AEEC SAI Timely Recovery of Flight Data (TRFD) Meeting #2

Date: 11 June - 13 June, 2018

Location: Memphis, TN, USA

Please send any corrections or additions to Greg Moran and Hannes.

Discussion:

Organization

TRFD deliverables and schedule are as discussed in APIM 17-005 section 5.1. Our goal to generate a draft report addressing phases 1 & 2 in time for discussion at the Hawaii meeting, ahead of the APIM schedule.

Activity	Start Date	Completion Date
Phase 1: document the end-to-end system requirements	June, 2018	December, 2018
i. Define TRFD requirement source documents (ICAO SARP, industry standard, regulation) IN WORK		
ii. Define TRFD functional block diagram COMPLETE 13 June 2018		
iii. Capture requirements and recommendations from source documents IN WORK		
iv. Identify any additional requirements and recommendations PENDING		
v. Allocate requirements and recommendation to functional blocks IN WORK		
Phase 2: develop candidate architectures and select architecture(s)	January, 2019	December, 2019
Phase 3: develop detailed equipment interface, and aircraft installation requirements, as well as ground system requirements	January, 2020	September, 2020

Technical

11 June, 2018

Miro discussed his presentation on timely recovery of flight data including (available on GAT SharePoint)

- applicable SARPs, industry standards and regulatory material,
- TRFD functional flow overview,
- Triggered and continuous transmission of flight data system components,
- candidate architectures for transmission of flight data,
- mandatory / required FDR parameter group definition,
- transmission of flight data throughput analysis, and
- questions to consider for candidate architectures.

The group discussed the case where TRFD and ADT requirements overlap:

- transmission of flight data could be used for tracking purposes and end of flight location, and
- ELT of ADFR could be used for ADT purposes and end of flight location.

There is a common interface for the GAT functions and those interfaces are defined by ADT documents. Those interfaces will be referenced in TRFD requirements as appropriate.

At minimum, distress triggering for ADT (per ED-237) and for triggered transmission of flight data should be the same. ADT could potentially provide pre-distress trigger in order to satisfy ICAO recommendation to begin a transmission before circumstances reach ED-237 level event.

ADT group incorporated transmission of flight data enable and pre-distress trigger & cancellation bits in their ARINC 429 label definition. Transmission of flight data *enable* could be used to initiate continuous transmission and buffering historical data for triggered transmission.

13 June, 2018

The group reviewed an updated TRFD functional block diagram from Greg Smith and Miro. After some modification the group accepted this as a final version (uploaded to GAT SharePoint and included in requirements table under Auxiliary Figures).

The group reviewed the requirements table (TRFD Minimum Requirements) and assigned functional blocks to most requirements.

Schedule

Two (2) hour teleconferences to be held every third week 07:00 Pacific / 10:00 Eastern / 15:00 British

- Teleconference #2 10 July, 2018 to continue review of requirement table.
- Teleconference #3 31 July, 2018

Face to face meeting Kelowna, BC, Canada 21-23 August, 2018

Actions:

Open -

ID	Action	Assigned	ECD
180613-B	Add combination recorder and FDR & DLR duration requirements (only CVR duration was added) in TRFD Minimum Requirements.	Blake	10 July 2018

Closed –

ID	Action	Assigned	Closed
180411-A	Compile requirements source documents	Hannes / Greg Moran	17 May 2018

180411-B	Compile requirements from source documents into spreadsheet.
	    "shall" = minimum requirements
	    "should" = recommendations
		Greg Moran	17 May 2018

180411-C	Draft TRFD functional block diagram	Greg Smith	18 May 2018
180522-A	Circulate EASA document (HKCAD and CAAS regulatory material)	Hannes / Greg Moran	31 May 2018
180522-B	Update TRFD functional block diagram	Greg Smith / Miro	13 June 2018
180522-C	Update requirements table for ADFR	Blake	6 June 2018
180522-D	Provided requirements table numbering scheme	Greg Moran	31 May 2018
180613-A	Add EASA location of an aircraft in distress to requirements map.	Greg Moran	13 June 2018