



To	Aviation Industry	Date	April 4, 2022
From	ARINC Industry Activities	Reference	22-025/AGS-197 lth
Subject	AEEC General Session	Marquee Host	FedEx
Where	Renasant Convention Center Memphis, Tennessee	Marquee co-Host	HEICO

MEETING AGENDA			
AEEC General Session - Memphis 2022			
Time	Tuesday May 10	Wednesday May 11	Thursday May 12
0830	1. OPENING SESSION <ul style="list-style-type: none"> • Welcome/Introductions • Keynote Address • Awards 	5. DATA COMM <ul style="list-style-type: none"> 5a. Data Link Users Forum 5b. Data Link Systems 5c. Air/Ground Comm / Satcom 5d. Internet Protocol Suite (IPS) 	9. CABIN SYSTEMS <ul style="list-style-type: none"> 9a. Ku/Ka-Band Satcom 9b. Cabin Systems 9c. Galley Interfaces
1010	Break	Break	Break
1030	2. JOINT SYMPOSIUM CYBER SECURITY	6. SYMPOSIUM FUTURE COMMUNICATION MEANS	10. SYMPOSIUM SPECTRUM MANAGEMENT
1200	<i>Lunch Break</i>		
1330	3. SYSTEMS & ARCHITECTURES <ul style="list-style-type: none"> 3a. SAI Subcommittee 3b. Surveillance, Mode S 3c. Integrated Surveillance Sys 3d. Airborne Weather Radar 	7. NETWORK SYSTEMS <ul style="list-style-type: none"> 7a. Network Infrastructure (NIS) 7b. Electronic Flight Bag (EFB) 7c. EFB Users Forum 7d. AOC Messaging 	11. SPECIAL TOPICS <ul style="list-style-type: none"> 11a. Fiber Optics 11b. ARINC 600 Packaging 11c. Software Distribution and Loading
1500	Break	Break	Break
1520	4. SYMPOSIUM 5G / RADIO ALTIMETER	8. EMBEDDED SYSTEMS <ul style="list-style-type: none"> 8a. Navigation Data Bases 8b. Cockpit Displays (CDS) 8c. APEX Software 	12. SPECIAL TOPICS <ul style="list-style-type: none"> 12a. Other Topics 13. Adjourn
1700 2300	Evening Hospitality Suites Open		

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AEEC EXECUTIVE COMMITTEE 2022

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IATA	Stuart Fox
AEEC EXECUTIVE SECRETARY	Paul Prisaznuk

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Welcome to Memphis

Your Badge and Registration

The AEEC registration desk is open Monday from 4:00pm to 7:00pm, Tuesday from 7:00am to 3:00pm and 5:00pm to 8:00pm, and 7:00am to 3:00pm on Wednesday and Thursday. If you have pre-registered for the meeting, a badge will be ready for you.

An advance copy of the pre-registration list is available at:

<https://www.aviation-ia.com/conferences/aeec-amc>

Monday Welcome Reception

Join us for the Welcome Reception at the Convention Center to be held Monday, May 9, from 5:00pm to 7:00pm. Meeting attendees and their guests are invited.

Meeting Materials

This agenda and working papers for the meeting are available at: <https://www.aviation-ia.com/conferences/aeec-amc> two weeks before the meeting.

You are invited to download the documents that you might want to refer to during the meeting. Hardcopies of meeting materials will not be available at the meeting.

Speak to the Issues

All attendees are invited to participate in the discussion on the floor. Your input will help clarify the issue at hand and assist the AEEC Executive Committee members in their decision making.

When you wish to speak to an issue, please move to one of the floor microphones. When you are recognized, please state your name and affiliation for the record, then proceed with your remarks. Please be aware that your comments are being recorded.

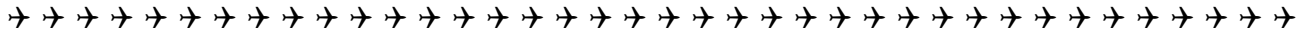
Smart phone users, please set your phone to silent operation when you are in the meeting room. Side conversations should be conducted outside the meeting room, so not to disturb the discussion in progress. Photography of presentation material is not permitted.

Doing Business at the AEEC General Session

The AEEC General Session is an excellent place to meet valuable contacts and to conduct business. There are many opportunities for marketing presentations outside of the conference room. Sales pitches inside the conference rooms are not permitted.



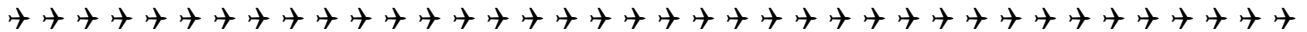
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1. OPENING SESSION

TUESDAY, MAY 10 – 8:30am – RENASANT CONVENTION CENTER

- The AEEC Co-Chairmen will welcome meeting attendees to the AEEC General Session.
 - Robert Swanson, FedEx
 - Jessie Turner, Boeing
- The AMC Chairman will provide opening remarks on behalf of the AMC.
- FedEx and HEICO will provide a welcome address.



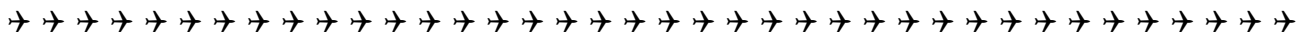
2. CYBER SECURITY SYMPOSIUM

Tuesday, May 10, Starting at 10:30am

Renasant Convention Center

Moderator: Marijan Jozic – SAE-ITC

Speakers (to be announced)



3a. Systems Architecture and Interfaces (SAI) Subcommittee

Chairman: Rich Stillwell, United Airlines

Secretary: Paul Prisaznuk, pjp@sae-itc.org

Goal: The SAI Subcommittee is developing avionics architecture recommendations and new communications mediums for aircraft presently in service and for future airplane types.

Summary: The SAI Subcommittee has coordinated the development of **ARINC Report 678: Guidance for Distributed Radio Architectures**. This effort builds on the foundation of **ARINC Report 660B: CNS/ATM Avionics Architectures Supporting NextGen/SESAR Concepts**.

