REPORT OF THE SEMINAR ON THE EFFECTIVE IMPLEMENTATION AND MANAGEMENT OF THE LRIT SYSTEM

IMO HEADQUARTERS, LONDON
LONDON 14 TO 15 FEBRUARY 2018
Effective Implementation and Management of the LRIT System

A Seminar Organised by
International Mobile Satellite Organization (IMSO)

Dates:
Thursday 15th and Friday 16th February 2018

Venue:
International Maritime Organization (IMO)
4 Albert Embankment, SE1 7SR, London, UK

Event website: lritseminar.imso.org
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SUMMARY SHEET

Title of the Seminar: Effective Implementation and Management of the LRIT System

Host: IMSO Directorate

Venue and date: IMO HQ, London
15 to 16 February 2018

Type: International

Organized by: IMSO

Supported by: IMO and sponsors: Government of Nigeria, Collecte Localisation Satellites (CLS), Pole Star Applications Ltd.

No. of participants: 135+


EXECUTIVE SUMMARY

The international seminar on the “Effective Implementation and Management of the LRIT System”, was planned to fulfill the objectives of holding a wider consultation process for promoting the use of the LRIT system, in order to enhance maritime safety, security and marine environmental protection; explore ways to efficiently use the LRIT system by all stakeholder; offer ways to ensure sustainability of the LRIT system; embrace innovative technologies and ideas supporting ship tracking; and to increase LRIT awareness through capacity development. The seminar brought on an agreed consensus through the deliberations and, in particular: the current implementation and use cases of the LRIT system in the context of Flag State, Port State, Coastal State, search and rescue and maritime security; sustainability of the LRIT system; LRIT innovations such as: exploring effective ways of tracking ships using LRIT, or integration of LRIT with other tracking and reporting systems; and cyber-security.

The seminar was attended by more than 135 participants who travelled from different parts of the world and represented a diverse participation from Member States, international and regional organizations, maritime policymakers and regulators, LRIT application service providers, data centre operators, search and rescue authorities, security forces and mobile satellite communications service providers.

The program of the event and the presentations can be downloaded from the seminar website: http://lritseminar.imso.org.

Key words: LRIT, ship tracking, AIS, satellite detection of AIS, cyber security, mobile application.
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1 INTRODUCTION

As part of the international maritime community’s wide-ranging response to the growing threat from terrorism world-wide, the International Maritime Organization (IMO) decided to establish a new system for the global identification and tracking of ships. Following a major effort to identify appropriate technologies, establish the necessary global legal regime and achieve political consensus concerning the collection, distribution and use of the data, IMO has established a system for the Long-Range Identification and Tracking of Ships (LRIT).

The obligations of ships to transmit LRIT information and the rights and obligations of SOLAS Contracting Governments and of Search and rescue services to receive LRIT information are established under regulation V/19-1 of the 1974 SOLAS Convention.

The LRIT system consists of the shipborne LRIT information transmitting equipment, Communication Service Provider(s), Application Service Provider(s), LRIT Data Centre(s), including any related Vessel Monitoring System(s), LRIT Data Distribution Plan, the International LRIT Data Exchange and International Distribution Facility (IDF). Certain aspects of the performance of the LRIT system are reviewed or audited by IMSO serving the SOLAS Contracting Governments as the LRIT Coordinator.

The LRIT system was reviewed and upgraded twice since it became fully operational in December 2009 following the feedbacks received from the LRIT Coordinator and SOLAS Contracting Governments.

As of February 2018, 111 SOLAS Contracting Governments, 10 non-metropolitan territories and 2 special administrative regions were participating in the LRIT system through 59 LRIT DCs.

Since the establishment of the LRIT system in 2009, IMSO has been successfully accomplishing the tasks of LRIT Coordination and conducted more than 450 audits of the IDE and the data centres.

2 AIMS AND OBJECTIVES

2.1 Aims

The aim of this international seminar was to create opportunities for the stakeholders of the LRIT system to meet and discuss issues of concerns and interests in an interactive environment for the wider and effective implementation and promotion of the system.

2.2 Objectives

The principal objectives of this seminar were to:

.1 promote wider use of LRIT to enhance maritime safety, security, search and rescue (SAR) operations and protection of the marine environment;
.2 explore ways to efficiently use the LRIT system by all stakeholder;
.3 offer ways to ensure sustainability of the LRIT system;
.4 embrace innovative technologies and ideas supporting ship tracking; and
3 VENUE, DATES, ROLES AND PARTICIPANTS

3.1 The venue for the international LRIT seminar was IMO Headquarters, London.

3.2 It was organized by the IMSO and supported by Government of Nigeria, Thuraya Telecommunications Company, Collecte Localisation Satellites (CLS) and Pole Star Space Applications Ltd.

3.3 More than 135 participants from the Contracting Governments of the SOLAS Convention and various entities participated in the seminar.

4 OPENING OF THE SEMINAR

4.1 The Chairman of the seminar Mr Edwin Thiedeman, SAR Systems Specialist, U.S. Coast Guard welcomed the participants urging them for a productive seminar on the effective implementation of the LRIT System. He stressed the importance of exploring possible ways to ensure safety and security for all and stated that the seminar was aimed to bring together all stakeholders on a single platform to observe possible ways to efficiently use the LRIT system, ensure its sustainability and increase LRIT usage through capacity development.

