AEEC

Together "We Set the Standard."

To	AEEC Members, Corporate Sponsors and Guests	**Date**	March 29, 2019
From	Paul J. Prisaznuk AEEC Executive Secretary	**Reference**	19-043/AGS-191
Subject	**AEEC General Session**	**Host**	AIRFRANCE INDUSTRIES / KLM Engineering & Maintenance ADAPTIVENESS®
Where	Hilton Prague Czech Republic		

MEETING AGENDA
AEEC General Session and AMC – Prague 2019

0830 Monday, Opening Session at the Hilton Congress Hall – Lower Lobby Floor
1330 Monday, AEEC General Session will convene in the Hilton Grand Ballroom – Mezzanine Floor

Time	Monday April 29	Tuesday April 30	Wednesday May 1	Thursday May 2
0830	**1. OPENING SESSION** • Welcome/Introductions • Keynote Address • Awards	**5. SYSTEMS** 5a. SAI Subcommittee 5b. Global Aircraft Tracking 5c. Surveillance / ADS-B	**9. EFB & NETWORKS** 9a. EFB Users Forum 9b. EFB Subcommittee 9c. NIS Subcommittee	**AEEC Advisory Session** *AEEC ExCom Members only*
1010	Break	Break	Break	Break
1030	**2. JOINT SYMPOSIUM** ***BIG DATA IN AVIATION***	**6. SYMPOSIUM** ***AUTONOMOUS DISTRESS TRACKING***	**10. SYMPOSIUM** ***AIRPORT APPROACH AND LANDING***	**AEEC Advisory Session** *AEEC ExCom Members only*
1200	*Lunch – Hosted*			
1330	**3. CABIN SYSTEMS** 3a. Ku/Ka-Band Satcom 3b. Cabin Systems 3c. Galley Interfaces	**7. DATA COMM** 7a. DataLink Users Forum 7b. DataLink Systems 7c. AOC 7d. Air/Ground Comm	**11. SPECIAL TOPICS** 11a. Software Distribution 11b. APEX Software 11c. Cockpit Displays 11d. Fiber Optics	**Adjourn**
1500	Break	Break	Break	
1520	**4. SYMPOSIUM** ***TOPICS TRENDING IN AVIATION***	**8. DATA COMM (cont'd)** 8a. IPS Aero 8b. Navigation Database	**12. SPECIAL TOPICS** 12a. ARINC 429 Data Bus 12b. Other Topics	
1700 2300	***Supplier Hospitality Suites Open Tuesday – Showcase – 6pm to 8pm***			

The AEEC takes great pride in giving back to the community. ***Bátor Tábor "a serious fun camp for children"*** has been selected as the charity for this event. Please donate generously to this worthy cause.

AEEC EXECUTIVE COMMITTEE 2019

TAP PORTUGAL	**José Almeida** **AEEC Chairman**
AIR FRANCE – KLM	**Piet van den Berg**
ALASKA AIRLINES	**John Melvin** **Alternate for Krista Dial**
AMERICAN AIRLINES	**Maurice Ingle**
DELTA AIR LINES	**Jim Lord**
FEDEX	**Robert Swanson** **AEEC Chairman-Elect**
LUFTHANSA	**Jürgen Lauterbach**
SOUTHWEST	**Brian Gleason**
UNITED AIRLINES	**Rich Stillwell**
UPS	**James McLeroy**
USAF	**Craig Hodgdon**
AIRBUS	**Jean-Francois Saint Etienne**
BOEING	**Jessie Turner**
AEEC EXECUTIVE SECRETARY	**Paul Prisaznuk**

WELCOME TO PRAGUE

On behalf of the AEEC Executive Committee, and our host, Air France KLM, it is my honor, privilege, and pleasure to welcome you to Prague.

We visited Prague just four years ago. Few of us will remember what we said there, but all of us remember how we felt there. Prague's warmth and inviting atmosphere was quite memorable and it's certainly worth a repeat performance.

A few famous Czechs you might know include:

- Psychologist, Sigmund Freud
- Former US Secretary of State, Madeline Albright
- Hockey players, Jaromír Jágr and Dominik Hašek
- Tennis greats, Martina Navratilova and Ivan Lendl
- The first President of the Czech Republic, Václav Havel

This week we salute Air France KLM for their great accomplishment, fine leadership, and loyalty to the AEEC and ARINC Industry Activities. Quoting their January 9, 2019 Press Release: *"Air France KLM transported for the first time more than 100 million passengers during the full year 2018, of which 7.7 million were in December 2018."*

The AEEC General Session includes four great symposiums that you won't want to miss:

- *Big Data in Aviation*
- *Autonomous Distress Tracking*
- *Airport Approach and Landing*
- *Topics Trending in Aviation*

The AEEC provides a collaborative environment for decision making that no single organization could deliver on its own. We are pleased to celebrate our 70th Anniversary with you in Prague.

Paul J. Prisaznuk
AEEC Executive Secretary & Program Director
ARINC Industry Activities

Your Badge and Registration

Welcome to Prague. The AEEC | AMC registration desk is open from 2:00pm to 7:00pm on Sunday. It is open from 7:00am to 3:30pm on Monday, Tuesday, and Wednesday.

