Welcome to RTCA
Program Management Committee Meeting
March 26, 2020
Welcome

Chairman

Chris Hegarty, MITRE
Anti-Trust Policy

• RTCA meetings are conducted in strict compliance with US antitrust laws. Meetings shall not consider, or be used to discuss, agreements on prices, including terms of sale or credit, production plans, marketing strategies or customer potential, or any other element of competition between participants.

• RTCA staff will suspend any discussion that relates to such matters and the Meeting will proceed only after appropriate limitation of such discussions has been advised and agreed.
Proprietary Policy

RTCA develops comprehensive, industry-vetted and endorsed recommendations for the regulatory authorities and the aviation community on issues ranging from technical performance standards to operational concepts for air transportation. Supporting this hallmark of RTCA foundational goals to procure consensus for recommended performance standards, the preferred and highly endorsed method for producing RTCA documents is to do so without reference to proprietary information (that is proprietary, patented, patent pending, or copyrighted material) including requirements, normative text, supplemental text, and appendices. Although this type of reference in an RTCA document is not prohibited per se, it is limited to those circumstances where the objective of the document cannot reasonably be attained without the reference(s). Before incorporation into an RTCA document, three tests must be met:

1) A bona fide, public interest basis for the reference and/or usage
2) Evidence that private pecuniary interests have not driven any decision to either include or exclude a system from the market
3) A commitment to license the relevant technology, patent, patent pending, or copyrighted material by completing a Commitment to License (CtL)

Early in the development of an RTCA document, if proprietary information is identified as relevant, the participant or the proponent must disclose to the SC leadership and/or Work Group (WG) leadership that they are personally aware that proprietary information is proposed and/or required for compliance with the RTCA document being developed.

The content of an RTCA published document is considered RTCA proprietary information. Individuals can request to reference this information by receiving approval from RTCA President. By providing material to the RTCA document, the providing party grants RTCA the nonexclusive, paid-up, worldwide perpetual license

Participation in a meeting (including participation via conference telephone or via web cast or similar remote means) shall be deemed to authorize the meeting secretary to record that this proprietary policy has been communicated and accepted.
RTCA Committee Participation Membership Policy

• To participate on RTCA Committees, an individual’s organization is required to be a member of RTCA. Individuals from non-member organizations may apply for membership on a committee, and if accepted, will be required to become an RTCA member.

• Individuals from Non-RTCA member organizations may attend Committee Plenary meetings that are announced on the web. Non-member attendees have the option of requesting permission to be recognized to speak during the plenary meeting. Meeting summaries and related information from previous plenary meetings will be available to the public via RTCA’s website. Documents undergoing final review can be obtained by contacting RTCA. Members of the public may also submit comments on documents undergoing final review.
Introductions

Chairman

Chris Hegarty, MITRE
Welcome “Fill In” Members

Joel Wichgers, Collins Aerospace
Don Kauffman, Honeywell
Agenda Item 2A:
Review / Approve Meeting Summary
December 19, 2019

RTCA Paper No. 003-20/PMC-1968
Agenda Item 2B: Review / Approve Administrative SC TOR Revision

SC-228 – New Co-Chairman
Agenda Items 3A and 3B: Automatic Dependent Surveillance – Broadcast (ADS-B) 
SC-186

PMC Meeting – March 26, 2020

RTCA Paper Nos. 023-20/PMC-1972 and 037-20/PMC-1984

Jessie Turner, SC-186 Co-Chair
Committee Status

SC-186 Leadership
- Co-Chairs
  - Rocky Stone – United Airlines
  - Jessie Turner – The Boeing Company
- Government Authorized Representative
  - Matt Haskin
- Secretary
  - Michael Garcia – Aireon
- Program Director
  - Al Secen

Participants
- ~250 members from multiple industry stakeholders

Documents have successfully gone through FRAC
- DO-328B – Safety, Performance, and Interoperability Requirements for Airborne Spacing – Flt Deck Interval Management
- DO-361A – MOPS for Flight-deck Interval Management (FIM)
SC-186 TOR Deliverables

- **DO-328B - Safety, Performance, and Interoperability Requirements for Airborne Spacing – Flight Deck Interval Management**
  - Safety and Performance Requirements (SPR) (Chapter 3)
  - Interoperability Requirements (INTEROP) (Chapter 4)
  - Operational Services and Environment Definition (OSED) (Annex A)
  - Operational Performance Assessment (OPA) (Annex B)
  - Operational Safety Assessment (OSA) (Annex C)

- Rev. B introduced numerous changes to support Advanced Interval Management (A-IM)

  Advanced applications to enable relative spacing capabilities for implementation into the NAS
DO-361A - MOPS for Flight-deck Interval Management (FIM)

- The FIM operational concept was still in development and trials when the original DO-361 was released in Sept. 2015. Therefore, the FAA intentionally did not release a TSO to invoke DO-361. The goal was to develop an Advanced-Interval Management application that took advantage of an integrated aircraft.

- Advanced - Interval Management (IM) application is used to increase throughput at an airport through increased precision and consistency of inter-aircraft spacing.

- Flight crew follows speed guidance to achieve, capture, and/or maintain a given spacing from Designated Traffic through the use of the on-board FIM Application.
FRAC

FRAC opened August 12, 2019

FRAC ended October 22, 2019
  • DO-328B - 260 comments
  • DO-361A – 971 comments

FRAC/Open Consultation comments assessment completed during 73rd Plenary Meeting November 8, 2019
  • Follow-on actions regarding DO-361A closed during 75th Plenary Meeting on Jan. 31, 2020
FRAC Comment Summary

**DO-328B SPR (12 Reviewers from 7 Organizations)**
- 260 Comments
  - 29 High
  - 91 Medium
  - 47 Low
  - 93 Editorial

**DO-361A MOPS (19 Reviewers from 10 Organizations)**
- 971 Comments (+57 identical, duplicates)
  - 70 High
  - 170 Medium
  - 207 Low
  - 524 Editorial
Non-Concur Comments

0 Non-concur comments received
Conclusions

SC-186 has reached consensus on the following documents:

- DO-328B - Safety, Performance, and Interoperability Requirements for Airborne Spacing – Flt Deck Interval Management
- DO-361A – MOPS for Flight-deck Interval Management (FIM)