The Director General of the Organization Captain Moin Ahmed opened the seminar addressing the participants. The Director General’s opening address is set out in annex 2.

Following the opening of the seminar the IMO Secretary-General Mr Kitack Lim, delivered his keynote speech, as set out in annex 3.

The Chairman of the IMSO Assembly Mr Dikko Tahir Bala, the Permanent Representative of Malta to IMO Mr Lino Vssallo, delivered their speeches as set out in annexes 4, and 5, and the IMSO Director General Emeritus Captain Esteban Pacha sent a goodwill message as set out in annex 6.

5 SESSION ONE: LRIT SYSTEM - IMPLEMENTATION AND USE CASES (PART I)

Moderator: Dr Heike Deggim, Director of Maritime Safety Division, International Maritime Organization (IMO).

5.1 Dr Deggim, highlighted that more than eight years have passed since the LRIT system became fully operational in December 2009. She noted that the LRIT system has operated continuously providing information not only to administrations’ coastal port state and Search and Rescue services but also to the security forces operating in the Gulf of Aden and the western Indian Ocean to aid their work in the repression of piracy and armed robbery against ships. She also expressed how the system has evolved over the time following the suggestions of IMSO.
Reviewing the current implementation of the LRIT System - from a regulatory perspective

Speaker: Mr Javier Yasnikouski, Head, Maritime Security, Sub-Division for Maritime Security and Facilitation, Maritime Safety Division, IMO

5.2 Mr Yasnikouski introduced the LRIT system from a regulatory perspective and gave detailed information about how the system works. He highlighted that the main objective has always been to have reliable information on the position of ships, and to assist with SAR operations at sea, which has over the years further extended to the safety and security of ships and the protection of the marine environment. Mr Yasnikouski also mentioned that the audits conducted by IMSO as the LRIT Coordinator has significantly improved the overall performance of the LRIT system.

Flag-State implementation and efficient use of the LRIT System

Speaker: Mr Robert Brian Page, Head of LRIT Program, US Coast Guard

5.3 Mr Page presented the current use of LRIT system and expressed some concerns about the system including the data transmission frequency, its scalability and running cost. He further presented how the US Coast Guard make use of the system and concluded his presentation by proposing a number of new data elements to be incorporated into the LRIT system.

Successful utilization of the LRIT System by Coastal States

Speaker: Mr Pier-Giovanni Taranti, Head of Division, Operational and Strategic Systems, CASNAV Brazil

5.4 Mr Taranti presented the use of LRIT system in Brazil, as a Coastal State using some operational scenarios. The LRIT was used during the World Cup 2014 and the Olympic Games 2016 to identify ships approaching the surveillance areas. This early anticipation allowed the security team to sort ships of interest and use the available resources in the area more efficiently. The strategic use of LRIT data for policy definition and implementation was discussed, and it was presented an example of how data mining and spatial-temporal analysis can benefit from LRIT data to plan maritime lanes or detect unknown navigation focal points.

Panel discussions

Panellists:

Mr Javier Yasnikouski, Mr Robert Brian Page and Mr Pier-Giovanni Taranti.

The panellists discussed the possibility of extending the use of LRIT to the public and compared the AIS with the LRIT system from various aspects including security, reliability, accessibility of these systems.
6 SESSION ONE: LRIT SYSTEM - IMPLEMENTATION AND USE CASES (PART II)

Moderator: Lino Vassallo, Permanent Representative of Malta to IMO

Effective use of the LRIT System for SAR purposes

Speaker: Mr Pier-Giovanni Taranti, Head of Division, Operational and Strategic Systems, CASNAV Brazil

6.1 Mr Taranti presented the use of LRIT in Search and Rescue operations with three real-world examples. He explained the benefits from using LRIT in SAR operations, both for saving lives by reducing the time between the alert and the first ship arrives the incident area, and for the efficient use of the available resources. He also expressed the use of the historical information related to SAR SURPICS to identify areas where SAR incidents were more likely to occur, and possible uses for this information, as supporting the distribution of SAR resources.

Understanding how Security Forces are utilizing the LRIT system

Speaker: Mr Simon Church, MSCHOA Director, EU NAVFOR Somalia OP Atlanta

6.2 Mr Church presented how EU NAVFOR uses the LRIT in their operations to fight against piracy. He described how the LRIT system extended the area they can perform their operations with a reduced incident response time. He also referred to the use of LRIT in activities of Word Food Programme.

Panel Discussion

Panellists:

Ms Azara Prempeh (Minister and Alternative Permanent Representative of Ghana to IMO, Ghana High Commission), Mr Pier-Giovanni Taranti, Mr Simon Church, Ms Heidi Clevett, (Senior Manager, UK Maritime and Coastguard Agency)

6.3 The panellists discussed the use of LRIT for security and safety purposes in details. They further discussed how the reliability of the LRIT information could be improved by taking measures including preventing switching of the shipborne terminals. The reporting frequency of the system was also discussed.

