AEEC Project Initiation/Modification (APIM)

1. Name of Proposed Project APIM: 11-012C

Supplement 6 to ARINC Specification 834: Aircraft Data Interface Function (ADIF)

Software specification only yes ☑ no ☐

2. Subcommittee Assignment and Project Support

2.1 Identify AEEC group

Electronic Flight Bag (EFB) Subcommittee.

2.2. Support for the activity

Organizations: American Airlines, FedEx, Lufthansa, **United Airlines,** Airbus, **Boeing, Astromed,** Astronautics, Avionica, CMC Electronics, **Cyberjet, Jeppesen**, Rockwell Collins, **Sabre, SITA,** Teledyne, **Thales,** UTC Aerospace Systems [others, TBI]

2.3. Commitment for resources (directly from participant)

Organizations: American Airlines, FedEx, Lufthansa, Airbus, **Boeing, Astromed,** Astronautics, Avionica, CMC Electronics, **Cyberjet, Jeppesen,** Rockwell Collins, **Sabre, SITA,** Teledyne, **Thales,** UTC Aerospace Systems [others, TBI]

2.4. Recommended Coordination with other groups

The EFB Subcommittee will coordinate with DLK Subcommittee

The following activities are relevant to this topic:

- **ARINC Specification 619 ACARS Protocols for Avionic End Systems**
- **ARINC Charactersitic 759 Project Paper Aircraft Interface Device (AID)**
- ARINC 840 Electronic Flight Bag (EFB) Application Control Interface (ACI) Standard

3. Project Scope

3.1 Description

This APIM describes the preparation of Supplement 6 to the Aircraft Data Interface Function standard. Supplement 6 will include clarifications, corrections and/or improvements to ARINC 834.

ARINC Specification 834 establishes the interface for handling avionics data between system software and applications. This standard creates a level of EFB platform independence in which the specifics of the system software implementation are hidden from the applications. Consistent with the objective of platform independence, it is the purpose of this APIM to address potential improvements to ARINC Specification 834 which have been identified.

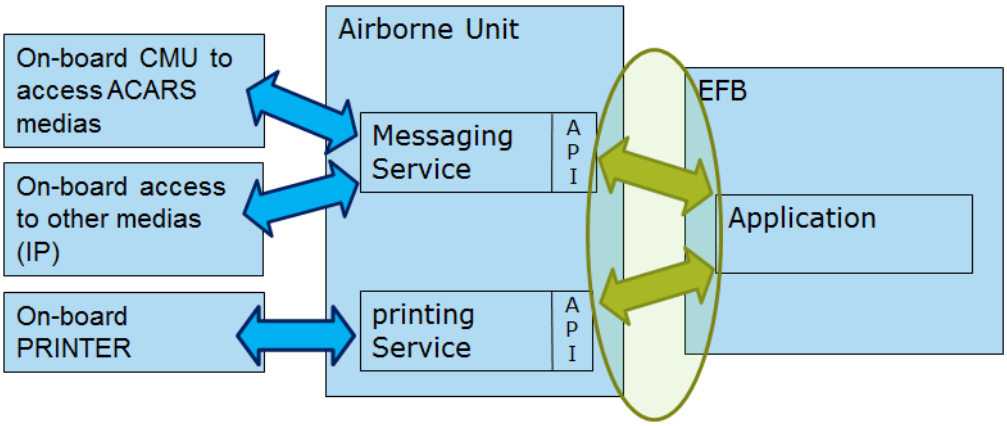
The following topics will be addressed:

Redefine Messaging and Printing Services principles focused on following identified operational needs:

- **Provide a media-agnostic method for EFB applications to send downlinks and receive uplinks over ACARS network.**
- **Allow EFB applications to benefit from ARINC 619 primitives.**
- **Provide to EFB applications, a mean to benefit from avionics printing service.**

The following key drivers must be considered:

- **Define simple mechanisms for Messaging Servers and clients to benefit from those services.**
- **Do not use COTS or Proprietary technologies.**
- **Identify/Capture new operational needs/growth potentials.**



System of Interest
Define Communication principles between EFB application and Messaging/Printing Services

Airborne units that may be candidates for hosting such services will be evaluated as part of this APIM.

3.2. Planned usage of the envisioned specification

New aircraft developments planned to use this specification	yes ☐ no ☑
New avionics equipment for major retrofit programs	yes ☐ no ☑
Mandate/regulatory requirement	yes ☐ no ☑
Please specify program and date: Not Applicable	
Modification/retrofit requirement	yes ☐ no ☑
Please specify: Not Applicable	
Airframer and/or airline projects to use this specification	yes ☑ no ☐
Once established, it is expected to be used by airframer and/or airline projects using avionics data parameters.	
Is the infrastructure standard for the aircraft defined?	yes ☑ no ☐
Are 18 months (min) available for standardization work?	yes ☑ no ☐
If 'No' please specify solution:	
Patent(s) involved?	yes ☐
If 'Yes' please describe:	

3.3. Issues to be worked

The main issues are:

Current ARINC 834 solutions manage parameters; they are not optimized to manage messages (a message cannot be managed as a parameter).

Therefore, new services must be defined to offer messaging and printing solutions. This will start from defining operational needs and lead to the definition of a standard messaging service in ARINC 834.

4.0 Benefits

4.1. Basic benefits

This standard will enable traditional avionics data parameters to be acquired by network components such as file servers, aircraft interface devices (AIDs) and Electronic Flight Bags (EFBs).

Operational enhancements (reduction in DOC?) yes ☑ no ☐

Form, Fit, Function, (FFF) standard (HW and/or SW):

a. ARINC 600 form (only HW) yes ☐ no ☑

b. Interchangeable fit (plug, mount, SW loading interface, etc.) yes ☐ no ☑

c. Interchangeable function yes ☑ no ☐

If not fully interchangeable, please explain:

Interface and protocol standard only, since H/W will not be addressed yes ☑ no ☐

d. Product available from more than one supplier (competitive environment) yes ☑ no ☐

The purpose of this proposed project is to establish an open standard that can be implemented by any supplier.

4.2 Specific project benefits

- Minimize the overall cost of implementing EFB applications willing to access aircraft data buses.
- Enable the use of software applications developed by third parties.

4.3 Benefit for Airlines

This standard will provide several benefits to Airlines:

- Airlines would benefit from lower integration costs, times and risks.
- Better and more consistent integration of applications leads to better user acceptance.

4.4 Benefit for Airframe Manufacturers

- Reduced integration time to verify new applications

4.5 Benefit for EFB Equipment and Application Suppliers

- Flexibility for EFB suppliers to add new applications
- Reduced integration time for EFB suppliers to validate new applications
- Reduced integration for third party application developers to integrate into different EFB platforms

5. Documents to be Produced and Date of Expected Result

Supplement 6 to ARINC Specification 834: Aircraft Data Interface Function (ADIF) Standard – April 2016.

6. Meetings/Expected Document Completion

The following table identifies the number of meetings and proposed meeting days needed to produce the document described above. This activity will be undertaken by the EFB Subcommittee. Regular teleconferences will be held between face to face meetings to maintain progress.

Activity	Mtgs	Mtg Days (Total)	Expected Start Date	Expected Completion Date
Supplement 6 to ARINC 834	2	4	April 2015	April 2016

6.1 Expiration date for this APIM

December 2016

7. Comments

none