SC-186 recommends PMC approve documents for release to RTCA for publication
SC-186 Upcoming Work

Deliverable Review

- Aircraft Surveillance Applications (ASA) MOPS, DO-317C – May 2020
- MOPS for Flight-deck Interval Management (FIM), DO-361A, Change 1 – August 2020
- 1090 MHz ADS-B Out MOPS, DO-260C – August 2020
- Universal Access Transceiver (UAT) ADS-B MOPS, DO-282C – August 2021
Agenda Items 3C, 3D, and 3E
SC-222 Updates to
DO-343 MASPS, DO-262 MOPS, and
DO-210D MOPS
for AMS(R)S Satellite Services Aeronautical Safety

PMC Meeting March 26, 2020

E.F.C. LaBerge, Chair

RTCA Paper Nos. 032-20/PMC-1977, 033-20/PMC-1978, and
019-20/PMC-1971
Current ToR (Dec 2019)

- Joint effort between SC-222 and EUROCAE WG-82, chaired by Armin Schlereth of DFS
- Revised DO-343 and DO-262 due to FRAC in Dec 2019
  - Update of DO-343B and its Appendix B to reflect new frequency and power plan for ATCt and LTE and new System Specific Attachment(s) from Iridium.
  - Update of DO-262D for SBB terminals for immunity to LTE and ATCt blocking interference and to include Technique Specific Normative Appendix from Iridium
  - Update of legacy DO-210D (Classic Aero) for SBB terminals for immunity to LTE and ATCt blocking interference
- Previous approved changes to these documents were in March 2019.
Current Request for Approval

- DO-343C  “Minimum Aviation System Performance Standard For AMS(R)S Data and Voice Communications Supporting Required Communications Performance (RCP) And Required Surveillance Performance”
  - It’s an “C” (instead of Change 1)...
  - ...in order to maintain compatibility with the WG-82 Terms of Reference, which called for a letter revision and were difficult to change.
Development and FRAC for DO-343C

- Andrew Ives of Inmarsat oversaw the revision and editing process
- ...with contributions from Sachin Chhiber of Ligado
- Multiple versions, each with formal comments
- Final FRAC version had 38 comments
  - 38 were resolved
- Andrew assisted with final editing
Current Request for Approval

- DO-262E “Minimum Operational Performance Standards for Avionics Supporting Next Generation Satellite Systems (NGSS)” contains the equipment standards to implement the system requirements of DO-343C
  - It, too, is a letter revision for the same reason
  - Parallel and coordinated effort with the changes to DO-343C
  - Activity on inclusion of requirements for LTE/Ligado led by Richard Tapp of Honeywell
Development and FRAC

- Richard Tapp of Honeywell led the revision and editing process
- Multiple versions, each with formal comments and resolution
- Final FRAC version had 84 comments
  - 84 were resolved
  - Final resolution was administrative
- Richard assisted with final editing
Current Request for Approval

- DO-210D, Change 5 “Minimum Operational Performance Standards for Geosynchronous Orbit Aeronautical Mobile Satellite Services (AMSS) Avionics)” contains the equipment standards for the legacy Inmarsat Classic Aero

- It is not a joint document with Eurocae.
  - It is Change 5, because the document is old and only minimal maintenance is required.
  - Parallel and coordinated effort with the changes to DO-262E
  - Activity on inclusion of requirements for LTE/Ligado led by Richard Tapp of Honeywell
Richard Tapp of Honeywell led the revision and editing process

- Multiple versions, each with formal comments and resolution
- Final FRAC version had 71 comments
  - 71 were resolved
  - 1 comment was added during the resolution and it, too was resolved.
- Richard assisted with final editing


**Recommended Action**

- SC-222 Recommends approval
  - DO-343C
  - DO-262E
  - DO-210D, Change 5
But where’s Iridium

- This set of documents was supposed to include the system-specific appendices related to Iridium Certus.

- At the December 2019 Meeting SC-222 decided that:
  - The interference model related to the effects of Inmarsat on Iridium Certus was not mature enough to publish.
  - The Iridium MASPS material was not sufficiently mature to publish.
  - The Iridium MOPS material was more mature, but could not be brought forward with a simultaneous MASP.

- Therefore, the Iridium material was not approved for FRAC...

- ...and will be included in the material for 2021 publication (in accordance with Eurocaee TOR)
Continuing/Future Work

- Continuing work on new Iridium material
  - MOPS Material is in good shape
  - MASPS Material is improving, but hasn’t been reviewed since December
  - Model Material is improving, but hasn’t been reviewed since December.
- The remaining content has to do with SATCOM Performance Class A below enroute airspace...
- ...and this work is well behind schedule.
- We seem to be on schedule for December 2020 start of FRAC, leading to approval in March 2020 documents.
- SC-222 has been working with SC-228 as part of ICC effort. Looking at L-Band AMS(R)S for UAS C2 link
Agenda Item 3F and 3G:
Approve DO-365A and DO-381 FRACs

PMC Meeting – March 26, 2020
RTCA Paper Nos. 045-20/PMC-1986 and 031-20/PMC-1976
John R. Moore, SC-228 Co-Chairman
DO-365A DAA MOPS FRAC – Request PMC Approval to Publish
DO-365A New Content

• Rev A has increased the scope of operations that DAA is suited for
  • Extended operations in D, E, and G (previously transit)
  • Takeoff/Landing operations in Class C, D, E, and G
  • Transit through Class B
  • Primarily changes affect the OSED and limitations statements

• Rev A adds support for ground-based non-cooperative surveillance
  • Allows for ground-based surveillance systems (GBSS) to be used en-route and in terminal volumes

• Rev A adds terminal alerting criteria
  • Reduces the well clear volume to address visual pattern operations
  • Limits the maneuver guidance provided to address terrain/obstacle risk
DO-365A FRAC Results

- Held two FRAC periods
- First FRAC resulted in 1242 comments
- Second FRAC comments summarized in table
- Main Issues Addressed
  - Equipment Class Structure
  - Terminal Area Activation
  - Guidance for Departure
  - TCAS Interoperability
  - RADAR Special Cases
  - Guidance Requirements Structure
  - Test Procedures

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Concur</td>
<td>44</td>
</tr>
<tr>
<td>High</td>
<td>132</td>
</tr>
<tr>
<td>Medium</td>
<td>60</td>
</tr>
<tr>
<td>Low</td>
<td>52</td>
</tr>
<tr>
<td>Editorial</td>
<td>83</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>371</strong></td>
</tr>
</tbody>
</table>

Comments
- Non-Concur
- High
- Medium
- Low
- Editorial
Request PMC approval to publish and distribute DO-365A
DO-381 Ground Based Surveillance System (GBSS) MOPS – Request PMC Approval to Publish
DO-381 Content

• Functional and Performance requirements for a 3D non-cooperative ground-based surveillance system to provide tracks of Part 91 aircraft in en-route and terminal environments (i.e. NOT small UAS)

• Is expected to be met initially by 1 or more ground-based 3D radars such as the Skyler system from Raytheon, but the standard was written to allow other non-cooperative systems as well.

