AMC A Publication for the Avionics Maintenance Conference

PLANE TALK®

Volume XXIX, Number 2

IN THIS ISSUE



## Notice



https://www.aviation-ia.com/activities/amc

ARINC INDUSTRY ACTIVITIES An SAE ITC Program

SAE ITC An SAE International Affiliate

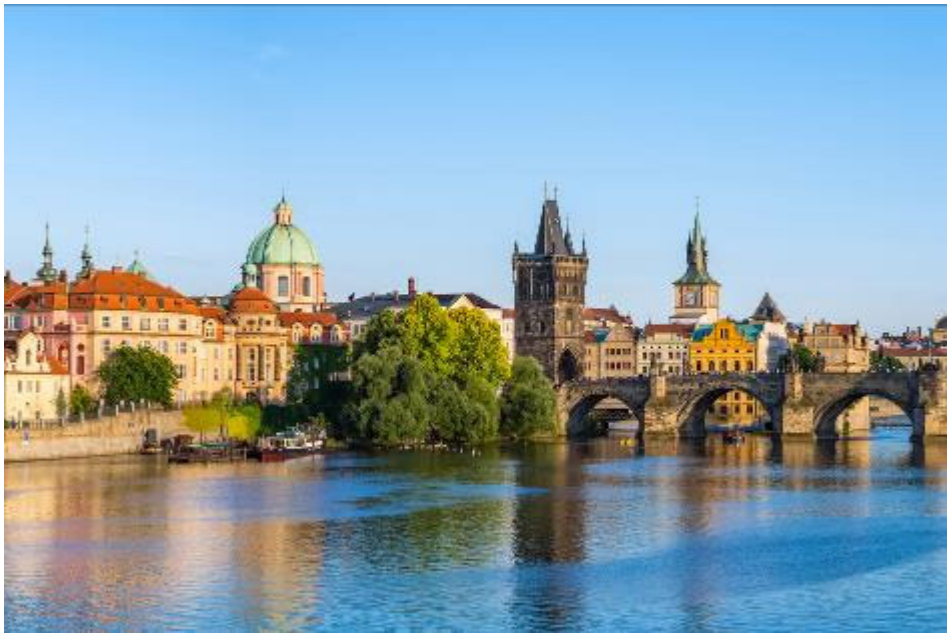
## 2019 AMC

## Avionics Maintenance Conference (AMC)

ARINC Industry Activities invites you to the 2019 AMC Conference in Prague, Czech Republic.

The 70th annual AMC Conference will be the center of the avionics world for four days. In addition to the open forum discussion, the conference will have three symposia topics selected from the comments on the AMC Conference surveys.

Make your plans now to attend, participate, exhibit, and problem-solve for 96 hours (72 hours, given time for sleep).



2019 AMC
Plan Now!
April 29—May 2
Prague, CZ

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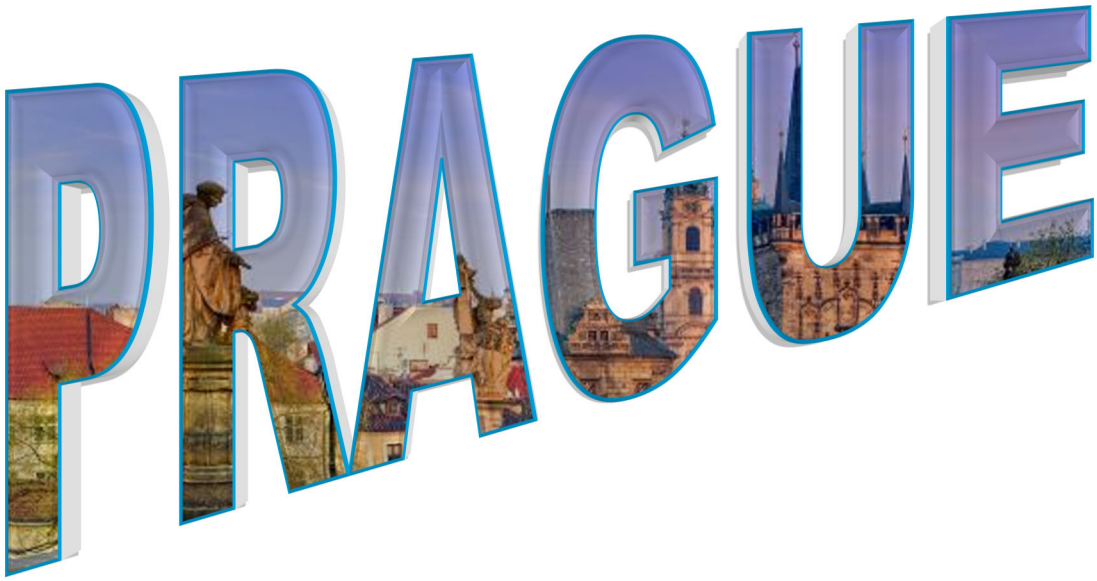
# 2019 AMC Conference
# April 29—May 02
# Prague, CZ




