



International Civil Aviation Organization

**FOURTH MEETING OF THE ASIA PACIFIC ACCIDENT INVESTIGATION GROUP
(APAC-AIG/4)**

Tokyo, Japan, 1-2 September 2016

Agenda Item 4: Regional cooperation

ON-SITE FDR TECHNICAL WORKSHOP

(Presented by Macao, China)

SUMMARY

This paper highlights the recent On-site FDR Technical Workshop conduct by Air Accident Investigation Bureau (AAIB) of Singapore from 27 - 28 June 2016 at Macao, China.

1. INTRODUCTION

1.1 Flight recorder provides valuable sources of evidence in air accident investigations. Currently, the Civil Aviation Authority, Macao, China (AACM) does not have capability on flight recorder download and readout. Although this process was arranged under regional cooperation or cooperation arrangement, still our investigators must be capable of interpreting and analyzing the data. AACM has been sourcing for flight recorder training but hard to find one that suits our needs.

1.2 The APAC-AIG has been encouraging States and Administrations to offer training opportunities to another, thereby maximizing resourcing and logistical effort. Through the Code of Conduct (COC) for APAC States and Administrations on accident investigation matters, AACM approached AAIB Singapore for conducting an on-site FDR workshop at Macao. AAIB accepted our requested and customized one for us.

2. DISCUSSION

Objectives

2.1 Flight recorder is a crash protected recording system to record flight data in the aircraft. It has to be handled carefully in order to prevent structure damage resulting in data lost since all the data from the recorder is significant important for an aircraft accident investigations. Data output from the recorder is complex and requires sufficient knowledge to carry out the analysis process.

2.2 The objective of the workshop is to provide a general understanding of the flight recorder structure, technologies, data recovery and analysis to our participants. Knowledge about the raw data read out, data frame layout and data analysis will also be considered and presented during the workshop. In addition, the workshop also covered case studies and analysis results by using the data from the flight recorder.

Participants of the Flight Recorder Workshop 2016

2.3 Counterparts from the following administrations and agencies were invited to join the Flight Recorder Workshop:

- Civil Aviation Department, Hong Kong, China (CAD)
- Judiciary Police, Macao
- Public Security Police Force, Macao
- Air Macau
- Macau Jet
- East Asia Airlines

Workshop Agenda

2.4 The agenda of the two days workshop are as follows:

- Annex 6 Flight Recorder Carriage Requirements
- National Regulations Pertaining to Flight Recorders
- Mandatory Parameters
- Flight Recorder Technologies
- Other Technologies with Useable Data
- Flight Recorder Data Recovery
- Raw Data Format and Organization
- Parameter Allocation and Conversion Equation Documentation
- Data Frame layout
- Data Analysis
- Spreadsheet pitfalls
- Parameter Selection for Analysis
- Animations – Dangers and Benefits

2.5 The workshop covered some basic concepts on flight recorder structure and specifications. It also highlighted some key points on how to prevent the data from getting loss and data recovery from damaged recorder. Participants also learned the theories and the technologies of the flight recorder such as data format and how the data being used for analysis. Data verification and 3 different ways to view the data including Spreadsheet, graphical chart and animation were presented.

2.6 With more and more sharing sessions, observer attachment and OJT attachment being conducted with the effective of Asia-Pacific Code of Conduct, and the cooperative mechanism are getting more mature, these have proven that the COC is helpful and beneficial.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the content of this paper.

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