New work is being proposed in **ARINC Project Paper 660C: Future Communication, Navigation and Surveillance (CNS) system architectures**. The areas of expansion, improvement, and the potential impact to other ARINC Standards will be summarized.

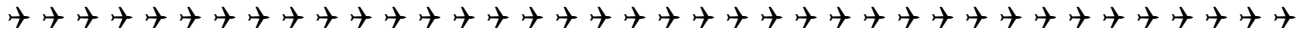
APIM Approval: The AEEC Executive Committee will consider the following:

- **APIM 22-001** proposes the development of **ARINC Project Paper 660C: CNS/ATM Avionics Equipment Architectures for Emerging Aircraft**. New topics for inclusion are the Internet Protocol Suite (IPS), NextGen Airborne Collision Avoidance System (ACAS-Xa/o), Automatic Dependent Surveillance – Broadcast (ADS-B), L-band Digital Aeronautical Communication System (LDACS), cyber security, and others.

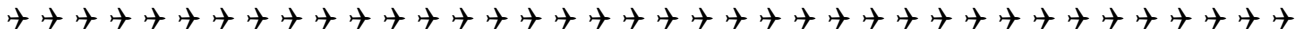
Several new AEEC project proposals have been reviewed in the first quarter of 2022. Five APIMs have been supported by the SAI Subcommittee and assigned to the appropriate AEEC Subcommittee for presentation in Memphis. The AEEC is expected to consider future work in these areas:

- Navigation Database

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- Network Security
- Gatelink
- Software Distribution for eEnabled Aircraft



3b. Traffic Surveillance, ADS-B

ARINC 718A and ARINC Project Paper 755C

Chairman: Mohammed Ahmed, Boeing

Secretary: Paul Prisaznuk, pjp@sae-itc.org

APIM 19-009B: Supplement 5 to ARINC 718A: MARK 4 ATC Transponder (ATCRBS/ MODE S) ARINC Project Paper 735C: Traffic Computer, ACAS-X and ADS-B Functionality

Goal: Develop and maintain traffic surveillance standards that advance air traffic management, enhance flight crew situational awareness and ensure safety.

Summary: A report of related industry activities will be presented, including the impact of RTCA SC-147 and RTCA SC-186 activities. ADS-B applications enhance safety, enable efficient Air Traffic Management, augment flight crew situational awareness, and facilitate time and fuel saving operation at optimum altitudes and flight paths.

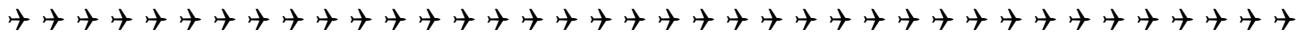
AEEC Adoption Item: The AEEC Executive Committee will consider the following:

- **Draft 2 of Supplement 5 to ARINC Characteristic 718A: Mark 4 Air Traffic Control Transponder (ATCRBS/MODE S)**

AEEC Adoption Item: The AEEC Executive Committee will consider the following:

- **Draft 1 of ARINC Project Paper 735C: Traffic Computer, ACAS-X and ADS-B Functionality**

The future work program will be presented.



3c. Integrated Surveillance System (ISS)

ARINC Project Paper 768A

Chairman: Mohammed Ahmed, Boeing

Secretary: Paul Prisaznuk, pjp@sae-itc.org

APIM 19-007A: ARINC Project Paper 768A: Second Generation Integrated Surveillance System (2G ISS)

Goal: Develop a second generation Integrated Surveillance System (ISS) standard for new airplane type designs. Include traffic surveillance capabilities that advance air traffic management, enhance flight crew situational awareness and ensure safety.

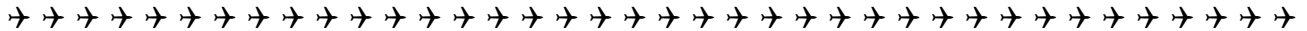
Summary: A status report will be provided.

- **ARINC Project Paper 768A: Second Generation Integrated Surveillance System (2G ISS)** is being prepared for new aircraft type design. The goal is to reduce equipment size, weight, and power. It would also improve air traffic management, flight crew situational awareness, and reduced fuel consumption.

AEEC Adoption Item: (none proposed)

The future work program will be presented.

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3d. Airborne Weather Radar

ARINC Project Paper 748

Chairman: Mohammed Ahmed, Boeing

Secretary: Paul Prisaznuk, pjp@sae-itc.org

APIM 19-008B: ARINC Project Paper 748: Airborne Weather Radar with Advanced Antenna Technology

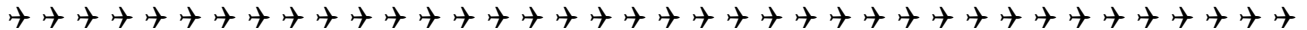
Goal: Develop new airborne weather radar equipment standards for new airplane type designs using electronically steerable antenna technology.

Summary: A status report will be provided.

- **ARINC Project Paper 748:** *Airborne Weather Radar System with Advanced Antenna Technology* is being prepared to support new aircraft designs with supplier-level system interchangeability. The document is expected to define the following:
 - Weather Processor Unit (WPU)
 - Electronically Scanned Antenna (ESA) with all RF located near antenna
 - Single and dual antenna drive configurations
 - Form factors, interwiring, and connectors

AEEC Adoption Item: (none proposed)

The future work program will be presented.



