



*International Civil Aviation Organization*

**Second Meeting of the Asia Pacific Accident Investigation Group  
(APAC-AIG/2)**

*(Hong Kong, China, 27-28 May 2014)*

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**Agenda Item 2: Report on recent accident/incident investigation related developments and activities**

**BRIEFING ON THE ICAO MULTI-DISCIPLINARY MEETING ON  
GLOBAL FLIGHT TRACKING**

(Presented by Chairman of the ICAO FLIRECP)

**SUMMARY**

Briefing on the ICAO multidisciplinary special meeting of State and industry experts on the global tracking of airline flights

**1. INTRODUCTION**

1.1 As the search for Malaysia Airlines Flight MH 370 continues, the International Civil Aviation Organization (ICAO) convened a special meeting of State and industry experts on the global tracking of airline flights on 12 and 13 May 2014.

1.2 The purpose of this meeting was to explore the need for globally tracking airline flights and existing technologies to support it.

1.3 The two-day meeting addressed the following issues: what technologies are available; the limitations of these technologies; and other obstacles, including any non-technical issues.

**2. DISCUSSION**

2.1 More than 200 people were registered from many countries, representing a wide range of actors: States representatives, chairpersons of ICAO Panels, investigation bodies, regulatory authorities, airframe manufacturer, service providers, equipment and satellite manufacturers, international associations...

2.2 The conclusions, list of attendees, WPs and presentations of the vendors are available on the public portal at <http://www.icao.int/Meetings/GTM/Pages/default.aspx>

2.3 The meeting agenda was articulated around 3 items:

- Explore the need and means available to track globally all airline flights
- Explore the need for ICAO guidance on global tracking
- Explore the potential for strengthening ICAO provisions

2.4 Explore the need and means available to track globally all airline flights: Recent events, where there has been uncertainty on the whereabouts of an airliner, have identified the need to review if a means to globally track airline flights should be a common practice for air operators. The meeting addressed the extent that such tracking systems should be independent of other aircraft systems and/or systems used for ATC surveillance. Meeting participants explored the use of existing technologies that may provide the means to support global tracking of airline flights at a reasonable cost.

2.5 Explore the need for ICAO guidance on global tracking: Promote global tracking of airline flights based on industry best practices and existing technologies. The meeting identified elements that may be missing and need to be addressed. These may include sharing of best practices, ICAO guidance and training material, and was not limited to technical issues alone. All subjects were discussed to ensure that, as far as possible, all obstacles which would hinder global tracking of airline flights were addressed.

2.6 Explore the potential for strengthening ICAO provisions: Explore the ways to cover gaps in the current provisions based on new technologies and practices. There may be areas of the world where global tracking of airline flights may be either impossible, or unsustainable. The meeting studied the underlying issues and, based on the current developments in technology, determined a realistic plan on how to address these. The study may include a review of the need for improved International Standards in this regard.

2.7 The work program was accomplished in one day. The conclusions were reviewed on the second day before providing slots for presentations from vendors.

2.8 One of the main elements to achieve near-term goals is the creation of a Task Force managed by the International Air Transport Association (IATA). The Task Force includes, but is not limited to, ICAO, airlines, flight safety organizations, manufacturers, air navigation service providers, flight tracking equipment and service providers, pilots and air traffic management experts. IATA will ensure that participation is limited to a manageable number and has the required skill mix to achieve desired outcomes.

2.9 The Task Force will examine available options for tracking commercial airplanes, considering implementation, time, complexity and cost efficiency to achieve the desired coverage. In particular, the Task Force will assess the responses to the ICAO vendor survey and examine existing capabilities to determine potential solutions against elements such as reporting parameters and intervals, reliability, accuracy and coverage. The Task Force will develop recommended options based on performance requirements to implement global airplane tracking.

2.10 The Task Force will initiate its work following the Multidisciplinary Meeting and will develop a draft report with recommendations within 120 days. Following required coordination, the Task Force will issue its final report within 150 days of the Multidisciplinary Meeting.