If you have pre-registered for the meeting, a badge will be ready for you. Please be prepared to provide a business card to our registration staff. This will complete the registration process.

An advance copy of the pre-registration list is available at:
https://www.aviation-ia.com/conferences/aeec-general-session

Sunday Welcome Reception

Join us for the AEEC | AMC Welcome Reception at the Hilton Congress Hall Foyer to be held Sunday, April 28 from 5:00pm to 7:00pm. All meeting attendees and guests are invited.

Meeting Materials

This agenda and working papers for the meeting are available at: *https://www.aviation-ia.com/conferences/aeec-general-session* 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.

If you cannot hear someone who is speaking, use the standard “speak louder” signal, i.e., raise your hand and move it in a small horizontal circle.

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.

Charity

The AEEC takes great pride in giving back to the community. ***Bátor Tábor “a serious fun camp for children”*** has been selected as the charity for this event. Please consider how fortunate you are to be participating in this conference and, as the basket is passed, please give generously to this worthy cause.

✈ ✈

ARINC Industry Activities Membership

Your membership fees are used to fund the ARINC Standards development activities and to ensure that your airplanes are produced using the best technical standards possible. Airlines that are not yet members of ARINC Industry Activities are invited to do the right thing and join your colleagues in industry. Your membership will ensure that the AEEC will continue to prepare standards that benefit aviation at large.

For more information:
https://www.aviation-ia.com/membership

ARINC Industry Activities Corporate Sponsorship

Is your organization a Corporate Sponsor? Suppliers are encouraged to check their status and take full advantage of the benefits of your Corporate Sponsorship. A list of Corporate Sponsors is available at the registration desk and on the ARINC Industry Activities website. If your organization has not signed-up to be an ARINC Corporate Sponsor, we invite you to do so.

Corporate Sponsorship enables you to fully participate in AEEC standards development activities, attend this conference for free, and gain access to ARINC Standards. For more information:
https://www.aviation-ia.com/membership

Doing Business at the AEEC | AMC

Everyone knows 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 ballroom. Marketing pitches and sales pitches inside the conference rooms are not permitted.

The AEEC General Session Meeting Report

The official report of the AEEC General Session will be available to our Members and Corporate Sponsors approximately four weeks after the meeting. Non-members and non-sponsors may purchase a copy of the AEEC General Session report for a nominal fee.

✈ ✈

1. AEEC | AMC OPENING SESSION

MONDAY, APRIL 29 – 8:30am – HILTON CONGRESS HALL – LOWER LOBBY FLOOR

- The AEEC Chairman, José Almeida, TAP Portugal, will welcome meeting attendees to the AEEC General Session. Marijan Jozic, KLM, will provide opening remarks on behalf of the AMC.
- Vincent Metz, Head of Strategy, Air France KLM E&M will provide the keynote address.
- The AEEC Trumbull Award will be presented by the AEEC Chairman-Elect, Robert Swanson.

✈ ✈

2. BIG DATA IN AVIATION

SYMPOSIUM

Monday, April 29, Starting at 10:30am

Hilton Congress Hall – Lower Lobby Floor

Moderator: José Almeida, TAP Portugal

FEATURED SPEAKERS

Jim Jackson, Delta Air Lines

Jason Onorati, United Airlines

Captain Andreas Ritter, Lufthansa

✈ ✈

3a. Ku/Ka-Band Communications

ARINC 791, ARINC 792
Co-Chairman: Mark Sorensen, Delta Air Lines
Co-Chairman: Chris Schaupmann, Airbus
Secretary: José Godoy, *jose.godoy@sae-itc.org*

APIM 16-006: Broadband Satellite System Installation and Equipment 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:

- **Supplement 3 to ARINC Characteristic 791 Part 1:** *Aviation Ku-Band and Ka-Band Satellite Communication System: Physical Installation and Aircraft Interfaces*, was updated to include new antenna mounting fittings, new antenna blockage drawings, new form factor for the KRFU and KANDU enclosures, and guidance for waveguide installation.
- **Supplement 2 to ARINC Characteristic 791 Part 2:** *Aviation Ku-Band and Ka-Band Satellite Communication System: Electrical Interfaces and Functional Equipment*

✈ ✈

Description, will be updated to specify a new airborne network interface, Management Information Base (MIB), and related changes.

- **ARINC Characteristic 792:** *Second Generation Aviation Ku-Band and Ka-Band Satellite Communication System*, was first published in 2018. It defines a small form factor satcom system intended for non-safety services. Updates to this document will be recommended.

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

- **Draft 2 of Supplement 3 to ARINC Characteristic 791, Part 1 –** *Aviation Ku-Band and Ka-Band Satellite Communication System: Physical Installation and Aircraft Interfaces*.

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

APIM 19-001 proposes the development of **Supplement 1 to ARINC Characteristic 792:** *Second Generation Aviation Ku-Band and Ka-Band Satellite Communication System.*

The future work program will be presented.

