio ID may be used successively in various terminals.

#### D - Radio identifier

The field called **Radio identifier** (Radio ID) should be filled in according to the table below:

Communication system	Radio identifier	Composition	Example
Inmarsat C	IMN (Inmarsat Mobile Number, 9 digit number)	Starts with digit "4" + 3 digits MID country code + additional 5 digits	422535610
Inmarsat mini C	IMN (Inmarsat Mobile Number, 9 digit number)	Starts with digit "4" + 3 digits MID country code + additional 5 digits	424098410
Inmarsat IsatM2M	ISN (Inmarsat Serial Number, 12 digit number)	Skywave: starts with "DCC" + additional 9 digits or letters Satamatic: starts with "DST" + additional 9 digits or letters	DCC00475275E DST00267B03E
Iridium	IMEI (International Mobile Equipment Identifier, 15 digit number)	New models: starts with digit "3" + additional 14 digits Old models: starts with digit "5" + additional 5 digits	300034012328940 523654
Other	Radio Identifier		

Please note that you can find the **Radio identifier** (radio ID) of the shipborne equipment in the CTR.

Please do not insert the **Radio identifier** and the serial number of the shipborne equipment in the same field. Use the 2 separate fields to do this.

Below are some examples for each communication system:

<b>Inmarsat Standard C:</b> <b>LRIT Radio Equipment:</b> Communication system: INMARSAT C/ mini C Terminal model: FELCOM 18 Serial number: 3598-3041 Radio identifier: 422991510	<b>Inmarsat Standard C:</b> <b>LRIT Radio Equipment:</b> Communication system: INMARSAT C/ mini C Terminal model: TT-3020C Serial number: 06231697 Radio identifier: 421253011
<b>Inmarsat Mini C:</b> <b>LRIT Radio Equipment:</b> Communication system: INMARSAT C/ mini C Terminal model: JUE-87 Serial number: 4JR1906EEB1F Radio identifier: 425615910	<b>Inmarsat Mini C:</b> <b>LRIT Radio Equipment:</b> Communication system: INMARSAT C/ mini C Terminal model: 3027C - SAILOR 6110 Serial number: 4TT094 346FC7 Radio identifier: 420958910
<b>Inmarsat IsatM2M:</b> <b>LRIT Radio Equipment:</b> Communication system: INMARSAT IsatM2M Terminal model: SAT202 LRIT Serial number: DST005B31F44 Radio identifier: DST005B31F44	<b>Inmarsat IsatM2M:</b> <b>LRIT Radio Equipment:</b> Communication system: INMARSAT IsatM2M Terminal model: LRIT-proD200 Serial number: 4933060 Radio identifier: DCC0043EFED4
<b>Iridium:</b> <b>LRIT Radio Equipment:</b> Communication system: IRIDIUM Terminal model: THORIUM TST-100 Serial number: A9500212 Radio identifier: 300034012185270	<b>Iridium:</b> <b>LRIT Radio Equipment:</b> Communication system: IRIDIUM Terminal model: THORIUM TST-100 Serial number: Unknown Radio identifier: 500335

**III – Box: “Contact Person”**

Optional field. If the Automatic Alert Service (AAS) is activated, at least the email should be filled in.

**IV – Box: “Comment”**

Free text; here you can provide any additional information you find useful, or write a personal comment for the management of the terminal.

**V – Box: “Automatic Alert Service (AAS)”**

Allow the above contact person to receive an automatic email if the ship stops reporting.

**VI – Box: “Start of Service”**

Per default, today's date. The date of service cannot be in the past. It can be in the future, in that case the ship appears in the menu “Pre-registered ships”.

**VII – Box: “Transfer of flag”**

Indicate the previous flag, for statistical purposes.

**VIII – Box: “Shipborne equipment type approval”**

According to the IMO circular 1307 a Conformance Test Report (CTR) should be issued in all cases except for terminals type-approved by the administration in accordance with the provision of SOLAS regulation V/19-1.

Take care not to enter the Date of completion of the testing of the shipborne equipment, but the date of issue of the CTR. At the issue date of this document, for terminals type-approved by the Administration according to regulation V/19-1, only the field “Type approval reference number” should be filled in.

## 2. Ship update

It is the responsibility of the CG to update the EU LRIT Ship DB accordingly in case of a change of flag or if a new terminal on board has been installed to transmit LRIT information.

Two types of updates are possible:

- 1 – The update affects data in the box “LRIT Radio Equipment”. Then, the field “Change of terminal” must be set to YES. All the fields in this box are erased.

Update Ship
?

Changed by: [na\\_lequitte](#) on: 2011-01-21 16:34:06.245627

Ship Identification:	LRIT Radio Equipment:
IMO Number: 9179713	Change of terminal: Yes <input type="button" value="v"/>
MMSI Number: <input type="text" value="228063000"/>	Communication system: <input type="button" value="v"/>
Call Sign: <input type="text" value="FNHR"/>	Terminal model: <input type="button" value="v"/>
Ship Name: <input type="text" value="ALGARVE"/>	Serial number: <input type="text"/>
Flag State: France	Radio identifier: <input type="text"/>
	*LRIT Mandatory: <input type="button" value="v"/>

\* In accordance with SOLAS regulation V/19.1

Please note that a simple change in the MID (even keeping the same flag) of the MMSI number implies a change of the Radio identifier for Inmarsat C terminals; so in this case it is necessary to enter again all the LRIT radio equipment data with the new Radio identifier. A new CTR, with the new radio ID, has to be issued and entered in the “Shipborne equipment type approval” box. A new integration will automatically follow.

2 – The update does not affect data in the “LRIT Radio Equipment” box. Then, the “Change of terminal” field must be set to NO.

The screenshot shows the 'Update Ship' interface. At the top, it says 'Changed by: na\_lequitte' and 'on: 2011-01-21 16:34:06.245627'. There are two main sections: 'Ship Identification' and 'LRIT Radio Equipment'. The 'Ship Identification' section contains fields for IMO Number (9179713), MMSI Number (228063000), Call Sign (FNHR), Ship Name (ALGARVE), and Flag State (France). The 'LRIT Radio Equipment' section contains fields for Change of terminal (No), Communication system (INMARSAT C/ mini C), Terminal model (TTHRANE - TT-3000LRIT), Serial number (4TT0883D05D9), Radio identifier (422806312), and \*LRIT Mandatory (No). The 'Change of terminal' dropdown is highlighted with a green circle. A note at the bottom states '\* In accordance with SOLAS regulation V/19.1'.

Ship Identification:		LRIT Radio Equipment:	
IMO Number:	9179713	Change of terminal	No
MMSI Number:	228063000	Communication system	INMARSAT C/ mini C
Call Sign:	FNHR	Terminal model	TTHRANE - TT-3000LRIT
Ship Name:	ALGARVE	Serial number	4TT0883D05D9
Flag State:	France	Radio identifier	422806312
		*LRIT Mandatory	No

\* In accordance with SOLAS regulation V/19.1

In this case it is not possible to modify any data in the “LRIT Radio Equipment” box, but all the other fields from other boxes can be updated.


