RTCA WEBINAR SERIES

RTCA launched a new 7-webinar series, Aviation Technology Connect, on June 17, 2020. The webinars will be broadcast live at 1 PM ET on every 3rd Wednesday of the month.

The complimentary webinar series features talks and interviews with government leaders, panel discussions with aviation executives, committee awards and short Tech Talks on transformational topics. Leaders will discuss Commercial Space Transportation, Artificial Intelligence, Challenges with Spectrum, Counter UAS Measures, Electric Propulsion Vehicles, Modernizing the NAS and more.

The inaugural webinar, June 17, kicked off with a talk by Wayne R. Monteith, FAA Associate Administrator for Commercial Space Transportation and other sessions. July’s featured speaker is the Honorable Robert L. Sumwalt, Chairman of NTSB. Registration is required for the webinars, but there is no fee to attend. The agenda, schedule and other details can be found on the RTCA website.
NAVIGATION EQUIPMENT USING THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)

SC-159 met virtually on April 30th. The group completed Final Review and Comment (FRAC) resolution for DO-229F, Minimum Operational Performance Standards (MOPS) for Global Positioning System/Satellite-Based Augmentation System Airborne Equipment from WG-2. They will present at the June Program Management Committee (PMC) meeting for final approval and publication.

Details of all SC-159 deliverables can be found in the Terms of References (TOR) on the RTCA SC-159 Committee page.

ENHANCED FLIGHT VISION SYSTEMS AND SYNTHETIC VISION SYSTEMS (EFVS/SVS)


The joint group is also undertaking an effort, led by EUROCAE WG-79, for Combined Vision Systems (CVS) for Rotorcraft for Operational Credit. All three documents are expected to be published in 2021.
STANDARDS FOR AIR TRAFFIC DATA COMMUNICATION SERVICES

SC-214 VDL Subgroup met virtually April 15th. The gathering was a continued joint collaboration meeting with EUROCAE Working Group (WG) 92 VDL Mode 2 and ARINC Airlines Electronic Engineering Committee (AEEC) Data Link (DLK) Systems Sub Committee. They approved the release of DO-382/ED-276, Guidance on Air to Ground VDL Mode 2 Interoperability for Final Review and Comment (FRAC)/Open Consultation (OC). This is a new companion document to cover ground equipment associated with the VDL Mode 2 systems. The FRAC/OC resolution is scheduled for the July Plenary and will be presented to the Program Management Committee (PMC) in September for approval and publication.

The group continues work on DO-224E, Signal-In-Space MASPS For Advanced VHF Digital Data Communications Including Compatibility with Digital Voice Techniques, scheduled for completion in late 2020.

AIRPORT SECURITY ACCESS CONTROL SYSTEMS

SC-224 met virtually on April 16th to continue work on DO-230K, Standards for Airport Security Access Control System. This version will include updates to the credentialing, integration, procurement, and biometrics sections with new sections on facilitation and cybersecurity to be added.

This document is currently scheduled to be presented to the Program Management Committee for publication in late-2021.
RTCA has teamed with MANNARINO Systems & Software Inc. to offer four new technical seminars expanding the suite of training programs that RTCA provides for the aviation industry. The seminars will offer aviation industry participants proficient domain knowledge on topics relevant to current challenges in aircraft systems, software and electronic hardware development.

**Integrated Modular Avionics (IMA) Development Guidance and Certification Considerations**

This course provides the fundamentals for developing and integrating IMA systems, using DO-297 and applicable Advisory Circular material. It presents the definition, tasks and role of each party in the context of component integration, from the platform level to the application, system and aircraft perspective. It presents the approval aspects of the platform in isolation and in conjunction with multiple software applications.

It discusses the use of ARINC 653 in IMA systems and as well the system aspects of SAE ARP 4754A in IMA Systems.