• Future work may be needed to address the limitations of other sensors such as EO/IR.
  • SC-228 may request that in future TOR.
DO-381 FRAC Results

- FRAC Comments summarized in table
- Main Issues Addressed
  - Clarified terminal coverage volume
  - Clarified language regarding intent to track Part 91 aircraft vs. small UAS
  - Modified figures for consistency with DO-365A
  - Clarified false track language
  - Clarified language around location of Control Station
  - Clarified language around how the Operational Volume is communicated to the UAS operator
  - Clarified required outputs

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Concur</td>
<td>46</td>
</tr>
<tr>
<td>High</td>
<td>75</td>
</tr>
<tr>
<td>Medium</td>
<td>73</td>
</tr>
<tr>
<td>Low</td>
<td>66</td>
</tr>
<tr>
<td>Editorial</td>
<td>101</td>
</tr>
<tr>
<td>TOTAL</td>
<td>361</td>
</tr>
</tbody>
</table>
Request PMC approval to publish and distribute DO-381
Agenda Item 4:
ICC Report to the PMC

None for March 26, 2020
Agenda Items 5E, 5G, 5H, 5I, 5J, 5K, and 5L
Actions Closed

Karan Hofmann, PMC Secretary
Agenda Item 5A: Investigate Pulling Requirements from Documents and making available in Separate Format

Karan Hofmann, RTCA Program Director
Agenda Item 5B: Conduct Internal (FAA) 4D TBO Coordination

Doug Arbuckle
FAA
Agenda Item 5C: After FAA Coordination, Ad Hoc 4D TBO with SC-227 and SC-186

Doug Arbuckle
FAA
Agenda Item 5D: Ad Hoc to Investigate possible sMOPS Concept

Al Secen, RTCA Vice President, Aviation Technology and Standards
Agenda Item 5F:
Document Configuration Management Procedure/Process

Al Secen, RTCA Vice President, Aviation Technology and Standards
5L & M: New Special Committee SC-239

PMC Meeting – March 26, 2020

RTCA Paper No. 068-20/PMC-1996
Low Range Radar Altimeter Survey of Interest

- Call Notice sent February 4\textsuperscript{th}
- Received positive responses from:
  - Aerospace Vehicle Systems Institute
  - Air Line Pilot Association
  - Airbus
  - American Airlines
  - Aircraft Owners and Pilots Association
  - Aviation Spectrum Resources, Inc.
  - Bell Helicopter Textron
  - Cessna Aircraft Company
  - Collins Aerospace
  - Federal Aviation Administration
  - FreeFlight Systems
  - Garmin
  - Honeywell Aerospace
  - NeuralVol Inc
  - The Boeing Company*
  - Transport Canada

* Signed Letter of Support
Coordination with EUROCAE

- WG-119 Radar Altimeter Strategy TOR was approved February 6th

- Target Date December 2022

- Specifies to work jointly with SC-239
  - Current documents DO-155 and ED-30 are not technically equivalent
  - Goal: achieve technically equivalent documents which supersede current versions
SC-239 Activity

- First meeting set for June 3-5, 2020 at RTCA
- Designated Chairman and GAR
- Still soliciting a Secretary
- Propose review of draft TOR with the entire group
- Align delivery dates
Agenda Item 5N: Copy of RTCA/EUROCAE Joint Procedures to PMC Members

Karan Hofmann, RTCA Program Director
Agenda Item 6A: SC-135 Environmental Test TOR Update

PMC Meeting – March 26, 2020
RTCA Paper No. 044-20/PMC-1985
Summary of Committee Current Scope

The SC-135 committee has been working on changes for DO-160H. Current DO-160H FRAC completion date has been pushed to 12/2024.

The SC-135 committee has been heavily involved with the creation and approval of the new DO-380, Environmental Conditions and Test Procedures for Ground Equipment document. This is to support SC-228, the FAA, and the UAS industry.
Current Committee Leadership

- Brad Green of Eagle Picher Technologies LLC has been the Chair of SC-135 and will continue on the committee as the Co-Chair of SC-135.

- Kyle McMullen of the National Institute of Aviation Research (NIAR) at Wichita State University has been added as a Co-Chair of SC-135.

- Jake VanDyke of Honeywell is and will remain Secretary of SC-135.
Current Committee Participation

- We have between 30-40 people at the working group meetings.
- We have between 40-50 people at the plenary meetings.
Changes to TOR

The new DO-380 document has been approved at FRAC and will be published, pending PMC approval, in June 2020. This is a major accomplishment considering the size of the task and the number of participants on the sub-group committee.

Two environments for DO-380 did not make the initial release: Earthquake and Direct Effects of Lightning. These are to be addressed in DO-380A by June 2021.
Changes to TOR

- Revision H of DO-160 has been pushed out to December 2024. There are still several changes to finalize on the committee and with Eurocaee. Due to this, the task of producing DO-380, and revising DO-380 to DO380A, the committee needs additional time.

- Revision A of DO-357 (User Guide for DO-160H) has been pushed out to December 2024 to align with DO-160H.
Changes to TOR

- Revision B of DO-380 has been scheduled for December 2025. Almost all of the work performed on DO-380 has been done with SC-135 members. Once DO-380 gets out into the UAS industry, the committee expects feedback and change requests from the industry.
Changes to TOR

It is recommended to remove the document DO-160 – Bob Saffel’s Document: Applying RTCA DO-160() Environmental Conditions and Test Procedures for Airborne Equipment from the TOR. While this document does have very useful guidance, it should not be a requirement for revisions to the other documents in the TOR.
Agenda Item 6B:
SC-147 TORs Update Proposal
RTCA Paper No. 030-20/PMC-1975

J. Stuart Searight, FAA/ANG
Ruy Brandao, Honeywell, Inc
Background

The FAA has funded research, testing, and preliminary development of an ACAS X variant for smaller UAS, ACAS sXu.