✈ ✈

3b. Cabin Systems Subcommittee (CSS)

ARINC 628, ARINC 664, ARINC 800, ARINC 808, ARINC 809
ARINC Project Paper 648, Project Paper 820, Project Paper 854
Chairman: Dale Freeman, Delta Air Lines
Co-Chairmen: Klaus Friedrich (Fritz) Urban and Jecelin Peterson, Boeing
Secretary: Scott Smith, *scott.smith@sae-itc.org*

APIM 14-001: Cabin Architecture for Wireless Distribution
APIM 15-001A: Cabin Passenger Seat Production Testing
APIM 15-006: Cabin Wireless Access Point (CWAP) Operational Management
APIM 16-005A: Cabin Equipment Interfaces
APIM 16-011A: Next Generation Cabin Data Bus
APIM 17-009: Multi-Gigabit Cabin Wireless Access Point (CWAP)
APIM 17-011: Cabin and Cargo Video Surveillance Equipment
APIM 17-012: Third Generation Cabin Network (3GCN)
APIM 17-013: Cell Phone Modem Standards for IFE
APIM 18-001: Fifth Generation Cabin Network (5GCN)

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 status of the following documents will be reported:

- **Supplement 8 to ARINC Specification 628 Part 1:** *Cabin Management and Entertainment System – Peripherals*
- **Supplement 9 to ARINC Specification 628, Part 2:** *Cabin Management and Entertainment System – Seat Interfaces*
- **ARINC Project Paper 648:** *Cabin Passenger Seat Production Testing*
- **Supplement 4 to ARINC Specification 664, Part 2:** *Aircraft Data Network, Ethernet Physical and Data Link Layer*
- **Supplement 2 to ARINC Specification 800, Part 2:** *Cabin Connectors and Cables: Specification of Connectors, Contacts, and Backshells*

✈ ✈

- **Supplements 1 and 2 to ARINC Specification 800, Part 3:** *Cabin Connectors and Cables: Specification of Cables*
- **Supplements 1 to ARINC Specification 800, Part 4:** *Cabin Connectors and Cables: Standard test Methodology*
- **Supplement 2 to ARINC Specification 808:** *3GCN – Cabin Distribution System*
- **Supplement 4 to ARINC Specification 809:** *3GCN – Seat Distribution System*
- **ARINC Project Paper 820:** *Cabin Architecture for Wireless Distribution System*
- **ARINC Project Paper 854:** *Cabin Equipment Bus*
- **ARINC Project Paper 8xx:** *Fifth Generation Cabin Network (5GCN)*

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

- **Draft 3 of ARINC Project Paper 820:** *Cabin Architecture for Wireless Distribution System*

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

- **APIM 19-002** proposes the development of **Supplement 4 to ARINC Specification 485:** *Cabin Equipment Interfaces, Part 1 – Head End Equipment Protocol and* **Supplement 5 to ARINC Specification 485:** *Cabin Equipment Interfaces, Part 2 – Physical Layer – In-Seat Protocol*
- **APIM 19-003** proposes the development of **Supplement 4 to ARINC Specification 628:** *Cabin Equipment Interfaces, Part 5 – Cabin Electrical Equipment and Wiring Installation Guidelines.*

✈ ✈

3c. Galley Insert (GAIN) Subcommittee

ARINC 812A
Co-Chairman: Christian Auris, Airbus
Co-Chairman: Jon Dhondt, Boeing
Secretary: Larry A. Hesterberg, *larry.hesterberg@sae-itc.org*

APIM 17-007 – Galley Interfaces

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

Summary: APIM 17-007 calls for updates to **ARINC Specification 812A** as follows:

- 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

The status of the following documents will be summarized.

- **Supplement 2 to ARINC Specification 812A, Part 1:** *Standard Data Interfaces for Galley Insert (GAIN) Equipment, CAN Communications*
- **Supplement 1 to ARINC Specification 812A, Part 2:** *Standard Interfaces for Galley Insert (GAIN) Equipment, CAN Communications Verification and System Test Guidance*

AEEC Adoption Item: (none proposed)

The future work program will be presented.

✈ ✈

4. TOPICS TRENDING IN AVIATION SYMPOSIUM

Monday, April 29 – Starting at 3:20pm

Hilton Grand Ballroom – Mezzanine Floor

Moderator: Maurice Ingle, American Airlines

FEATURED SPEAKERS

Andy Shand, NATS UK – Modernising UK Airspace 2025 Vision

Murray Skelton, Teledyne – Solving the eEnabling Puzzle

Radek Zaruba, Honeywell – IRIS Satcom

ADJOURN MONDAY

✈ ✈

AEEC GENERAL SESSION

TUESDAY, APRIL 30 – 8:30am – HILTON GRAND BALLROOM

✈ ✈

5a. Systems Architecture and Interfaces (SAI) Subcommittee

Co-Chairman: Rich Stillwell, United Airlines
Co-Chairman: Reinhard Andreae, Lufthansa
Secretary: Paul Prisaznuk, *pjp@sae-itc.org*

APIM 18-003: Communication, Navigation and Surveillance (CNS) radio system architectures.

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 is coordinating the development of industry standards for CNS/ATM. This effort builds on the recommendations of **ARINC Report 660B:** *CNS/ATM Avionics Architectures Supporting NextGen/SESAR Concepts*.

SAI Subcommittee activities include:

- Develop new CNS/ATM radio architecture guidelines
- Monitor global aircraft tracking initiatives
- Determine need for new ARINC Standards

APIM 18-003 calls for an assessment of future Communication, Navigation and Surveillance (CNS) radio system architectures, areas of improvement, integration, and the potential for future ARINC Standards.