### 3. Ship removal


To remove a ship from the EU LRIT Ship DB, go to Search/Update ships, and click on the Update hyperlink. Three options are possible:

- Transfer of flag: the date can be today's date or in the future (never in the past), the Next flag field is optional;
- Out of service: the date can be today's date or in the future (never in the past);
- Delete button: the action is immediate, at next cut-off time the ship will be deleted.

If you performed a ship removal following an email from MSS (see section IV.1.1 Box: “Ship Identification”), don't forget to reply to their email. Then, they can in return inform the flag administration which was not able to create the ship.

**Transfer of Flag:**

Date:    
yyyy-mm-dd

Next Flag:  


**Out of Service:**


Date:    
yyyy-mm-dd


**Start of Service:**

Date: 2012-12-17  
yyyy-mm-dd

**Shipborne equipment Type approval:**

Type approved by the Administration:      Type approval Reference number:

Certified by the Administration Conformance test report issued by the ASP:  

Date of issue:    
yyyy-mm-dd

Shipborne equipment should be of a Type approved by the Administration or Certified by the Administration completing a Conformance Test as stated by IMO MSC.1 Circ. 1307

Update

Cancel

Delete

## V. SHIP INTEGRATION AND RELATED INCIDENT MODELS

To manage with integration incidents after a ship is registered in the EU LRIT Ship DB, a responsible person should regularly check the ship integration status in the EU LRIT CDC UWI, menu **Ship management** > **Ship integration**, until the integration is completed successfully (status: **Integrated**).

The integration statuses are also always available in the **Ship management** > **Ship history** table, even for ships removed from the EU LRIT CDC.

### Integration statuses meanings in **Ship management** > **Ship integration** table

- Integration in progress:

This status is used either:

- After the ship's data have been entered in the EU LRIT Ship DB and automatically passed to the EU LRIT CDC for integration;
- After the **Continue integration** button has been pressed.

- Waiting 1<sup>st</sup> position:

The terminal was successfully activated at ASP level (for Inmarsat C network: meaning the DNID was properly uploaded in the terminal), and the EU LRIT CDC is waiting for the first position to change the status to **Integrated**.

- Integrated:

The terminal sent at least one position to the EU LRIT CDC.

- Not integrated:

The terminal failed to be integrated in the EU LRIT CDC.

- Upload DNID in progress:

Status of an Inmarsat C terminal after a request to upload a DNID through the **DNID upload** button. Then the ASP does the DNID upload action in the current ocean region.

- Removal in progress:

Status of a terminal after it has been removed from the EU LRIT Ship DB by the Administration, and not yet removed from the EU LRIT CDC by the ASP. This status will appear in the table **Ship integration** until it has been effectively removed by the ASP. Then, the ship does not longer appear in this table. The removal can take up to 72 hours.



### UWI's buttons in *Ship management* > *Ship integration* table

The following buttons, to be used in the procedures, are available in the bottom of the *Ship Integration* table:

- **Continue integration:** This command is to request the continuation of the integration of a terminal when the causes of non-integration described in procedures I-2 and I-3 have been resolved. It should not be used for the causes described in procedure I-1, since the resolution of these causes automatically resumes/continues the integration.
- **DNID Upload:** This command is to request a DNID upload in the current ocean region the ship is sailing in. It is used in the procedures A-1 and E-1. It is not possible to request the DNID upload for an ocean region where the ship is not currently sailing. Unlike in the ship integration process, there is only one attempt to upload the DNID.

### **1. Initialization of the integration process**

The explanations below can usefully be read together with the flowchart in Figure 1.

1 – To be integrated, the ship must be registered within the EU LRIT Ship DB. It is very important that CGs pay attention to the quality of data registered in this database and provide any additional data that can help in the integration process.

2 – After the ship's data have been entered in the EU LRIT Ship DB, the information is automatically passed to the EU LRIT CDC each day at the cut-off time which is normally set at 6:00 hours UTC. You can see this information on the top right of the EU LRIT Ship DB: **Daily Cut-off Time: 06:00 UTC**

3 – Then the information is forwarded from the EU LRIT CDC to the ASP, and the integration process can start. ASP operators work during working days, so the integration can start up to 3 days after the data have been entered in the EU LRIT Ship DB.

If the data provided for a particular ship are correct, and if the terminal is correctly switched on (powered on) and logged on (connected to the satellite network), the normal duration of the integration process is usually up to 5 days after the data has been received in the EU LRIT CDC. During the integration process, the Integration status in the *Ship integration* table of the UWI of the EU LRIT CDC is **Integration in progress**:

Ship Integration										
<input type="checkbox"/>	Ship name	IMO	MMSI ▼	Date of entry	<i>Integration status</i>	Cause of failure	Comment	Radio installation	Radio ID	Serial number
<input type="checkbox"/>	COSCO GUA...	<a href="#">9305570</a>	256940000	17/06/2009 13:21:07	Integration In Progress			inmarsatD	DCC012D34873	DCC012D34873
<input type="checkbox"/>	HELLAS FIG...	<a href="#">9722625</a>	256748000	11/11/2015 06:17:15	Integration In Progress			inmarsatC	425674811	4JR180FABAAF

Otherwise, the Integration status in the **Ship integration** table of the UWI of the EU LRIT CDC is **Not integrated**, and the suitable procedure should be applied to resume the integration process.

4 – Then, after the terminal is activated by the ASP, the status changes to **Waiting first position**. Sometimes, the ASP needs to investigate and do troubleshooting with a Communication Service Provider (CSP), or perform several Data Network Identification (DNID) uploads, in order to receive the first position. These actions take time, and the terminal may stay in this status up to 7 days before being integrated.

5 – When the first position from this terminal is received by the EU LRIT CDC, it means that the integration process concluded satisfactorily, and the integration status is set to **Integrated**.

6 – If after 7 days of troubleshooting the ASP did not manage to get a position for this terminal, its integration status will change to **Not integrated**, and a **Cause of failure** is provided. This is visible in the **Ship integration** table:

Ship Integration								
<input type="checkbox"/>	Ship name	IMO	MMSI	Date of entry	Integration status	Cause of failure	Comment	Radio installation
<input type="checkbox"/>	BELUGA C	<a href="#">8741507</a>	256975000	12/03/2010 16:26:17	Not Integrated	Shipborne equipment logged out	Log in the shipborne equipment	inmarsatC
<input type="checkbox"/>	RT AMBITION	<a href="#">9559250</a>	256947000	13/07/2012 21:03:13	Not Integrated	DNID upload failed	Log out/log in required	inmarsatC
<input type="checkbox"/>	COSCO YAN...	<a href="#">9305594</a>	256930000	17/06/2009 13:21:07	Not Integrated	Terminal not responding	Check terminal and/or its instal...	inmarsatD

Depending on the cause described in the **Cause of failure** column, the relevant procedure in Table 1 should be selected. The **Comment** helps also to better understand the cause of failure.