4. 5G / RADIO ALTIMETER IMPACT SYMPOSIUM

Tuesday, May 10 – Starting at 3:20pm

Renasant Convention Center

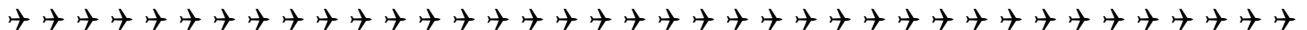
Moderator: Jessie Turner, Boeing

SPEAKERS

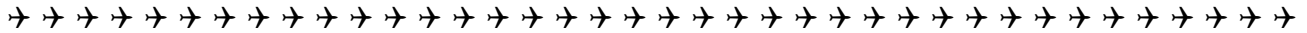
Claude Pichavant, Airbus

Luis H P M Alves, Embraer (online)

Jessie Turner, Boeing

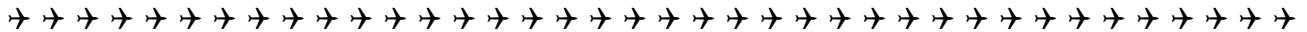


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WEDNESDAY, MAY 11 – 8:30am – RENASANT CONVENTION CENTER



5a. Datalink Users Forum

Co-Chairman: Brian Gleason, Southwest Airlines

Co-Chairman: Steinarr Bragason

Secretary: Vic Nagowski, vnagowsk@sae-itc.org

Secretary: José Godoy, jose.godoy@sae-itc.org

APIM 16-008A: Datalink Users Forum

Goal: The Datalink Users Forum (DLUF) promotes continuous improvements to datalink system performance in a way that maximizes the operational benefit to the user community.

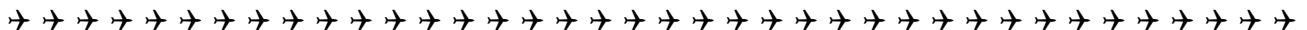
Summary: Brian Gleason and Steinarr Bragason will summarize key discussions in the Datalink Users Forum. The DLUF provides coordination among airlines and cargo carriers, civil aviation authorities, air traffic service providers, aircraft manufacturers, avionics suppliers, datalink service providers, and other interested parties.

Economic and operational benefits are obtained through the exchange of technical information and through the resolution of common problems. The DLUF monitors the direction and schedule of Air Traffic Service (ATS) datalink programs and global mandates. Airline feedback ensures that the user community gets the best possible service to meet their operational needs.

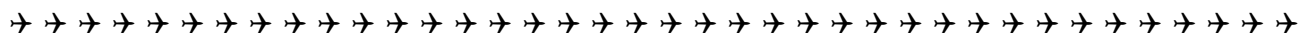
Topics discussed by DLUF include:

- FAA NextGen Data Comm Program Status and Performance – Tower and Enroute
- Single European Sky Data Link Services (DLS) Status
- Controller/Pilot Data Link Communication (CPDLC) implementation by Air Navigation Services Providers (ANSP)
- VHF Multi-Frequency Deployment in European and US National Airspace System (NAS)
- Performance-based operations Aviation Rulemaking Committee (PARC) Communication Working Group (CWG)
- Status of ARINC Datalink Standards and of other Industry Standards
- L-Band Satellite Communications (Satcom) Services (Inmarsat and Iridium)
- Air-Ground Communications/Avionics RF Interference
- Aircraft manufacturer and avionics supplier plans for:
 - FANS
 - ATN/OSI
 - ATN Baseline B
 - ATN/IPS

The future work program will be presented.



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5b. Datalink Systems

ARINC 618, ARINC 631

Co-Chairman: Joseph Westbrook, FedEx

Co-Chairman: Robert Holcomb, Cobham

Secretary: José Godoy, jose.godoy@sae-itc.org

APIM 17-002B: Supplement 9 to ARINC Specification 631: VHF Digital Link (VDL) Mode 2 Implementation Provisions Standards

APIM 17-003: Supplement 9 to ARINC Specification 618: Air Ground Character Oriented Protocol Specification

Goal: Develop and maintain ARINC Standards in support of ongoing and future datalink communications programs including VDL Mode 2. The Datalink Systems Subcommittee meets jointly with RTCA SC-214 and EUROCAE WG-92.

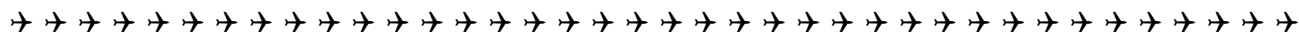
Summary: Joe Westbrook, FedEx, will summarize the activities of the DLK Systems Subcommittee, including the following ARINC Standards that are currently being developed:

- **Supplement 9 to ARINC Specification 618: Air-Ground Character Oriented Protocol Specification:**
 - Support transition from ARINC 429 to Ethernet interfaces
 - Will define ACARS over Internet Protocol (IP)
 - ACARS over IP provides interim benefits prior to ATN/IPS services
 - Future IPS enabler
 - Will support Super VHF Ground Station

- **Supplement 9 to ARINC Specification 631: VHF Digital Link (VDL) Mode 2 Implementation Provisions:**
 - Addresses Air-Ground Interoperability Issues observed by CPDLC programs:
 - FAA Data Comm
 - Single European Sky Data Link Services (DLS)
 - Defines a protocol for the VDL Subnetwork can support the exchange VDL IP packets for ATN/IPS operation
 - Security considerations required by the ICAO SARPS will be included
 - Define the downlink of avionics perceived Channel Utilization

AEEC Adoption Item: (none proposed)

The future work program will be presented.



5c. Air/Ground Communications Systems (AGCS)

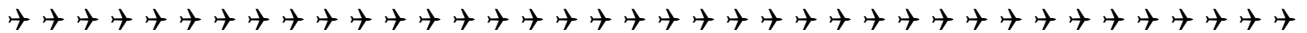
ARINC 771, ARINC 781

Chairman: Robert Holcomb, Cobham

Secretary: José Godoy, jose.godoy@sae-itc.org

Goal: The Air-Ground Communications Systems (AGCS) Subcommittee defines and maintains aviation satcom standards that satisfy airline operational requirements for safety services. It

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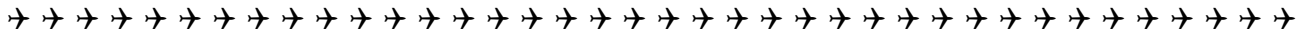
concentrates on developing standards for geostationary and low earth orbiting L-Band satcom standards for systems capable of providing broadband voice and data communications.