*"It's your conference, i's what you make of it!"*
**-R.S. Goldberg**

**Hilton Prague**
**Probezni 1**
**Prague 186 00**
**Czech Republic**
**+42 0-2-2484-111**

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## AMC Symposia

The AMC Steering Committee received over 200 surveys in 2018 with answers about what future AMC Symposia should cover.

From this list, the AMC will hold two symposia on:

Monday, April 29, 1000 hours

# Big Data — An Airlines' Gold Mine

Wednesday, May 1, 1530 hours

# Security — Not just an Afterthought

Persons desiring a hospitality suite should contact:

Vanessa Mastros
Office: +1 240-334-2575
Email: vanessa.mastros@sae-itc.org

All attendees are invited to visit the hospitality suites.

**The AEEC|AMC Welcome Reception is a networking event for all engineering professionals from airlines, OEMs, and MROs.**

### Don't forget the AMC Conference Kickoff!

**AEEC | AMC | MMC Welcome Reception**
Sunday, April 28, 2019
1700-1900 hours

# AMC Standards Activities

## Obsolescence Management Guidance (OMG) Working Group

The Obsolescence Management Guidance (OMG) Working Group met October 24-26, 2018, in Annapolis, Maryland to create or modify material intended for **Supplement 1 to ARINC Report 662:** *Obsolescence Management Strategies for Aircraft Components*.

This standard is applicable to all levels of the commercial aviation industry, including airlines, airframers, through Original Equipment Manufacturers (OEMs) and their suppliers, and across all associated aviation disciplines: electronic, mechanical, materials, and fluids.

Sustainability is concerned with the endurance of systems and processes. A comprehensive understanding of those interrelated systems and processes is required. To attain this sustainability overview, the entire lifecycle from before the product design and beyond the end of the production line needs to be considered.

The purpose of this document is to establish guidelines that should be observed during initial design, production, and maintenance of aircraft components, and to present short-term and long-term strategies to minimize the costs and impacts associated with decreasing availability of components.

At the conclusion of the standards meeting, the OMG Working Group deemed Draft 3 of ARINC Report 662 to be mature. Following the industry review, should there be no adverse industry comments, the OMG Working Group has requested that Draft 3 be forwarded to the AMC for adoption consideration.

**Contact a member of the AMC Steering Group To suggest a standardization activity.**

More information on these working groups can be found here:

AEEC, AMC, and FSEMC Subcommittees and Working Groups

.

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# Air Transport– Avionics Service Bulletin (AT-ASB) Working Group

## Project Goals

**Goal:** The AT-ASB Working Group will develop a standard that eliminates differences in service bulletins for avionics products from different suppliers. The standard will also provide for standardization of Buyer Furnished Equipment (BFE) and Supplier Furnished Equipment (SFE) service bulletins regardless of the aircraft manufacturer the avionics product is used on.

The end result will be a definitive standard that addresses areas in the existing ATA standards (ATA 100, iSpec 2200, etc.) which allow variance; such as wording, format, etc.