7 SESSION ONE: LRIT SYSTEM - IMPLEMENTATION AND USE CASES (PART III)

Moderator: Mr. Edwin Thiedeman, SAR Systems Specialist, U.S. Coast Guard

LRIT Audits and data analysis

Speaker: Mr Halil Keskin, Technical Officer, IMSO

7.1 Mr Keskin presented how IMSO as the LRIT Coordinator conducts the review and audit of the performance of LRIT Data Centres and the International LRIT Data Exchange. He gave detailed information about the audit software and the business intelligent tools used
for analysis of LRIT audit evidence. He expressed that the audit data is stored and processed in a secure computer system. He also demonstrated a software IMSO developed which visualizes the Data Distribution Plan (DDP) files.

Live LRIT Demonstrations – Understanding global sanctions and compliance, Flag State risk mitigation and its impact on LRIT Fleet

Speaker: Mr Ben Minichino, Global Head of Government Sales, Pole Star Space Applications Ltd.

Mr Minichino introduced Pole Star’s commercial services including LRIT. He demonstrated how their services could be used for compliance purposes.

8 SESSION-TWO: SUSTAINABILITY OF THE LRIT SYSTEM

Moderator: Mr John Shaw, Head of Operations and Capacity Building, International Mobile Satellite Organization (IMSO)

Mr Shaw highlighted the importance of exploring how the capacities of existing services could be extended as security becomes a more prominent issue in the world. He stated that more can be done with data, and by combining or aggregating it and it can be used more effectively on issues such as cybersecurity. He also mentioned the importance of correct management of data.

Exploring Effective ways of tracking of ships

Speaker: Mr Gros Philippe, Maritime Surveillance Business Unit, CLS

8.1 Mr Philippe’s presentation was focused on potential communication issues in the LRIT system and solutions to these issues. Mr Philippe also expressed how the LRIT infrastructure could be integrated into other tracking systems.

I-3 to I-4 Migration and its Impact on LRIT

Speaker: Mr Peter Broadhurst, Senior Vice President, Safety and Security, Inmarsat Maritime

8.2 Mr Broadhurst presented Inmarsat’s current and future satellite networks gave detailed information about the planned migration of safety and commercial services from Inmarsat-3 to Inmarsat 4 satellites. He confirmed that the safety services will not be interrupted due to the migration. He also explained the corrective actions to be taken in case a mobile terminal stops sending LRIT position reports after the migration.
Live Demonstration by CLS & Fulcrum: LRIT Data Centre user interface

Speaker: Ms Karen Day, Director, CLS Group

8.3 Ms Day introduced their Data Centre and ship tracking solutions by CLS and demonstrated how their solutions could be utilized for pollution detection and anti-piracy as well as LRIT.

Deploying LRIT for regional voyages – challenges and opportunities

Speaker: Mr Jassem Naseer, Chief Strategy Officer, Thuraya Telecommunications Company Ltd.

8.4 Mr Naseer introduced Thuraya and the services they provide including the vessel tracking service for LRIT. Mr Naseer also presented their current satellite infrastructure, coverage area and the maritime product portfolio. He confirmed that their system can be used for LRIT and explained how it works.

Enhancement of LRIT System to Maritime and Aeronautical Distress Alerts

Speaker: Mr. Sadatoshi Koike, Partner, SATMarine Consulting LLP

8.5 Mr Koike presented how the Global Maritime Distress and Safety System (GMDSS) compares with the Global Aeronautical Distress and Safety System (GADSS). In his presentation, Mr. Koike highlighted, how the LRIT contributes now and could contribute to future, in these systems.

Panel Discussion

Panellists:

Mr Jassem Naseer, Ms Karen Day, Mr Peter Broadhurst, Mr Kyle Hurst (Director Maritime Business, Iridium Communications)

8.6 The panellists discussed how the LRIT data could be used in a more efficient manner and wider areas, considering the possibility of integrating LRIT with other systems.

9 SESSIO-N-THREE: LRIT INNOVATIONS

Moderator: Mr Sadatoshi Koike, Partner, SATMarine Consulting LLP.

Using Mobile Apps for LRIT- Assessing the practicalities

Speakers:

Captain Jon Leon Ervik, Head of Department, Norwegian Coastal Administration
Mr. Ulrich Tagne, LRIT Database Manager, Kystverket – Norway
9.1 Mr Ervik and Mr Tagne introduced the mobile app they developed which allows shipowners to check their Norwegian flag ships’ real time LRIT reporting status. Mr Tagne highlighted that without the mobile app, ship owners would have to contact them every time to query if their ships reporting as expected. He confirmed that only authorized users could access the reporting status of the ships.

**Integration of LRIT with other tracking and reporting systems**

Speaker: Mr Jacob Sukkot, Satcom Specialist, Recro Aps

9.2 Mr Sukkot introduced the concept of unified tracking in which multiple data sources and connection options are used. He explained how “unified tracking” could address the issues resulted from single point of failures. Mr Sukkot believes that communication cost would also be reduced significantly as the cheapest connection method would be used by the unified tracking system.

**LRIT Spectrum, Cybersecurity and other ITU related activities**

Speaker: Mr Nikolai Vassilier, Senior Representative, International Telecommunications Union (ITU)

9.3 International Telecommunication Union is based in Geneva and is the oldest specialized agency of the UN family which has its own inter-governmental treaty similar to that of SOLAS. He presented ITU’s maritime related materials including standards, publications and databases. Mr Vassilier talked about cyber security, cyber-attack types and recent attacks that affected maritime industry as well as other industries. Regulation of radio communications started with the maritime industry. The vulnerabilities and implementation of cyber security measures were also discussed.