Summary: Robert Holcomb, Cobham, will provide a summary of the AGCS Subcommittee activities including the status of the following documents:

- **ARINC Characteristic 771-1:** *Low-Earth Orbiting Aviation Satellite Communication System* was published in 2018. It defines both low-gain and high-gain antenna definitions for the data rates made available by the Iridium NEXT satellite constellation.
- **ARINC Characteristic 781-8:** *Aviation Satellite Communication System* was published in 2019 and includes the following:
 - RF duplexers to protect Inmarsat Aero and SBB satcom equipment from ground-based cellular telephony sources (i.e., LTE and Ligado).
 - Define secure ACARS Voice over IP (VoIP)
 - Specify dual dissimilar Satcom operation and switching

AEEC Adoption Item: (none proposed)

The future work program will be presented.



5d. Internet Protocol Suite (IPS) for Aeronautical Safety Services

ARINC Report 658, ARINC Specification 858, Part 1 and Part 2

Co-Chairman: Luc Emberger, Airbus

Co-Chairman: Greg Saccone, Boeing

Secretary: Paul Prisaznuk, pjp@sae-itc.org

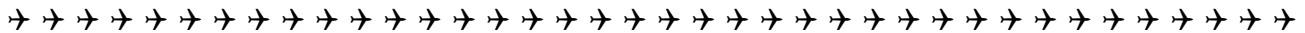
APIM 15-004B: Internet Protocol Suite for Aeronautical Safety Services

Goal: The IPS Subcommittee is preparing standards for the introduction of the Internet Protocol Suite (ATN/IPS) in aviation air/ground communication systems considering the current infrastructure, IPv6, and the need for aviation cyber security.

Summary: ATN/IPS is expected to be an advancement in data communication used for NextGen and SESAR airspace. Airline benefits are expected to accrue in the form of improved data communication performance compared to ACARS and ATN/OSI.

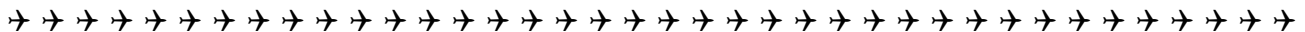
- **ARINC Report 658:** *Internet Protocol Suite (IPS) for Aeronautical Safety Services - Roadmap Document* was published in 2017. The document serves as a roadmap for the standardization of IPS and it provides the timeline for elements to be standardized. ARINC 658 identifies the proper Standards Development Organization (SDO), to develop and/or update new standards e.g., AEEC, RTCA, EUROCAE, ICAO.
- **ARINC Specification 858:** *Internet Protocol Suite (IPS) for Aeronautical Safety Services – Technical Requirements* is being updated in accordance with related work in ICAO. Supplement 1 for Part 1 and Supplement 1 to Part 2 are presently in development. Topics include:
 - ATN/IPS Architectures – Air and Ground
 - Network and Data Security
 - Support for legacy aircraft equipped with ACARS and ATN/OSI
 - Transition phase during which ACARS, ATN/OSI, and IPS will co-exist
 - ATN/IPS Standardization timelines with ICAO, RTCA, EUROCAE, etc.

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- Cybersecurity Risks and Threats
- Information Security Processes
- **APIM 22-003** proposes the development of **ARINC Project Paper 822B: On-Ground Aircraft Wireless Communication**. The main issues to be worked are as follows:
 - Update Wi-Fi security standards within ARINC Project Paper 822B to reflect recent updates to Wi-Fi standards such as IEEE 802.11ax and WPA3.
 - Review and update cellular security, connectivity, and authentication recommendations including the needs of 5G cellular services.
 - Align ARINC Project Paper 822B with other published ARINC Standards, for example ARINC Specification 687: Secure Onboard Wi-Fi Profile.

The future work program will be presented.



7b. Electronic Flight Bag (EFB) Subcommittee

ARINC Project Paper 829 and ARINC Project Paper 834A

Chairman: David Jones, Astronautics

Secretary: Peter Grau, peter.grau@sae-itc.org

APIM 17-014A: EFB Functional Interface Definition

APIM 21-002: ARINC Project Paper 829: Guidance for Wireless Use of COTS Crew Devices

Goal: This activity prepares standards applicable to Electronic Flight Bag (EFB) deployment on all types of aircraft with the goal of maintaining proper isolation of EFB equipment from avionics equipment.

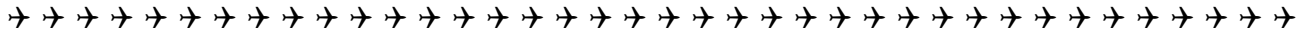
Summary: A summary report of EFB Subcommittee activities will be provided, including the status of the following documents:

- **ARINC Project Paper 834A** will define a standardized means for EFB software applications to acquire aircraft avionics data using Internet Protocols (IP). The goal is to eliminate duplication of applications required to function among the three protocols defined in the existing ARINC Specification 834 and remove the need for mixed-fleet airlines to maintain multiple versions of EFB applications. The document will define:
 - Aircraft Data Interface Function (ADIF) to enable the EFB to acquire aircraft data
 - ACARS interface to enable the EFB to send and receive ACARS messages
 - Broadband off-aircraft communication
 - Cross-talk capability between EFBs
 - Printer interface for the cockpit printer
- **ARINC Project Paper 829: Guidance for Wireless Connections of COTS Devices** has been initiated in response to APIM 21-002. The goal to provide guidance for connecting COTS devices to aircraft networks including:
 - Wireless technologies such as Wi-Fi (IEEE 802.11) and Bluetooth
 - Wireless Access Points (WAPs)
 - Device Authentication methods
 - Certificate Management for Encrypted Communications
 - Network protection aspects (domains, etc.)

AEEC Adoption Item: (none proposed)

The future work program will be presented.

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7c. Electronic Flight Bag (EFB) Users Forum

Co-Chairman: Philipp Haller, Austrian Airlines

Co-Chairman: Will Ware, Southwest Airlines

Secretary: Peter Grau, peter.grau@sae-itc.org

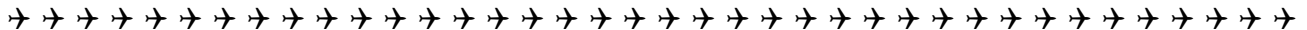
APIM 09-009D: Electronic Flight Bag (EFB) Users Forum

Goal: The joint AEEC EFB Users Forum and IATA EFB Task Force is a venue where interested parties can exchange information, present challenges, and resolve issues being confronted by the industry with this rapidly evolving technology. It coordinates the development of EFB capabilities among airlines, manufacturers, suppliers, and regulators.