This standard will also end the divergence of SFE service bulletin standards from the aircraft manufacturers, and drive a single standard for all. Examples of industry issues to be considered:

- BFE products are transitioning to Selective Supplier Furnished Equipment (SSFE) on new platforms, which are then held to the requirements of SFE products.
- Aircraft manufacturers have created Tier 1 and Tier 2 (Tier 3…) suppliers, where the Tier 2 supplier is the design authority, yet the Tier 1 is responsible for the product performance and documentation. This creates a service bulletin (from the Tier 2) within a service bulletin (from the Tier 1), often in different formats and to different standards.
- IP valuation considerations and field-loadable software service bulletins require new types of installation considerations

**Harmonizing service bulletin content and format will increase communication effectiveness and allow for faster implementation.**

The first AT-ASB Working Group meeting is scheduled for:

February 5-7, 2019, in Melbourne, Florida.

More information about the AT-ASB Working Group, including meeting reports, working papers, and meeting announcements, will be available on the AT-ASB webpage of the ARINC IA website:

https://www.aviation-ia.com/activities

# Test Program Set (TPS) Quality Working Group

## Project Goals

**Goal:** Original Equipment Manufacturers (OEMs) often deliver a Technical Support and Data Package (TSDP) that contains a cornucopia of documents. The relevant Test Specification data is obscured and difficult to ascertain within the large amount of data that is not relevant to the Test Specification.

The aim of the Test Program Set (TPS) Quality Working Group is to update ARINC Report 625 in order to emphasize the importance that the OEM provides a Test Specification that is intelligible, unobscured, and as complete as possible.

The role of the TSDP is to provide the minimal amount of data required to fully understand and implement the Test Specification. Only data that is pertinent to the Test Specification should be provided. It should be separate and independent of all non-pertinent data.

**The TPS Working Group intends to update ARINC 625 to provide guidance for industry about accurate and adequate maintenance instructions.**

## Issues to be Worked:

- To clearly state the Test Specification requirements so that it will be delivered on time, in a clear, un-obscured format.
- Clarifying differences between Test Specification (TS) and Test Specification Data Package (TSDP).
- Defining the responsibility of the repair facility is to verify the conformance of the test implementation.
- Defining a component manufacturer's production test specification is written to support factory production acceptance tests.
- A subset of this production test specification forms the TS used to develop the Return-To-Service (RTS) test procedures provided in the CMM.

The next TPS Quality Working Group meeting is tentatively scheduled for:

March 5-7, 2019, in North America.

More information about the TPS Quality Working Group, including meeting reports, working papers, and meeting announcements, will be available on the TPS webpage of the ARINC IA website:

https://www.aviation-ia.com/activities/test-program-set-tps-quality-working-group

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# 2018 AMC Follow-Up Items

The responses to most AMC discussion items result in a solution being accepted and the discussion item being closed. When discussion items need further action by one or more suppliers, the resolution is published in PLANE TALK®. For a description of items removed from the follow-up list, refer to appropriate issues of PLANE TALK®.

**The AMC will cover these items during the open forum.**

| ITEM | SECTION | SUBMITTER | SUPPLIER | ACTION |
|---|---|---|---|---|
| 18-009 | Avionics Philosophy | DAL | Honeywell/ OTTO | Honeywell to support Otto. |
| 17-011 | Avionics Philosophy | ETD | Honeywell | Honeywell to improve their process for Technical Publication access. |
| 17-016 | Avionics Philosophy | ETD | Boeing | Boeing to develop an extraction that prints in pdf. |
| 17-017 18-015 | Avionics Philosophy | ETD | All | Airlines would like the cost of the VSB to be included in the SB. |
| 18-024 17-178 | Avionics Philosophy | DAL | Honeywell | Honeywell to provide a method to expedite labels for approved facility |
| 18-029 | Test Systems | AFR/KLM | Teledyne | Teledyne to provide TS and TSDP. |
| 18-035 | Electrical Power | ANA | UTAS | Resolve VSCF nuisance faults. |
| 18-036 | Electrical Power | SR Technics | UTAS | UTAS to provideV2.5 VFSG that replace the journal bearing. |
| 18-037 | Electrical Power | VIR | UTAS | Waiting for VFSG HO4 SB. |
| 18-040 | Electrical Power | ETD | UTAS | Resolve the burnt circuit board on GAPCU. |
| 18-049 | Electrical Power | AFR/KLM | Pratt & Whitney | P&W to provide CMMs. |
| 18-056 | Autoflight System | ETD | Thales | Reduce the NFF rate on the ELAC. |
| 18-060 | Autoflight System | JAL | Moog/Boeing | Moog to resolve EMCU high power failure. Boeing to support fleet replacement. |
| 17-079 | Navigation | DAL | UTAS/All | Provide HMS for Pitot Tubes. |
| 18-075 | Navigation | KAL | Boeing | Boeing to complete model evaluation on Quick Disconnects for all Aircraft |

