

GUIDANCE NOTES FOR
LRIT DATA CENTRES AND THE INTERNATIONAL LRIT DATA EXCHANGE
FOR SUBMISSION OF SAMPLE AUDIT DATA TO THE LRIT COORDINATOR

1 General

- 1.1 This Circular provides guidance on the submission of LRIT sample data to IMSO, the LRIT Coordinator, for the purposes of auditing the performance of LRIT Data Centres (DC) and the International LRIT Data Exchange (IDE).
- 1.2 These notes are relevant to all DC and the IDE whose LRIT performance will be audited by IMSO in accordance with provisions of the *Revised performance standards and functional requirements for the long-range identification and tracking of ships* (Revised performance standards) adopted by IMO resolution MSC.263(84).
- 1.3 These guidance notes should be read together with;
- *Revised performance standards and functional requirements for the long-range identification and tracking of ships* (resolution MSC.263(84));
 - *Principles and guidelines relating to the review and audit of the performance of LRIT Data Centres and the International LRIT Data Exchange*, as amended (MSC.1/Circ.1412/Rev.1); and
 - *Revised Standards and procedures for auditing the performance of LRIT Data Centres and the International LRIT Data Exchange* (Standards and Procedures), as endorsed by the IMSO Assembly at its 22nd session.
- 1.4 This Circular revokes “IMSO Circular LRIT/004/2010” dated 22 January 2010.

2 Regulatory requirements

- 2.1 Revised performance standards establish the necessary framework to facilitate and regulate the audits undertaken by the LRIT Coordinator in paragraphs 7.1.9, 7.5, 7.5.1, 10.3.4, 10.3.5, 10.6, 10.6.1, 14.4 and 14.6.

3 Sample data

3.1 All DCs are required to provide IMSO with at least one sample data, containing the DC's complete record of all LRIT messages during 30 consecutive calendar days within the period covered by the audit, to enable the satisfactory completion of an audit of their performance. Sample data should be generated and provided to IMSO only in response to a formal request from IMSO, e.g. pre-audit notification letter or email.

3.2 The IDE is required to provide IMSO with the IDE Journal(s) for the whole calendar year in order to facilitate not only the IDE's own audit but also the audits of all DCs throughout the year. IMSO and the IDE Operator will consider and agree on the appropriate arrangements to provide IMSO with the IDE Journal(s).

3.3 DCs and the IDE are requested to follow the guidance provided in this Circular when generating, formatting and submitting their sample data to IMSO for the audit purposes.

4 Sample data format

4.1 DCs and the IDE are required to use the agreed XML schema file (**LRITMessageLog.xsd**) when generating the XML data file for the audit. The schema file can be downloaded from <http://www.imso.org/LRIT/XML/LritXMLSchemas.zip>.

4.2 The XML data file(s) should be named by DCs and the IDE according to the following format:

"LRITMessageLog_ *nnnn* _*mm*.xml" where *nnnn* is the LRIT ID of the DC or the IDE and *mm* is the file sequence number.

Example: LRITMessageLog_3153_1.xml

LRITMessageLog_0002_1.xml

4.3 IMSO will perform schema validation on all received sample data packages and may request re-submission of the sample data if it fails schema validation or cannot be processed by the audit software. The failed sample data will be discarded and destroyed by IMSO.

4.4 The uncompressed size of a single XML data file must never exceed 2GB. Sample data greater than 2GB should be saved in multiple XML data files.

5 Sample data content

5.1 LRIT Data Centres

5.1.1 The start and end dates of the sample data will be communicated to each DC by IMSO before the sample date is due for submission.

5.1.2 Inbound messages received from other DCs, the DDP and the IDE should **not** be included in the sample data. The sample data should contain only the *LRIT information* received from the ships registered with the DC, and the LRIT messages transmitted by the DC to other DCs, the DDP Server or the IDE.

5.1.3 The sample data should include only the following message types:

- .1 LRIT Message Types 1, 2 and 3 with all parameters;
- .2 LRIT Message Types 4, 5 and 6 with all parameters;
- .3 LRIT Message Type 7 with all parameters;
- .4 LRIT Message Type 9 with all parameters;
- .5 LRIT Message Type 11 with all parameters;
- .6 LRIT Message Type 12 with all parameters *with the exception of file attachment* (if internal journal is kept by the DC);
- .7 LRIT Message Type 16 with all parameters *with the exception of file attachment*; and
- .8 LRIT Message Type 17 with all parameters.