**International Data Exchange Disaster Recovery site**

Speaker: LCDR Christopher McCann, Operations Systems Centre U.S Coast Guard

9.4 LCDR McCann presented the International Data Exchange (IDE) Disaster Recovery site hosted and operated by the US Coast Guard. LCDR McCann highlighted that the IDE acts as the central router through which all DCs and the DDP servers communicate. He also mentioned that the DR site ensures the continuity of service in case of a failure at the primary site.

**Panel Discussion**

Panellists:

Mr Nikolai Vassilier, LCDR Christopher McCann, Captain Jon Leon Ervik, Mr. Ulrich Tagne, Mr Ben Minichino.

9.5 The panellists received questions and comments from the participants.
10. CONCLUSION OF THE SEMINAR

10.1 The two days seminar of fruitful deliberations reached to the following conclusions:

.1 the LRIT system provides a reliable network for the exchange of validated ship data that could facilitate communications and transfer of data from one data centre to another one, or simultaneously to multiple data centres. All those present, as responsible stewards of a Member State, need to remain diligent in meeting mission requirements at a reasonable cost;

.2 the current and emerging requirements of administrators of maritime situational awareness to enhance safety, security and environmental protection must be considered and the evaluation and productive use of the LRIT infrastructure to achieve those needs must be encouraged;

.3 LRIT is a reliable tool in the toolbox for supporting the maritime domain awareness (MDA);

.4 satellite detection of AIS may be used to complement the LRIT system but cannot be a match to it due to the verification and reliability issues;

.5 ground infrastructure of the LRIT system provides a secure, reliable and globally available network, and it has the flexibility and potential for many other applications;

.6 effective use of the LRIT system in search and rescue operations can help to save lives at sea and to use existing SAR assets more efficiently, reducing operational costs;

.7 LRIT is an important and useful tool for taking measures against piracy threat;

.8 reporting performance of shipborne terminals needs improvement;

.9 ship-owners, port state control officers and other legitimate users could be given access to the LRIT information, preferably, through innovative ideas such as mobile phone applications;

.10 LRIT is a regulated and audited system, unlike other tracking systems;

.11 live demonstration given by an LRIT service provider in relation to LRIT DC user applications was found to be very useful;

.12 discussion on collection, security and confidentiality of tracking data in general terms were found noteworthy;

.13 similarities between ICAO's GADSS and IMO's GMDSS+LRIT were also found noteworthy;
.14 Cyber threats to communication systems were highlighted along with the spectrum issues in the ITU maritime bands particularly the L-band and C-band were found to be very helpful; and

.15 a technical session on the LRIT innovation should be convened in the near future to further explore and assess potential improvements and changes to LRIT system for supporting exchange of additional data. Several noteworthy ideas have also been presented in this seminar that could be candidates for further development and potential adoption;

11. CLOSING OF THE SEMINAR

11.1 In his closing remarks, the Chairman mentioned that the seminar captured the key elements and produced a lively discussion on how LRIT currently supports the users and the potential it has for further development, noting that LRIT is used beyond the purpose for which it was originally established.

11.2 Prior to the closure of the seminar the IMSO Director General, Captain Moin Ahmed, delivered his closing remarks as set out in annex 7.

11.3 Finally, the Chairman declared the seminar closed.

***
ANNEX 1
LIST OF PARTICIPANTS

ALGERIA
Mr Khirdine Benslim
Maritime Attaché to IMO
Embassy of Algeria
Delegate

Mr Siari Mohamed Lamine
Alternate Permanent Representative to IMO
Embassy of Algeria
Delegate

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Deputy Director
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Delegate

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BAHAMAS
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Liaison Officer to IMO
Bahamas High Commission
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Mr Taslim Imad
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Delegate

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Delegate

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Mr Mario Arturo Suarez Vargas
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<th>Country</th>
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<td>BRAZIL</td>
<td>Mr Pier-Giovanni Taranti</td>
<td>HOD, Operational and Strategic Systems, CASNAV Brazil</td>
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<td>Mr Leonardo Azevedo</td>
<td>Secretary, Permanent Representation of Brazil to International Organizations in London</td>
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<td>CAMBODIA</td>
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<td>First Secretary, Royal Embassy of Cambodia, London</td>
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<td>CANADA</td>
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<td>Counsellor and Alternative Permanent Representative to IMO, Government of Canada</td>
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<td>CHILE</td>
<td>Lt. Cdr. Erick Anwandter Cuellar</td>
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<td>Captain Nelson Saavedra</td>
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<td>Alternate Permanent Representative to IMO, Embassy of Chile, London</td>
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<td>CHINA</td>
<td>Mr Yan Zan</td>
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<td>Dr Zhang Xiaodong</td>
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<td>Counsellor, First Secretary, Embassy of the People’s Republic of China, London</td>
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<td>Counsellor (Maritime Affairs), High Commission for the Republic of Cyprus, London</td>
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<td>COLOMBIA</td>
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<td>CYPRUS</td>
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<td>Democratic People’s</td>
<td>Mr Jun Hyok IM</td>
<td>Alternate Permanent Representative to IMO</td>
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<td>Deputy Permanent Representative to IMO</td>
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<td>Mrs Luisa Burgess</td>
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<td>EGYPT</td>
<td>Miss Alaa Mohamed Ali Abou Seada</td>
<td>LRIT operating Engineer</td>
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<td>Mr Amaury Meullenaere</td>
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<td>Mr Djomboe André Gabriel Attaché</td>
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<td>Japan</td>
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<td>Ms Razan Alsaket</td>
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KENYA
Mr Aden Mohamed  
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Mr Gerard Kenny  
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Panellist
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Captain Jon Leon Ervik  
Head of Department of Vessel Traffic Service and Pilotage  
Norwegian Coastal Administration