# 2018 AMC Follow-Up Items—cont'd

| ITEM | SECTION | SUBMITTER | SUPPLIER | ACTION |
|---|---|---|---|---|
| 18-079 | Navigation | UAL | Honeywell/ Boeing | Boeing to provide a method to reduce moisture damage to the ADIRU due to ineffective moisture shrouds.18 |
| 18-084 | Navigation | ETD | ALL | Left Open to review supplier progress on meeting ADS-B requirements. |
| 17-096 | Navigation | SWA | Honeywell | Improve reliability of the EGPWC, by updating software. |
| 18-088 | Navigation | ANA | Rockwell Collins | Rockwell Collins to resolve the nuisance messages on Weather Radar to reduce NFF. |
| 18-091 | Navigation | ANA | Honeywell | Honeywell to release an update to CMM. |
| 17-099 18-094 | Navigation | EXS | GE Aviation | Resolve problems with FMC CDU blanking in flight. |
| 18-097 | Navigation | ETD | Boeing | Boeing to certify the -005 Honeywell TCAS computer on B777. |
| 18-108 | Navigation | ANA | Rockwell Collins | Rockwell Collins to complete root cause analysis. |
| 18-114 | Navigation | THY | GE Aviation | GE to resolve issue with defective capacitor. |
| 17-115 | Communication | ANA | Honeywell | Honeywell to provide root and solution to RFM failure and then associated SB. |
| 18-125 | Communication | ANA | Rockwell Collins | Rockwell to provide root cause and corrective action. |
| 17-116 | Communication | ANA | Rockwell Collins | Airlines to check HFS-900D for darken coils and report finding to Boeing and Rockwell Collins. Rockwell Collins to provide resolution to coil overheat issues. |
| 17-117 18-128 | Communication | KLM/AFR | Boeing | Boeing to speed up SB to install drip shield. |

**If you know of an item that has been resolved, send us an email to reflect it in PlaneTalk.**

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# 2018 AMC Follow-Up Items—cont'd

| ITEM | SECTION | SUBMITTER | SUPPLIER | ACTION |
|---|---|---|---|---|
| 16-138 | Communication | DAL | AstroNova | AstroNova to improve reliability of the ACARS Printer. |
| 18-132 | Communication | DAL | Honeywell/ Boeing | Honeywell to resolve the VDR No Comm on the B717 platform. |
| 18-147 | Communication | UAL | Avionica | Avionica to resolve avRDC Firmware Load. |
| 14-168 | Software | ETD | Honeywell | Honeywell to reduce the lead time for software. |
| 18-150 | Software | NAX | All | Supplier to provide a mean of electronic distribution of software…no more floppies. |
| 17-126 | Environmental | KLM/AFR | BAE Systems | BAE to visit KLM to resolve problem with conformal coating. |
| 18-160 | Environmental | LHT | UTAS | UTAS to develop more efficient testing of the galley heat exchanger module. |

