ICAO Initiatives on Global Tracking

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Expert Dialogue on Real-time Monitoring of Flight Data, including the Black Box – the Need for International Standards in the Age of Cloud Computing and Big Data
26 – 27 May 2014, Kuala Lumpur, Malaysia
AIR NAVIGATION INTEGRATED WORK PROGRAMME

Assess & Measure

Global & Regional

Safety and Air Navigation Regulatory Operational Improvements (ROI)

Needs Analysis / Validation

Enablers

Recipient Activities

Training & Guidance
Safety and Air Navigation Regulatory Operational Improvements (ROI) Enablers

Recurrent Activities

AIR NAVIGATION INTEGRATED WORK PROGRAMME

Safety Recommendations to ICAO

AF447
1 Jun 2009

Aeroplane Found
Apr 2011

2nd Interim Report
(Dec 2009)

3rd Interim Report
(Jul 2011)

Final Report
(Jul 2012)

MH370
8 Mar 2014

Preliminary Report
(April 2014)

1st Interim Report
(Jul 2009)

2nd Interim Report
(Jul 2009)

3rd Interim Report
(Jul 2011)

1st Interim Report
(Jul 2009)

I CAO HLSC
(Mar 2010)

Data for Accident Investigations
Location of Aircraft Underwater
Surveillance of Aircraft
Search and Rescue (SAR)
Flight Deck Activities
Protection of Safety Information

1 BEA Flight Data Recovery Working Group
2 BEA Triggered Transmission of Flight Data Working Group

Legend

✓ Adopted

ongoing

Referred to Panel

90 Day ULB
Low-Freq. ULB
Regular Transmission of FLT Data
Automatic Deployable Flight Recorders (ADFR)

Image Recorders
Confidentiality for readout of image recordings
Triggered Data
Triggered ELT

SAR Coordination and Regional Plans
SAR Operator Training
SAR National Coordinator Contacts
ATM Systems for HF-only Areas
Annex 12 Amendment for SAR drifting buoys

Examining benefits of Standard for tracking of commercial A/C

Examine benefits of Standard for tracking of commercial A/C

BEA Flight Data Recovery Working Group
BEA Triggered Transmission of Flight Data Working Group

5 May 2014
Work in Progress

• Data to support investigation of accidents and incidents
  – Airborne image recorders;
  – Duration of CVR recordings

• Location of the accident site
  – FLIRECP to reconsider proposal on accident site location in its meeting in Sep 2014

• Surveillance
  – Operational Data Link Panel continues work on ADS-C, CPDLC and required communication performance (RCP)
Global Flight Tracking Meeting Outcomes

• 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 behavior;

  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 will consider establishing a short term joint ICAO/IATA advisory group to support the global tracking initiative;
Global Flight Tracking Meeting Outcomes

• Near-Term

e) airlines will be encouraged to use existing equipment and procedures to the extent possible to support flight tracking pending the outcome of the AATF;

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;
Global Flight Tracking Meeting Outcomes

• Near-Term
  
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; in partnership with the Task Force, ICAO will develop guidance material, based on available flight tracking best practices;

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 centers, air navigation service providers (ANSPs) and rescue coordination centers (RCCs) to test and verify their ability to respond and coordinate together in an integrated manner to abnormal flight behavior scenarios;
Global Flight Tracking Meeting Outcomes

• Mid-Term

i) 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;
Global Flight Tracking Meeting Outcomes

• Mid-Term

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
Global Flight Tracking Meeting Outcomes

• Long-Term

n) ICAO should work in coordination with ITU to develop aviation requirements for network communications associated with remote storage of flight information.
High Level Safety Conference 2015

• Updated Agenda
  – Reviewing the Current Situation
    • Achievements and Remaining Work
  – Future Approach to manage aviation safety
    • State Safety Programme
    • Safety Information Protection
    • Safety Information Sharing
    • Evolution of the GASP
  – Facilitating increased regional cooperation
    • Effective and Efficient Regional Collaboration
  – Emerging Safety Issues
Collaboration and Partnership

• IATA Aircraft Tracking Task Force (ATTF)
  – Represents the contribution of industry under the ICAO framework
  – Address the near-term needs for flight tracking
  – Assess all possible solutions for flight tracking
  – Bring the views of industry on what can be envisaged as a voluntary means for flight tracking, and how it integrates with normal aircraft operations
Collaboration and Partnership

• International Telecommunication Union (ITU)
  – Spectrum **protection** for existing needs, and **allocation** for emerging aviation needs
  – Aviation requirements for network communications associated with **remote storage** of flight information
Aviation Cloud – *What do we need to consider?*

- Aviation requirements?
- Technical, regulatory, legal, and policy issues?
- Business and cost model?