Summary: A report of the EFB Users Forum activities will be presented. Topics include:

- Operator Experiences
- EFB System Architectures
- EFB Security and Connectivity
- EFB Applications and Content Management
- Regulatory Issues

Next EFB Users Forum: The next EFB Users Forum meeting will be held June 1-3, 2022, in Annapolis, Maryland.



7d. AOC Message Exchange

ARINC 633

AOC Chairman: Dirk Zschunke, Lufthansa

Secretary: José Godoy, jose.godoy@sae-itc.org

APIM 19-005A: Supplement 5 to ARINC Specification 633: AOC Air-Ground Data and Message Exchange Format

Goal: The goal of the AOC Subcommittee is to define Aeronautical Operational Control (AOC) message sets that may be hosted on an Electronic Flight Bag (EFB). Benefits include improved aircraft dispatchability, reduced operational cost, reduced fuel consumption, favorable routing, reduced crew workload, and message security.

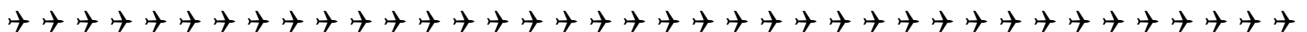
Summary: José Godoy, AEEC staff, will present the AOC Subcommittee activities and plans.

ARINC 633 defines an AOC message exchange format, associated XML schemas, and data structures. ARINC 633 AOC messages are defined with exclusive qualities that are independent of legacy ACARS messages.

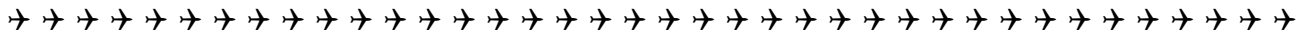
- **Supplement 5 to ARINC Specification 633** is expected to define the following data structures:
 - Operational Flight Plan (OFP)
 - Expanded Crew List
 - Terrain Clearance
 - Performance modeling structures (RCP and RSP)
 - Special Loads (in coordination with IATA)

AEEC Adoption Item: (none proposed)

The future work program will be presented.



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8a. Navigation Database (NDB)

ARINC 424

Chairman: Chuong Phung, FedEx

Secretary: Sam Buckwalter, sam.buckwalter@sae-itc.org

APIM 11-005C: Supplement 23 to ARINC Specification 424: Navigation System Database

Goal: Update and maintain the ARINC 424 Navigation Database Standard for use in the air transport industry. This includes traditional ASCII encoding methods and Extensible Markup Language (XML) standards.

Summary: A report of **ARINC Specification 424** development activities will be provided:

- The NDB presentation will address current updates to the standard and future implementations. Examples include:
 - The Performance Based Operations Aviation Rulemaking Committee has requested a method that would enable operators to implement and fly curved paths using either an RF leg or TF leg implementation of the same instrument approach procedure.
 - Proposal to add a new continuation record for Airport SID/STAR/Approach Name for the textual representation of the SID/STAR/Approach.
- The presentation will report on the development of the XML schema for all types of navigation data. The XML schema is being defined in a way that allows it to hold all existing specifications, documentation, and requirements from the existing ARINC Specification 424, as well as additional data expected for growth.
- The presentation will report new types of routes and airspaces that were added to the XML schemas to support the US Government.

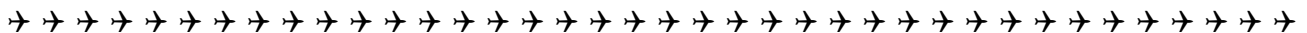
AEEC Adoption Item: The AEEC Executive Committee will consider the following:

- **Draft 4 of Supplement 23 to ARINC Specification 424: *Navigation System Database***

APIM Approval: The AEEC Executive Committee will consider the following:

- **APIM 11-005D proposes the development of Supplement 24 to ARINC Specification 424: *Navigation System Database***

The future work program will be presented.



8b. Cockpit Display Systems (CDS) Interfaces

ARINC 661

Co-Chairman: Brian Gilbert, Boeing

Co-Chairman: Sofyan Su, Airbus

Secretary: Peter Grau, peter.grau@sae-itc.org

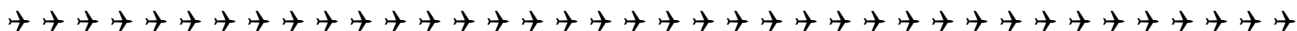
APIM 19-010A: ARINC Specification 661: Cockpit Display Interfaces, Part 1 and Part 2

Goal: Prepare flight deck display interface standards for new airplane development programs that focus on transport category aircraft: business, regional, general aviation, and military aircraft.

Summary: A summary report of CDS Subcommittee activities will be provided, including the status of the following documents:

- **Supplement 9 to ARINC Specification 661: *Cockpit Display System Interface to User Systems, Part 1, Avionics Interfaces, Basic Symbolology, and Behavior*** is intended to ensure growth for CNS/ATM applications and support advanced operational concepts

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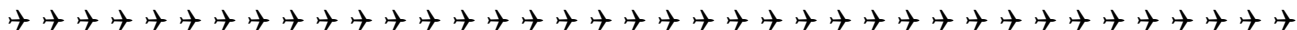


that will increase aviation safety, capacity, and efficiency. Supplement 9 will add widget structure meta-definition and three-dimensional vision capability.

- **Supplement 1 to ARINC Specification 661:** *Cockpit Display System Interfaces to User Systems, Part 2, User Interface Markup Language (UIML) for Graphical User Interfaces* is being prepared to allow developers to specify the interface, look, and behavior of any ARINC 661 Graphical User Interface (GUI). Supplement 1 will extend the User Interface Markup Language, provide scripting language definition, and provide additional features.

AEEC Adoption Item: (none proposed)

The future work program will be presented.



