

## **ARINC Project Initiation/Modification (APIM)**

- 1.0 Name of Proposed Project** **APIM 16-003**  
Supplement 7 to **ARINC Characteristic 781: Mark 3 Aviation Satellite Communication Systems.**
- a. Addition of a security overlay for SwiftBroadband (SBB) safety services
  - b. General maintenance of the document.
- 1.1 Name of Originator and/or Organization**  
Francois Aicardi, Airbus  
Alan Schuster Bruce, Inmarsat
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**  
AGCS, Robert Holcomb, American Airlines
- 2.2 Support for the activity (as verified)**  
Airlines: American Airlines, United others TBD  
Airframe Manufacturers: Airbus, Boeing, Bombardier  
Suppliers: Cobham, L2, Rockwell Collins, Honeywell, Thales  
Others: Inmarsat
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**  
Airlines: American Airlines, others TBD  
Airframe Manufacturers: Airbus, Boeing, Bombardier  
Suppliers: Cobham, Rockwell Collins, Honeywell, Thales  
Others: Inmarsat
- 2.4 Recommended Coordination with other groups**  
(List other AEEC subcommittees or other groups.)  
DLK, KSAT, NIS
- 3.0 Project Scope** (why and when standard is needed)
- 3.1 Description**

### **Background**

Inmarsat is completing development of the addition of a security overlay (VPN) based on IPSEC and PKI to support ACARS over SBB as shown below:



Other: (manufacturer, aircraft & date)

Modification/retrofit requirement yes  no

Airbus: A320 family, A330, A350, A380 - 2018

Needed for airframe manufacturer or airline project yes  no

Airbus: A320 family, A330, A350, A380 - 2018

Mandate/regulatory requirement yes  no

Program and date: (program & date)

Is the activity defining/changing an infrastructure standard? yes  no

Specify (e.g., ARINC 429)

When is the ARINC Standard required?  
March 2017

What is driving this date? Development of Airbus Lightweight Cockpit Satcom

Are 18 months (min) available for standardization work? yes  no

If NO please specify solution: AGCS believes one year is sufficient time

Are Patent(s) involved? yes  no

If YES please describe, identify patent holder: \_\_\_\_\_

### 3.3 Issues to be worked

- Agree upon overall security approach
- Align with FAA and EASA to take benefit of the overall security approach
- Define satcom security functionality

## 4.0 Benefits

### 4.1 Basic benefits

Operational enhancements yes  no

For equipment standards:

a. Is this a hardware characteristic? yes  no

b. Is this a software characteristic? yes  no

c. Interchangeable interface definition? yes  no

d. Interchangeable function definition? yes  no

If not fully interchangeable, please explain: \_\_\_\_\_

Is this a software interface and protocol standard? yes  no

Specify: \_\_\_\_\_

Product offered by more than one supplier yes  no

Identify: (company name)

## 4.2 Specific Project Benefits

### 4.2.1 Benefits for Airlines

Provide a state of the art security overlay for ACARS/SBB for airlines

### 4.2.2 Benefits for Airframe Manufacturers

Provide a secure end-to-end solution to the aircraft by providing isolation between subnetwork domains and by providing authentication of the most secure ground counterpart (Inmarsat Secure Aero Rack)

**4.2.3 Benefits for Avionics Equipment Suppliers**

More/continued sales, and provides more functionality from the satcom system.

**5.0 Documents to be Produced and Date of Expected Result**

ARINC 781 Supplement 7.

**5.1 Meetings and Expected Document Completion**

<b>Product/Activity</b>	<b>Mtgs</b>	<b>Mtg-Days (Total)</b>	<b>Expected Start Date</b>	<b>Expected Completion Date</b>
Supplement 7 to ARINC Characteristic 781	3	9*	April 2016	April 2017

\* This activity will be carried out during AGCS Subcommittee meetings preparing ARINC 771 and ARINC 781 satcom standards and use approximately 3 hours per meeting. Web conferencing will be used where appropriate.

**6.0 Comments**

None

**6.1 Expiration Date for this APIM**

April 2017

*Submit completed form to the AEEC Executive Secretary.*