**September 29**

*Unless otherwise noted, all training courses will take place at RTCA Headquarters, located conveniently in downtown Washington, DC. For additional information, please visit [www.rtca.org](http://www.rtca.org) or email [training@rtca.org](mailto:training@rtca.org).*
AIRBORNE WEATHER DETECTION

SC-230 met virtually April 7th – 9th. Working Group (WG) 11, under the leadership of Shumpei Kameyama (Mitsubishi Electric Corporation) and Venkata Sishtla (Collins Aerospace), completed Final Review and Comment (FRAC) resolution on a Feasibility Study Airborne LiDAR for Clear Air Turbulence Detection. It was presented at the June PMC meeting and approved for publication.

WG-10, under the leadership of Jean-Baptiste Berthier (Airbus) and Steven Harrah (NASA), continued work on an update to DO-220A Change 1, *MOPS for Airborne Weather Radar Systems* to add detection requirements for High Altitude Ice Water Conditions using Airborne Weather Radar Systems with a completion date in early 2021.
RTCA has teamed with Wichita State University’s National Institute for Aviation Research (WSU-NIAR) to offer another high quality training course covering the RTCA Security Suite: DO-326A, Airworthiness Security Process Specification; DO-355, Information Security Guidance for Continuing Airworthiness; and DO-356A, Airworthiness Security Methods and Considerations. This course describes what Airworthiness Security is and why it is important. It also explains which FAA Regulations, standards, etc. will require these documents and procedures as well as how to use these standards. The course will also cover what the standards are meant to prevent and how these standards and processes fit into the aviation system.

RTCA, in partnership with Wichita State University’s National Institute for Aviation Research (WSU-NIAR), offers high quality training covering RTCA’s DO-160G, Environmental Conditions and Test Procedures for Airborne Equipment. The course will provide an understanding of the use of DO-160G and how it fits in with the greater picture of requirements, design, certification and TSOs.

For additional questions email training@rtca.org
If you want to find out more about getting your electronics hardware certified for use on aircraft, then you should attend this comprehensive RTCA training course.

ARE YOU THINKING OF TAKING DO-254 TRAINING?

- Have you been assigned the task of preparing a PHAC without knowing what you are expected to include?
- Do you know if your project is for a simple or complex device and what it will mean to your plan for certification?
- Do you need to communicate why following DO-254 could help save your project time and money?

- Three days of instruction focused on the details of DO-254
- Registration discount for RTCA members
- Online registration on RTCA’s DO-254 Training site.

Classes start at 8am and end at 5pm each day.
Questions? Contact training@rtca.org

RTCA  |  1150 18th Street NW, Suite 475, Washington, DC 20036

SC-231, met for their 17th plenary in May for the committee to reach consensus on a white paper detailing recommendations addressing NTSB findings A-17-035 and A-18-015 regarding Class B/C TAWS. The committee presented their white paper at the June Program Management Committee (PMC) meeting and was approved to go into Active Monitoring Status. The group will be available in case there are further questions related to their white paper.
ARE YOU INTERESTED IN TAKING DO-178C TRAINING?

- Do you know how the Software Life Cycle at your organization relates to the Software Development Process that supports producing software which can approved?
- Is your System Process supporting your Software Development Cycle to ease implementation of the aspects of certification for software?
- Can you explain how what you do in your software process relates to a certification process?

If you need better answers to these and other questions, join the graduates who have benefited from our course. Register early to guarantee your seat.

Next Class:
June 22-25, 2020 (Virtual)

Classes start at 11:00am and end at 5pm each day.
Questions? Contact training@rtca.org

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HELICOPTER TERRAIN AWARENESS WARNING SYSTEM (HTAWS)

SC -237 met jointly with EUROCAE Working Group (WG) 110 for two virtual plenaries this spring. One was held at the beginning of April and one was held at the end of May. The group continues to develop the Minimum Operating Performance Standard (MOPS) to identify requirements for helicopters undertaking offshore operations. They are expected to approve the document for Open Consultation/ Final Review (FRAC/OC) and comment at their next plenary and present the document to the Program Management Committee (PMC) in March 2021.