8c. Application/Executive (APEX) Software Interface

ARINC 653

Co-Chairman: Pierre Gabilot, Airbus

Co-Chairman: Gordon Putsche, Boeing

Secretary: Scott Smith, scott.smith@sae-itc.org

APIM 21-007: Avionics Application Software Standard Interface

Goal: Develop and maintain **ARINC Specification 653:** *Avionics Application Software Standard Interface* that defines a standard interface between avionics application software and Real Time Operating Systems (RTOS).

Summary: ARINC 653 is used extensively on civil and military aircraft produced by Airbus, Boeing, and others. Avionics suppliers have expressed the desire to use ARINC 653 RTOS on regional, business, and private aircraft. ARINC 653 enables application software to be developed concurrently and independent of the RTOS. This will enable avionics functional updates to be made with minimal impact on the underlying computing platform.

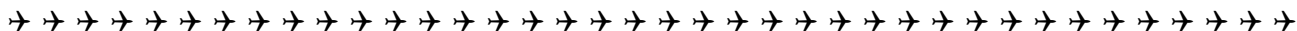
ARINC Specification 653: *Avionics Application Software Standard Interface* consists of seven parts as follows:

- **Part 0:** Overview of ARINC 653 – Introduction of the seven parts and explains the purpose and role of each part.
- **Part 1:** Required Services – Defines the requirements and provides design guidance for an operating system Application Program Interface (API).
- **Part 2:** Extended Services – Defines extensions to the API specified in Part 1.
- **Part 3A:** Conformity Test Specification for Required Services that are defined in Part 1.
- **Part 3B:** Conformity Test Specification for Extended Services that are defined in Part 2.
- **Part 4:** Subset Services – This document defines a strict subset of Part 1, RTOS services for small-scale platforms. It is considered stable.
- **Part 5:** Core Software Recommended Capabilities – Provides guidelines to facilitate software operating system integration on highly integrated platforms. It is considered stable.

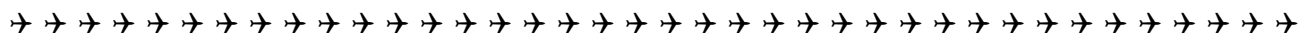
The current APIM 21-007 calls for Supplements to ARINC 653, Parts 0, 1, 2, and 3A.

AEEC Adoption Item: (none proposed)

The future work program will be presented.



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THURSDAY, MAY 12 – 8:30AM – RENASANT CONVENTION CENTER

9a. Ku/Ka-Band Communications

ARINC 791, ARINC 792, ARINC Project Paper 792A

Co-Chairman: Chris Schaupmann, Airbus

Co-Chairman: Michael Reinbold, Boeing

Secretary: José Godoy, jose.godoy@sae-itc.org

APIM 16-006A: Supplement 2 to ARINC Characteristic 791 Part 2, Ku/Ka Band Satcom

APIM 19-001: Supplement 1 to ARINC Characteristic 792: Second-Generation Ku-Band and Ka-Band Satellite Communication System

APIM 20-001: ARINC Project Paper 792A: Multi-Modem Ku/Ka Satcom System with Fiber Optic Interfaces

Goal: The Ku/Ka Communications Subcommittee is developing standards for broadband satellite equipment used for passenger and non-safety application. Satcom equipment form, fit, function and interfaces are defined by ARINC Characteristic 791 and ARINC Characteristic 792.

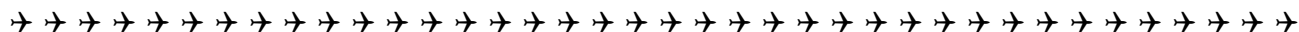
Summary: The status of the following documents will be presented:

- **ARINC Characteristic 791-3 Part 1: Aviation Ku-Band and Ka-Band Satellite Communication System: Physical Installation and Aircraft Interfaces**, was published in 2019 and viewed to be stable. It defines antenna mounting fittings, antenna blockage drawings, equipment form factors and interfaces.
- **Supplement 2 to ARINC Characteristic 791 Part 2: Aviation Ku-Band and Ka-Band Satellite Communication System: Electrical Interfaces and Functional Equipment Description**, is being updated to specify a new airborne network interface, Management Information Base (MIB), and related changes.
- **Supplement 1 to ARINC Characteristic 792: Second Generation Aviation Ku-Band and Ka-Band Satellite Communication System**, is being prepared to define a small form factor satcom system intended for non-safety services.
- **ARINC Project Paper 792A: Multi-Modem Aviation Ku-Band and Ka-Band Satellite Communication System**, is in work. It defines a future satcom system intended for non-safety services.

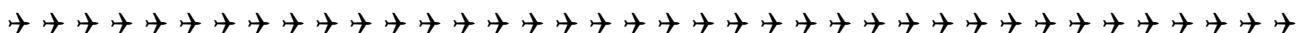
AEEC Adoption Item: The AEEC Executive Committee will consider the following:

- **Draft 3 of Supplement 1 to ARINC Characteristic 792: Second-Generation Ku-Band and Ka-Band Satellite Communication System**

The future work program will be presented.



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9b. Cabin Systems Subcommittee (CSS)

ARINC 628, ARINC 664, ARINC 800
ARINC Project Papers 808A and 809A
Co-Chairman: Jecelin Peterson, Boeing
Co-Chairman: Klaus Friedrich (Fritz) Urban, Airbus
Secretary: Scott Smith, scott.smith@sae-itc.org

APIM 17-012A: Third Generation Cabin Network (3GCN)

APIM 18-001A: Fifth Generation Cabin Network (5GCN)

APIM 19-004A: ARINC Project Paper 8xx: Cabin Systems Secure Media Independent Messaging

APIM 21-005: Supplement 8 to ARINC Specification 628 Part 1, Cabin Equipment Interfaces

Goal: Define cabin equipment standards that will support evolving technologies and enable airlines to install equipment that exceeds passenger expectations. This effort includes interface standards to allow airlines to implement preferred systems for their passengers. Cabin communication, broadband connectivity, wireless distribution, cabin interface protocols, and connector standardization are all components of this activity.

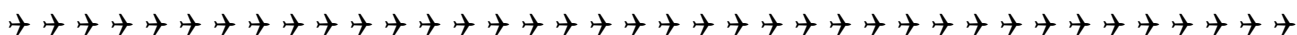
Summary: The Cabin systems provide entertainment and service improvements to the passenger. To keep up with passenger's desire for better accommodations, systems are becoming more sophisticated and complex.