**The AMC will cover these items during the open forum.**

# 2018 AMC Follow-Up Items—cont'd

| ITEM | SECTION | SUBMITTER | SUPPLIER | ACTION |
|---|---|---|---|---|
| 17-ULB | Indicating Systems | All Airlines | Boeing | Request that the 90 day ULB requirement be satisfied by stocking the recorder part number separate from the ULB and the recorder inter-changeability be based on the Form, Fit and Function of the recorder. |
| 18-183 | Lighting | AZU | Honeywell | Honeywell to improve the reliability of the Navigation light on the E-Jet. |
| 18-191 | Fuel Systems | LHT | Parker | Parker to provide missing data to create a TS. |
| 18-194 | Landing Gear | SR Techics | Safran | Sanfran to provide root cause analysis for the BTMU. |
| 18-197 | Landing Gear | AFR/KLM | Airbus | Airbus to publish SB on re-ducing LGCIU dual faults. |
| 18-206 | Engine Systems | LHT | UTAS | UTAS to work with LHT to resolve EEC150 -40 pro-gramming problems. |
| 14-264 | Other | DAL | Adams Right/ Boeing | Adams Right to provide sole-noid rebuild and/or replace-ment. |
| 18-212 | Other | ETF | Adam Right/ Airbus | Adam Right and Airbus to improve cockpit door locking systems components. |
| 18-220 | Other | DAL | Rockwell Collins | To improve the reliability of the 267XP chillers. |
| 18-227 | Other | DAL | Adams Right | Airbus to work with Adams Right to provide technical manual for the CDLS system. |

**If you know of an item that has been resolved, send us an email to reflect it in PlaneTalk**

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# Prague! We are ready to Rock and Roll!

By: Marijan Jozic
AMC Chairman

Just a few years ago, we had the AMC Conference in Prague, Czech Republic. Prague was one of biggest and most important cities in the Habsburg Monarchy. The Habsburg Monarchy was a dual monarchy better known as the Austrian-Hungarian Monarchy. It has few remarkable cities: Vienna (the capital of the monarchy), Budapest, Prague, Bratislava, and Zagreb. Each of those cities is now a capital of their respective countries: Austria, Czech Republic, Slovakia, Hungary, and Croatia. These cities are still beautiful as jewels, and Prague is a diamond among them. Ask anyone who attended the AMC a few years ago and they will tell you that I am right. But, the city is not the true reason why we are going to Prague. We are going for the AMC Conference. And here is probably the biggest surprise: it will be a bit different than last time. Let me explain.

**Prague's Charles Bridge was built in 1357 crossing the Vltava River.**

Last year, we launched the Mechanical Maintenance Conference (MMC) where we had the opportunity to work together with aircraft mechanical engineers. We solved problems in open forum sessions and we educated the crowd in our symposiums. The conference was just two days and we managed to demonstrate that every single minute of the MMC was valuable. Our mechanical friends were absolutely delighted, and the first MMC Conference was an ultimate success.

This past April, the AMC Conference was held in Dallas, Texas. Figuratively and literally, there was a big storm above the AMC Steering Committee meetings during the AMC. You may not have noticed that the AMC Steering Committee had a rough ride in Dallas. We deliberated, talked, discussed, checked, and rechecked future schedules and strategies. We discussed issues with the AEEC Executive Committee as well as the SAE ITC leadership team and eventually cut the Gordian knot.

# Prague! We are ready to Rock and Roll!

Here is the result. The MMC Conference will be collocated with AMC Conference and the AEEC General Session. Yes, I will repeat: in Prague, we will have a triple venue: AMC-MMC-AEEC. Three conferences in one location. We are convinced that this will be the most cost-effective conference in the history of aviation. With these three events, we will be covering the entirety of all aircraft systems—well, except primary structures and powerplants. Regardless, the avionics wiring keeps airplanes flying. Everyone knows that! In other words, an aircraft is just a bunch of parts flying in close formation held together by wiring. Now you know the secret.

Unfortunately, creating a three-sided event is not easy. There are many people involved to be able to compress so much into the fastest four days in aviation. Everyone is dedicated to the events' success: SAE ITC, ARINC IA, AMC, and AEEC Leadership. Even the hotel leadership!

On our list of goals and tasks: establish new guidelines regarding questions, select symposiums and seminars, plan to fit it all in the program, coordinate with AEEC, communicate with OEMs, choose moderators, advertise, etc. Of course, we will need to deal with last minute changes and everybody will be asked to cooperate, but we have no doubt that we can do it.