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Business Intelligence Officer  
Palau International Ship Registry  
Mr Victor Alejandro Padilla  
Customer Relations Department  
Palau International Ship Registry
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<td>PANAMA</td>
<td>Mr Feipe Moreno</td>
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<td>Ms Judith Silau</td>
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<td>Mr Oscar Gomez</td>
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<td>Mr Arsenio F. Lingad II</td>
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<td>Dr Waclaw Bielawski</td>
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<td>Mr José Galaz</td>
<td>Attaché, Embassy of Portugal</td>
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REPUBLIC OF KOREA  Mr Taeseong Cheong  IMO Liaison Officer  Ministry of Ocean and Fisheries  Delegate

SAUDI ARABIA  Miss Arwa Almutawa  2nd Secretary  Royal Embassy of Saudi Arabia, London  Delegate
Miss Rania Aref  Attaché  Royal Embassy of Saudi Arabia, London  Delegate

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Mr Aliou Diallo  First Secretary  Embassy of Senegal, London  Delegate

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ST. KITTS & NEVIS  Mr Liam Ryan  Senior Ship Registration Executive  Delegate

SUDAN  Mr Adam Ahmed Elshriefe  Telecommunication Manager  Seaports Corporation  Delegate

TONGA  Mr Sione Sonata Tupou  Acting High Commissioner  High Commission of the Kingdom of Tonga, London  Delegate

TURKEY  Mr Burak Aykan  Maritime Counsellor  Embassy of the Republic of Turkey, London  Delegate

TUVALU  Mr Alexander Ian Morrison  Permanent Representative to IMO  Tuvalu Ship Registry  Delegate
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<td>Mrs Natalia Platzerova</td>
<td>Head of Ukraine LRIT NDC, State Enterprise</td>
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<td>Mr Sergiy Dubin</td>
<td>Deputy Director SAR, State Enterprise</td>
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<td>Ms Heidi Clevett</td>
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<td>Mr Kevin Hunter</td>
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<td>Mr Richard Jackson</td>
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<td>Mr Shaun Rogers</td>
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<td>Mr Darryl Randolph</td>
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<td>Mr Edwin Thiedeman</td>
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<td>Mr Robert Page</td>
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<td>Mr Robert C. Wilmore</td>
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**VENEZUELA**

Mr Alfonso D'Santiago  
Alternate Permanent Representative to IMO  
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Mrs VA Xiomara Sanoja  
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**THE CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT MALTA (CILT)**

Ms Miriam Camilleri  
Chairperson

**COMITE INTERNATIONAL RADIO MARITIME (CIRM)**

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Secretary-General  
CIRM

Mr Philip Lane  
Technical Officer

Captain Arne Loland  
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**CLS**

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Head, Maritime Surveillance Unit

Ms Karen Day  
LRIT Operations Manager  
Fulcrum Maritime Systems

Mr Gros Philippe  
Maritime Surveillance Business Unit  
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Ms Habyalimana Clementine  
Fulcrum Maritime Systems
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<td>Mr Carmelo Abela</td>
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<td>Mr Nikolai Vassilier</td>
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KYSTVERKET
Mr Ulrich Tagne
LRIT Database Manager
Kystverket (Norway)
Speaker & Panellist

LISCR (UK) LTD.
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Technical Manager
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MARCOM NATO
Mr Rod Drake
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MARCOM NATO
Mr Sandro Ferro
Staff Officer (NCAGS)
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NAVTOR AS
Mr Tor Svanes
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NAVTOR AS
Delegate

NAVTOR AS
Mr Bjorn Age HJOLLO
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NAVTOR AS
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Mr Michael Pearson
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Mr Benjamin Pius
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INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)

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Director General

Speaker

Mr John Shaw
Head of Operations and Capacity Building

Speaker

Mr Rakesh Luchmun
Head of Finance, Administration and Conference

Delegate

Mr Ozkan Istanbullu
Technical Officer

Delegate

Mr Halil Keskin
Technical Officer

Speaker

Mrs Nadia Temple
Finance Officer

Delegate

Mr Jefri Danial
Intern

Delegate

Ms Farhasaad Shahid
Intern

Delegate

***
ANNEX 2

OPENING ADDRESS BY THE IMSO DIRECTOR GENERAL
CAPTAIN MOIN AHMED

Mr Chairman, Excellencies, distinguished delegates;
Ladies and gentlemen,

Good morning,

It is a great honour for me to welcome you all to the 2018 international LRIT Seminar on "Effective Implementation and Management of the LRIT System", organized by the International Mobile Satellite Organization.
Mr Chairman,

As a former country representative to IMO, attending IMO meeting in 2001, I recall with respect that the Long-Range Identification and Tracking system, LRIT, was proposed by the United States Coast Guard at an IMO meeting in London during the aftermath of the September 11, 2001 attacks to track approximately 50,000 large ships around the world. The LRIT was established by the IMO as an international system on 19 May 2006 as resolution MSC.202 (81). This resolution amends Chapter V of the International Convention for the Safety of Life at Sea (SOLAS), regulation V/19-1 and binds all Governments which have contracted to the IMO.