Several new AEEC project proposals have been reviewed and dispositioned in the first quarter of 2019. Five APIMs have been supported by the SAI Subcommittee and assigned to the appropriate AEEC Subcommittee for presentation in Prague.

Additionally, the SAI Subcommittee is planning future work in these areas:

- Advanced Weather Radar
- Integrated Surveillance System
- Traffic Computer (TCAS + ADS-B)

The next SAI Subcommittee meeting will be held June 19-21, 2019, in Toulouse, France.

✈ ✈

5b. Global Aircraft Tracking (GAT)

ARINC Project Paper 680 and ARINC Project Paper 681
Chairman: Chuck Adler, Boeing
Secretary: Peter Grau, *peter.grau@sae-itc.org*

APIM 17-004: Autonomous Distress Tracking (ADT)
APIM 17-005: Timely Recovery of Flight Data (TRFD)

Goal: Prepare flight tracking and recovery of data specifications which meet ICAO Annex 6 standards for newly constructed transport category aircraft.

Summary: A summary report of Global Aircraft Tracking Working Group activities will be provided, including the status of the following documents:

✈ ✈

- **ARINC Project Paper 680:** *Aircraft Autonomous Distress Tracking* was prepared to provide immediate aircraft location in the event of an accident or loss of communications. These recommendations are expected to apply to new transport category aircraft built after January 1, 2021. ARINC Project Paper 680:
  - Describes end-to-end system requirements
  - Identifies suitable candidate ADT architectures
  - Provides avionic interface recommendations
  - Mature document to be presented

- **ARINC Project Paper 681:** *Timely Recovery of Flight Data* is intended to ensure future aircraft flight data can be quickly recovered to assist in accident investigations. These recommendations are expected to apply to aircraft constructed under new Type Certificates issued after January 1, 2021. ARINC Project Paper 681 will:
  - Document end-to-end Systems requirements
  - Identify suitable candidate architectures
  - Provide interface recommendations
  - Mature document expected in September 2020

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

- **Draft 4 of ARINC Project Paper 680:** *Aircraft Autonomous Distress Tracking*

The future work program will be presented.

✈ ✈

5c. Traffic Surveillance, ADS-B

Chairman: Jessie Turner, Boeing
Secretary: Larry Hesterberg, *larry.hesterberg@sae-itc.org*

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

Summary: A status report of industry activities, including RTCA SC-147 and RTCA SC-186 activities will be provided. 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: (none proposed)

The future work program will be presented.

✈ ✈

✈ ✈

6. AUTONOMOUS DISTRESS TRACKING SYMPOSIUM

Tuesday, April 30, Starting at 10:30am

Hilton Grand Ballroom – Mezzanine Floor

Moderator: Jessie Turner, Boeing

FEATURED SPEAKERS

Claude Pichavant, Airbus ***Tom Pack, ACR/ARTEX***

Ruben Stepin, SKYTRAC ***Jessie Turner, Boeing***

✈ ✈

7a. 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 16-008: 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 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 – Tower and Enroute Performance
- European Data Link Services (DLS) – Mandates and Performance Summaries
- ANSPs CPDL Implementations by NavCanada, NATS UK, Avicom Japan and others
- Status of VHF Multi-Frequency Deployment in European and US National Airspace System (NAS)
- Performance-based operations Aviation Rulemaking Committee (PARC) Communication Working Group (CWG)
- Aircraft manufacturer and avionics supplier plans for:
    - FANS
    - ATN/OSI
    - ATN Baseline B
    - ATN/IPS

The future work program will be presented.

✈ ✈

✈ ✈

7b. Datalink Systems

ARINC 618, ARINC 631, ARINC 758
DLK Chairman: Bob Slaughter, American Airlines
Secretary: José Godoy, *jose.godoy@sae-itc.org*

APIM 17-002A: Definition of a connectionless protocol for VDLM2 in ARINC Specification 631
APIM 17-003: Definition of Ethernet interfaces in ARINC Characteristic 758 CMU

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: Bob Slaughter, American Airlines, will summarize the activities of the DLK Systems Subcommittee, including the following documents:

- **Supplement 9 to ARINC Specification 618:** *Air-Ground Character Oriented Protocol Specification* will define ACARS over Internet Protocol (IP) to enable operators to take advantage of the benefits of IP services. ACARS over IP is expected to provide interim benefits before ATN/IPS services are available.
- **Supplement 8 to ARINC Specification 631:** VHF Digital Link (VDL) Mode 2 Implementation Provisions is under development. Topics include:
    - Implementation provisions for VDL Mode 2 connectionless protocol
    - Seamless operation of connection-oriented and connectionless protocols simultaneously
    - VDL Mode 2 air-ground interoperability test requirements as recommended by the Enhanced Large Scale ATN (ELSA) Consortium
- **Supplement 4 to ARINC Characteristic 758:** Communications Management Unit (CMU), adding Ethernet hardware interfaces was prepared in 2019.
    - Standardizes new Ethernet interfaces per ARINC Specification 664 Part 2.
    - Adds reference to **ARINC Specification 618-9** defining ACARS over IP.