From the sXu ConUse: "The ACAS Xu for smaller UAS (sXu) concept is an extension of the ACAS Xu concept, beyond the scope of the Phase 1 and 2 DAA MOPS, intended to provide a DAA capability for sUAS operating BVLOS. sXu is a modular, tunable, and scalable solution well suited for a problem space expected to involve a broad range of surveillance sources and sUAS platform maneuver capabilities."

Preliminary standardization of system has occurred in ATSM for lower risk airspaces.

Stakeholders recognize the need for more formal and rigorous certification process for more complex airspaces and operations.

ACAS sXu standard will be tightly aligned to SC-228 Phase 3 DAA MOPS.

- Current planning is for all system requirements to reside in single ACAS sXu MOPS rather than split between two documents like was done for ACAS Xu and DAA Phase 2
ACAS sXu will provide a DAA capability for smaller UAS (sUAS), which are outside of the scope of the current Phase 2 SC-228 DAA MOPS, and operating Beyond Visual Line of Sight (BVLOS).

- Designed to be flexible in adapting to airspace beyond the existing Part 107 restrictions;
- Complementary to the UAS Traffic Management (UTM) concept, but can also support operations outside of UTM if allowed.
- Allows for various equipage combinations; the logic as well as surveillance sources can either be located entirely on ownship, entirely on the ground (with avoidance commands uplinked to the vehicle) or split between ownship and the ground.
TOR Additions: SC-228/DAA Coordination

- SC-147 will be responsible for the core surveillance and DAA algorithms, and will work in a tightly coordinated fashion with SC-228 on other aspects of the system for which the expertise resides in that committee.
- SC-228 subgroups will potentially be responsible for certain sections or subsections of the sXu MOPS as deemed appropriate by the leadership of both committees.
- A Management Group of leaders from SC-228, SC-147, and FAA will be formed to ensure that the development of these MOPS is properly coordinated and aligned with Phase 3 DAA scope and concepts
  - Leadership currently agrees there is no need for an ISRA for this coordination.
SC-147 Deliverables and Schedules

- Interoperability MASPS for Collision Avoidance Systems: December, 2020
  - Was December, 2019
- ACAS Xu MOPS: December, 2020
  - Currently undergoing FRAC/Open Consultation
- ACAS sXu: December, 2022
Conclusion

Inclusion of ACAS sXu in TORs is responding to interest and desires of UAS community

With ACAS Xu undergoing FRAC and scheduled for joint SC-147/WG75 approval in June, this is appropriate time to add sXu to the committee’s workplan.

Request Proposed TOR revisions be approved*

* Support incorporating all feedback received by Clay Barber’s review of proposed TORs
Agenda Item 6C:
Special Committee 206 (SC-206) and Working Group 76 (WG-76)

Aeronautical Information and Meteorological Data Link Services

Proposed Terms of Reference Revision 16
March 26, 2020
RTCA Paper No. 071-20/PMC-1998

Eldridge Frazier, FAA, Government Authorized Representative, and SG-6 Co-Task Lead
SC-206 Overview

Established in 2005 to develop standards for Aeronautical Information Services (AIS) & Meteorological Data Link Services

Leadership
- **Co-Chairs:** Capt. Rocky Stone (United Airlines) & Mark Libant (NAV Canada)
- **Government Authorized Representative:** Eldridge Frazier (ANG-C61 Aviation Research Branch)
- **Secretary:** Joe Bracken (AvMET)
- **Program Director:** Karan Hofmann
- **SG1:** (MET/Wake/ATM) Ed Johnson (FAA)
- **SG5:** (FIS-B UAT MOPS) John Ferrara (GA Pilot Consultant)
- **SG6:** Eldridge Frazier

<table>
<thead>
<tr>
<th>Approved Deliverables</th>
<th>PMC Date</th>
<th>Status</th>
<th>DOC #</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSED for AIS / MET Data Link Services</td>
<td>Dec 2007</td>
<td>Released</td>
<td>DO-308</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ED-151</td>
</tr>
<tr>
<td>SPR for AIS / MET Data Link Services</td>
<td>Oct 2010</td>
<td>Released</td>
<td>DO-324</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ED-175</td>
</tr>
<tr>
<td>OSED for Wake Vortex, Air Traffic Management &amp; Weather Applications</td>
<td>Jun 2012</td>
<td>Released</td>
<td>DO-339</td>
</tr>
<tr>
<td>Concept of Use for AIS / MET Data Link Services</td>
<td>Jun 2012</td>
<td>Released</td>
<td>DO-340</td>
</tr>
<tr>
<td>AIS / MET Data Link Services Delivery Architecture Recommendations</td>
<td>Dec 2013</td>
<td>Released</td>
<td>DO-349</td>
</tr>
<tr>
<td>MIS for Automated Meteorological Transmission (AUTOMET)</td>
<td>Jun 2014</td>
<td>Released</td>
<td>DO-252A</td>
</tr>
<tr>
<td>MOPS FIS-B with UAT</td>
<td>Mar 2015</td>
<td>Released</td>
<td>DO-358</td>
</tr>
<tr>
<td>MASP5 for Aeronautical Information/Meteorological Data Link Services</td>
<td>Dec 2016</td>
<td>Released</td>
<td>DO-364</td>
</tr>
<tr>
<td>Guidance for the Usage of Data Linked Forecast and Current Wind Information in Air Traffic Management (ATM) Operations</td>
<td>Jul 2017</td>
<td>Released</td>
<td>DO-369</td>
</tr>
<tr>
<td>Guidelines for In Situ Eddy Dissipation Rate (EDR) Algorithm Performance</td>
<td>Dec 2017</td>
<td>Released</td>
<td>DO-370</td>
</tr>
<tr>
<td>MOPS FIS-B with UAT</td>
<td>Jun 2019</td>
<td>Released</td>
<td>DO-358A</td>
</tr>
</tbody>
</table>
# SC-206 Overview

Established in 2005 to develop standards for Aeronautical Information Services (AIS) & Meteorological Data Link Services

## Active Organizations

1. Air Line Pilots Association  
2. AvMet Applications  
3. Boeing  
5. Dynamic Aerospace, Inc.  
6. European Meteorological Services Network  
7. FAA  
8. Foreflight  
9. Garmin  
10. Harris Corporation  
12. The MITRE Corporation  
13. MIT Lincoln Laboratory  
14. NASA  
15. NATCA  
16. NAV CANADA  
17. Rockwell Collins, Inc.  
18. Thales  
19. U.S. Air Force  
20. United Airlines, Inc.