COMMITTEE
SC-237, Helicopter Terrain Awareness Warning System (HTAWS)

CHAIR
Michael Deer, Bell Helicopter

NEXT MEETING
September 16-18, 2020, hosted by Bell Helicopter Texas (tentatively)
EARLY 2021

HUMAN FACTORS TRAINING COURSE

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LOW RANGE RADAR ALTIMETER

SC-239 was approved at the December 2019 Program Management Committee (PMC) to update DO-155 and ED-30 for joint effort. This was approved to include optimization for the use of the 4200-4400 MHz band while keeping it dedicated to aviation use. It will also seek to define the parameters for side band interference to protect aviation spectrum.

In response to the Federal Communications Commission’s (FCC) Report and Order in GN Docket No, 18-122, an Ad Hoc from the Integration and Coordination Committee (ICC), a subgroup of the PMC, recommended tasking SC-239 to form a multi-stakeholder group to examine coexistence issues, including the potential for interference into existing aeronautical radio navigation (i.e., radio altimeter) operations by newly introduced flexible use systems. This would result in a report to be submitted to the FCC.

Their kickoff meeting was held virtually on April 22nd and they continue several working group sessions on a weekly basis to meet the July due date.
RTCA President Terry McVenes and EUROCAE Secretary General Christian Schliefer in May kicked off a two-day, virtual, joint meeting of RTCA Special Committee (SC) 240 and EUROCAE Working Group (WG) 117. The groups are beginning work on two new process standards – one on software considerations in low-risk operations with the intention to support equipment certifications and approvals. The second document will clarify the use of Commercial Off the Shelf software, Operating Systems and use of Service History for aviation software. Work on the two standards is expected to be completed by the third quarter of 2021.

SC-240, Topics on Software Advancement, is chaired by Steve Cook of Northrop Grumman and WG-117 is led by Burak Ata of Volocopter. The two groups combine experts in unmanned systems with experts in software development from a range of stakeholders. The effort also has the participation and support of the U.S. Federal Aviation Administration and the European Union Aviation Safety Agency.

Day 2 of the meeting is scheduled for Wednesday, and the committee will continue to meet virtually until in-person meetings are again viable.
RTCA WELCOMES NEW MEMBERS

AAddValue Innovation
Singapore
Addvalue is a satellite communications company that is dedicated to partnering with you to develop boundless connectivity solutions on the horizon and beyond. Whatever the market or application, Addvalue’s wide range of products, extensive engineering expertise and integration services are sure to offer the right technology to drive enhanced connectivity.

Acutronics Turbines
Pittsburgh, Pennsylvania - USA
Acutronic Turbines Inc. develops and manufactures specialty components for use on unmanned and optionally-piloted aircraft. These products are used on next-generation aerospace programs and include micro turbines and turbo-generator sets. Acutronic Turbines Inc. offers standard products and excels at designing highly-customized solutions for demanding mission requirements.

Piper Aircraft
Vero Beach, Florida - USA
Piper Aircraft, Inc. is a manufacturer of general aviation aircraft

RTCA REVIEW CYCLE EXTENDED FOR JOINT DOCUMENTS

RTCA, EUROCAE, and our respective member organizations continue to cope with the global pandemic. While many of our members are able to work from remote locations and practice social distancing, others are requiring their employees to temporarily stop work including reviewing and commenting on documents in FRAC/OC. To maintain the greatest number of reviewers for our documents and hence maintain the high quality of the final product, RTCA and EUROCAE believe the best course of action is to temporarily (for the duration of the current lockdown period) extend the FRAC/OC period from the nominal 45 days to 60 days. (For RTCA, non-joint documents will continue to have a review cycle of 30 days unless an extension is requested by the committee.) Our joint-review processes require a minimum of 45 days for joint document reviews but also permit us to extend that time period (i.e., 45 days is the minimum review time but the maximum time can be extended based on extenuating circumstances.) Normally, that extension comes at the behest of the committees themselves, but this time originates with the secretariats.