LRIT became operational on 1st of July 2009. The United States became one of the first SOLAS contracting Government to establish a National Data Centre and comply with the LRIT regulation. The LRIT regulation applies to all ship types engaged on international voyages, including passenger ships, Cargo ships of 300 gross tonnage and above, and mobile offshore drilling units.

Individually and collectively, IMSO render all possible efforts to contribute to our work to enhancing safety, security and to protect the environment. It also ensures that, according to regulation V/19-1 of the 1974 SOLAS Convention, ships can meet their obligations to transmit LRIT information and that contracting Governments and Search and Rescue Services will receive and process LRIT information as mandated.

Besides this fact, we also felt that following the last two successful LRIT meetings held in 2001 and 2014 and the request from the IMSO Assembly at its 24th Session in November 2016, it is imperative that we continue to promote the LRIT system, particularly to encourage those states which are yet to participate in it, and assist the SOLAS Contracting Governments to fulfil their obligations under SOLAS regulation V/19-1, as amended. Furthermore, in order to compliment the discussions that were held at IMO meetings, I did mention at MSC 98 that IMSO intended to offer a consultation arrangement on the LRIT issues.

In considering these facts, we have mobilised all possible efforts to deliver this two-day seminar with the aim of bringing together all key stakeholders to review the strategic, operational and technical issues in respect of the effective implementation of the LRIT system.
The seminar also seeks to fulfil some key objectives, which are:

- promote the wider use of the LRIT system, in order to enhance maritime safety, security and marine environmental protection;
- explore ways to efficiently use the LRIT system by all stakeholder;
- offer ways to ensure sustainability of the LRIT system;
- embrace innovative technologies and ideas supporting ship tracking; and
- increase LRIT awareness through capacity development.

We have some pertinent topics that will be presented by the Government and industry representatives over the two days, to review:

- the current implementation and use cases of the LRIT system in the context of flag State, port State, coastal state, search and rescue and maritime security;
- sustainability of the LRIT system;
- LRIT innovations such as: exploring effective ways of tracking ships, or integration of LRIT with other tracking and reporting systems; and
- LRIT spectrum availability, cyber security etc.

These deliberations will focus on, how LRIT system has been used and its potential development in the foreseeable future. I trust our work during this seminar will promote maritime safety, security and marine environment protection. May I also take this opportunity to welcome the Chairman, moderators, speakers and other participants for their interest and contributions.

On behalf of the International Mobile Satellite Organization (IMSO), I take this opportunity to express my sincere appreciation for the generosity and continuous support of our host, Mr Kitack Lim, the IMO Secretary-General. IMO is a committed ally of the IMSO’s activities, and we look forward to this ongoing collaboration.

I conclude, by wishing you all a fruitful seminar and a joyful stay in London. Thank you, Mr Chairman, IMO Secretary-General, distinguished delegates, ladies and gentlemen.
ANNEX 3
KEYNOTE SPEECH BY THE SECRETARY-GENERAL OF
THE INTERNATIONAL MARITIME ORGANIZATION,
HIS EXCELLENCY MR. KITACK LIM

Mr Chairman, Director General, Excellencies, distinguished delegates;
Ladies and gentlemen,

Good morning,

There is a lot of changes of the British weather but today there is a lot of sunshine and I feel a bit lighter and happier with brighter sky. It is a great pleasure for me to welcome you all to the IMO Headquarters for this international seminar on “Effective Implementation and Management of the LRIT System”.

This seminar is one of several initiatives from IMSO, and I am pleased to see it has drawn such wide and diverse participation.

As you are all well aware, IMO provides the international regulatory framework for the global shipping industry, which underpins legislation around the world at national and regional level. As a specialized agency of the United Nations, IMO is the global standard-setting authority for the safety, security and environmental performance of international shipping, including standards and procedures for auditing the performance of LRIT Data Centres and the International LRIT Data Exchange.

It is ten years now since IMSO was given the role of coordinating the LRIT. As such, IMSO makes a valuable contribution to our work in enhancing safety, security and protecting the environment. It ensures that ships can meet their obligations to transmit LRIT information and that contracting Governments and search and rescue services will receive and process LRIT information as they are required to do.

IMSO has grown considerably over the years, from its original 26 Member States to the current 104 Member States. It works closely with the existing satellite service provider – Inmarsat - and, following the decisions taken by IMO Maritime Safety Committee on facilitating additional mobile satellite service providers in the GMDSS, IMSO is now entering into new relationships with other satellite providers, such as Iridium. This represents a new era and new challenges for IMSO. IMSO has a small but dedicated team in term of secretariat, and I am sure it will tackle them diligently and wisely. I believe that the Director General, Captain Moin Ahmed, has been very devoted to promoting the work IMSO based on the active communication of its work for its Member States and the representatives. I would like to take this opportunity to express my deepest thanks to Captain Moin Ahmed and to his team and all representatives for the hard work and their contributions to date.