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

- **Draft 1 of Supplement 4 to ARINC Characteristic 758:** *Communications Management Unit (CMU)*

The future work program will be presented.

✈ ✈

7c. AOC Message Exchange

ARINC 633
AOC Chairman: Dirk Zschunke, Lufthansa
Secretary: José Godoy, *jose.godoy@sae-itc.org*

Goal: The goal of the AOC Subcommittee is to develop ARINC Specification 633 which species 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: Dirk Zschunke will provide a briefing on 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.

Dirk will propose the development of **Supplement 4 to ARINC Specification 633** to accomplish the following:

- Update existing Operational Flight Plan data structure
- Update existing Crew List and Duty Cycle data structure
- Add GNSS RAIM data structure
- Add RNP, RCP, and RSP Performance modeling structures

AEEC Adoption Item: (none proposed)

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

- **APIM 19-005** proposes the development of **Supplement 4 to ARINC Specification 633:** *AOC Air-Ground Data and Message Exchange Format*

✈ ✈

7d. Air/Ground Communications Systems (AGCS)

ARINC 771, ARINC 781
Chairman: Robert Holcomb, American Airlines
Secretary: José Godoy, *jose.godoy@sae-itc.org*

APIM 18-002: Diplexer Low Noise Amplifier (DLNA) to Protect Satcom from LTE and Ligado

Goal: The Air-Ground Communications Systems (AGCS) Subcommittee defines and maintains aviation satcom standards that satisfy airline operational requirements for safety services. It 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 will provide a summary of AGCS Subcommittee activities will be presented, 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.
- **Supplement 8 to ARINC Characteristic 781:** *Aviation Satellite Communication System* has been prepared to include the following:
    - RF diplexers 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: The AEEC Executive Committee will consider the following:

- **Draft 1 of Supplement 8 to ARINC Characteristic 781:** *Mark 3 Aviation Satellite Communication System*

The future work program will be presented.

✈ ✈

✈ ✈

8a. Internet Protocol Suite (IPS) for Aeronautical Safety Services

ARINC 658 and ARINC Project Paper 858
Co-Chairman: Luc Emberger, Airbus
Co-Chairman: Greg Saccone, Boeing
Secretary: Paul Prisaznuk, *pjp@sae-itc.org*

APIM 15-004A: 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: This project is expected to improve data communication technologies used for NextGen and SESAR airspace initiatives and, in turn, provide many benefits to airlines, airframe manufacturers, and avionics suppliers. 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 December 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 Project Paper 858: *Internet Protocol Suite (IPS) for Aeronautical Safety Services – technical Requirements* is presently in development. Topics of discussion include:

- ATN/IPS Architectures – Air and Ground
- Mobility Considerations
- 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.

AEEC Adoption Item: (none proposed)

The future work program will be presented.

✈ ✈

8b. 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: The project maintains the ARINC 424 Navigation Database Standard. It identifies, evaluates, and documents the necessary standards 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 **ARINC Specification 424** and future implementations.
- The presentation will outline 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 address accommodating military route data in **ARINC Specification 424**, specifically to remove the need of Digital Aeronautical Flight Information File (DAFIF) as a unique format.

AEEC Adoption Item: (none proposed)

The future work program will be presented.

ADJOURN TUESDAY

✈ ✈

AEEC GENERAL SESSION

WEDNESDAY, APRIL 30 – 8:30AM – HILTON GRAND BALLROOM

9a. 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 09-009C: 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: United Airlines will host the next EFB Users Forum on June 25-27, 2019 in Chicago, Illinois.

✈ ✈

9b. Electronic Flight Bag (EFB) Subcommittee

ARINC Project Paper 679, ARINC Project Paper 834A and ARINC Project Paper 840A
Co-Chairman: Sonja Schellenberg, Lufthansa
Co-Chairman: David Jones, Astronautics
Secretary: Peter Grau, *peter.grau@sae-itc.org*

APIM 17-006A: Application Control Interface for Tablet Devices
APIM 17-014: EFB Functional Interface Definition
APIM 17-015: EFB Functional Server Definition

Goal: This activity prepares standards applicable to Electronic Flight Bag (EFB) installation 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 679** will define an airborne server functional definition to support the EFB and other peripherals. This document is expected to define the following functions:
    - Avionics data interface service
    - ACARS messaging and EFB content printing function (presently in ARINC 834)
    - File service and file server capabilities
    - Application service and application server capabilities
    - Data storage requirements

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

  - Interface provisions to enable tablet devices to utilize on-board IP-Based communication systems (e.g., Satcom and Gatelink)
  - Information security guidance
  - Mature document expected in April 2020.

- **ARINC Project Paper 834A** is expected to define a standardized means for the EFB software applications to acquire aircraft avionics data. The goal is to eliminate 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 among EFBs
  - Printer interface for the cockpit printer
  - Mature document expected in April 2020.
- **ARINC Project Paper 840A:** *Application Control Interface for Tablet Devices* was prepared in 2019. This document defines a standardized application software interface for tablet-based EFBs. This enables EFB applications to be developed independent of the EFB platform. This document defines the following:
  - Inter-application navigation for users
  - Blending of multiple applications into a single workflow
  - Single data entry with data shared across applications
  - Mature document to be presented

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

- **Draft 2 of ARINC Project Paper 840A:** *Application Control Interface for Tablet Devices.*

The future work program will be presented.