After a ship has had a status **Not integrated**, the integration process can resume either:

- automatically, after an update of the EU LRIT Ship DB by the CG (third column of Table 1 below). The procedure I-1 should be used (see also section IV.2. *Ship update*: the process is the same as point 2 above. In the box: LRIT Radio Equipment, the field “Change of terminal” must be set to **YES**).
- manually, after the CG has had the terminal checked (fourth column of Table 1 below) the request to continue the integration has to be done by the CG through the button **Continue integration**. One of the procedures I-2 or I-3 below should be used. The button **Continue integration** is available in the EU LRIT CDC UWI in the **Ship Management** menu, bottom left of the **Ship Integration** table.

**Only the LRIT NCA and any role including “Flag Full” have the necessary access rights to see this button in the table Ship Integration; users who do not have these roles cannot see this button, and should request that their LRIT NCA perform the Continue integration action in the procedures below, or request the LRIT NCA to give them access to this button by assigning a role containing “Flag Full”.**

Cause of failure	Meaning	Resume integration automatic (in EU LRIT Ship DB: "Change of terminal" = YES)	Resume integration manual (use of button Continue integration)	Follow procedure:
Shipborne equipment deactivated (Inmarsat C only)	The terminal has been deactivated in ESAS (generally before a change of flag)	X		I-1
Invalid radio ID in EU Ship DB	A wrong radio identifier was entered in the EU LRIT Ship DB, or radio ID no longer exists	X		I-1
Shipborne equipment activated after the CTR date of issue (Inmarsat C only)	The issue date of the CTR entered in the EU LRIT Ship DB is too old. A CTR can be issued only after the activation of the terminal in ESAS	X		I-1
Shipborne equipment superseded (Inmarsat C only)	The terminal has been replaced (serial number changed), but the same radio identifier is used	X		I-1
DNID upload failed (Inmarsat C only)	DNID could not be uploaded in the terminal by the CSP		X	I-2
Shipborne equipment logged out (Inmarsat C only)	The terminal is logged out from Inmarsat network		X	I-2
Shipborne equipment not responding	The terminal and / or its installation have a problem		X	I-2
GPS issue	The GPS giving position and time to the terminal has a problem: the date is in the future or in the past		X	I-2
Shipborne equipment is barred (Inmarsat C only)	Barred by the Communication Service Provider, often because of unpaid bills.		X	I-3

Table 1: Causes of non-integration

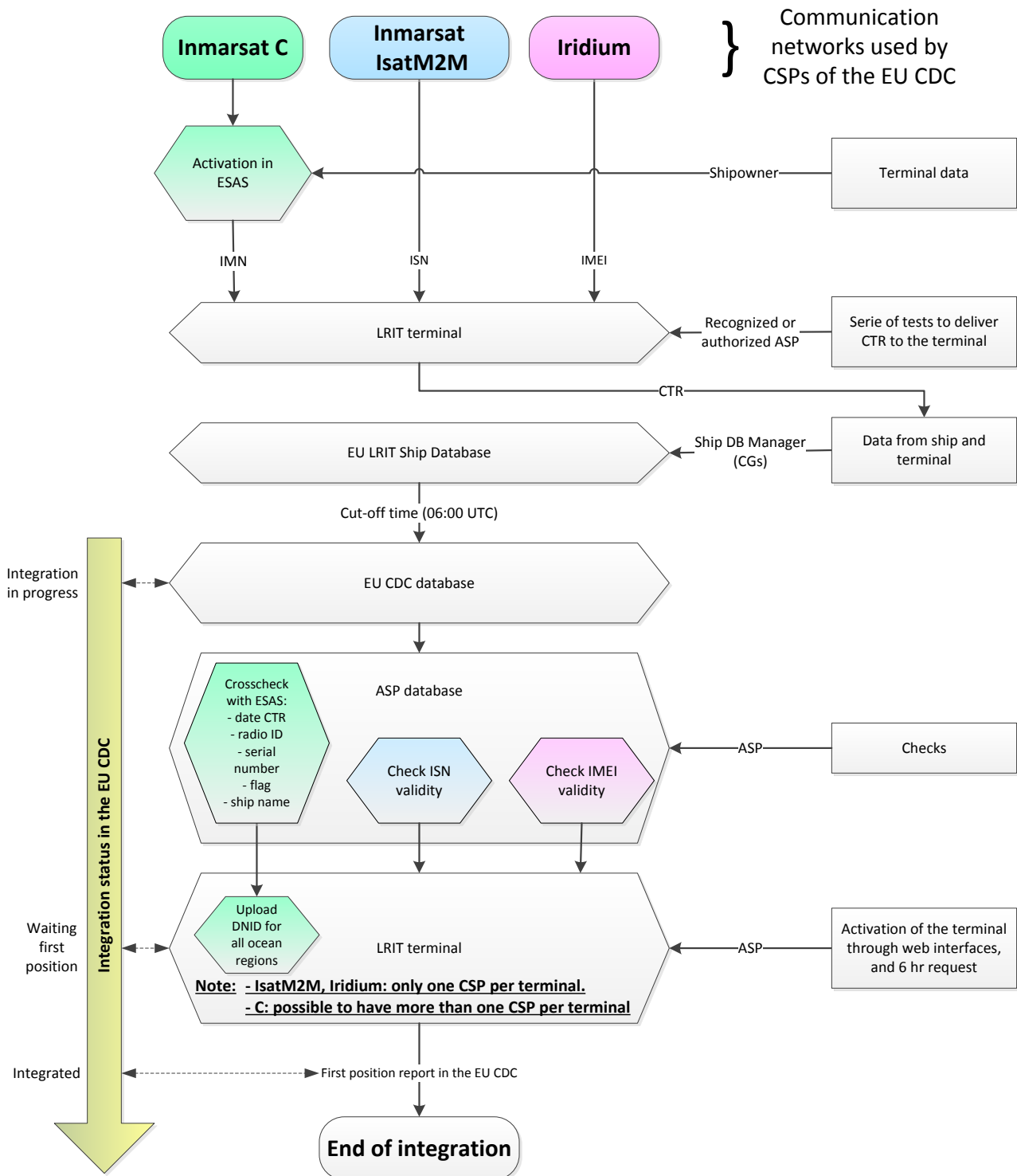


Figure 1: Ship integration chronology

## 2. **Procedure I-1: Not integrated: need for an update in the EU LRIT Ship DB**

**Note:** at the end of this procedure, there is **NO** need to press the **Continue integration** button: the integration process will resume automatically when the EU LRIT CDC receives the update from the EU LRIT Ship DB.