## Current Planned Deliverables

<table>
<thead>
<tr>
<th>Current Planned Deliverables</th>
<th>PMC Date</th>
<th>Status</th>
<th>DOC #</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOPS FIS-B with UAT</td>
<td>Dec 2020</td>
<td>In Works</td>
<td>DO-358B</td>
</tr>
<tr>
<td>MASPS for Aeronautical Information/Meteorological Data Link Services</td>
<td>Dec 2021</td>
<td>In Works</td>
<td>DO-364</td>
</tr>
</tbody>
</table>
TOR Changes

• Change the completion date for the “Minimum Operational Performance Standards for Flight Information Services Broadcast with Universal Access Transceiver” by 6 months
• Need more time due to:
  ➢ Time required for Harris to design the Temporary Restricted Area and Temporary Military Operating Area
  ➢ Limited participation
  ➢ FRAC release scheduled for June 2020, correcting errors or deficiencies in DO-358A during the course of the DO-358B update.
TOR Changes

- Change the completion date for the “Minimum Aviation System Performance Standards for Aeronautical Information / Meteorological Data Link Services” by 12 months
- Change from quality of AI / MET information to information from approved source
- Need more time due to:
  - Time to develop service descriptions
  - Limited participation developing service descriptions and consistency of attendance
  - FRAC release scheduled for September 2021
Questions?
Agenda Item 6D:
SC-227 Terms of Reference Change

PMC Meeting – March 26, 2020
RTCA Paper No. 056-20/PMC-1995
Summary of Committee Current Scope

In June 2018, PMC accepted requests from SC-227 to remain monitor status defined in new ToR

Revision 9 of the ToR directed the committee monitoring EUROCAE WG-107 work toward new DME facility standards

- Offer a more robust DME facility to serve European airspace need to support reversion to RNAV ops when GNSS is lost for any reason
- Ensure backward compatibility with existing DME receiver and antenna standards – tacit aircraft use of new & existing Annex DME facilities

WG-107 meeting invitations and minutes have been routinely posted to the SC-227 workspace for review

- Some members of SC-227 participate directly in WG-101 meetings
Current Committee Leadership

- Chair – Mr. Michael Cramer, The MITRE Corporation
- Government Authorized Representative – Mr. Barry Miller, AIR-6B1
- Secretary – Mr. Dave Nakamura, The MITRE Corporation
Current Committee Participation

SC-227 membership updated prior to February 27 plenary:
- Questionnaire to the full legacy roster asking if members planned to continue participation
- Email to the full RTCA membership asking interested parties to join committee


All lines of business in the FAA will support SC-227: AIR, AFS, ATO
Changes to TOR

MASPS DO-236D & MOPS DO-283C:

- Develop new standards for DME navigation to offer more resilient RNP capability - ECD: 2023.
- Eliminate inconsistencies between existing RTA & TOAC requirements vs. those for FIM - work with SC-186 (need for ISRA TBD) - ECD: 2023.

MOPS DO-257C:

- Develop the first public standards for presentation of data derived charts on electronic displays in the flight deck – ECD 2024
Agenda Item 6E:
SC-228 Chair Report to PMC

PMC Meeting – March 26, 2020
RTCA Paper No. 080-20/PMC-2002
John R. Moore, SC-228 Co-Chair
Topics for Discussion

- Phase 3 TOR Revision Status
  - Additional Plenary Meeting Scheduled

- DO-362A Delay
  - Risk described at last PMC has been realized.
Phase 3 Planning Status

- Series of stakeholder telecons have been held since new year
  - Progress has been slower than anticipated toward a FRAC draft.
  - Two new topics beyond natural C2 and DAA scope were first proposed.
    - New working group to draft design guidance and procedures to follow when a UA goes lost link.
    - New working group to draft navigation performance requirements for UA operating Part 91.
  - Additional new topics have been proposed, increased diversity in stakeholder group.

- Related Terms of Reference (TOR) Update Schedule / Process
  - Addition of a new Plenary Meeting (not just delay of the one currently planned)
Phase 2 TOR FRAC Approval Dates

Plenary

**Working Group 1 Documents**
- Ground-based Non-Cooperative Radar MOPS
- DAA MOPS, DO-365, Rev A
- Airborne EO/IR Sensor MOPS
- Air-to-Air Radar MOPS, DO-366, Rev A
- DAA MOPS, DO-365, Rev B

**Working Group 2 Documents**
- C2 Link System MASPS, DO-377
- C2 Link System MASPS, DO-377, Rev A
- C2 Link System MASPS (SATCOM)
- C2 Data Link MOPS (Terrestrial), DO-362, Rev A

Special Committee 228 Chair Report
Agenda Item 6F: SC-231 TAWS

Presentation to PMC
March 26, 2020
RTCA Paper No. 072-20/PMC-1999
SC-231 TAWS

- SC-231’s TOR requested the committee to consider NTSB recommendations A-17-035 & A-18-015, along with GAJSC recommendations and report back to the PMC by May 2020.

- To date, the GAJSC has provided the final draft of the safety enhancements relevant to the committee for review. However, the GAJSC document has not been released for publication.

- RTCA policy does not allow a committee to reference an unpublished document in a formal publication.

