Agenda Item 3: Report of activities and deliverables of the INTEROP TF and Subgroups
b) CNS Implementation. Progress of the Subgroups.

GADSS and AireonLOCATE

(Presented by Aireon)

SUMMARY

This information paper presents update on GADSS-Related Global Aircraft Tracking Initiatives.

Reference:

- Air Traffic Services Planning Manual Doc 9426

1. Background

1.1 In March 2016, the International Civil Aviation Organization (ICAO) established Global Aeronautical Distress Safety System, (GADSS) and published Standards and Recommended Practices (SARPs) in an effort to improve global aircraft flight tracking and search and rescue (SAR).

1.2 The SARPs define aircraft tracking provisions including operator performance requirements for normal tracking and distress tracking capabilities, and operator data retention requirements.

1.3 The ICAO Global Aeronautical Distress and Safety System (GADSS) - Concept of Operations (CONOPS) identified a need to collect, store and provide access to Autonomous Distress Tracking (ADT) position information to aid appropriate stakeholders in locating an aircraft in distress, and enhance Search and Rescue (SAR) and recovery capabilities.

1.3 The three main functions of the GADSS are to enhance or enable:

- Aircraft Tracking (AT);
- Autonomous Distress Tracking (ADT); and
- Post Flight Localization and Recovery (PFLR).

1.4 AireonLOCATE allows customers access to Post Flight Localization and Recovery (PFLR).

2. Analysis

2.1 Aireon is providing the first ever, global air traffic surveillance system using a space-

based Automatic Dependent Surveillance-Broadcast (ADS-B) network that meets the strict, real-time Air Traffic Service (ATS) surveillance requirements for air traffic separation services anywhere in the world.

2.2 ADS-B is an air traffic surveillance technology that relies on aircraft broadcasting their identity, a precise Global Positioning System (GPS) position and other information derived from on-board systems. The data is broadcast every half a second from the aircraft, and is being used by Air Traffic Controllers (ATCs) to identify and separate aircraft in real time.

2.3 AireonATS Space-based ADS-B provides full, continuous, global air traffic surveillance, whereas before, 70 percent of the world had no access to ATS surveillance information (i.e. the oceans, polar regions, mountainous regions, jungles, deserts).

2.4 AireonATS Space-based ADS-B significantly improves Air Traffic Management (ATM) safety, efficiency, predictability and capacity, while reducing overall infrastructure costs.

2.5 Today AireonATS Space-based ADS-B is being used by more than 20 ANSPs representing 40 countries and over 50% of the earth's surface is using AireonATS Space-based ADS-B data services to safely and efficiently manage aircraft in their airspaces.

2.6 Leveraging the same high-fidelity, global dataset that Aireon's Air Navigation Service Providers (ANSP) rely on to safely surveil and separate aircraft, AireonLOCATE is a web-based platform that provides customers the ability to locate any ADS-B-equipped aircraft in real-time, offering data on the last position and last 15 minutes of flight. See Figure 1 below.

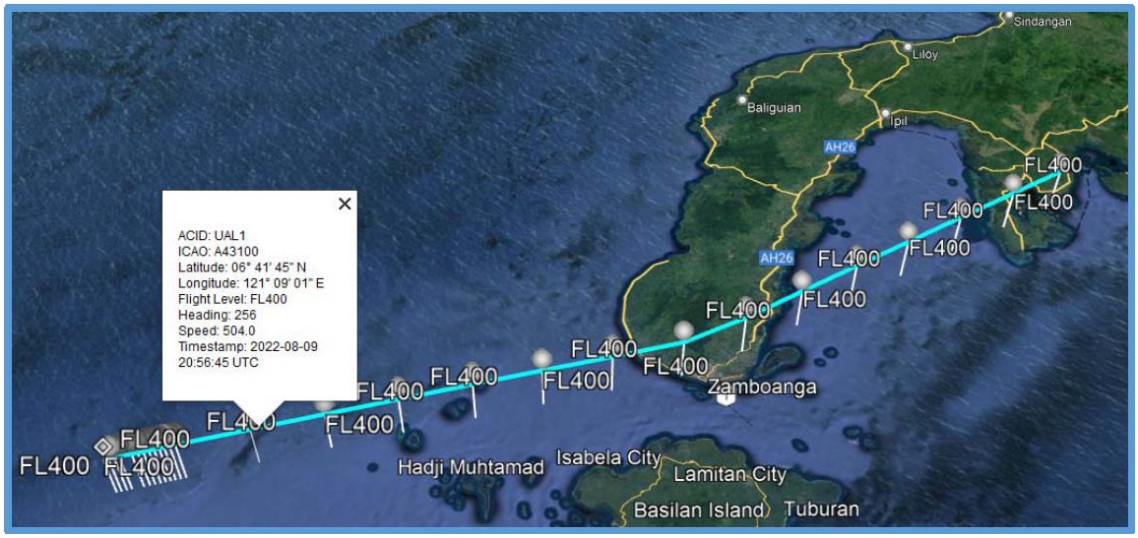

Figure 1

2.7 This combination of trusted data and secure, easy-to-use web interface provides unprecedented surveillance capabilities for customers in extremely time-critical circumstances.

2.8 AireonLOCATE up-to-the-second data service is accessed via secure weblink, saving valuable time in search and rescue operations by providing the last known aircraft position.

3. Sugested Action

3.1 The Meeting is invited to take note of the information provided.