

Cabin Systems

(CEI / 3GCN / 4GCN/ SI / CC)

Meeting Agenda

May 10-12, 2016

Lisbon, Portugal

Dale Freeman, DAL, Chairman
Gerald Lui-Kwan, Boeing, Co-Chairman
Rolf Gödecke, Airbus , Co-Chairman

Cabin Systems Meeting Agenda

▶ Introductions

- Special Notes
 - ▶ Intellectual Property (Patent & Copyrights)
 - ▶ APIM Guidelines
 - ▶ Members and Corporate Sponsors
- Acceptance of Previous Meeting Report (16-055/CSS-576)
- Current Drafts
 - ▶ Draft 6 of Supplement 1 to ARINC 832 – Adopted April 25 by AEEC
 - ▶ Draft 3 of Supplement 1 to ARINC 800 Part 2 - New
 - ▶ Draft 2 of Supplement 1 to ARINC 800 Part 3
 - ▶ Draft 1 of Supplement 3 to ARINC 664 Part 2
- Working Papers Identification
 - ▶ Approved APIM 16-005 for Multiple Standards
 - ▶ Airbus Proposal for Cabin Lighting Interface Standard
 - ▶ Glenair Patent: Electrical Connector for High-Speed Transmission Using Twisted Pair Cable
 - ▶ ARINC 800 Part 3 Strawman for Hybrid Cable - TEC and ARINC IA
 - ▶ Updated Strawman Input for PP836A Mini-MRP – Molex
 - ▶ Radiall proposal for Project Paper 836A Connector Interface
 - ▶ TEC proposal for Project Paper 836A Connector Interface
 - ▶ BAE recommendations for new cabin LAN interfaces

Objectives

- ▶ Review of Current CSS Program and Results from AEEC General Session
- ▶ Connectors and Cables
 - Supplement 1 to A800 Part 2 (Specification of Connectors)
 - 10 Gbps Ethernet Octo-ax Contact Concepts
 - Supplement 1 to A800 Part 3 (Specification of Cables)
 - Fiber Optic Connectors
- ▶ ARINC 836A – mini-modules
- ▶ PP648 -- Guidance for Seat Production Testing
- ▶ HD Landscape Camera – A628 Part 1
- ▶ CWAP Automatic Region Code Adaptation – A628 Part 1
- ▶ Initiate USB 3.1 Updates to A628P2, A809, A832
- ▶ Initiate Supplement 4 to ARINC 628 Part 9
- ▶ Project Paper 820 (Wireless Networks)
- ▶ New Seat LAN Definition
- ▶ Close Action Items for Supplement 1 to A832 (Copper/FO Hybrid)
- ▶ Proposed Change for ARINC 628 Part 5 (Wiring Installation)
- ▶ Cabin Lighting Interface
- ▶ ARINC 664 Part 2 (10 Gb Ethernet)
- ▶ Agenda and Location for Next Meeting

Tuesday, 9:00 AM – 5:00 PM

▶ **Current CSS Program**

- Review of current program
- Results/feedback from AEEC General Session (April 25 through April 28)

▶ **ARINC 800, Part 2 (Specification of Connectors)**

- Create a drawing for A800P2 16-10 insert for inclusion in the specification (A800P2-86)
- Provide EN4165 references to replace drawings for accessories and shells (A800P2-90)
- Provide rationale for the hermetically sealed satcom bulkhead connector (A800P2-93)
- Provide a proposal for the 10Gb Oct contact at the May meeting (A800P2-94)
- Provide wording for section 3.1.4 from PPA845 (A800P2-95)
- Provide maximum weights for the 30 #23 for table A-1 (A800P2-96)
- Contact Glenair and identify patent claims if any on the Oct Contact (A800P2-97)

▶ **10 Gbps Ethernet Octo-ax Contact Concepts**

- Positronics
- Amphenol/Radiall

▶ **ARINC 800, Part 3 (Specification of Cables)**

- Review the proposed electrical properties for sections 4.1.4 and 4.1.5 (A800P3-25)
- Propose a strawman update for the new hybrid fiber/copper cable (A800P3-27)

Delta/IA

CSS

Delta/IA

CSS/CWG

Amp/TEC

TEC

Airbus

Suppliers

Airbus

Amphenol

IA

CSS

CWG

Boeing

TEC/IA

Tuesday, 9:00 AM – 5:00 PM (Continued)

▶ **Fiber Optic Connectors (PP845 and PP846)**

– **Status of Project Paper 845**

- Determine whether their FO xcvrs are compatible with A845 termini (CWG-14)
- Add design guidance for placement of fiber termini in an insert to A803 (CWG-15)
- Notify FOS to specify specific insert arrangement for A600 connector (CWG-16)
- Section 2.4 needs to reference the same fiber types as the previous table. (CWG-18)
- Section 2.4.4.3 - correct reference for "resistance to fluids" requirements (CWG-19)
- Verify the 125C temp requirement is adequate for MT termini (CWG-20)

▶ **ARINC Project Paper 836A (Mini-MRP)**

- Intermateability requirements of connectors in the mini-MRP (836-41)
- Provide proposed simplified drawings for the A836 Mini-MRP (836-43)
- Provide information on the proposed connectors (836-44)
- Distribute the connector information received from AI 836-44 (836-48)
- Incorporate connector insertion and removal force information into strawman (836-49)