Cause of non-integration (table <i>Ship Integration</i> , column Cause of failure)	Step	Action to be done	By whom		
			ASP	CG: Administration	CG: Technical Team
<ul style="list-style-type: none"> <li>- Shipborne equipment deactivated (Inmarsat C only)</li> <li>- Invalid Radio ID in LRIT Ship DB</li> <li>- Shipborne equipment activated after the CTR date of issue (Inmarsat C only)</li> <li>- Shipborne equipment superseded (Inmarsat C only)</li> </ul>	1	Obtain the updated Conformance Test Report (CTR) from the testing ASP or the ship owner and update the CTR information in the EU LRIT Ship DB by inserting the correct Radio ID, CTR date of issue, and serial number. See also section IV.2. <i>Ship update</i> : in the box: LRIT Radio Equipment, the field “Change of terminal” must be set to <b>YES</b> .		X	
	2	Updated information is transmitted automatically from EU LRIT Ship DB to the EU LRIT CDC (this could take up to 24 hours) and integration is resumed. The status in the <b>Ship Integration</b> table should change from <b>Not integrated</b> to <b>Integration in progress</b> .	X		
	3	Check the UWI after a maximum of 12 days in order to see if the ship has changed its status to <b>Integrated</b> . If not, check the reason in the “Cause of failure” column and go to the right procedure in this section (I-1, I-2 or I-3).		X	

### 3. Procedure I-2: Not integrated: need to perform checks on board the ship

Cause of non-integration (table Ship Integration, column Cause of failure)	Step	Action to be done	By whom		
			ASP	CG: Administration	CG: Technical Team
<ul style="list-style-type: none"> <li>- DNID upload failed (Inmarsat C only)</li> <li>- Shipborne equipment logged out (Inmarsat C only)</li> <li>- Shipborne equipment not responding</li> <li>- GPS issue</li> </ul>	1	<ul style="list-style-type: none"> <li>- Check on board if the terminal is properly installed and switched on;</li> <li>- Do a log-out and log-in (needed only for Inmarsat C terminals);</li> <li>- For "GPS issue": check the GPS which is giving date and position to the terminal.</li> </ul>			X
	2	Continue the integration through the button <b>Continue integration</b> : status will pass to <b>Integration in progress</b> . NOTE: the ship should be in open sea to have a better satellite communication and facilitate the integration.		X	
	3	Integrate the terminal.	X		
	4	Check the UWI after a maximum of 12 days in order to see if the ship has changed its status to <b>Integrated</b> . If not, check the reason in the "Cause of failure" column and go to the right procedure in this section (I-1, I-2 or I-3).		X	

Note:

The button **Continue integration** is available in the UWI in the **Ship Management** menu, bottom left of the **Ship Integration** table.

**4. Procedure I-3: Not integrated: need to check with the Communication Service Provider**

Cause of non-integration (table Ship Integration, column Cause of failure)	Step	Action to be done	By whom		
			ASP	CG: Administration	CG: Technical Team
Shipborne equipment is barred	1	Check with the Communication Service Provider of the shipowner why the equipment may have been barred.		X	
	2	After the problem is solved, continue the integration through the button <b>Continue integration</b> : status will pass to <b>Integration in progress</b> . NOTE: the ship should be in open sea to have a better satellite communication and facilitate the integration.		X	
	3	Integrate the terminal.	X		
	4	Check the UWI after a maximum of 12 days in order to see if the ship has changed its status to <b>Integrated</b> . If not, check the reason in the "Cause of failure" column and go to the right procedure in this section (I-1, I-2 or I-3).		X	

Note:

The button **Continue integration** is available in the UWI in the **Ship Management** menu, bottom left of the **Ship Integration** table.

## VI. SHIP REPORTING AND RELATED INCIDENT MODELS

To manage with reporting incidents after a ship has been correctly integrated, a responsible person should regularly check the ship reporting status in the EU LRIT CDC UWI, menu **Ship Management > Ship reporting**, until the reporting is back to normal. The reporting statuses are always available in the **Ship history** table, even for ships removed from the EU LRIT CDC.

### Reporting statuses meanings in Ship management > Ship reporting table

- Normal:

The ship is reporting according to the reporting rate (15 mn to 24h) which has been requested or according to the mandatory reporting of every 6 hours.

- Over (for: Over-reporting):

The ship is reporting more than expected and this is due to 1) either a problem in the change of reporting period which has not been executed by the terminal correctly 2) or due to a problem with the hardware. Over-reporting occurs when more than 25% of expected position reports are received in the past 3 days (e.g. for mandatory reporting: 16 positions received in the past 3 days, instead of 12).

- Under (for: Under-reporting):

This is caused due to 1) some position reports not being sent by the terminal or are lost before reaching the satellite or 2) the last reporting rate change has not been executed by the terminal correctly. Under-reporting occurs when more than 25 % of expected position reports are not received in the past 3 days or there are more than 3 consecutive position reports which are missing.

- Stopped:

The terminal is no longer sending any position reports. The terminal may have this status when the ship is undergoing conversions in dry dock or in port; undergoing repairs; or is laid up for a long period of time. In this case, the master can request the Administration to reduce the frequency of the transmission of the LRIT information to one transmission every 24 hour period or may temporarily stop the transmission of such information.<sup>1</sup> It could also be that the shipmaster determines there is a potential danger to his crew and in which case he may stop completely the transmission.<sup>2</sup>

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<sup>1</sup> Paragraph 4.4.1 of Resolution MSC 263(84) Revised Performance Standards and Functional Requirements for the Long Range Identification and Tracking of Ships

<sup>2</sup> ITU International Radio Communication Regulation



This can also occur when the ship was over-reporting and therefore the ASP stopped the equipment as it was incurring excessive costs.

- **Not reporting:**

This status is shown if no position reports were received in the past 3 days.









### UWI's buttons in *Ship management* > *Ship reporting* table

The following buttons, to be used in the procedures, are available in the bottom of the *Ship reporting* table:

- **Restart:** This command resets the shipborne equipment to the last reporting rate requested by the Flag State (or in case the ship is in the SAM area: to the reporting rate set in this area) or to 6 hours per default.  
**Note:** The command **Restart** is different from the **Request** "Restart/Reset", not linked with reporting issues. Its functionality is further detailed in the EU LRIT CDC User Manual.
- **Stop:** This command should be used by the CG when a ship enters a dry dock, or has to sail in areas which necessitate to switch off the radio equipments / when radio equipments will not be able to emit: some ports dealing with dangerous goods, rivers with low bridges implying to fold masts...
- **DNID Upload:** Duplication of the button available in the *Ship Integration* table, to facilitate the troubleshooting of ships not reporting.

### 1. **Prerequisite**

- 1 – The ship is integrated: at least one position was received in the EU LRIT CDC;
- 2 – A responsible person (CG or ASP if delegation) should regularly check the UWI and the *Ship Reporting* table for ships with a reporting status: **Not reporting**, **Under-reporting**, **Over-reporting** or **Stopped**.

