ARINC Project Initiation/Modification (APIM)

1.0 Name of Proposed Project

APIM 17-012

Update ARINC 808 (3GCN Cabin) and ARINC 809 (3GCN Seats) to define a 3GCN+ architecture capable of supporting multiple aircraft types with fiber optic technology.

Name of Originator and/or Organization
Gerald Lui-Kwan, Boeing

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
Airframe Manufacturers: Boeing, Airbus
Suppliers: Thales, Panasonic, ZII
Others:

2.3 Commitment for Drafting and Meeting Participation (as verified)

Airlines: Delta
Airframe Manufacturers: Boeing, Airbus
Equipment Suppliers: Thales, Panasonic, ZII
Others:

2.4 Recommended Coordination with other groups

FOS, NIS

3.0 Project Scope (why and when standard is needed)

ARINC 808 and ARINC 809 were developed as the 3GCN standard architecture for the IFE industry. Network technology is evolving and the development of 10 Gbps fiber interfaces provides a growth path for the 3GCN architecture that will support future IFE features such as 4K UHD video to be incorporated to create a 3GCN+ architecture.

3.1 Description

The ARINC 808 and ARINC 809 defined 3GCN architecture will be revised to incorporate a 10 Gbps fiber backbone routed between the head-end IFE equipment and the Area Distribution Boxes that form the cabin network distribution system.

3.2 Planned usage of the envisioned specification

New aircraft developments planned to use this specification

Yes ☒ No ☐
Specify: 777X, Existing Airbus aircraft
Modification/retrofit requirement
Specify: 777, 747-8
Yes ☒ no □

Needed for airframe manufacturer or airline project
Specify:
Yes □ no ☒

Mandate/regulatory requirement
Program and date: None
Yes □ no ☒

Is the activity defining/changing an infrastructure standard?
Specify: ARINC 808 and ARINC 809 3GCN
Yes □ no ☒

When is the ARINC Standard required? 2019

Are 18 months (min) available for standardization work?
If NO, please specify solution: Not applicable
Yes □ no ☒

Are Patent(s) involved?
If YES please describe, identify patent holder: Not applicable
Yes □ no ☒

3.3 Issues to be worked
- Incorporation of 10 Gbps fiber

4.0 Benefits
4.1 Basic benefits
Operational enhancements
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 ☒

4.2 Specific project benefits (Describe overall project benefits.)
The purpose of the project is to update to ARINC 808 and ARINC 809 to incorporate performance enhancements to the 3GCN architecture creating a 3GCN+ architecture that is applicable to multiple aircraft models.

4.2.1 Benefits for Airlines
Airlines will benefit from a revised standardized 3GCN+ architecture that provides an IFES growth platform that supports new features such as 4K UHD video distribution.
4.2.2 Benefits for Airframe Manufacturers
Standardized products from a variety of suppliers applicable to multiple airplane platforms.

4.2.3 Benefits for Avionics Equipment Suppliers
Revision of an existing architecture that incorporates new and existing technology and improves system performance.

5.0 Documents to be Produced and Date of Expected Result
Supplement 3 to ARINC 808 and Supplement 4 to ARINC 809.

5.1 Meetings and Expected Document Completion
The following table identifies the number of meetings and proposed meeting days needed to produce the documents described above.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mtgs*</th>
<th>Mtg-Days (Total)*</th>
<th>Expected Start Date</th>
<th>Expected Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplement 3 to ARINC 808 &amp; Supplement 4 to ARINC 809</td>
<td>8</td>
<td>24</td>
<td>10/2017</td>
<td>10/2019</td>
</tr>
</tbody>
</table>

* Meetings reflect ongoing CSS activities responsible for multiple ARINC Standards.

6.0 Comments
None.

6.1 Expiration Date for the APIM
January 2020

_completed forms should be submitted to the AEEC Executive Secretary._