In October, there was an AMC Steering Committee meeting in Amsterdam where we will laid out the plan and started to finalize some of the details. The last bits and pieces will be decided at the AMC Steering Committee winter meeting, and we will then be ready to rock and roll.

I am so proud and yet humbled to be the AMC Chairman as we go into its 70th year. I am in awe of all the people that participated in the AMC, shaping aviation history.

**Prague's Astronomical Clock dates back to 1410.**

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# Prague! We are ready to Rock and Roll!

In all those years, the AMC has adapted to industry changes. The first 50 years were the years of amazing aviation industry growth. After that, we saw years of deregulation, merging of airlines, merging of OEMs, and in the last couple of years, we have seen the Intellectual Property wars. Through all of these, the AMC managed to adapt.

It was not always easy; sometimes it was hard. The aviation industry was changing but gaining experience. The types of AMC questions changed but we anticipated that. The classic standardization of radios was replaced by standardizations of procedures and processes. We have educated the AMC about intellectual property, obsolescence, PMA parts, 3D printing, statistics, Big Data, predictive maintenance, ADS-B, and many other things.

**The term "avionics" was coined by the journalist Philip J. Klass as a portmanteau of "aviation electronics".**

We can proudly say that we have made decisions that must be followed by others, not only the AMC participants. They had a chance to join us, but they decided not to. The AMC took the lead and they had no other choice than to follow what we decided. That is the power of the AMC and ARINC Industry Activities.

Finally, all avionics people are one big family. We know each other, we collaborate, have the greatest network in aviation, and we are really good. In Prague, our family will grow further. Mechanical engineers will be added to an already strong group of avionics engineers. Again, the AMC conference has adapted. Ten years ago, AMC Chairman Mitch Klink from FedEx announced that there was a new definition for avionics components: Avionics is every component with a wire attached. People were thinking that such a definition was too trivial. But look at the Boeing B787 and Airbus A350: every LRU in every ATA series has at least one wire attached. There is not a valve, check valve, actuator, blower, etc., without at least a sensor. And any sensor needs a wire to transfer the data to other device.

# Prague! We are ready to Rock and Roll!

And there is software, almost everywhere. The B787 is generating 500 GB of data after every flight. We are using maybe 5%. The rest is deleted forever. The last chapter in this history book has not been written. The intellectual property wars will soon start about the ownership of data. If it is my aircraft, it is my data? Why should I give it out for free? Those questions are not yet answered, but we know that if you control the data, you also control the materials. The AMC and MMC must contribute to these discussions and educate others.

Some new developments like block chain are normal in other industries. Before we know it, block chain will become the new headache in aviation. We should take care not to be late in our understanding. The AMC's ambition is to lead because we know that leading is better than following. But leading also has the price. We need now more than ever smart young people to wrestle with these new technologies and developments.

Therefore, please urge everyone to attend our conferences. At this moment, we have the whole world in the palm of our hand. We must keep that status, but at the same time, we must challenge status quo and keep adapting to every new development: new technologies, new aircraft, a new concept of maintenance, or a new format of conference.

So let's rock and roll!

**Big Data was a symposia topic at the 2018 AMC.**

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## AMC Steering Committee



## ARINC IA Activities Partial Calendar

| | | |
|---|---|---|
| Air Transport– Avionics Service Bulletin (AT-ASB Working Group | February 5--7 | Melbourne Florida |
| Hilton Prague Hotel Cutoff Date | March 21 | Prague Czech Republic |
| AEEC General Session AMC Conference | April 29-May 02 | Prague Czech Republic |

Plus **MANY** more events in the next few months!
This list is not all-inclusive of ARINC Industry Activities events.
For more information, see:
http://www.aviation-ia.com/events/index.html

**2019 AMC**
**April 29-May 02**
**Hilton Prague**
**Prague, Czech Republic**

**Mark the date and make your plans now!**

**AMC Conference Information**

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**"Another Success Story!"**

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