Ship Reporting										
<input type="checkbox"/>	Ship name	IMO	Last reques...	Request status	Request date	Reporting status	Status date	Comment	Date of last position	
<input type="checkbox"/>	ASTRO CHA...	9237072	6 hrs	Executed	06/07/2011 10:10:24	Under	07/11/2015 21:58:56	69%	09/11/2015 06:01:18	 
<input type="checkbox"/>	VICTORIA S...	9350721	6 hrs	Executed	25/06/2009 16:11:02	Normal	02/06/2013 09:58:56		09/11/2015 08:46:00	 
<input type="checkbox"/>	AGRARI	9389083	6 hrs	Executed	08/09/2015 09:35:34	Not reporting	09/11/2015 03:47:36	Former status: under	07/11/2015 21:30:00	 
<input type="checkbox"/>	PANOCEANIS	9460320	6 hrs	Executed	26/04/2013 12:07:48	Normal	31/10/2015 13:21:13		09/11/2015 01:06:00	 

Depending on the status, the associated actions should be taken and these are indicated in the procedures below.

The **Comment** column, if filled in by the ASP, helps also to better understand the issue. The standard comments are:

- Invalid radio ID
- SSAS/LRIT over reporting issue
- GPS issue
- Stored position issue

It also indicates the percentage of under-reporting (<100%) or over-reporting (>100%).

Finally, if a ship has been stopped, it displays the user login of person who stopped the ship.

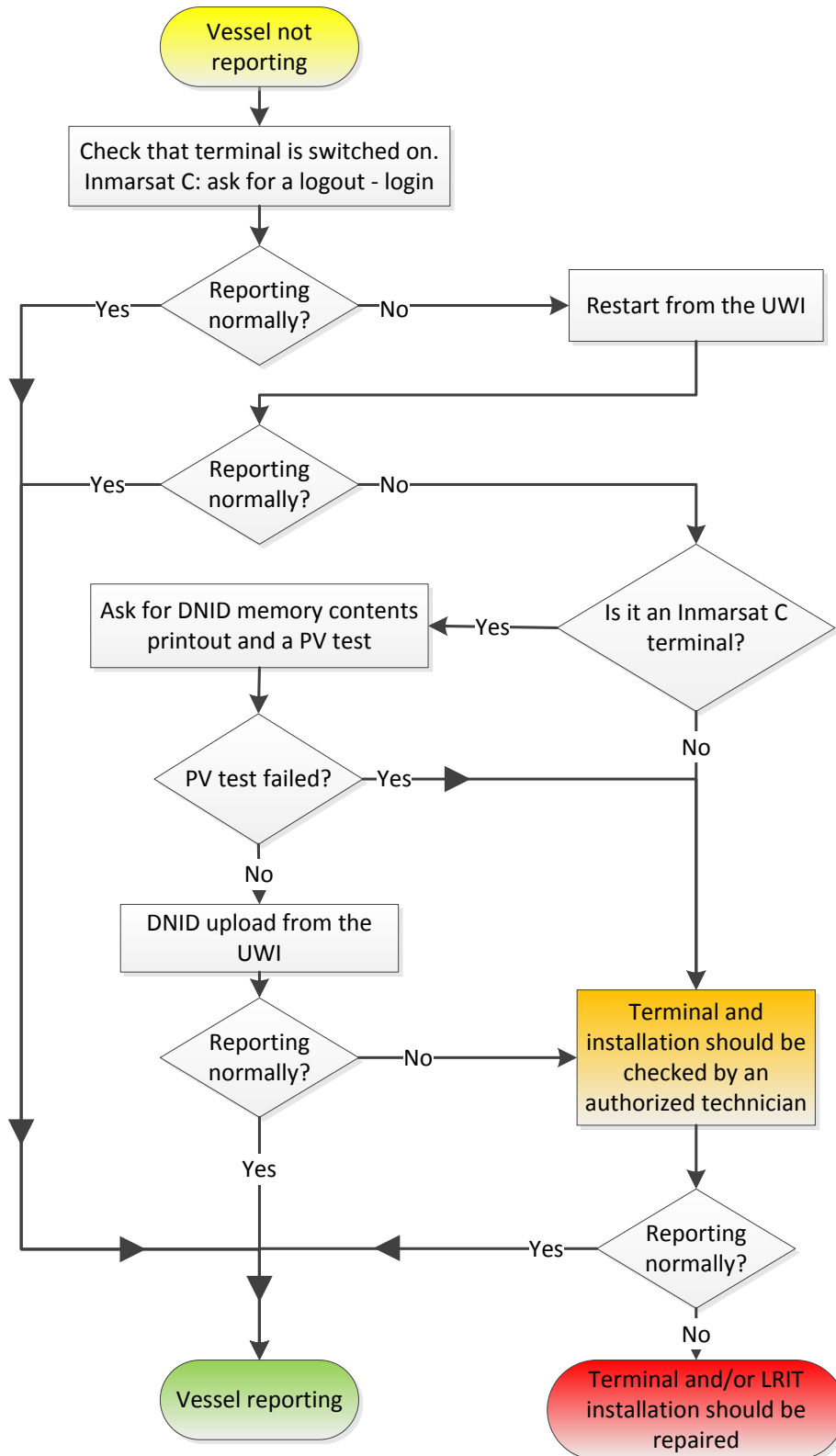
For the following reporting procedures:

- **Stop** means the button “Stop”, available in the UWI in the **Ship Management** menu, bottom left of the **Ship Reporting** table.
- **Restart** means the button “Restart”, available in the UWI in the **Ship Management** menu, bottom left of the **Ship Reporting** table.
- **DNID upload** means the button “DNID upload” in the UWI in the **Ship Management** menu, bottom left of the **Ship Integration** table. The DNID is uploaded **ONLY** in the current ocean region the ship is sailing in, and not in all the ocean regions.

**Only the LRIT NCA and any role including “Flag Full” have the necessary access rights to see these buttons in the Ship management menu; users who do not have these roles cannot see these buttons, and should request that their LRIT NCA to perform the Stop and Restart actions in the procedures below, or request the LRIT NCA to give them access to these buttons by assigning a role containing “Flag Full”.**

**2. Status: Not Reporting**

The flowchart Figure 2 explains the different actions to be performed for a terminal which is not reporting.



**Figure 2: Ship with Status 'Not Reporting'**

The actions of the flow chart above are summarized in the procedure below.