The scope of this project is to develop next generation standard cabin interfaces that will provide airlines with freedom of choice in the installation and expansion of cabin equipment. IFE, communications, interface protocols, seat integration issues, and connectors and cables standardization are also a part of this activity. The status of the following documents will be reported:

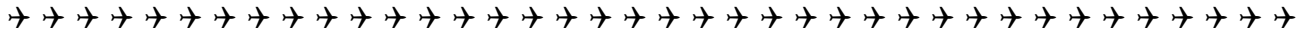
- **Supplement 8 to ARINC Specification 628 Part 1: *Cabin Management and Entertainment System – Peripherals***
- **Supplement 10 to ARINC Specification 628, Part 2: *Cabin Management and Entertainment System – Seat Interfaces***
- **Supplement 4 to ARINC Specification 664, Part 2: *Aircraft Data Network, Ethernet Physical and Data Link Layer***
- **Supplement 2 to ARINC Specification 800, Part 3: *Cabin Connectors and Cables: Specification of Cables***
- **ARINC Project Paper 808A: *3GCN – Cabin Distribution System***
- **ARINC Project Paper 809A: *3GCN – Seat Distribution System***
- **ARINC Project Paper 8xx: *Fifth Generation Cabin Network (5GCN)***
- **ARINC Project Paper 8xx: *Cabin Secure Media Independent Messaging***

AEEC Adoption Item: (none proposed)

The future work program will be presented.



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9c. Galley Insert (GAIN) Subcommittee

ARINC 810, ARINC 812A

Co-Chairman: Christian Auris, Airbus

Co-Chairman: Adam Cha, Boeing

Secretary: Sam Buckwalter, sam.buckwalter@sae-itc.org

APIM 17-007A – Supplement 1 to ARINC Specification 812A Part 2: Standard Data Interfaces for Galley Inserts (GAIN) Galley Interfaces

APIM 19-013A Supplement 7 to ARINC Specification 810: Definition of Standard Interfaces for Galley Insert (GAIN) Equipment Physical Interfaces

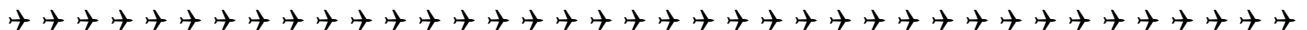
Goal: The GAIN Subcommittee is updating cabin galley equipment standards.

Summary: A status report will be provided.

- The status of **Supplement 7 to ARINC Specification 810: *Standard Data Interfaces for Galley Insert (GAIN) Equipment*** will be summarized. This includes an update expected to include the following:
 - Identify the types of sensors required for galley inventory tracking.
 - Define positions for sensors in the compartments for non-electrical inserts.
 - Define positions for identifiers on the non-electrical inserts (e.g., Trolley/Standard container).
- The status of **Supplement 1 to ARINC Specification 812A, Part 2: *Standard Interfaces for Galley Insert (GAIN) Equipment, CAN Communications Verification and System Test Guidance*** will be summarized. This includes an update expected to include the following:
 - Update ARINC 812A to reflect galley equipment production implementations
 - Update CANbus digital messages in accordance with ARINC Specification 825.
 - Consider the effect of CAN Flexible Data rate (FD) protocol on galley components.
 - Update the XML and XSD support files as required

AEEC Adoption Item: (none proposed)

The future work program will be presented.



10. SPECTRUM MANAGEMENT

SYMPOSIUM

Thursday, May 12, Starting at 10:30am

Renasant Convention Center

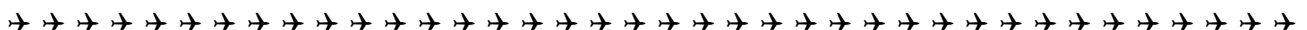
Moderator: Rich Stillwell, United Airlines

SPEAKERS

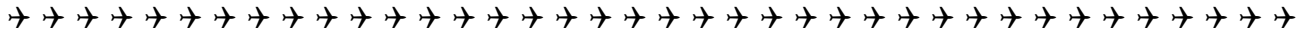
Andrew Roy, Aviation Spectrum Resources Inc. (ASRI)

Stuart Fox, IATA

Ed Hahn, ALPA - RTCA SC 242 Chair



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11a. Fiber Optic Interfaces

ARINC 803 and ARINC 804

Chairman: Robert Nye, Boeing

Secretary: Scott Smith, scott.smith@sae-itc.org

APIM 21-006: Fiber Optic Interconnection

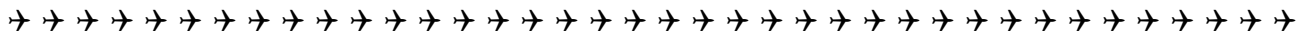
Goal: Develop aircraft interfaces standards for fiber optic cables and components. These standards are intended to define physical characteristics, design guidelines, component criteria, and testing and maintenance procedures for fiber optic components and interfaces. The objective is to promote a high-level of fiber optic interface performance while minimizing the costs of procurement, installation, and maintenance.

Summary: A status report will be provided. Cabin system interfaces are expected to use fiber optic technologies to reduce weight and increase performance. The goal is to develop and update physical media standards, design guidelines, component criteria, and testing and maintenance procedures for fiber optic components expected to be used on all types of aircraft. Deliverables include:

- **Supplement 5 to ARINC Report 803:** *Fiber Optic Design Guidelines*
- **Supplement 3 to ARINC Report 804:** *Fiber Optic Active Device Specification*

AEEC Adoption Item: (none proposed)

The future work program will be presented.



11b. ARINC 600 Connector

ARINC 600

Chairman: Steffen Ohde, Airbus

Secretary: Scott Smith, scott.smith@sae-itc.org

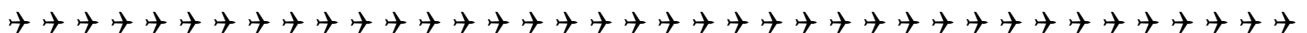
APIM 20-002A: Supplement 21 to ARINC Specification 600: Air Transport Avionics Equipment Interfaces

Goal: Develop new ARINC 600 Size 4 connector definition. These standards define physical characteristics, design guidelines, component criteria, and testing and maintenance procedures for fiber optic components and interfaces. The objective is to promote a high-level of fiber optic interface performance while minimizing the costs of procurement, installation, and maintenance.