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

9c. Network Infrastructure and Security (NIS)

ARINC Project Paper 686, ARINC Project Paper 687, ARINC Project Paper 848
Chairman: Jeffrey Rae, United Airlines
Secretary: Vanessa Mastros, *vanessa.mastros@sae-itc.org*

APIM 16-014: Broadband Network Interface for Non-Safety Services
APIM 17-001: Roadmap for Transitioning to IPv6
APIM 18-006: Supplement 2 to ARINC Specification 664: Aircraft Data Network, Part 1, Systems Concepts and Overview
APIM 18-008: Onboard Secure Wi-Fi Network Profile Standard

Goal: The NIS Subcommittee develops standards for secure IP connectivity to the aircraft that enable fleet-wide solutions based on open data transfer standards.

Summary: Activities to develop the following documents will be presented:

- **ARINC Project Paper 686:** *Roadmap and Strategy for IPv6 Transition* is being developed as a roadmap that will recommend end-to-end solutions in cases where

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

IPv4 and IPv6 coexist. This document is intended to provide a common IPv6 strategy for aircraft connectivity to:

- Anticipate IPv6 capability in the coming product developments
- Ease the transition from IPv4 to IPv6
- Identify security issues and provide recommendations to solve them
- Develop plan for address allocation and management
- Identify ARINC Standards to be updated to include IPv6

- **ARINC Project Paper 687:** *Onboard Secure Wi-Fi Network Profile Standard* is expected to define a standard method for authentication and encryption of Wi-Fi-based connections to onboard WLAN networks. Examples of client devices requiring connections to these networks include electronic flight bags, flight attendant mobile devices, onboard IoT devices, and mobile maintenance devices. ARINC Project Paper 687 is intended to address the following:
  - Connections based on IEEE 802.11 wireless LAN standards.
  - Onboard RADIUS AAA services for authenticating client devices to onboard WLAN networks.
  - Authentication protocol based on EAP-TLS.
  - Mutual authentication to ensure two-way trust relationships are established between clients and infrastructures.
  - Encryption algorithms based on AEC-CCMP
- **ARINC Project Paper 848:** *Broadband Network Interface for Non-Safety Services* is intended to define a media-independent method to ensure secure communications between an aircraft onboard LAN and an enterprise LAN on the ground. Utilizing Virtual Private Network (VPN) technology, tunnels can be established using any combination of onboard LANs. This document is will define three distinct layers of security: COTS, Network, and Application.
- **Supplement 2 to ARINC Specification 664:** *Aircraft Data Network, Part 1, Systems Concept and Overview* was prepared to remove ambiguities in the standard. ARINC 664 defines a ruggedized version of the IEEE 802.3 Ethernet standard for use in commercial aircraft. The first version of ARINC 664 was released in 2001. No technical changes to this standard are planned.

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

- **Draft 2 of Supplement 2 to ARINC Specification 664:** *Aircraft Data Network, Part 1, Systems Concept and Overview*

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

- **APIM 19-006** proposes the development of **ARINC Project Paper 8xx:** Intersystem Network Architecture Design Guidelines by the NIS Subcommittee

The future work program will be presented.

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

✈ ✈

10. AIRPORT APPROACH AND LANDING

SYMPOSIUM

Wednesday, April 30, Starting at 10:30am

Hilton Grand Ballroom – Mezzanine Floor

Moderator: Robert Swanson, FedEx

FEATURED SPEAKERS

Jean-Francois Saint-Etienne, Airbus

Yasuo Ishihara, Honeywell

Mike McDowell, Collins Aerospace

✈ ✈

11a. Software Distribution and Loading

ARINC 665, ARINC 843
ARINC Project Paper 851
Chairman: Ted Patmore, Delta Air Lines
Secretary: Scott Smith, *scott.smith@sae-itc.org*

APIM 16-015: Ground System definition for e-Enabled Aircraft
APIM 18-004: Supplement 5 to ARINC Report 665: Loadable Software Standards
APIM 18-005: Supplement 1 to ARINC Specification 843: Aircraft Common Configuration Reporting

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:

- **Supplement 5 to ARINC Report 665:** *Loadable Software Standards* was prepared to address three main issues:
  - Align **ARINC Report 665** software part definitions with those defined in **ARINC Specification 641:** *Logical Software Part Packaging for Transport*. This will provide a standardized method for packaging aircraft software parts for electronic distribution or storage on physical media.
  - Align **ARINC Report 665** terminology with **ARINC Report 645:** *Common Terms and Functions for Software Distribution and Loading*
  - Add references to **ARINC Specification 838:** *Loadable Software Part Definition Format* as the preferred way to produce XML defined software parts.
- **Supplement 1 to ARINC Specification 843:** *Aircraft Common Configuration Reporting* was prepared to support Boeing's work on the B777X. This standard will provide a common configuration reporting format for airlines, aircraft manufacturers, and suppliers. Supplement 1 will enable suppliers to use the correct system attribute names in configuration reporting.
- **ARINC Project Paper 851:** *Software Ground Systems 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 Items: The AEEC Executive Committee will consider the following:

- **Draft 2 of Supplement 5 to ARINC Report 665:** *Loadable Software Standards*
- **Draft 2 of Supplement 1 to ARINC 843:** *Aircraft Common Configuration Reporting*

✈ ✈

11b. Application/Executive (APEX) Software Interface

ARINC 653
Co-Chairman: Pierre Gabrilot, Airbus
Co-Chairman: Gordon Putsche, Boeing
Secretary: Larry Hesterberg, *larry.hesterberg@sae-itc.org*

APIM 16-009: 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.