**Procedure R-1: Not reporting: ship stopped sending position reports (old positions are available in the UWI)**

Step	Action to be done	By whom												
		ASP	MSS	CG: Administration	CG: Technical Team									
1	- Check on board if the terminal is properly installed and switched on; - Do a log-out and log-in* (needed only for Inmarsat C terminals); - Wait 12 hours and check the UWI: Reporting status should be <b>Normal</b> : end of procedure. If not then go to step 2.				X									
2	- Click on <b>Restart</b> ; - Wait 12 hours and check the UWI: Reporting status should be <b>Normal</b> : end of procedure. If not then for Inmarsat C terminal go to step 3; for other terminals, go to step 6.			X										
3	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center; vertical-align: middle;"><b>Inmarsat C only</b></td> <td style="width: 80%;">                     - Ask the ship for DNID memory contents printout and a PV test;                      - Check if the printout contains the ASP DNID and member number (see Annex, definition of DNID) for the ocean region that the ship is sailing in;                      - If not, and PV test is ok: then click on <b>DNID upload</b>, else go to step 6.                 </td> <td style="width: 10%; text-align: center; vertical-align: middle;"><b>Inmarsat C only</b></td> </tr> <tr> <td style="text-align: center;">4</td> <td>- Re-upload DNID and if successful <b>Restart</b> the terminal.</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">5</td> <td>- Wait 24 hours and check the UWI: Reporting status should be <b>Normal</b>: end of procedure. If not then go to step 6.</td> <td style="text-align: center;">X</td> </tr> </table>	<b>Inmarsat C only</b>	- Ask the ship for DNID memory contents printout and a PV test; - Check if the printout contains the ASP DNID and member number (see Annex, definition of DNID) for the ocean region that the ship is sailing in; - If not, and PV test is ok: then click on <b>DNID upload</b> , else go to step 6.	<b>Inmarsat C only</b>	4	- Re-upload DNID and if successful <b>Restart</b> the terminal.	X	5	- Wait 24 hours and check the UWI: Reporting status should be <b>Normal</b> : end of procedure. If not then go to step 6.	X			X	X
<b>Inmarsat C only</b>		- Ask the ship for DNID memory contents printout and a PV test; - Check if the printout contains the ASP DNID and member number (see Annex, definition of DNID) for the ocean region that the ship is sailing in; - If not, and PV test is ok: then click on <b>DNID upload</b> , else go to step 6.	<b>Inmarsat C only</b>											
4		- Re-upload DNID and if successful <b>Restart</b> the terminal.	X											
5	- Wait 24 hours and check the UWI: Reporting status should be <b>Normal</b> : end of procedure. If not then go to step 6.	X												
4		X												
5				X										
6	- Terminal and installation should be checked by an authorized radio-technician, and go to step 1.				X									

**THIS PROCEDURE COVERS MOST OF THE NOT REPORTING CASES; AS SUCH, IT IS THE MOST IMPORTANT PROCEDURE AND SHOULD BE THE MOST USED**

\*: the terminal must first be logged in to an ocean region before it can send or receive any messages. Refer to the manufacturer's instructions on how to perform a manual log-in.

### 3. **Status: Stopped**

When a ship is undergoing repairs, modifications or conversions in dry-dock or in port or is laid up for a long period, the master or the Administration may reduce the frequency of the transmission LRIT information to one transmission every 24-hour period, or may temporarily stop the transmission of such information (MSC.263(84) §4.4.1). The reporting period can simply be changed to 24h through the UWI (menu **Requests / Make requests**).

In a similar way, if a ship has to sail in areas which necessitate switching off the radio equipment (e.g. some ports dealing with dangerous goods, rivers with low bridges that imply to fold masts...) the terminal should be stopped through the UWI. By doing so, the terminal will not appear with the status “Under-reporting” or “Not reporting” in the UWI.

**Note:** The associated text that appears in the **Comment** column of the **Ship reporting** table is: “Stopped by CG\_user login”, where CG represents the 2-letters ISO code of the Contracting Government.

**Procedure R-2: Stopped: ship was reporting normally, and then the reporting of the terminal had to be stopped by the CG because the ship was going to undergo repairs in dry dock, LRIT terminal had to be switched off, etc.**

Step	Action to be done	By whom			
		ASP	MSS	CG: Administration	CG: Technical Team
1	The CG administration is informed by the shipowner/ship manager that a given ship is undergoing repairs in dry dock, etc. and is not able to send LRIT positions.				X
2	<b>Stop</b> the terminal through the UWI; The associated text that appears in the <b>Comment</b> column of the <b>Ship reporting</b> table is: “Stopped by CG_user login”, where CG represents the 2-letter ISO code of the Contracting Government.			X	
3	The CG administration is informed by the shipowner/ship manager that a given ship has the LRIT terminal powered on again after the repairs.				X
4	- Click on <b>Restart</b> ; - Wait 12 hours and check the UWI: Reporting status should be <b>Normal</b> : end of procedure.			X	

#### 4. **Status: Over-reporting**

A terminal can be in status **Over-reporting** for several causes. They are mainly:

- double programming: two requests are set in the terminal, generating the sending of extra positions;
- bad handling of a change of ocean region;
- SSAS alerts (test or real) if terminal not properly configured or updated with the correct software. (A ship terminal used to transmit LRIT information may also be used to transmit alerts in the framework of SSAS, pursuant to SOLAS Chap. XI-2 Reg. 6);
- Bad managing of a request set to deliver positions at a higher reporting rate, when the request finishes;
- Hardware issue in the terminal;
- ...

For Inmarsat IsatM2M and Iridium networks, over-reported positions are not sent to the EU LRIT CDC and therefore cannot be displayed on the map of the UWI.

For Inmarsat C network, all incoming LRIT reports having a MEM code different from 11 are not processed by the ASP and therefore not sent to the EU LRIT CDC. These messages are stored by the ASP for a limited period of time (one month) in its binary format. Nevertheless, over-reported positions with a MEM code 11 are available through the Journals/Position report messages menu in the EU LRIT CDC UWI.

The reporting status **Over** is reflected in the **Ship reporting** table. The **Comment** column displays the percentage of over-reporting. 100% corresponds to a normal reporting rate: over-reporting is displayed as such when equal or above 125%.

Ship Reporting									
<input type="checkbox"/>	Ship name	IMO	Last reques...	Request status	Request date	Reporting status	Status date	Comment	Date of last position
<input type="checkbox"/>	NORDLEOP...	9626261	6 hrs	Executed	15/10/2015 14:03:13	Over	03/12/2015 07:06:58	1192%	14/12/2015 10:10:00
<input type="checkbox"/>	PUNA	9594456	6 hrs	Executed	19/09/2015 08:12:45	Over	05/12/2015 00:28:44	184%	14/12/2015 06:10:00

**Procedure R-3: Over-reporting: detection and action**

This procedure is to deal with the over-reporting of LRIT positions. Extra messages sent by the terminal when it is switched on, or to inform about an ocean region change, do not generate over-reporting.

Step	Action to be done	By whom			
		ASP	MSS	CG: Administration	CG: Technical Team
1	Automatically detects the over-reporting;	X			
2	Investigates the problem;	X			
3	Sends a stop command to the terminal;	X			
4	Sends immediately a Restart command to the terminal. The reporting status should pass to <b>Normal</b> .	X			

With this procedure, the terminal is never stopped for a long period, allowing a permanent tracking. The ASP may contact the CG through the MSS in case of repetitive issues.

## 5. **Status: Under-reporting**

Under-reporting can be due to a large number of causes which are not easy to identify. These causes are for example:

- the ship is in a port and the terminal antenna on board the ship is hidden by a crane or a building, not in direct view of a satellite;
- the ship is sailing in the polar regions with a terminal which is not appropriate for this area (only the Iridium satellite constellation covers the poles);
- the ship is sailing in a deeply embanked river;
- etc.

