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ASSEMBLY — 39TH SESSION

TECHNICAL COMMISSION

Agenda Item 33: Aviation safety and air navigation monitoring and analysis

**IMSO'S POTENTIAL SUPPORT TO GADSS THROUGH THE
PROMOTION OF EFFICIENT SATELLITE NETWORK SYSTEM**

(Presented by the International Mobile Satellite Organization (IMSO))

EXECUTIVE SUMMARY

This document contains proposal on possible cooperation between IMSO and ICAO on the GADSS related matters that are relevant to ICAO

<i>Strategic Objectives:</i>	This paper relates to the Safety and Air Navigation Capacity and Efficiency Strategic Objectives.
<i>Financial implications:</i>	No additional resources requested.
<i>References:</i>	

1. BACKGROUND

1.1 IMSO noted that the loss of AF447 into the ocean and the disappearance of MH370 highlighted global concerns with safety and tracking of aircraft, particularly over oceanic regions. The lack of timely notification and sufficiently accurate position of the aircraft severely hampers search and rescue (SAR) and accident investigation. Global aviation safety through flight tracking under regulatory oversight of the satellite system providing communication service is critical to provide timely knowledge of aircraft position at all times.

1.2 IMSO noted further that a special multi-disciplinary meeting held from 12 to 13 May 2014, concluded that global tracking of airline flights should be pursued as a matter of priority to provide early notice of, and response to, abnormal flight behaviour; and an Ad-hoc working group was tasked to develop a Concept of Operations (ConOps). The group having evaluated the effectiveness of Alerting and Search and Rescue services developed a ConOps for a Global Aeronautical Distress and Safety System (GADSS).

1.3 IMSO is aware that GADSS is aimed at tracking and locate aircraft when they are in distress, with a view to increasing the effectiveness of Aeronautical Alerting and also expected to contribute to greatly improved and more cost-effective search and rescue operations. GADSS regulations will apply to any operator flying over water or remote areas, with an aircraft.

1.4 IMSO is also aware that in March 2016 ICAO Council adopted new provisions aimed at preventing the loss of commercial aircraft experiencing distress in remote locations and announced new amendments to Annex 6 to the Chicago Convention (Operation of Aircraft) which will take effect between now and 2021. The amendments require aircraft to carry autonomous distress tracking devices which can autonomously transmit location information *at least once every minute in distress circumstances* when in oceanic or remote airspace throughout the entire duration of the flight. ICAO originally planned for that standard to become applicable in November 2016, but the applicability date for the 15-minute reporting requirement has been pushed back to November 2018. From 1 July 2016, airlines will be required to track their aircraft either manually or automatically. Automatic tracking will be required by 8 November 2018.

1.5 Having had an active role on SAR communications, IMSO noted that GADSS data is also critical for maritime SAR agencies, as the GADSS ConOps states that “The data supplied by aircraft tracking, autonomous distress tracking and the automatic deployable flight recorder must be effectively shared among all stakeholders as necessary to ensure the effective operation of GADSS.”

1.6 In this context IMSO noted further that in December 2015, the International Maritime Organization (IMO) provided guidelines on harmonized aeronautical and maritime search and rescue procedures. IMO’s Sub-Committee on Navigation, Communications and Search and Rescue and ICAO collaborated to publish the guidelines offering a succinct summary of GADSS from the SAR perspective.

1.7 The IMSO Advisory Committee at its 38th session (May 2016) noted that the Director General had had an informal meeting with the Secretary-General of the International Civil Aviation Organisation (ICAO) Dr (Ms.) Fang Liu and discussed immediate area for possible cooperation and the best practices that could be shared from IMSO’s oversight of the GMDSS for maritime safety, and the parallels in aerospace under Global Aeronautical Distress and Safety System (GADSS) being developed by ICAO.

1.8 In response to requests by some delegations on what was already in place in relation to the joint working relationship of ICAO and IMSO, the Director General offered further clarification on the progress of collaboration so far. He also gave a summary of the assistance that IMSO could offer to ICAO, on comparable best practices of Global Maritime Distress and Safety System (GMDSS) that could be adopted for safety in the aeronautical field to be covered under GADSS.

1.9 About IMSO's continuing cooperation with ICAO, and in particular on the GADSS, (which is the equivalent of the GMDSS for aeronautical safety), the Committee noted and urged the Director General to continue with exploring more areas of synergy and collaboration between IMSO and ICAO.

2. **DISCUSSION**

2.1 GADSS being both performance based and technology dependent global flight tracking solutions, will rely on satellite services similar to GMDSS. In this regard, it may be noted that while GMDSS is an established satellite based system in operation in the maritime field for more than 20 years under the global regulatory oversight of the IMSO, GADSS is at its initial stage.

2.2 It is imperative that like GMDSS, the global aeronautical flight tracking, distress and safety system GADSS will also need to operate fulfilling certain ICAO criteria by the satellite service providers for the availability of satellite services, and in particular for the restoration of satellite service in case of any disruption or outage, in fulfilment of the public service obligations.

2.3 Since IMSO (former INMARSAT IGO) from the very beginning of the GMDSS, gained experience in promoting safety of life at sea by overseeing the performance of the satellite service provider Inmarsat and also assessing a potential new satellite service provider Iridium, as well as the international coordinator for the Long range Identification and Tracking of Ships, it would be helpful, if it extends its offer of cooperation to ICAO for this new system.

3. **PROPOSAL**

3.1 In consideration to the aforementioned background and discussions, IMSO proposes to:

- a) undertake a programme of collaboration to work with ICAO in order to share its experience on the oversight of satellite based distress and safety system, as well as its coordinating role for the tracking of ships; and
- b) examines the possibility of playing similar oversight role for GADSS.

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