**Question for the PMC:** Should the committee proceed with its current due date without official publication of the GAJSC recommendations included in the white paper or request an extension until which time the GAJSC recommendations have been officially released?
Agenda Item 6G:
Possible Update to DO-277A

Presentation to PMC
March 26, 2020
RTCA Paper No. 078-20/PMC-2000
Agenda Item 6-H: New Committee Request: Topics on Software Advancement

March 26, 2020
RTCA Paper No. 079-20/PMC-2001
Background on New Activity

- In November 2019 at the EUROCAE/RTCA Coordination meeting in St. Denis, France, RTCA and EUROCAE discussed the path forward for the topics from the FAS UAS Ad Hoc
- EUROCAE Presented the proposed new committee, WG-117 Topics on Software Advancement, to both the TAC and the Council and received approval
- RTCA has created a TOR with identical content asking for the PMC to approve its creation
Scope of New Committee Work

Two Deliverables are in the current Terms of Reference:

1. Software Considerations in Low Risk Applications, Equipment Certification and Approvals
2. Integration of COTS, Open Source and Service History into Software

Aggressive schedule is requested from the committee
Support Received

7 Letters of support have been received from:

- Northrup Grumman (providing chair)
- NUAIR
- Mannarino Systems
- ENSCO
- Astronautics
- Collins Aerospace
- Honeywell
Support Received (continued)

Additional support has been expressed from:


- These companies specifically expressed support for the committee and that they would provide members to the Special Committee

- Currently expect a roster of around 40 to begin the work
Proposed Leadership

- Dr. Steve Cook, of Northrup Grumman, is the suggested chair of SC-XXX
- The secretary and chair for EUROCAE are expected to be selected at the first meeting of WG-117 on May 19-20, 2020 at the EUROCAE facilities in St. Denis, France
- A Government Authorized Representative has not yet been identified
Proposed Use
Request for PMC Approval
Agenda Item 6I: Discussion FAA Actions on Previously Published Documents
RTCA Paper No. 034-20/PMC-1979

March 26, 2020
<table>
<thead>
<tr>
<th>RTCA Document</th>
<th>Developed By</th>
<th>FAA Guidance</th>
<th>Approval Date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTCA DO-385, MOPS for ACAS Xa/o</td>
<td>SC-147</td>
<td>TSO-C219</td>
<td>02/28/2020</td>
<td>Performance standard and installation guidance for Class 1 ACAS X (basic collision avoidance functionality) and Class 2 ACAS X (closely spaced runway operations and do not alert)</td>
</tr>
<tr>
<td>RTCA Document</td>
<td>Developed By</td>
<td>FAA Guidance</td>
<td>Planned Release Date</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DO-373, MOPS for GNSS Active Antenna in the L1/E1 and L5/E5A Bands</td>
<td>SC-159</td>
<td>TSO-C215</td>
<td>TBD</td>
<td>New TSO. (Need DO-292A (2021) for interference environment)</td>
</tr>
<tr>
<td>DO-315A, DO-359, MASPS for SVGS, MASPS for ASA-SVS</td>
<td>SC-213</td>
<td>AC 20-185A</td>
<td>TBD</td>
<td>Consolidates synthetic vision (SVS), synthetic vision guidance system (SVGS), and airplane state awareness guidance</td>
</tr>
<tr>
<td>DO-315A, MASPS for EVS, SVS, CVS, EFVS</td>
<td>SC-213</td>
<td>AC 20-167B</td>
<td>TBD</td>
<td>Consolidates enhanced and combined vision system airworthiness criteria. No new criteria.</td>
</tr>
<tr>
<td>DO-356A, Airworthiness Security Methods and Considerations</td>
<td>SC-216</td>
<td>AC -XX</td>
<td>TBD</td>
<td>Rule draft is currently in internal FAA comment; AC to follow</td>
</tr>
<tr>
<td>DO-355A, Information Security Guidance for Continuing Airworthiness</td>
<td>SC-216</td>
<td>AC-XX</td>
<td>TBD</td>
<td>Revision has been completed; currently in public comment resolution</td>
</tr>
<tr>
<td>DO-311A, MOPS for Rechargeable Lithium Batteries and Battery Systems</td>
<td>SC-225</td>
<td>AC 20-184A</td>
<td>TBD</td>
<td>Installation standard for rechargeable lithium batteries</td>
</tr>
<tr>
<td>DO-365, Detect and Avoid MOPS Phase I.</td>
<td>SC-228 WG-1</td>
<td>AC 20-DAA</td>
<td>TBD</td>
<td>Airworthiness installation of a UAS DAA system</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------</td>
<td>-----------</td>
<td>-----</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>DO-366, MOPS for Air-to-Air Radar for Traffic Surveillance</td>
<td>SC-228, WG-1</td>
<td>TSO-C211b</td>
<td>TBD</td>
<td>DAA supports ACAS Xu, Low Swap Non-Cooperative (LSNC), and Electro-Optical</td>
</tr>
<tr>
<td>DO-XXX, EO-IR MOPS</td>
<td>SC-228 WG-1</td>
<td>TSO-CXXX</td>
<td>TBD</td>
<td>Adds EO/IR Sensor to DAA System</td>
</tr>
<tr>
<td>DO-XXX, Ground Based Surveillance System MOPS</td>
<td>SC-228, WG-1</td>
<td>TSO-CXXX</td>
<td>TBD</td>
<td>Adds GBSS Sensor to DAA System</td>
</tr>
<tr>
<td>DO-366A, Air-to-Air Radar(ATAR) MOPS</td>
<td>SC-228, WG-1</td>
<td>TSO-C212a</td>
<td>TBD</td>
<td>Adds ATAR Classes to support DAA ACAS Xu and DAA LSNC</td>
</tr>
<tr>
<td>DO-227A, MOPS for Non-Rechargeable Lithium Batteries</td>
<td>SC-235</td>
<td>AC 20-192</td>
<td>TBD</td>
<td>Airworthiness installation criteria for non-rechargeable lithium batteries</td>
</tr>
<tr>
<td>DO-385 MOPS for ACAS $X_a$ System and ACAS $X_{ao}$ Functionality (Class 1 ACAS X &amp; Class 2 ACAS X)</td>
<td>SC-147</td>
<td>AC</td>
<td>TBD</td>
<td>Performance standard and installation guidance for Class 1 ACAS X (basic collision avoidance functionality) and Class 2 ACAS X (closely spaced runway operations and do not alert)</td>
</tr>
<tr>
<td>DO-201B – User Requirements for Navigation Data</td>
<td>SC-217</td>
<td>AC 20-153B Change 1</td>
<td>TBD</td>
<td>Updates navigation data quality requirements (DQRs).</td>
</tr>
<tr>
<td>DO-317B Change 1</td>
<td>SC-186</td>
<td>Note to Manufacturers for TSO-C195b</td>
<td>TBD</td>
<td>Note to Manufacturers will post on FAA RGL with TSO-C195b, announcing availability of MOPS change.</td>
</tr>
<tr>
<td>DO-262D MOPS for Next Gen Satellite Systems</td>
<td>SC-222</td>
<td>None</td>
<td>N/A</td>
<td>TSO revision will synch with subsequent MOPS update</td>
</tr>
<tr>
<td>New C2 Link MASPS</td>
<td>SC-228 WG-2</td>
<td>AC 20-187A</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>DO-358A – MOPS FIS-B</td>
<td>SC-206</td>
<td>TSO-C157c</td>
<td>09/2020</td>
<td></td>
</tr>
<tr>
<td>Document</td>
<td>SC-206</td>
<td>TBD</td>
<td>N/A</td>
<td>FAA/Stakeholders discussion to be held at Turbulence workshop Oct 2020</td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
<td>-----</td>
<td>--------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>DO-370, Guidelines for the In Situ Eddy Dissipation Rate (EDR) Algorithm Performance</td>
<td>SC-206</td>
<td>TBD</td>
<td>N/A</td>
<td>Incorporates clarification memo from Dec 2017 and policy for partial FANS-1/A installations</td>
</tr>
<tr>
<td>Multiple RTCA data comm references from AC 20-140C</td>
<td>SC-214</td>
<td>AC 20-140D</td>
<td>TBD</td>
<td>Incorporates clarification memo from Dec 2017 and policy for partial FANS-1/A installations</td>
</tr>
<tr>
<td>DO-281C, MOPS for aircraft VDL Mode 2 Physical Link and Network Layer</td>
<td>SC-214</td>
<td>TSO</td>
<td>2021</td>
<td>SC-214/WG-92/AEEC DLK recommends TSO/ETSO-C160a not be revised until publication of DO-281D/ED-92D planned in late 2020</td>
</tr>
</tbody>
</table>
## RTCA Documents Pending PMC Approval