As mention in IMO strategy, the modern technology, in particular, communications technologies, are highly important to the work of a ship’s daily operation, which is very relevant to IMO work, safety and security. Distinguished delegates, I believe that this seminar present an excellent opportunity to examine how our resources can be effectively implemented and managed, bearing in mind the background and the philosophy of the relevant IMO combination SOLAS. In normal situation, we expect that there is a normal operation of a ship without a problem, but if you imagine a problem occurs in the sea and which is not near the land, the
seafarers will be facing very serious problem, we had the 101 in the far east area and the situation on board of the ship must have been very serious and desperate, and this cost a lot of damage to the seafarers and there are a lot of other serious incident taking place plus a lot of security issues and the IMO has been talking a lot about GMDSS issues and e-navigation issues and we are discussing about the autonomous ships and the security of the ships which require a high level of communication. In this sense, the LRIT and the work of IMSO is crucial to the work of IMO.

Mr Chairman, Director General, Excellencies, distinguished delegates, ladies and gentlemen, the LRIT system provides an essential resource for the safety of life and protection of our seas. This seminar presents an excellent opportunity to examine how that resource can be effectively implemented and managed.

In conclusion, it is encouraging to see so many of you here this morning. You have two long days ahead, and I hope you will find the discussions during these sessions fruitful and productive.

I wish you all the best and every success this year.

Thank you.
Mr Chairman,

IMSO Director General, IMO Secretary-General, Excellencies, Distinguished delegates, Ladies and gentlemen

I feel profoundly honoured and privileged to be invited to this seminar and having this opportunity to speak before you as the Chairman of the IMSO Assembly.

Mr Chairman, I do recall with great admiration the establishment of the Long-Range Identification and Tracking (LRIT) of ships on 19 May 2006 by the International Maritime Organization (IMO). In my observation, the objectives of the LRIT has rapidly evolved over the years and is now used not only for maritime security and search and rescue (SAR) but also for maritime safety and protection of the marine environment.

Since I first started attending the IMO meetings, I have witnessed numerous discussions rightly or wrongly arguing that the system had not achieved its goals i.e. it was not going beyond the flag State use, and it should fully integrate surveillance of daily Port and Coastal State operations to achieve its goals.

These concerns, to a certain extent – created impact or even jeopardised the financial viability of LRIT system, since the cost of transmissions undertaken by Flag State Administrations was and still is not compensated by the purchase of said data by Port and Coastal States as originally planned.

Today, International Mobile Satellite Organization (IMSO) is offering a great opportunity for the LRIT stakeholders to exchange their views on the effective implementation or best possible use of the LRIT system.

Besides this, most importantly it is also an opportunity to exchange views on LRIT system’s future with an open mind that, what the SOLAS Contracting Governments at IMO established in 2006 for maritime safety, security, Search and Rescue, and protection of the Marine Environment, can be enhanced with sharing knowledge and experience.

I am hopeful that over these 2 days, IMSO’s crucial role as the LRIT Coordinator and its initiative for the promotion of LRIT system will attract adequate attention and I also trust LRIT will also be seen as “THE” tool for Coastal and Port States Administrations to track vessels hence making the LRIT more sustainable.

Mr. Director General, distinguished delegates, ladies and gentlemen, I wholeheartedly express my support to this great initiative of IMSO under your leadership for the effective implementation and promotion of the LRIT system, which will indeed help all of us to set a vision for the future of LRIT system, as well as of IMSO

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ANNEX 5
GOODWILL MESSAGE BY IMSO DIRECTOR GENERAL EMERITUS
CAPTAIN ESTEBAN PACHA-VICENTE

I would like to congratulate IMSO for the initiative to organize a Seminar on Effective Implementation and Management of the LRIT System.

Since IMO appointed IMSO as LRIT Coordinator, a lot has been progressed and achieved to implement this system worldwide, thus contributing to enhance maritime safety and security. LRIT is also a relevant tool for specific purposes, such as Search and Rescue operations or actions to protect shipping from piracy, etc.

Developing and implementing LRIT was a major project undertaken during my term of office as Director General of IMSO, requiring significant effort by all staff involved and commitment by Member States and the industry. IMSO thoroughly prepared itself to undertake this new function, including both legal and operational aspects. From adopting amendments to the IMSO Convention to developing and implementing financial strategies and audit procedures, as well as negotiating and entering into service agreements with 60+ Member States and other stakeholders.

It was my honour to contribute to that effort then, and I commend IMSO today for its continued contribution to promote a harmonized implementation and a more efficient management of the LRIT system internationally.

I would like to congratulate all the participants in this Seminar. The high level of your contributions on a variety of different LRIT topics are key for its success, and I wish you a very fruitful outcome of your debates and deliberations, looking forward to learning about your concussions.

Capt. Esteban Pacha, PhD

Director General Emeritus

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Mr Chairman, Director General, Excellencies, distinguished delegates;
Ladies and gentlemen,
Good morning

Let me first offer my congratulations to the Director General and his hard-working staff for this initiative, this is in fact the second time such seminar is organised and the good turnout to the seminar is very encouraging. Mr Director General, I hope that you will take this initiative even further. I will come to this later at the end of my very short presentation and very short, I promise.

We also thank IMO for the collaboration as it is very important and inspiring to have their support. I sincerely hope that we can all, and I stress all, both within and outside, put aside or rather put away once and for all, our personal differences and focus on the much bigger success of the LRIT, which is ably overseen by IMSO, our Organization.