A status report will be provided, ARINC 653 consists of:

- **ARINC Specification 653:** *Part 0, Overview of ARINC 653*
- **ARINC Specification 653:** *Part 1, Required Services*
- **ARINC Specification 653:** *Part 2, Extended Services*
- **ARINC Specification 653:** *Part 3A, Conformity Test Specification for Required Services*
- **ARINC Specification 653:** *Part 3B, Conformity Test Specification for Extended Services*
- **ARINC Specification 653:** *Part 4, Subset Services*
- **ARINC Specification 653:** *Part 5, Core Software Recommended Capabilities*

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

- **Draft 1 of Supplement 2 to ARINC Specification 653:** *Part 0, Overview of ARINC 653*
- **Draft 1 of Supplement 5 to ARINC Specification 653:** *Part 1, Required Services*
- **Draft 1 of Supplement 4 to ARINC Specification 653:** *Part 2, Extended Services*
- **Draft 1 of Supplement 1 to ARINC Specification 653:** *Part 5, Core Software Recommended Capabilities*

The future work program will be presented.

✈ ✈

11c. Cockpit Display Systems (CDS) Interfaces

ARINC 661
Co-Chairman: Chad Weldon, Collins Aerospace
Co-Chairman: Sofyan Su, Airbus
Secretary: Larry Hesterberg, *larry.hesterberg@sae-itc.org*

APIM 08-004C: ARINC 661 Cockpit Display System Interface Standard

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 7 to ARINC Specification 661:** *Cockpit Display System Interface to User Systems, Part 1, Avionics Interfaces, Basic Symbology, and Behavior* is intended to ensure growth for CNS/ATM applications and support advanced operational concepts that will increase aviation safety, capacity, and efficiency. Supplement 7 adds widget structure meta-definition and three-dimensional vision capability.
- **ARINC Project Paper 661:** *Cockpit Display System Interfaces to User Systems, Part 2, User Interface Markup Language for Graphical User Interfaces* is a new document being prepared to allow developers to specify the interface, look, and behavior of any ARINC 661 Graphical User Interface (GUI).

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

- **Draft 2 of Supplement 7 to ARINC Specification 661:** *Cockpit Display System Interface to User Systems, Part 1, Avionics Interfaces, Basic Symbology, and Behavior*

The future work program will be presented.

✈ ✈

11d. Fiber Optic Interfaces

ARINC 806
Chairman: Robert Nye, Boeing
Secretary: Scott Smith, *scott.smith@sae-itc.org*

APIM 13-009: Fiber Optic Mechanical Transfer Technology

Goal: Develop ARINC Standards for fiber optic interfaces. 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 Fiber Optic Subcommittee activities will be presented. The standardization of mechanical transfer technology in the ARINC Standards is complete.

Several cabin systems are beginning to use fiber optic technologies to reduce weight and increase performance. Cabin APIM 18-001, approved by the AEEC in 2018, calls for a Fifth Generation Seat Network (5GCN) standard. This effort is expected to impact one or more of the following published fiber optic standards:

- **ARINC Report 803-4:** *Fiber Optic Design Guidelines*
- **ARINC Report 805-5:** *Fiber Optic Test Procedures*
- **ARINC Report 806-6:** *Fiber Optic Installation and Maintenance*
- **ARINC Report 807-4:** *Fiber Optic Training Requirements*
- **ARINC Specification 846:** *Fiber Optic Ferrule, Mechanical Termini*

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

- **Draft 1 of Supplement 6 to ARINC Report 806:** *Fiber Optic Installation and Maintenance*

No future work is planned at this time.

✈ ✈

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

12a. ARINC 429 Data Bus

Secretary: Larry Hesterberg, *larry.hesterberg@sae-itc.org*

APIM 17-010A: Prepare Supplement 17 to ARINC Specification 429 Part 2

Goal: Maintain ARINC 429 data bus standards for industry.

Summary: The ARINC Industry Activities staff maintains ARINC Specification 429 based on industry inputs that are collected and organized in a form that is suitable for inclusion in the standard. Current changes expand ARINC 429 Label and Data Word formats with no impact on legacy systems.

ARINC Specification 429 Part 1 was updated by the publication of Supplement 19 in 2018.

ARINC Specification 429 Part 2 was last published in 2004. It was updated by Supplement 17 and is now considered to be mature. Part 2 changes were driven in part by current Global Aircraft Tracking (GAT) requirements, specifically the addition of two new words: Distress Transmitting Device Status Word (Octal 201) and GATS Automatic Trigger Word (Octal 202).