5.1.4 *LRIT information* that was not provided to any LRIT Data User other than the own flag State during the sample data period, should be classified as Message Type 1 in the XML data file. The *DDPVersionNum* parameter in these messages should refer to the *DDPVersionNum* that was valid at the time when the *LRIT information* was received by the Data Centre. Additionally, these messages should be populated with the following values:

- *TimeStamp5* = "1000-01-01T00:00:00Z";
- *ResponseType* = "2"
- *DataUserRequestor* = "0003" (LRIT Id of the LRIT Coordinator); and
- *PositionSent* = "false".

An example XML data file for DCs is available at
http://www.imso.org/LRIT/XML/Example_data_file.zip.

5.2 *International LRIT Data Exchange*

5.2.1 The IDE should provide IMSO with the IDE Journal(s) on a monthly basis, unless otherwise agreed between IMSO and the IDE operator, to form a continuous record of the IDE transactions.

5.2.2 The IDE Journals should include:

- .1 *TimeStamp* of receiving a message;
- .2 *TimeStamp* of transmitting a message; and
- .3 The complete message contents with the exception of the *Latitude*, *Longitude*, *Timestamp1* and *ShipborneEquipmentId* parameters of Message Types 1, 2 and 3 and file attachments associated with Message Type 10 (DDP update), Message Type 12 (Journal) and Message Type 16 (Geographical area update).

5.2.3 The *Latitude*, *Longitude*, *TimeStamp1* and *ShipborneEquipmentId* parameters of Message Types 1, 2 and 3 should be populated with the following values:

- .1 *Latitude* = "00.00.00.N"
- .2 *Longitude* = "000.00.00.W"
- .3 *TimeStamp1* = "1000-01-01T00:00:00Z"
- .4 *ShipborneEquipmentId* = "N/A"

6 Transfer method and security of the sample data

6.1 IMSO assumes responsibility for the security of the sample data from the time such material is received by IMSO. Necessary arrangements have been put in place by IMSO to ensure protection of the sample data from unauthorised access or disclosure while it is in possession of IMSO. These arrangements are regularly reviewed and updated to maintain their effectiveness.

6.2 DCs and the IDE are advised to use suitable and secure methods, at their own discretion, to submit their sample data to IMSO. IMSO can receive sample data submitted on a physical media (e.g. CD, DVD or USB flash drive), by email or by Secure File Transfer Protocol (SFTP). DCs or the IDE preferring other methods should liaise with IMSO prior to submit their sample data. Sample data should be sent to sampledata@imso.org in case email is the preferred method of delivery.

6.3 IMSO recommends encryption of the sample data before it is submitted to IMSO in order to ensure its security in transit and to prevent inadvertent disclosure or attempts to access its content by unauthorized users.

6.4 7-Zip¹ is a free and open-source tool that can be used by DCs and the IDE to encrypt and compress their sample data. 7-Zip supports AES-256 encryption method, which is one of the well-known and trusted industry-standards for data encryption.

6.5 IMSO will provide DCs and the IDE operator with a unique 16-character long password to be used when encrypting the sample data with 7-Zip.

6.6 DCs having more than one XML data file due to the size restriction may use a single 7-Zip archive file.

6.7 Recommended encryption settings and a simple user guide for creating 7-Zip archive files are provided in Annex.

¹ <http://www.7-zip.org/download.html>

7 Communication of the sample data

7.1 IMSO will neither accept nor process any sample data or material for the review and audit of a DC and/or the IDE received from individuals other than those identified in the Data Distribution Plan as a formal point of contact for that LRIT DC and/or the IDE.

7.2 Unless otherwise indicated, all communications of information to IMSO in relation to review and audit of LRIT DCs and the IDE should be addressed and sent to:

International Mobile Satellite Organization (LRIT Coordinator)
99 City Road
London EC1Y 1AX
United Kingdom

E-mail address: lrit@imso.org
sampledata@imso.org (for sample data submissions only)

ANNEX

CREATING 7-ZIP ARCHIVES WITH AES-256 ENCRYPTION

- 1 Install 7-Zip (<http://www.7-zip.org/download.html>).
- 2 Right click on the xml data files or the folder which contains the xml data files to be archived and encrypted.
- 3 Choose “7-zip > Add to archive...” on the context menu.
- 4 A 7-Zip dialog box will open; adjust the settings/options as shown below.
- 5 Type the file name and the password provided by IMSO.
- 6 Click OK