The success of the LRIT is not only due to the hard-working of the actual staff itself today but is also due to the hard-work of the Director General Emeritus, Captain Esteban Pachá-Vincente, who was the Director General when IMSO was delegated with the LRIT functions, amongst other things of course by IMO. IMSO is off course, a much younger and smaller and admittedly narrow in scope organization and when tasked by IMO to do the job, the delicate functions that include not only the overseeing and coordination of the LRIT and I repeat, the overseeing and coordination of LRIT but particularly the independent auditing of the service providers and ensuring that Members States are also discharging the LRIT obligations. This is meant to be a short intervention Mr. Chairman and I will promise that I will continue like this. I come toward the end of my intervention by suggesting a couple of things, plus the ones which have been given to us by the Chairman at his opening remarks and also by the Chairman of the Assembly.

Earlier I congratulated the Director General on this initiative and the support that has been given by attendance by the Member States and industry, and I stress on the support of the industry because they have a very important part and a vital role to play in all the work of IMO. I am very grateful to the Secretary General of IMO for his presence, which is indeed very important, and I have no doubt that his presence is very inspiring so that the work of IMSO has been done with vigour.

The initiative of the seminar should be something which should be expanded, amplified and should be taken out to the Member States and by giving them the information and providing them support to organise such a seminar back home, to the training institutions and I don't mean only to the WMU and the Geneva Training Academy but also to the private training institutions which should be given more information and details in order to be able to participate in the work of this organization, only then, they can appreciate the real work of LRIT and GMDSS, and fully understand its real benefits. It can then be accepted by the industry, which includes also the many thousands of seafarers in the sea and also to other organizations because as we shall discuss in this coming two days that there is a lot of facets of the LRIT such as search and rescue which are extremely important but alas they're not as yet known or understood even by the key players themselves.
So, Mr Director General, I also wish that you can really take this initiative further out so that the importance of LRIT is properly understood. One last thing, that I would also like to suggest to you Mr Director-General, is perhaps not today, it might be too late now, but I think that IMSO should undertake, with some particular attention to look at the role of this organization at the at the importance of a LRIT and GMDSS, what they have to contribute to the 2030 Sustainable Development Goals, which as you know, IMO also has in its strategic plan.

I think it is important that IMSO should give particular attention to the 2030 Sustainable Development Goals, when it looks at its programme and the leaflet of the of the seminar covers a number of things which would be touched up on and discuss today and if you look at the 2030 Sustainable Development Goals, you will find a lot of similarities. I think that this is something that the Director General should take up with the Assembly so that this work can be undertaken.

Congratulations once again and god bless you
Mr. Chairman, Excellencies, distinguished delegates, Ladies and gentlemen,

Good afternoon.

With our collective efforts to deliver this seminar during the two busy days, it is now time for us to close this seminar. Of course, one question still remains for us to answer, i.e. whether the objectives of the seminar are achieved? To answer this question, we need to check what we actually sought to achieve? In fact, we sought to:

- promote the wider use of the LRIT system, in order to enhance maritime safety, security and marine environmental protection;
- explore ways to efficiently use the LRIT system by all stakeholder;
- offer ways to ensure sustainability of the LRIT system;
- embrace innovative technologies and ideas supporting ship tracking; and
- increase LRIT awareness through capacity development.

Since fulfilment of the objectives is contingent upon the delivery of the pertinent topics, I would rather feel comfortable to verify what has been delivered. We can see that the deliberations had taken place on:

- the current implementation and use cases of the LRIT system in the context of flag State, port State, coastal state, search and rescue and maritime security;
- sustainability of the LRIT system;
- LRIT innovations such as: exploring effective ways of tracking ships, or integration of LRIT with other tracking and reporting system; and
- LRIT spectrum, cyber security etc.

These deliberations had focused on, how LRIT system has been used and its potential development in the foreseeable future.

Having done, what we aimed for these two days, I very much hope that the SOLAS Contracting Governments, who have not yet joined the LRIT, are convinced of the multiple benefits of joining the LRIT system. Of some 40,000 ships in the world that are required to implement LRIT, we understand that there are still good number of ships that do not participate in the LRIT implementation. I therefore, wish to encourage as many as possible flags to let their ships join the LRIT system to enhance the security, safety and environmental protection of the maritime world. I can now confidently seek your endorsement that our works during this seminar has fulfilled its prime objectives.

I very much look forward to receiving new applications to join LRIT in the near future! Please do not hesitate to speak with me or any of the IMSO Directorate team if you have any questions about the joining process or would like any more information.

At this point in time, I take this opportunity to express my hearty appreciations to IMO Secretary General Mr. Kitack Lim for his support with a highly inspirational keynote address, to the members of IMO Secretariat for their contributions and support, and to distinguished
moderators, speakers and all other participants for their wholehearted participation and contributions in achieving the objectives of this seminar. Of course, special appreciation goes to you, Mr. Chairman, for leading this seminar with utmost professionalism and dedication.

Last but not least, I feel proud to mention that I have a dedicated IMSO Directorate team, without whose support we would not have achieved the goals of this seminar. With this, I conclude my closing remarks.

Those of you are leaving London, I wish you a safe journey and those of you staying I wish you a pleasant stay.

Thank you, Mr. Chairman, distinguished delegates, ladies and gentlemen.