It is our hope that this temporary change in process is not disruptive to your committee and the schedules that you have developed so carefully. We apologize for any inconvenience this may introduce and hope that you understand our reasoning. If you have any questions, please be sure to contact your Program Director or Technical Program Manager.
JOIN RTCA
...HELP SHAPE THE SKIES OF TOMORROW

Member Benefits Include:

- Unlimited free electronic downloads on RTCA library of well over 350 documents and 60% discount on hard copies (certain restrictions may apply).
- Participation in Special Committees and advance notice of all new committees.
- Recognition as an organization committed to the consensus technical recommendation process.
- Advance information of new RTCA documents.
- Access to RTCA staff experts that provide responses to questions about our published or evolving standards.
- Discounts to attend and/or exhibit at the RTCA Annual Symposium as well as discounts to attend Forum events and RTCA training courses.
- Subscription to the RTCA Digest, keeping you informed about RTCA’s vast efforts to shape the future of CNS/ATM.
- Member-only access to the RTCA Membership Directory Online, connecting you with your aviation colleagues within more than 500+ member organizations.

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Join RTCA Today!
RTCA, Inc. has teamed up with The MITRE Aviation Institute to offer high quality and relevant training for the aviation industry in understanding the requirements and parameters for avionics software development necessary to obtain FAA certification.

The two world class organizations are using their collective experience and expertise to provide training on the new standards and recommended practices contained in the DO-178C, Software Considerations in Airborne Systems and Equipment Certification.

In addition to the comprehensive course manual developed by the experts at The MITRE Aviation Institute, each training course attendee will receive the latest standards developed over a six-year period by RTCA Special Committee 205.

The course is led by instructors who will provide a thorough understanding of the requirements and the applicability of DO-178C; the fundamental techniques of software development considerations in airborne systems and equipment certification; and an introduction and overview of Software Tool Qualification Considerations, Formal Methods Supplement to DO-178C, Model-Based Development and Verification Supplement to DO-178C, and Object Oriented Technology and Related Techniques Supplement to DO-178C.

As an adjunct to DO-178C, this course will provide the background and scope on the four documents supporting DO-178C:

• DO-330, Software Tool Qualification Considerations
• DO-331, Model-Based Development and Verification Supplement to DO-178C and DO-278A
• DO-332, Object-Oriented Technology and Related Techniques Supplement to DO-178C and DO-278A
• DO-333, Formal Methods Supplement to DO-178C and DO-278A

Attendees will receive detailed instruction on DO-331 covering the objectives, activities, explanatory text and software life cycle data that should be applied when model-based development and verification are used as part of the software life cycle.

In addition, the training will cover the systems requirements linkage to the DO-178C and Supplement processes through an explanation of the interface to ARP 4754A, Guidelines for Development of Civil Aircraft and Systems.
DO-254, DESIGN ASSURANCE GUIDANCE FOR AIRBORNE ELECTRONIC HARDWARE, TRAINING COURSE

September 22-24, 2020
December 8-10, 2020

RTCA is hosting a three-day training course, tailored specifically to design/verification engineers and project/certification managers requiring DO-254 compliance.

This three-day course will:

• Provide an overview and application of RTCA DO-254, as defined by current FAA and EASA guidance in airborne electronic systems.
• Describe how to apply the DO-254 lifecycle and supporting processes; understand system safety assessments and the design assurance level (DAL); and set up a project correctly through proper planning and standards.
• Present techniques and writing requirements for electronic hardware, and how to optimize requirements for verification processes.
• Describe how to efficiently and effectively verify requirements with simulation and hardware tests.
• Address specific considerations for programmable logic devices (PLDs) such as FPGA/ASIC versus all electronics; commercial off-the-shelf (COTS) components usage; and tool assessment and qualification.