<table>
<thead>
<tr>
<th>RTCA Document</th>
<th>Developed By</th>
<th>Planned FAA Guidance</th>
<th>Planned Release Date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-328B – Safety, Performance and Interoperability Requirements (SPR) for Airborne Space – Flight Deck Interval Management (ASPA-FIM)</td>
<td>SC-186</td>
<td>N/A</td>
<td>N/A</td>
<td>This document is referenced in DO-317C. TSO-C195c requires that ADS-B ASA systems and equipment must meet the Minimum Performance Standards (MPS) of DO-317C.</td>
</tr>
<tr>
<td>DO-361A – MOPS for FIM</td>
<td>SC-186</td>
<td>N/A</td>
<td>N/A</td>
<td>New TSO to show new DLNA (amplifier) which seems optional as of now.</td>
</tr>
<tr>
<td>DO210D Change 5 – MOPS for AMISS, Aeronautical Mobile Satellite (Route) Services AMS(R)S</td>
<td>SC-222</td>
<td>TSO-132b</td>
<td>TBD</td>
<td>MOPS changes are only on INMARSAT specific appendix.</td>
</tr>
<tr>
<td>DO-262E Mops for NGSS, Aeronautical Mobile Satellite (Route) Services AMS(R)S</td>
<td>SC-222</td>
<td>TSO-C159e</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>DO-343C – MASPS for AMS(R)S and RCP</td>
<td>SC-222</td>
<td>None</td>
<td>N/A</td>
<td>Minor change to SATVOICE dialing operation, which is not part of AC 20-150B.</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------</td>
<td>------</td>
<td>-----</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DO-365A – MOPS for Detect and Avoid (DAA) Systems</td>
<td>SC-228</td>
<td>TSO-C211a</td>
<td>TBD</td>
<td>DAA Supports GBSS and Terminal Operations</td>
</tr>
<tr>
<td>DO-381 (New Document) – MOPS for Ground-based Surveillance System (GBSS) for Traffic Surveillance</td>
<td>SC-228, WG-1</td>
<td>TSO-CXXX</td>
<td>TBD</td>
<td>Adds GBSS Sensor to DAA Systems</td>
</tr>
</tbody>
</table>
DISCUSSION
6-J: Discussion
RTCA PMC
March 26, 2020
Special Committees – Chairmen Reports
RTCA Paper No. 035-20/PMC-1980
Agenda Item 6-K: Discussion
RTCA PMC
March 26, 2020
Report on RTCA / EUROCAE Cooperation to PMC
RTCA Paper No. 036-20/PMC-1981
Updates on EUROCAE Committee Coordination

- RTCA and EUROCAE will continue to make use of remote meetings to facilitate progress on the documents.
- Joint meetings will be scheduled to be the least disruptive across time zones, but we ask for your patience and flexibility.
- If you feel the execution of the meetings can be improved, or you have any questions or concerns, reach out to your TPM/PD.
## New EUROCAE Documents

<table>
<thead>
<tr>
<th>Standard</th>
<th>Title</th>
<th>Working Group</th>
<th>Date of Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-020</td>
<td>Consideration for Hydrogen Fuel Cells in Airborne Applications</td>
<td>WG-80</td>
<td>December 2019</td>
</tr>
</tbody>
</table>
New Committees at EUROCAE

- **WG-117 Topics on Software Advancement**
  - TOR for WG-117 is available
  - Requested to be joint with RTCA
  - Kick off May 2020

- **WG-118 Crash-protected and lightweight Flight Recorders**
  - Plan is to update ED-112B by Mid 2022

- **WG-119 Radar Altimeters**
  - TOR for WG-119 is available
  - Requested to be joint with RTCA SC-239
  - Kick of June 2020
EUROCAE TAC Meetings in 2020