2.11 The mid term objective will be achieved through the normal process of SARPS development based on the results of the Task Force.

2.12 An informal briefing followed the meeting between the ICAO Panel chairpersons and the ICAO Air Navigation Commission (ANC) commissioners. This meeting was an opportunity to debrief, exchange ideas in a free manner and organize coming work. The outcomes of the Flight tracking meeting were shared, the "high level concept" was discussed and the work was shared between the various chairpersons.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the conclusions of the ICAO meeting on global flight tracking. The conclusions are detailed in Appendix 1.

#### **APPENDIX 1: CONCLUSIONS AND RECOMMENDATIONS SPECIAL MULTIDISCIPLINARY MEETING ON GLOBAL FLIGHT TRACKING MONTREAL, 12-13 MAY 2014**

The International Civil Aviation Organization (ICAO), upon the completion of this Special Meeting on Global Flight Tracking of Aircraft, forged consensus among its Member States and the international air transport industry sector on the near-term priority to track airline flights, no matter their global location or destination. Furthermore, the meeting established a framework for future efforts in this regard for the medium and long term.

The meeting concluded that:

#### **NEAR-TERM**

- a) global tracking of airline flights will be pursued as a matter of priority to provide early notice of and response to abnormal flight behaviour;
- b) a DRAFT concept of operations on flight tracking will be developed that includes a clear definition of the objectives of flight tracking that ensures that information is provided in a timely fashion to the right people to support search and rescue, recovery and accident investigation activities, as well as, the roles and responsibilities of all stakeholders;
- c) under the ICAO framework, the contribution by the industry through an Aircraft Tracking Task Force (ATTF) will help address the near-term needs for flight tracking;
- d) ICAO should consider establishing a short term joint ICAO/IATA advisory group to support the global tracking initiative;
- e) airlines will be encouraged to use existing equipment and procedures to the extent possible to support flight tracking pending the outcome of the ATTF;
- f) in partnership with the Task Force, ICAO will develop guidance material, based on available flight tracking best practices;
- g) a FINAL high level concept of operations should be delivered to the ICAO High Level Safety Conference (HLSC 2015, February, Montreal);

h) ICAO should increase its resources allocated to the Search and Rescue in order to improve the effectiveness across national and regional boundaries;

i) ICAO should, in collaboration with a pool of search and rescue experts, identify and address operational search and rescue challenges with implementation of existing Annex 12 provisions, and provide assistance to States, including aiding in the setting of priorities for the mid and long term;

j) ICAO should facilitate the sharing of experience and lessons learned from States that were recently involved in accidents where flight tracking could have facilitated search and rescue efforts to all other States;

k) ICAO should strongly encourage States to regularly run practice exercises involving airlines operation centres, air navigation service providers (ANSPs) and rescue coordination centres (RCCs) to test and verify their ability to respond and coordinate together in an integrated manner to abnormal flight behaviour scenarios;

#### **MID-TERM**

l) ICAO performance based provisions should be developed, using a multidisciplinary approach, on flight tracking to support the location of an accident site in a timely manner for the purpose of search and rescue and accident investigation;

m) ICAO performance based provisions addressing flight tracking requirements should be sufficiently flexible to accommodate regional needs and be commensurate to operational situations;

n) ICAO should encourage States and International Telecommunication Union (ITU) to take action, at the earliest opportunity, to provide the necessary spectrum allocations as emerging aviation needs are identified. This includes spectrum for satellite and radio services used for safety of life aviation services. ICAO encourages ITU to place this on the Agenda for the upcoming ITU World Radio Conference 2015;

o) COSPAS-SARSAT should be invited to continue to investigate, within its own program and in partnership with the industry, the means of improving the reliability and utility of emergency locator transmitter (ELTs), particularly in the context of flight tracking during a distress event; and

#### **LONG-TERM**

p) ICAO should work in coordination with ITU to develop aviation requirements for network communications associated with remote storage of flight information.