DO-160G, ENVIRONMENTAL CONDITIONS AND TEST PROCEDURES FOR AIRBORNE EQUIPMENT, TRAINING COURSE

July 13-17, 2020 (Virtual)
October 5-8, 2020 at WSU
December 14-17, 2020 at RTCA

RTCA, in partnership with Wichita State University's National Institute for Aviation Research (WSU-NIAR), offers high quality training covering RTCA’s DO-160G, Environmental Conditions and Test Procedures for Airborne Equipment. The course will provide an understanding of the use of DO-160G and how it fits in with the greater picture of requirements, design, certification and TSOs.

Course participants will gain a clear and relevant understanding of the applicable FAA regulations, advisory material, certification procedures, design approaches/trade-offs, inspection and conformity requirements, as well as details of the necessary parts of a test plan, test report, compliance plan and compliance report. A strong focus is placed on the reduction of risk, cost and schedule throughout the design/certification process, by use of targeted design and increased first-pass success on design and testing. In addition to a comprehensive course manual, each training course attendee will receive a copy of RTCA's DO-160G, supporting material, and will participate in real-world exercises applying the knowledge learned from the class.

*Unless otherwise noted, all training courses will take place at RTCA Headquarters, located conveniently in downtown Washington, DC. For additional information, please visit www.rtca.org or email training@rtca.org.
**June**

June 2-15  
**SC-216, Aeronautical Systems Security**  
Hosted by RTCA, Inc.  
Virtual

June 4  
**SC-147, Traffic Alert & Collision Avoidance System (TCAS)**  
Hosted by RTCA, Inc.  
Virtual

June 8-12  
**SC-206, Aeronautical Information and Meteorological Data Link Services**  
Hosted by RTCA, Inc.  
Virtual

June 9-10  
**SC-238, Counter UAS**  
Hosted by RTCA, Inc.  
Virtual

June 11  
**Program Management Committee**  
Hosted by RTCA, Inc.  
Virtual

June 17  
**RTCA’s Aviation Technology Connect Webinar**  
Hosted by RTCA, Inc.  
Virtual

June 18  
**SC-224, Airport Security Access Control Systems**  
Hosted by RTCA, Inc.  
Virtual

June 18-19  
**SC-227, Standards for Navigation Performance**  
Hosted by RTCA, Inc.  
Virtual

June 22-25  
**DO-178C Training**  
Hosted by RTCA, Inc.  
Virtual

June 23-24  
**SC-222, AMS (R)S**  
Hosted by RTCA, Inc.  
Virtual

June 25 & 30  
**SC-223, Internet Protocol Suite (IPS) and AeroMACS**  
Hosted by RTCA, Inc.  
Virtual

**July**

July 6-10  
**SC-214, Standards for Air Traffic Data Communication Services**  
Hosted by RTCA, Inc.  
Virtual

July 15-16  
**SC-230, Airborne Weather Detection Systems**  
Hosted by RTCA, Inc.  
Virtual

July 23  
**SC-228, Minimum Performance Standards for Unmanned Aircraft Systems**  
Hosted by RCTA, Inc.  
Virtual

**August**

August 20  
**SC-224, Airport Security Access Control Systems**  
Hosted by RTCA, Inc.  
Virtual

**September**

September 10  
**Program Management Committee (PMC)**  
Hosted by RCTA, Inc. Washington, DC

September 14-18  
**SC-216, Aeronautical Systems Security**  
Hosted by EUROCAE St. Denis, France

September 21-23  
**DO-178C Training**  
Hosted by RTCA, Inc. Washington, DC

September 22-24  
**Do-254 Training**  
Hosted by RTCA, Inc. Washington, DC

September 24  
**Supplements for DO-178C Training**  
Hosted by RTCA, Inc. Washington, DC