

## ARINC Project Initiation/Modification (APIM)

**Version 2.1**

### 1. Name of Proposed Project

**APIM #: 09-009**

Aircraft EFB Users Forum (EFB UF)

**Note: This APIM is follow-up to APIM 07-001 which initiated the EFB Subcommittee and produced ARINC 828: Electronic Flight Bag (EFB) Standard Interface.**

### 2. Suggested Subcommittee Assignment (who acts)

#### 2.1 Identify AEEC group

This APIM proposes the formation of the “**EFB Users Forum**” activity as a new activity. This may evolve to include Flight Deck Operations and Data Terminal and may merge with the Datalink UF in future as applications become more hardware independent.

#### 2.2. Support for the activity (all to be confirmed)

- Airlines: Lufthansa, FedEx, Air France, United, KLM, American, Swiss, Austrian, BA, TAP, Southwest, Delta, Northwest, UPS, others
- Airframers: Airbus, Boeing, Bombardier, Embraer, others
- Suppliers: Astronautics, CMC Electronics, Goodrich, ECS, Jeppesen, Lufthansa Systems, NavAero, Teledyne, Thales, Rockwell Collins, L2 and others

#### 2.3. Commitment for resources (directly from participant) (all to be confirmed)

- Chairman: (tbd)
- Airlines: Lufthansa, FedEx, Air France, United, KLM, American, Swiss, Austrian, others
- Airframers: Airbus, Boeing, Bombardier, Embraer, others
- Suppliers: Astronautics, CMC Electronics, Goodrich, ECS, Jeppesen, Lufthansa Systems, NavAero, Teledyne and other)

#### 2.4. Recommended Coordination with other groups

The following activities are relevant to this topic:

- AOC (633)
- ANFS (763, 821, 822)
- EFB (828, 834, 840)
- NIS (ADN + SEC)
- SAI

### **3. Project Scope**

#### **3.1 Description**

This activity will produce a unified forum for airlines, EFB system integrators, EFB hardware providers, EFB application providers and other interested parties to present discuss and find solutions for topics of interest to the EFB user community. This includes but is not limited to EFB topics as follows:

- regulatory issues
- installation issues
- operational issues
- communication interfaces (incl. media, provider, connectivity)
- data input devices, terminals, displays, interactive devices
- application software
- electrical interfaces, including power

It should be noted that the EFB User Forum activity is not intended to create any new standard. Should such a desire arise during an UF it would be directed to the appropriate AEEC body.

The EFB UF has similar format as the Datalink UF and might make sense to merge even with the Datalink UF in the future as related applications become more and more hardware independent. Due to the similar nature of the EFB UF and Datalink UF a co-location should be considered.

#### **3.2. Planned usage of the envisioned specification**

- Not applicable
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#### **3.3. Issues to be worked**

The main issues are:

- Provide a forum where EFB system integrators and EFB hardware/software providers can present their product development plans with airline users
- Provide a forum for airlines to share current EFB experiences along with future expectations
- Enable the industry to identify common EFB services that need to be supported over the aircraft interfaces
- Identify any new avionics parameters which are useful for EFBs and the need for data structures to support the avionics interfaces
- Provide a forum for IT services providers to describe their efforts in this area. Ensure one or more methods are available to enable the EFBs to access wired and/or wireless air-

/ground links, onboard servers and to internet services in general.

- Others (TBI)

## **4. Benefits envisioned**

### **4.1. Basic benefits**

Modeled after the Data Link Users Forum, the EFB Users Forum is expected to attract both users and suppliers in a neutral industry setting.

The activity is expected to identify industry trends both operationally and technically. The overall goal is to exchange information and experience and to find standardized ways to solve issues early and improve EFB services - for the benefit of all.

The rapidly evolving EFB market will benefit from this platform and help dealing with key issues:

- Support Operational enhancements (reduction in DOC)
- Clarify in-service issues
- Support Interchangeability of EFB applications
- Interface and protocol standards
- Inform and discuss products offered from suppliers (competitive environment)
- Support Hardware and software are open market items
- ... (should be discussed and completed at the first EFB UF)
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### **4.2 Specific project benefits**

This activity is proposed in recognition of the ability for EFBs to meet a wide-variety of airline operational needs and to provide a neutral forum to discuss these needs. Airlines are moving quickly to install EFBs, many that are extensible to include all types of flight deck operations and data communications functions.

A properly executed effort will allow airlines and suppliers to be on the same page, reduce risk and provide the desired products to the marketplace.

### **4.3 Project Benefit for Airlines**

- Enable airline to influence EFB product evolution to suit their operational needs, leading to greater commonality across fleets.
- Common processes for EFB including software handling
- Ensure flexibility when updating EFB, selecting and installing EFB products in a way that fits the airline operation
- Cost reduction in airline EFB programs

### **4.4 Project Benefit for Airframe Manufacturers**

- Airframe manufacturers will benefit from being able to offer new aircraft models with EFBs and EFB provisions that meet the broadest needs of their customers
- Airframe manufacturers can continue to offer Class 1, 2 or 3 EFBs and in addition point out to their customers that there is an easy upgrade / downgrade path between the classes.
- Airframe manufacturers can rely on EFB equipment suppliers and choose not to develop EFBs themselves.

#### **4.5 Project Benefit for EFB Suppliers**

- Opens market opportunities for EFB suppliers to provide desired equipment.
- Will simplify supplier effort to equip different aircraft models.
- Easier to certify and to get operational approval due to commonality and familiarity

#### **5. Documents to be Produced and Date of Expected Result**

*Reports will be provided of each meeting.*

*APIMs may be developed where the need arises.*

## 6. Meetings/Expected Document Completion

The following table identifies the number of meetings and proposed meeting days needed to produce the documents described above.

Activity	Mtgs	Mtg-Days 2011	Mtg-Days 2012
EFB Users Forum - two 2-day meetings per year	4	4	4

*Trail Period lasting 24 months - to be renewed as needed.*

## 7. Comments

*The EFB Users Forum can discuss experiences with many current installations including those which are identified in APIM 07-001.*

*Embraer is delivering EFB class 2 and 3 versions*

*Bombardier plans EFB options for the C-series*

*The A380 comes with a Network Server System (NSS) that hosts an EFB called Onboard Information System. EFB class 2 and 3 are used by operators*

*A320 family aircraft are available with EFB full options from 2010*

*B777 is available with EFB options*

*The B-787 comes with two Electronic Flight Bag Electronic Units (EFB-EU) connected to the Core Network Cabinet via an IDN switch.*

*On the B747-8 a Network File Server is basic, the Class 3 EFBs are currently an option as well as provisions for STC based class 2.*

*The A350 EFB (EFB class 2 is basic option) and NSS definitions will also benefit from discussions held within the EFB Users Forum.*

For AEEC staff use only:

Date Received: AEEC staff assigned: PJP

Potential impact: (Safety, Regulatory, New aircraft/system, other)

Forwarded to (AEEC, AMC, FSEMC): Date Forwarded:

Resolution: Date of Resolution:

(Withdrawn, Authorized, Deferred, More detail needed, Rejected)