It is a temporary state, and the terminal will soon go to **Not reporting** status, or back to **Normal** reporting again.

The **Comment** column in the **Ship reporting** table displays the percentage of under-reporting. 100% corresponds to a normal reporting rate: under-reporting is displayed as such when equal or below 75%.

Ship Reporting									
<input type="checkbox"/>	Ship name	IMO	Last requested...	Request status	Request date	<b>Reporting status</b>	Status date	Comment ▲	Date of last pos
<input type="checkbox"/>	BUSAN TRADER	9419668	6 hrs	Executed	17/11/2014 10:05:32	Under	16/03/2015 14:16:34	30%	17/03/2015 ▲
<input type="checkbox"/>	NORMAND NEPTUN	9121053	6 hrs	Executed	06/09/2011 14:05:52	Under	16/03/2015 01:45:27	38%	17/03/2015



## 6. Specific reporting issues to be solved on a case by case basis, depending on information given by ASP

### Procedure R-4 (Inmarsat C only): Under-reporting or Not reporting, with MEM code = 70 (terminal sending position reports in stored mode)

All incoming LRIT reports having a MEM code different from 11 are not processed by the ASP (Inmarsat only) and do not reach the EU LRIT CDC. These messages are stored by the ASP for a limited period of time (one month) in their binary format.

In the procedure below, to avoid a high number of investigations by the CG, the ASP will inform MSS only if more than 50 positions were stored and sent to the ASP.

A terminal working in stored mode is not compliant with the LRIT Performance Standards (MSC.263(84) §4 and 13)

Step	Action to be done	By whom			
		ASP	MSS	CG: administration	CG: technical team
1	- Inform MSS that a terminal is storing positions, with MEM code = 70 - Insert the comment "Stored position issue" for this ship, in Ship reporting table - Do not stop the terminal, but a specific surveillance/monitoring is applied	X			
2	Inform the CG that the ship is not LRIT compliant		X		
3	Contact the shipowner to change the terminal configuration and if necessary upgrade the software of the terminal			X	
4	Change the terminal configuration, upgrade if necessary				X
5	DNID should be deleted and reloaded: Request the ASP for the DNID to be uploaded again through the button <b>DNID upload</b>			X	
6	Re-upload DNID and if successful <b>Restart</b> the terminal	X			
7	Wait 24 hours and check the UWI: Reporting status should be "Normal": end of procedure.			X	

## VII. **ANNEX: DEFINITIONS AND ACRONYMS**

- **AAS:**  
Automatic Alert Service. When activated for a ship, the contact person will receive an email in case this ship stops reporting. See I-1 Ship creation.
- **ASP:**  
Application Service Provider: a recognized ASP contracted to provide service to the EU LRIT CDC. It does the interface between the CSPs and the EU LRIT CDC.
- **CG:**  
Contracting Government. It can refer to:
  - administration: LRIT NCA, EU Ship DB Manager, Operational Contact Point;
  - technical team: shipowner, crew member on board able to use the radio equipment (master...), radio surveyor, radio installator/reseller.
- **CSP:**  
Communication Service Provider: company operating satellite telecommunication services. In the LRIT system, it makes the link between the ships and the ASP.
- **CTR:**  
Conformance Test Report according to IMO circular MSC.1/Circ.1307.
- **DNID:**  
Data Network Identification. Used only in Inmarsat C network. A terminal must include a unique identification with the report to enable its position reports to be identified. This identification is uploaded normally once and for all in the terminal by the ASP: this action is called activation of a ship in the ASP. This identification consists in:
  - a DNID (4 digits);
  - a member number (1 to 255);
  - a LES ID (3 digits): it identifies the Ocean Region and the Operator. E.g: [LES ID = 121] means: AOR-E: Atlantic Ocean Region East, Operator: Vizada.

This group of 3 elements is usually named: DNID.

A terminal must have a DNID for each ocean region the ship is sailing on; if a ship is sailing on the 4 ocean regions covered by Inmarsat C, then it should have 4 different DNID's uploaded.

There is a unique DNID+member number for a given IMN (see I-1 Ship creation) **and** serial number. This means that a change of terminal, and so of serial number, will necessitate a new DNID+member number, to be uploaded in the new terminal by the ASP.

It is possible to recognize a DNID used for LRIT with the text associated to the provider of the DNID: the text identifies the name of the ASP operator.

E.g. if a terminal displays :

Provider	LES	DNID	Member	Status
Novacom	121	1525	196	Enabled

Then this DNID can be considered as used for LRIT purposes by the ASP of the EU LRIT CDC: this ASP uses as provider name both Novacom and CLS.

Below are 2 screenshots of an Inmarsat C terminal. On the first screenshot, there are no DNID for the ASP of the EU LRIT CDC: the terminal cannot report properly in the EU LRIT CDC:

		DNID			
<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Disable <input type="checkbox"/> Transmit					
Provider	LES	DNID	Member	Status	
Pole Star Space Applicati	12	2480	90	Enabled	
POLESTAR PURPLEFINDER	21	1730	103	Enabled	
POLESTAR PURPLEFINDER	121	1730	103	Enabled	
Pole Star Space Applicati	112	2480	90	Enabled	
POLESTAR PURPLEFINDER	21	1789	153	Enabled	
POLESTAR PURPLEFINDER	121	1789	153	Enabled	

On the second screenshot, there is one DNID per ocean region: the terminal is properly set-up.

		DNID			
<b>Enable</b>		<b>Disable</b>		<b>Transmit</b>	
Provider	LES	DNID	Member	Status	
POLESTAR PURPLEFINDER	221	1562	51	Enabled	
CLS	121	2229	43	Enabled	
CLS	321	2229	43	Enabled	
CLS	221	2229	43	Enabled	
CLS	21	2229	43	Enabled	

In the table below, the red rectangles show the LES codes used by the ASP of the EU LRIT CDC.