- TAC#81      28 April 2020 – Virtual Meeting
DISCUSSION
Agenda Item 6-L: Discussion
RTCA PMC
March 26, 2020
RTCA Drafting Guides
Agenda Item 7A: RTCA 2020 Award Nominations
<table>
<thead>
<tr>
<th>Document Number and Title</th>
<th>SC</th>
<th>Award: Outstanding Leadership</th>
<th>Award: Significant Contributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change 1 to Appendix U (MOPS for Aircraft Surveillance Applications (ASA) System)</td>
<td>SC-186</td>
<td>Miles Bellman, Volpe National Transportation Systems Center</td>
<td>Jason Lu, Volpe National Transportation Systems Center Katie Bernazzani, Department of Transportation</td>
</tr>
<tr>
<td>AMS(R)S Data and Voice Communications Supporting Required Communications Performance (RCP) and Required Surveillance Performance (RSP)</td>
<td>SC-222</td>
<td>Armin Schlererth, DFS GmbH</td>
<td>Alan Schuster-Bruce, Inmarsat (London, UK)</td>
</tr>
<tr>
<td>Minimum Operational Performance Standards for Avionics Supporting Next Generation Satellite Systems</td>
<td>SC-222</td>
<td>None</td>
<td>Radek Zaruba, Honeywell (Brno, Czech Republic)</td>
</tr>
<tr>
<td></td>
<td>Title</td>
<td>Table Number</td>
<td>Authors</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------</td>
<td>--------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6</td>
<td>Guidance for the Development of Portable Electronic Devices (PED) Tolerance for Civil Aircraft</td>
<td>SC-234</td>
<td>Brian Verna, Federal Aviation Administration</td>
</tr>
<tr>
<td>7</td>
<td>Minimum Operational Performance Standards for GPS Local Area Augmentation System Airborne Equipment</td>
<td>SC-159</td>
<td>Daniel Domey, Esterline CMC Electronics</td>
</tr>
<tr>
<td>8</td>
<td>Minimum Operational Performance Standards (MOPS) for Flight Information Services – Broadcast (FIS-B) with Universal Access Transceiver (UAT)</td>
<td>SC-206</td>
<td>Paul Freeman, L3 Harris, John Ferrara, John Ferrara Consulting, Eldridge Frazier, Federal Aviation Administration</td>
</tr>
<tr>
<td>9</td>
<td>Minimum Operational Performance Standards (MOPS) for Flight Information Services – Broadcast (FIS-B) with Universal Access Transceiver (UAT) Supplement</td>
<td>SC-206</td>
<td>Paul Freeman, L3 Harris, John Ferrara, John Ferrara Consulting, Eldridge Frazier, Federal Aviation Administration</td>
</tr>
<tr>
<td>10</td>
<td>MASPS for Coexistence of Wireless Avionics Intra-Communication within 4200-4400 MHz</td>
<td>SC-236</td>
<td>Radek Zakrzewski, United Technologies Corporation</td>
</tr>
<tr>
<td></td>
<td>Title</td>
<td>SC</td>
<td>Author(s)</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------</td>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Aviation Profiles for Internet Protocol Suite</td>
<td>SC-223</td>
<td>Brent Phillips, Federal Aviation Administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Minimum Operational Performance Standards for Airborne Collision</td>
<td>SC-147</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Avoidance System X (ACAS X) (ACAS Xa and ACAS Xo)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Standards for Airport Security Access Control Systems</td>
<td>SC-224</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Agenda Item 7B:
SC-159 Terms of Reference Change

PMC Meeting – March 26, 2020
RTCA Paper No. 070-20/PMC-1997
SC-159 Chairmen
image provided courtesy of Cospas-Sarsat

SC-159 WG-2 DO-229F
RTCA PMC
26 March 2020
John Studenny & Laurent Azoulai

RTCA Paper No. 070-20/PMC-1997
Context and motivation to develop DO-229F

- Dual Frequency Multi Constellation (DFMC) SBAS Receiver MOPS is being developed by WG-2 jointly with EUROCAE WG-62
  - This MOPS will support legacy receiver requirements using GPS / SBAS single frequency L1 as a backward compatibility feature since SBAS L1 service will continue to be supported

- New version of the *Minimum Operational Performance Standards for Global Positioning System/Wide Area Augmentation System Airborne Equipment* systems has been produced to introduce requirements tags
  - Will facilitate the comparison of L1 GPS only requirements with the future DFMC requirements
  - This version of the document is technically equivalent to RTCA DO-229E (see next slide)

- SC-159 WG-2 kindly requests RTCA PMC to approve SC-159 TORs change and a timely launch of DO-229F FRAC
Evolutions to DO-229E to become DO-229F

• Some changes to sentences in DO-229E with regard to the word “shall” have been performed
  – Replacement by the word “must” in one section to remain consistent with its definition
  – Removed use of the word “shall” that is inconsistent with its definition in two sections and one appendix
  – Combined two related “shall” into a single requirement in one section
  – Removed multiple uses of the word “shall” within a single requirement in multiple sections
  – Reformulated the requirement structure to avoid duplicate, embedded uses of “shall” in one section
  – Combined two “shall” predicated on the same condition in one requirement
• Editorial updates to accommodate the tagging and some clarifications of requirements have been introduced.
• Two notes were updated to reflect additional guidance resulting from recent operational experience
• This version of the document is technically equivalent to RTCA DO-229E

• WG-2 would like to specially thank Kevin Bean, John Barry and Barbara Clark who have successfully conducted the development of DO-229F in a very short timeframe to serve DFMC SBAS MOPS schedule, as well as John Foley, Denis Bouvet, Yi Ding and Sai Kalyanaraman for their detailed review of the new document
Agenda Item 9: Next Meeting Documents

SC-135 Environmental Testing

- DO-380 (New Document) – Environmental Conditions and Test Procedures for Ground Equipment

SC-147 Aircraft Collision Avoidance Systems

Agenda Item 9: Next Meeting
Documents (page 2)


- SC-229 406 MHz Emergency Locator Transmitters (ELTs)
  - DO-204B Change 1 – Minimum Operational Performance Stand for Aircraft Emergency Locator Transmitters 406 MHz
SC-230 Airborne Weather Detection Systems
  • New Document – *Feasibility Study Airborne LIDAR for Clear Air Turbulence Detection*

SC-236 Standards for Wireless Avionics Intra-Communication System (WAIC) within 4200-4400 MHz
  • DO-378A – *Minimum Aviation System Performance Standard (MASPS) for Coexistence of Wireless Avionics Intra-Communication Systems within 4200-4400 MHz*
Future Meetings

PMC:

• June 11, 2020
• September 10, 2020
• December 17, 2020
• March 18, 2020?
March Action Item Review
ADJOURN