

Cabin Systems Subcommittee

Meeting Agenda

*August 23-25, 2016
Ottobrun, Germany*

*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 (16-085/CSS-578)
- Current Drafts
 - ▶ Draft 3 of Supplement 1 to ARINC 800 Part 2
 - ▶ Draft 2 of Supplement 1 to ARINC 800 Part 3
 - ▶ Draft 2 of Supplement 3 to ARINC 664 Part 2
 - ▶ Draft 1 of ARINC Project Paper 836A
 - ▶ Draft 1 of Supplement 8 to ARINC 628 Part 1
- Working Papers Identification
 - ▶ Strawman for Supplement 5 to ARINC Specification 628 Part 9
 - ▶ Requirements matrices for single-pair Ethernet cable and connector – Airbus
 - ▶ TE input on single-pair Ethernet cables
 - ▶ Draft APIM 16-011 CSS Next-Generation Cabin Equipment Bus Interface
 - ▶ Revised APIMs 08-011B (Cabin Enclosures), 12-004C (10 GbE), and 13-014B (Connectors and Cables)
 - ▶ Airbus inputs on USB 3.1 Modifications for A628P2 and A809
 - ▶ Strawman for Project Paper 648 – Seat Production Testing
 - ▶ Souriau Question on ARINC 800P2 16-02 Definition
 - ▶ TE datasheet for 7.5A composite cable – ARINC 800 Part 3

Objectives

- ▶ Review of Current CSS Program
- ▶ Connectors and Cables
 - Supplement 1 to A800 Part 2 (Specification of Connectors)
 - 10 Gbps Ethernet 8ax Contact Concepts
 - Contactless Connections Demo
 - Supplement 1 to A800 Part 3 (Specification of Cables)
 - Fiber Optic Connectors
- ▶ ARINC 836A – mini-modules
- ▶ ARINC 628 Part 5 - Convolute Tubing
- ▶ PP648 -- Guidance for Seat Production Testing
- ▶ Supplement 8 to ARINC 628 Part 1
 - HD Landscape Camera and 4K Video
 - CWAP Automatic Region Code Adaptation
- ▶ USB 3.1 Updates to A628P2
- ▶ Supplement 5 to ARINC 628 Part 9
- ▶ Project Paper 820 (Wireless Networks)
- ▶ New Cabin LAN Definition
 - ARINC 664, Part 2
 - Seat Interfaces – PP 8XX, Part 1
 - Lighting Interfaces – PP 8XX, Part 2
- ▶ 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
 - ▶ **ARINC 800, Part 2 (Specification of Connectors)**
 - **Question on ARINC 800P2 16-02 Definition**
 - **Discussion of “octo-ax” terminology for 800P2 and 664P2**
 - Provide strawman for octo-ax geometry (A800P2-96)
 - Draft Strawman requirements section for Octo-ax contact definition (A800P2-97)
 - Revise APIM reflecting completion date of 5/17 for review at SAI (A800P2-98)
 - Revise RM to reference most recent link test methods and requirements (A800P2-99)
 - Propose Strawman for Octo-ax section for ARINC 800 Part 2 (A800P2-100)
 - ▶ **10 Gbps Ethernet 8ax Contact Concept Updates**
 - **Positronic**
 - **Amphenol/Radiall**
 - ▶ **Aircraft Seat Demo – Contactless Connections**
 - ▶ **ARINC 800, Part 3 (Specification of Cables)**
 - Make data cable definition in 4.1.4 and 4.2.1 consistent. Add transfer impedance. (A800P3-28)
 - Provide rationale for 25C temperature testing rather than 20C in Table 4-5b (A800P3-29)
 - Provide table showing cable insulator colors for Section 4.2.2 (A800P3-30)
 - Provide reference and/or requirements for fiber cable performance in 4.2.2.3 (A800P3-31)
 - Provide diameter and weight estimate for 7.5 A composite cable (Section 4.2). (A800P3-32)
- Delta/IA**
CSS
CSS/CWG
Souriau
CSS
Amp/Radiall
IA
IA
IA
IA
CSS
- TEC**
CWG
IA
TEC
IA
IA
IA

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

- ▶ **Fiber Optic Connectors (PP845 and PP846)**
 - **Discuss insert layouts for MT ferrules (for FOS coordination)**
 - Determine whether their FO xcvrs are compatible with A845 termini (CWG-14)
 - Verify the 125C temp requirement is adequate for MT termini (CWG-20)
 - ▶ **ARINC Project Paper 836A (Mini-MRP)**
 - **Mini MRP Presentation**
 - Provide proposed simplified drawings for the A836 Mini-MRP (836-43)
 - Define reference location for tray, enclosure, and connector cut-outs (836-50)
 - Propose insertion and removal forces and locking loads for each enclosure size (836-51)
 - Propose parameters associated with blind mating for each connector type (836-52)
 - Produce Draft 1 of A836A (836-53)
 - ▶ **ARINC 628 Part 5**
 - Investigate replacement reference for SAE-AMS-T-81914 in Table 4.4.1.6-1 (628-P5-10)
- CSS**
CSS
IFE Suppliers
Boeing
CSS
SQS
Molex
Molex
Molex/Airbus
Suppliers
Molex
CSS
IA