ARINC Specification 429 is published in four parts:

- **ARINC Specification 429:** *Digital Information Transfer System (DITS), Part 1, Functional Description, Electrical Interface, Label Assignments and Word Formats*
- **ARINC Specification 429:** *Digital Information Transfer System (DITS), Part 2, Discrete Word Data Standards*
- **ARINC Specification 429:** *Digital Information Transfer System (DITS), Part 3, File Data Transfer Techniques*
- **ARINC Specification 429:** *Digital Information Transfer System (DITS), Part 4, Archive of ARINC 429 Supplements*

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

- **Draft 1 of Supplement 17 to ARINC Specification 429:** *Digital Information Transfer System (DITS), Part 2, Discrete Word Data Standards*

The future work program will be presented.

12b. Other Topics

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

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

13. Announcements and Adjournment

The dates and location of the AEEC | AMC conference in 2020 will be announced.

The AEEC Chairman will adjourn the AEEC General Session.

✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈✈

✈ ✈

AEEC ADOPTION ITEMS PRAGUE (1 OF 2)					
Agenda Item	**Activity**	**Reference**	**Title**	**Pink Pages**	**Adopted Yes/No**
3a	KSAT	19-035/KSAT-036	Draft 2 of Supplement 3 to **ARINC Characteristic 791:** Aviation Ku-Band and Ka-Band Satellite Communication System, Part 1, Physical Installation and Aircraft Interfaces		
3b	CSS	19-014-CSS-615	Draft 3 of **ARINC Project Paper 820:** Cabin Architecture for Wireless Distribution System		
5b	GAT	19-039/SAI-067	Draft 4 of **ARINC Project Paper 680:** Aircraft Autonomous Distress Tracking (ADT)		
7b	DLK	19-008/DLK-168	Draft 1 of Supplement 4 to **ARINC Characteristic 758:** Communications Management Unit (CMU)		
7d	AGCS	19-024/AGCS-108	Draft 1 of Supplement 8 to **ARINC Characteristic 781:** Mark 3 Aviation Satellite Communication System, Aircraft Installation Provisions		
9b	EFB	19-026/EFB-077	Draft 2 of **ARINC Project Paper 840A:** Electronic Flight Bag (EFB) Application Control Interface (ACI) for Tablet Devices		
9c	NIS	19-016/NIS-092	Draft 2 of Supplement 2 to **ARINC Specification 664:** Aircraft Data Network, Part 1, Systems Concepts and Overview		
11a	SDL	19-020/SDL-122	Draft 2 of Supplement 5 to **ARINC Report 665:** *Loadable Software Standards*		
11a	SDL	19-021/SDL-123	Draft 2 of Supplement 1 to **ARINC Specification 843:** *Aircraft Software Common Configuration Reporting*		

✈ ✈

AEEC ADOPTION ITEMS PRAGUE (2 OF 2)

Agenda Item	Activity	Reference	Title	Pink Pages	Adopted Yes/No
11b	APEX	19-041/SWM-153	Draft 1 of Supplement 2 to **ARINC Specifications 653:** Avionics Application Software Standard Interface, Part 0, Overview of ARINC 653		
11b	APEX	19-038/SWM-152	Draft 1 of Supplement 5 to **ARINC Specification 653:** Avionics Application Software Standard Interface, Part 1, Required Services		
11b	APEX	19-036/SWM-150	Draft 1 of Supplement 4 to **ARINC Specification 653:** *Avionics Application Software Standard Interface,* Part 2, Extended Services		
11b	APEX	19-037/SWM-151	Draft 1 of Supplement 1 to **ARINC Specification 653:** *Avionics Application Software Standard Interface*, Part 5, Core Software Recommended Capabilities		
11c	CDS	19-033/SAI-066	Draft 2 of Supplement 7 to **ARINC Specification 661:** Cockpit Display System Interface to User Systems, Part 1, Avionics Interfaces, Basic Symbology, and Behavior		
11d	FOS	19-025/FOWG-187	Draft 1 of Supplement 6 to **ARINC Report 806:** Fiber Optic Installation and Maintenance		
12a	429	19-009/SAI-064	Draft 1 of Supplement 17 to **ARINC Specification 429**: Digital Information Transfer System (DITS), Part 2, Discrete Labels		

NEW AEEC PROJECT PROPOSALS (APIMs)				
Agenda Item	**Proposed Activity**	**APIM Number**	**APIM Description**	**Approved Yes/No**
3a	KSAT	19-001	**Supplement 1 to ARINC Characteristic 792:** *Second-Generation Ku-Band and Ka-Band Satellite Communication System*	
3b	CSS	19-002	**Supplement 4 to ARINC Specification 485:** *Cabin Equipment Interfaces, Part 1, Head End Equipment Protocol* **Supplement 5 to ARINC Specification 485:** *Cabin Equipment Interfaces, Part 2, Physical Layer - In-Seat Protocol*	
3b	CSS	19-003	**Supplement 4 to ARINC Specification 628:** *Cabin Equipment Interfaces, Part 5, Cabin Electrical Equipment and Wiring Installation Guidelines*	
7c	DLK	19-005	**Supplement 4 to ARINC Specification 633:** *AOC Air-Ground Data and Message Exchange Format*	
9c	NIS	19-006	**New ARINC Project Paper 8xx:** *Intersystem Network Architecture Design Guidelines*	