

## ARINC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM 17-013**  
**Supplement 8 to ARINC Specification 628 Part 1: Cabin Equipment Interfaces,**  
Definition of Cell Phone Modem Standards for IFE
- 1.1 Name of Originator and/or Organization**  
Rolf Goedecke, Airbus
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**  
Cabin System Subcommittee (CSS)  
Dale Freeman, Delta Air Lines
- 2.2 Support for the activity (as verified)**  
Airlines: Delta, TAP Portugal, United  
Airframe Manufacturers: Airbus, Boeing  
Suppliers: Rockwell-Collins, Thales, ZII  
Others:
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**  
Airlines: Delta  
Airframe Manufacturers: Airbus, Boeing  
Equipment Suppliers: Rockwell-Collins, Thales, ZII  
Others:
- 2.4 Recommended Coordination with other groups**  
NIS, SAI
- 3.0 Project Scope (why and when standard is needed)**  
The airframe manufacturers are increasingly installing cell modems for communication of cabin systems with ground infrastructure (e.g., WLAN, UMTS, LTE). There is a high effort necessary to integrate the cell modems, as all cell modems from various suppliers are different in size, mounting method, interface location and installation location. Standardization of form and fit of the cell modem will enable a particular installation location to be used for cell modems available from different suppliers. This project aims to:
- Define the form factor for a cell modem.
  - Define mounting method for a cell modem.
- 3.1 Description**  
The harmonization of form and fit of cell modems from different suppliers allows the airframe manufacturers to define a dedicated location in each aircraft type for such equipment.

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

New aircraft developments planned to use this specification      yes  no

Specify: All Airbus A/c

Modification/retrofit requirement      yes  no

Specify: Airlines are retrofitting wireless networks into their existing fleets to provide passenger and crew connectivity.

Needed for airframe manufacturer or airline project      yes  no

Specify:

Mandate/regulatory requirement      yes  no

Program and date: No mandate

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

Specify:

When is the ARINC Standard required? TBD

What is driving this date? TBD

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

If NO, please specify solution:

Are Patent(s) involved?      yes  no

If YES please describe, identify patent holder: Not applicable

### 3.3 **Issues to be worked**

- Form and fit of the cell modem.
- Max weight and max heat dissipation.
- Switching logics.
- Battery requirements.
- Antenna location(s).
- Network security considerations (coordinate with NIS).

### 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

Product offered by more than one supplier      yes  no

Identify: ZII, others TBI

**4.2 Specific project benefits (Describe overall project benefits.)**

The purpose of the project is to develop and standardize the form and fit of cell modem.

**4.2.1 Benefits for Airlines**

Airlines will benefit by reduction of lead time and lower integration cost.

**4.2.2 Benefits for Airframe Manufacturers**

Standardized products from a variety of suppliers allow for dedicated installation locations and provisions independent of the suppliers.

**4.2.3 Benefits for Avionics Equipment Suppliers**

The equipment suppliers get a predefined interface definition and avoid late equipment changes and requalifications.

**4.3 Meetings and Expected Document Completion**

The following table identifies the number of meetings and meeting days for the overall Cabin Systems Subcommittee effort.

<b>Activity</b>	<b>Mtgs</b>	<b>Mtg-Days (Total)</b>	<b>Expected Start Date</b>	<b>Expected Completion Date</b>
Supplement 8 to ARINC 628P1	6	18	Oct 2017	April 2019

Reflects all CSS meetings responsible for several APIMs in work. In addition to the meetings identified above, the CSS will have virtual meetings to develop preliminary pin assignments and connector definitions.

**5.0 Comments**

None.

**5.1 Expiration Date for the APIM**

October 2019

***Completed forms should be submitted to the AEEC Executive Secretary.***