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)
- Clarify/revise page 5 subparagraphs 2 & 3 and integrate with Zodiac diagrams (648-14)
- Prepare ATP template, remove supplier-specific references (648-15)
- Prepare test sequence block diagrams for incorporation into Appendix (648-16)
- Add A485 connections to SPM (648-17)
- Provide initial Strawman for 648 document (648-18)
- Set up webex schedule for writing group (648-19)

Action Items taken in web conferences since Lisbon CSS meeting

- Revise Figure 1-1 (648-20)
- Propose initial input for Section 1.5 – Seat Production Life Cycle (648-21)
- Propose a draft of Section 2.0 Introduction (648-22)
- Draft Section 2.3.1 – IFE (648-23)
- Provide initial input for Section 2.3.2 – Seat Actuation (648-24)
- Provide initial input for Sections 2.3.3 (In-Seat Lighting) and 2.3.4 (Emergency Lights) (648-25)
- Provide initial input for Section 2.3.7 – PED Power Supply (648-26)
- Provide initial input for Section 2.3.8 – Cabin Management Lighting (648-27)
- Provide initial input for Section 2.3.9 – Comfort Systems (648-28)
- Provide comments for proposed Sections 1.5, 2.3.3, and 2.3.4 (648-29)
- Provide a draft of Section 3.2.1 – IFES (648-30)
- Provide bullet-point input for Sections 3.2.2, 3.2.3, 3.2.4, and 3.2.9 (648-31)
- Contact Amsafe to address Sections 2.3.5 and 3.2.5 (Airbags) (648-32)
- Provide input for Section 3.2.7 (PED Power) (648-33)
- Provide input for Section 3.2.8 (Cabin Management Lighting) (648-34)

CSS

Panasonic
IFE Suppliers
IFE suppliers
Thales
IA/BE
ZSF
ZSF
Thales
IA

IA
BE
IA
Thales/PAC/Zii
ZSF
BE
Astronics
BAE
BE
CSS
PAC/Thales/Zii
ZSF/BE
IA
Astronics
BAE

Wednesday, 9:00 AM – 5:00 PM (continued)

- ▶ **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)
 - Put together Draft 1 incorporating the Latecoere strawman (628 P1-198)
 - Consider the addition of 10Gb interface to the CWAPs (fiber vs copper) (628 P1-196)
 - **GCOM Updates**
 - Inquire about an SAE-ITC means for joint industry measurement effort. (628 P1-197)
 - ▶ **Supplement 9 to A628P2 (USB 3.1)**
 - Propose USB 3.1 and Power Delivery (PD, rev 2.0) text for 628P2 and 809 (628-P2-25)
 - Provide requirements matrix for inline disconnect and associated cable (628-P2-26)
 - ▶ **Supplement 5 to ARINC 628 Part 9**
 - Propose Strawman for extensively revised A628P9 for review in August meeting (A628P9-11)
 - ▶ **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)
 - 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)
- CSS**
IFE Suppliers
Thales
IA
Suppliers
Zii
IA
CSS
Airbus/Thales
Th/A/B/PAC
CSS
IA
CSS
Suppliers
RCI
Thales
Boeing

Thursday, 9:00 AM – 12:00 Noon

- ▶ **ARINC Specification 664, Part 2 (New Cabin LAN)**
 - Discuss Requirements for 100/1000 BASE T1 Definition
 - Draft APIM for bus definition based on Airbus input (APIM-16-XX-02)
 - ▶ **New Cabin LAN (Seat Interfaces) – Project Paper 8XX Part 1**
 - Discuss Plans for definition of Seat Interfaces for new cabin LAN standard
 - ▶ **New Cabin LAN (Lighting Interfaces) – Project Paper 8XX Part 1**
 - Discuss Plans for definition of Seat Interfaces for new cabin LAN standard
 - ▶ **ARINC Specification 664, Part 2 (10 Gb Ethernet)**
 - 10Gbps fiber considerations (for ARINC 804)
 - Propose revision to ARINC 664 Part 2 Appendix I for 26 AWG (664P2-6)
 - Incorporate existing Quad cabling for 10 Gb links of limited distance (664P2-7)
 - Update test plan section in A800 P2 to include the Cat 6a channel specification (664P2-8)
 - Add voltage ranges to Table 3-1
 - Produce Draft 2
 - ▶ **Discuss agenda and locations for next meetings**
 - ▶ **Adjourn CSS**
- CSS**
CSS
IA
CSS
CSS
CSS
CSS
CSS
COTSWORKS
Boeing
Boeing
IA
IA
IA/Boeing
All

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				19-21 Chicago	
GAIN S/C	No Meetings Planned										
NIS	12-14 Cocoa Beach					13-16 San Diego					
FOS	26-28 Oxnard CA					21-23 Mukilteo, WA				25-27 Lyon	
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	