CSS

IA

IFE Suppliers

FOS/IA

IA

IA

IA

Boeing

CSS

TEC, Mx, Amp

Molex

Suppliers

IA

Molex

Wednesday, 9:00 AM – 5:00 PM

- ▶ **PP648 - Guidance for Seat Production Testing**
 - Develop input for sections 1.1 and 1.2. Include Airbus seat testing strawman material (648-1)
 - Provide a block diagram of testing that can be performed at the Seat Supplier. (648-7)
 - Review Thales document on a data driven seat process for seat acceptance (648-11)
 - Propose ATP template (648-12)
 - Update flow charts and test interconnect diagrams (648-13)
 - Clarify/revise page 5 subparagraphs 2 & 3 and integrate with Zodiac diagrams (648-14)
 - ▶ **Supplement 8 to ARINC 628 Part 1 – CWAP GCOM/HD Landscape Camera**
 - Review Latecoere proposed revisions to A628P1 for HD Landscape (628 P1-193)
 - Review and revise Att 17 video formats and integrate APEX EETWG requirements (628 P1-195)
 - Consider the addition of 10Gb interface to the CWAPs (fiber vs copper) (628 P1-196)
 - **GCOM Discussion Items**
 - ▶ CWAP Test Mode
 - ▶ Status of Regulatory Situation/Coordination
 - ▶ **Initiate USB 3.1 Updates to A628P2, A809, A832**
 - ▶ **Initiate Supplement 4 to ARINC 628 Part 9**
 - ▶ **Project Paper 820 (Wireless Network)**
 - Review proposed strawman and provide comments (820-2)
 - Propose power consumption value for section 2.2.1 assuming POE for CWAPs (820-11)
 - Clarify discretely input vs. output/ add discrete outputs RF Enable/ reference A628P1 (820-12)
 - Propose a disconnect strategy as an alternative to the WIU configuration for A820 (820-13)
 - Add reference to A852 in section 4.3 (820-14)
 - ▶ **New Seat LAN Definition**
 - Provide proposals for a new seat LAN architecture (APIM-16-XX-01)
- CSS**
Panasonic
IFE Suppliers
IFE suppliers
BEA
Zodiac
Thales
- CSS**
IFE Suppliers
Thales
Suppliers
- CSS**
Airbus
CSS
- CSS**
- CSS**
- CSS**
Suppliers
RCI
Boeing
Thales
Boeing
- CSS**
CSS

Thursday, 9:00 AM – 12:00 Noon

- ▶ **Supplement 1 to A832 (copper/FO hybrid)** **Airbus**
 - Move the Fiber Optic termini from the outboard cavity locations to the middle cavities (832-169) IA
 - Reword or remove the notes following the figures for the seat to seat wiring diagrams (832-170) IA
 - Update note in Figure 3-2d and 3-3c to incorporate detailed callout of the A845 termini (832-171) IA
 - Fix figure 3-15b to remove fiber shunt from the drawing (832-172) IA
 - Update height of the CNU in the note for figure 5-2c (832-173) IA
 - Include SEU in the acronym list (832-174) IA
 - Prepare circulation draft and circulate for adoption review (832-175) IA
- ▶ **Proposed change for ARINC 628 Part 5 – Wiring Installation** **Airbus**
- ▶ **Cabin Lighting Interface** **CSS**
 - Refine scope of the proposed definition of smart lighting components (APIM-16-01) Airbus
 - Contact Diehl and solicit interest in this proposal (APIM-16-02) Thales
 - Contact BE Aerospace, Schott and Emteq and solicit interest in this proposal (APIM-16-03) BAE
 - Contact LSI and PECO solicit interest in this proposal (APIM-16-04) Astronics
 - **Review Scope of SAE Interior Lighting Committee (A-20C)** IA
- ▶ **ARINC Specification 664, Part 2 (10 Gb Ethernet)** **CSS**
 - **SAE High Speed Connector Coordination** IA
 - Propose revision to ARINC 664 Part 2 Appendix I for 26 AWG (664P2-6) Boeing
 - Incorporate existing Quad cabling for 10 Gb links of limited distance (664P2-7) Boeing
 - Update test plan section in A800 P2 to include the Cat 6a channel specification (664P2-8) IA
- ▶ **Discuss agenda and locations for next meetings** **All**
- ▶ **Adjourn CSS**

2016 CSS Meetings Planning (Tentative)

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV |
|--------------------|-------------------------|--------------------------------|--|-----|-----------------|--------------------------------|-----|--------------------|------|--|-----------------|
| CSS S/C | | 9-11 Tucson | | | 10-12 Lisbon | | | 23-25 Ottobrunn | | | 1 – 3 Newark |
| Connector WG | | Same as CSS | | | Same as CSS | | | Same as CSS | | | Same as CSS |
| Ku/Ka SatCom SC | 13-15 Cocoa Beach | | | | | 21-23 Seattle | | | | TBD | |
| GAIN S/C | No Meetings Planned | | | | | | | | | | |
| NIS | 12-14 Cocoa Beach | | | | | 13-16 San Diego | | | | | |
| FOS | 26-28 Oxnard CA | | | | | 21-23 Mukilteo, WA | | | | | |
| SAI | | 9-11 Coral Gables, FL | | | | 14-16 London | | | | 11-12 Toulouse | |
| APEX | | | | | | 8-9 TEC Hollywood, CA | | | | | |
| AEEC | | | 23-24 General Session Atlanta | | | | | | | 13-14 Mid-Term Session Toulouse | |