**Inmarsat-C Land Earth Station Operators and Access Codes  
1 August 2008**

Land Earth Station Operator	Country	Ocean Region			
		AOR-E	AOR-W	IOR	POR
Beijing MCN	China			311	211
Bezeq	Israel	127		327	
Vizada	France	121	021	321	221
KDDI	Japan	103	003	303	203
Morsviazsputnik	Russia	117		317	217
OTE	Greece	120		305	
Embratel	Brazil	114			
Singapore Telecom	Singapore			328	210
Stratos Global (Burum LES)	Netherlands	112	012	312	212
Stratos Global (Burum-2 LES)	Netherlands	102	002	302	
Stratos Global (Auckland LES)	New Zealand				202
Telecom Italia	Italia	105		335	
Telekomunikacja Polska	Poland	116		316	
Vizada	Norway	104	004	304	204
Vizada	USA	101	001	301	201
VISHIPEL	Vietnam			330	
VSNL	India			306	

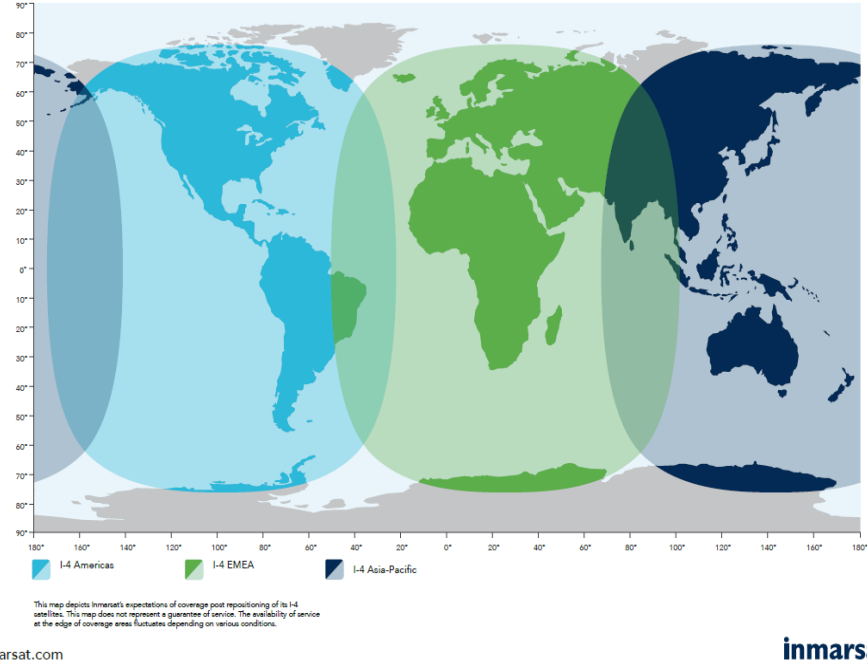
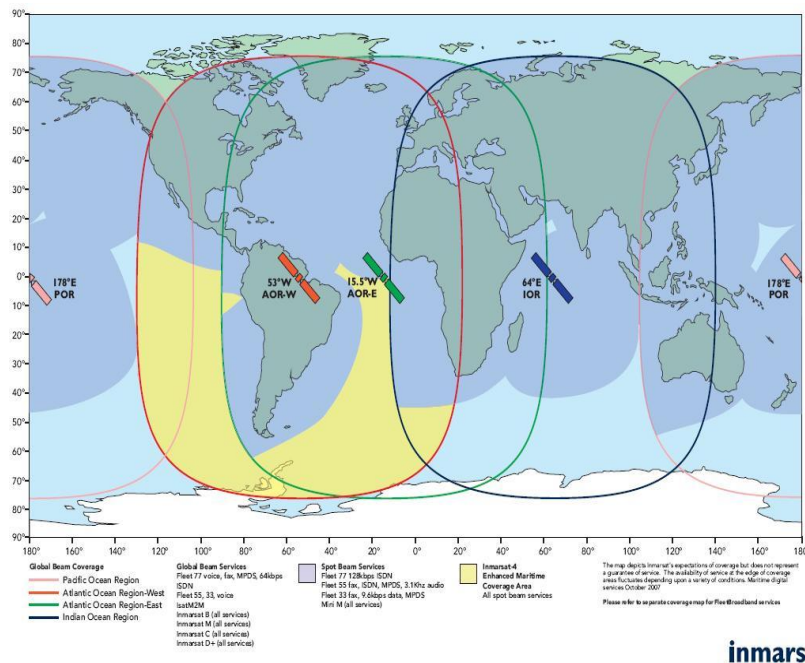
- **ESAS DB:**

Electronic Service Activation System Database = The Inmarsat C database. Apart from the ship's name, the flag, the IMO number and MMSI, it includes all the correct details of the terminals (make, model...), and their related IMN. The activation date of the shipborne equipment is also in this database.

- **IMEI:**

International Mobile Equipment Identifier, 15 digit number for Iridium, see I-1 Ship creation.

- **IMN:**  
Inmarsat Mobile Number, 9 digit number for Inmarsat Standard C and Mini C, see I-1 Ship creation.
- **Inmarsat C:**  
In this document, refers to Inmarsat Standard C and Mini C Communication Service Providers (CSP).
- **Inmarsat coverage:**  
The satellite coverage for Inmarsat C and Inmarsat IsatM2M networks are shown below:



Inmarsat C coverage

Inmarsat IsatM2M coverage

The polar areas are not covered, this is why , for ships sailing in the poles, it is needed to use Iridium network.

- **ISN:**  
Inmarsat Serial Number, 12 digit number for Inmarsat IsatM2M, see I-1 Ship creation.
- **LES:**  
Land Earth Station. This is a facility that routes calls from mobile stations (e.g. a ship terminal) via satellite to and from terrestrial telephone networks.
- **MEM:**  
Macro-Encoded Messages. In order to include as much information as possible in a data report, macro-encoded messages (MEMs) can be used to represent general terms by assigning a pre-defined code. Example: MEM code 11 means a position report.
- **MID:**  
Maritime Identification Digits. An MID is a unique three-digit code identifying a country.
- **MMSI:**  
Maritime Mobile Service Identity. An MMSI is a unique nine-digit code set into a radio equipment and AIS transceiver to identify a vessel or coastal station. The first three digits represent the MID number, the following six digits uniquely identify the station itself.
- **MORP:**  
Multi-Ocean Region Polling. Terminals fitted with this capability allow a DNID to be uploaded on all ocean regions, regardless of the ocean region in which the vessel is operating. This reduces drastically reporting problem in the LRIT system, because if the ship changes ocean region, a new DNID does not need to be uploaded by the ASP: it was already done during the integration process.
- **MSS:**  
Maritime Support Services at EMSA, available 24/7.
- **PSA:**  
Point of Service Activation. In Inmarsat network, place where a terminal can be activated or deactivated. When activated, an IMN is attributed to the terminal.
- **PV test:**  
Performance Verification test. Automatic tests and checks in Inmarsat C terminals giving the “health status” of the terminal.

- **Radio ID:**

Called Radio identifier in the EU LRIT Ship DB. It can be the IMN, ISN or IMEI, see I-1 Ship creation.

It is the unique identifier of a shipborne equipment, so position reports received by the ASP are properly linked with the appropriate ships, and a request is sent by the ASP to one, and only one, ship.

- **SSAS:**

Ship Safety Alert System. The ship security alert system is provided to a ship for the purpose of transmitting a security alert to the shore to indicate to a competent authority that the security of the ship is under threat or has been compromised.

A ship terminal used to transmit LRIT information may also be used to transmit alerts in the framework of SSAS, pursuant to SOLAS Chap. XI-2 Reg. 6. The sending of these alerts (real or test) may generate over-reporting in the EU LRIT CDC if the terminal is wrongly configured.

- **UWI:**

The EU LRIT CDC User Web Interface.