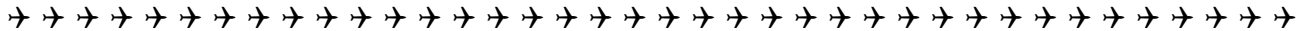
Summary: A summary of ARINC 600 development activities will be presented. APIM 20-002A calls for the expansion of **ARINC Specification 600: Air Transport Avionics Equipment Interfaces** to include the definition of a new ARINC 600 Size 4 connector. The new connector would have three additional cavities and would be able to accommodate up to 960 size 22 AWG contacts. A new Size 4 connector variant is intended to support new avionics equipment.

AEEC Adoption Item: (none proposed)

The future work program will be presented.



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11c. Software Distribution and Loading

ARINC 615A

ARINC Project Paper 851

Chairman: Ted Patmore, Delta Air Lines

Secretary: Scott Smith, scott.smith@sae-itc.org

APIM 16-015A: Ground System Definition for e-Enabled Aircraft

APIM 21-003: ARINC Project Paper 8xx: System Level Guidance for Data Loading Aircraft Components

APIM 21-004: Supplement 4 to ARINC Report 615A: Airborne Computer High-Speed Data Loader

Goal: Develop and maintain software data loading standards that will minimize resources and the time required to securely transfer databases and software to an aircraft.

Summary: A summary of SDL Subcommittee activities will be provided, including the status of the following documents:

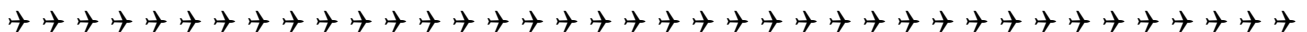
- **ARINC Project Paper 8xx: System Level Guidance for Data Loading Aircraft Components.** This project will provide guidance to airlines and MROs to allow for faster, more efficient data loading using existing equipment. Guidance on optimizing system resources, load times, parallel loading, etc. will be documented.
- **Supplement 4 to ARINC Report 615A** is expected to define parallel software data loading, IP address schemas, and multicast loading.
- **ARINC Project Paper 851: *Software Reception for e-Enabled Aircraft*** will provide guidance for airlines that operate two or more aircraft fleets from different airframe manufacturers. Airlines desire a single ground system to manage all aircraft software and data with common processes and security, regardless of source.

AEEC Adoption Item: (none proposed)

APIM Approval: The AEEC Executive Committee will consider the following:

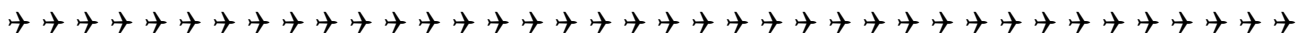
- **APIM 22-004** is a replacement for APIM 16-015A with new scoping for **ARINC Project Paper 851**. The goal is to define standards for software reception for eEnabled aircraft. The SDL Subcommittee will assess all current software receiving requirements currently in use by operators to determine the best common software reception protocol solution. It will determine methods for secure transfer and distribution of software that will comply with current security requirements.

The future work program will be presented.



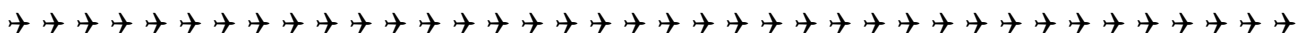
12. Other Topics

The AEEC Chairman will entertain any other topics of discussion from the floor.

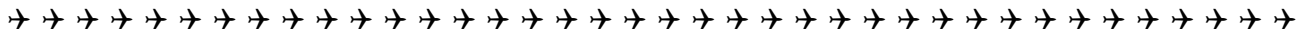


13. Announcements and Adjournment

The AEEC Chairman will adjourn the AEEC General Session.

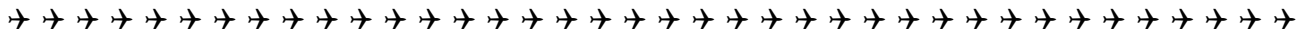


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AEEC ADOPTION ITEMS					
Agenda Item	Activity	Reference	Title	Pink Pages	Adopted Yes/No
3b	Traffic	22-019/XPDR-174	Draft 2 of Supplement 5 to ARINC Characteristic 718A: Mark 4 Air Traffic Control Transponder (ATCRBS/MODE S)		
3b	Traffic	22-021/SAI-110	Draft 1 of ARINC Project Paper 735C: Traffic Computer, ACAS-X and ADS-B Functionality		
7a	NIS	22-026/NIS-119	Draft 3 of Supplement 3 to ARINC Report 842: Guidance for Usage of Digital Certificates		
8a	NDB	21-094/NDT-187	Draft 4 of Supplement 23 to ARINC Specification 424: Navigation System Data Base		
9a	KSAT	22-024/KSAT-049	Draft 3 of Supplement 1 to ARINC Characteristic 792: Second-Generation Ku-Band and Ka-Band Satellite Communication System		

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NEW AEEC PROJECT PROPOSALS (APIMs)				
Agenda Item	Proposed Activity	APIM Number	APIM Description	Approved Yes/No
3a	SAI	22-001	Develop ARINC Project Paper 660C: CNS/ATM Avionics Architectures Supporting NextGen/SESAR Concepts	
7a	NIS	22-002	Develop ARINC Project Paper Report 811A: Commercial Aircraft Information Security Concepts of Operation and Process Framework	
7a	NIS	22-003	Develop ARINC Project Paper 822B: On-Ground Aircraft Wireless Communication	
8a	NDB	11-005D	Develop Supplement 24 to ARINC Specification 424: Navigation Database	
11c	SDL	22-004	Develop ARINC Project Paper 851 (intended to describe standards for software reception for eEnabled aircraft)	

