

**Summary of the 22nd Meeting (DRAFT)**  
**Special Committee 227**  
**Standards of Navigation Performance**

The 22nd Plenary Meeting of RTCA Special Committee 227 (SC-227) was held on February 26, 2020. This meeting was held by teleconference. Attendees included:

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Garmin	Anderson, Reuss	Guest
Thales	Arethens, Jean-Pierre	Guest
Airbus	Asoulai, Laurent	Guest
Federal Aviation Administration (FAA)	Bigler, Trent	Member
The MITRE Corporation	Bowman, Stuart	Member
Esterline CMC Electronics	Capodicasa, Alexandre	Member
Thales Group	Cazaux, Patrick	Member
Bombardier Aerospace	Ceparu, Silviu	Member
FAA	Clausnitver, Christina	Guest
The MITRE Corporation	Cramer, Michael	Committee Chair
Aviation Civile, France	Dehaynain, Christophe	Guest
Thales Group	Deker, Guy	Member
FAA	Dickinson, Joel	Guest
EUROCAE	Engel, Alexander	Member
The Boeing Company	Feng, Gang	Member
Honeywell International, Inc.	Forstie, Bill	Member
Garmin Ltd.	Gaul, Bob	Member
Collins Aerospace	Geels, Tim	Member
American Airlines, Inc.	Googe, Thomas	Member
Boeing	Harris, Matt	Guest
Garmin Ltd.	Hershberger, Kendal	Member
Honeywell International, Inc.	Hillier, John	Member
Federal Aviation Administration (FAA)	Hirt, Ruth	Member
EASA	Hoekema, Hette	Guest
Garmin Ltd.	Horvath, Steve	Member
Honeywell International, Inc.	Jackson, Mike	Member
Universal Avionics Systems Corp.	Jordan, David	Member
Federal Aviation Administration (FAA)	Kerr, Jeff	Member
Collins Aerospace	Kolek, Kirk	Guest
Federal Aviation Administration (FAA)	Ledford, Jennifer	Member
Honeywell	Meldrum, Mitch	Guest



Federal Aviation Administration (FAA)	Meyers, Jeff	Member
Federal Aviation Administration (FAA)	Miller, Barry	Government Authorized Representative
Federal Aviation Administration (FAA)	Miller, Bradford	Member
RTCA, Inc.	Morrison, Rebecca	Manager
Delta Air Lines, Inc.	Morse, Eric	Member
The MITRE Corporation	Nakamura, Dave	Member
U.S. Air Force	Padden, Tim	Member
United Airlines, Inc.	Renk, Ron	Member
Airbus	Robin, Jean Luc	Guest
Selex ES Inc.	Sivits, Kevin	Member
Federal Aviation Administration (FAA)	Tallman, Nick	Member
Eurocontrol	Vitan, Valeriu	Guest
Lufthansa	Wigold, Frank	Member

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In accordance with the Federal Aviation Advisory Committee Act, Barry Miller, Federal Aviation Administration, was the Government Authorized Representative for this meeting.

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**RTCA SC-227, Standards of Navigation**

- The 22nd Plenary meeting of SC-227 was convened at 11:00 a.m. EST by Chair Mike Cramer.
- Rebecca Morrison stated the RTCA Proprietary Policy and reviewed the process for development of standards and how any related or relevant intellectual property must be addressed.
- Rebecca Morrison also reviewed the RTCA membership policy.
- Attendance was noted and recorded electronically.
- Mike Cramer reviewed the agenda (copied below). He also stated that the purpose of the meeting was to review and approve revised terms of reference to bring the committee back to active status after PMC approval.

**Summary Agenda:**

1. Welcome and Administrative Remarks
2. Introduction
3. Review of the current status “Active Monitor” of SC-227
4. Agenda Overview
  - a. Purpose and Discussion

- b. Consensus to Re-activate
  5. Review and discuss proposed standards updates
  6. Discussion of the potential for joint work with EUROCAE
  7. Review and approve draft wording in the Terms of Reference
  8. Achieve consensus on tasks and recommendation to reactivate SC-227
  9. Next steps
  10. Adjourn

## Plenary Discussion

Following the Welcome and Introductions, the plenary discussion began Wednesday, February 26, 2020 at 11:15 a.m. EST.

1. As noted in the summary above.
2. As noted in the summary above.
3. Mike reviewed the committee's "active monitor" status for the new members. As part of that review, Mike gave time to EUROCAE WG-107 to present the current status and plans for that committee. Valeriu Vitan of Eurocontrol presented the summary for WG-107. The presentation included information about their MOPS deliverable, WG status, scope of requirements, intended compatibility with the ICAO PBN manual, and the expected PBN applications.
4. Mike stated the purpose of the meeting would be to first come to agreement that the proposed work tasks warrant re-activating the committee, and if there is consensus, to discuss with EUROCAE representatives and edit/approve a revised terms of reference (ToR).
5. Mike then presented proposed updates to DO-236C and Change 1 in briefing form for discussion. The principal topics were:
  - Strengthen DME Navigation Standards with consideration for DME reversion, additional minimum requirements, infrastructure planning and minimum standards for DME availability.
  - Other Desired Minimum Standards that might include: inertial integration, multi-sensor integration, datalink, expanded requirements for fixed radius transition, and accounting for aircraft performance models.
  - General Improvements that might consider: how the MASPS fits with the current/planned operational applications, greater clarity about RNP TSE with regard to NSE and FTE, greater clarity with regard to containment integrity and containment continuity vs integrity, continuity and availability; updated nav database requirements, and relationship with RNAV systems if possible.
  - Incorporate Change 1 directly into the MASPS and ensure operational compatibility between Flight Deck Interval Management (FIM) and Time of Arrival Control (TOAC)

- Data derived charting standards including possible guidance for user implementation, revised charting standards and aircraft equipment standards. This would be a coordination activity with SC-217.
6. The committee would update documents starting with DO-236, followed by DO-283 and DO-257. The update efforts will be coordinated with EUROCAE, recognizing that WG-85 is not active at this time and WG-107 work is aimed at a DME MOPS update only.
  7. Based on the briefing, the plenary agreed that all would like to see the work move forward. Mike noted that for the committee to re-activate, revised terms of reference (ToR) would have to be approved by the plenary and then presented to the RTCA program management committee (PMC) for final review and approval. Mike presented the revised terms of reference (ToR) for review and discussion. The group discussion lead to some editorial changes to the draft, and expanded material defining interactions with SC-186 and SC-217 for TOAC/FIM operational compatibility and Data Driven Charting (DDC) respectively. Further discussion with EUROCAE representatives resulted in a plan of action where the SC-227 ToR would be submitted to the RTCA PMC in March followed by a review and discussion with the EUROCAE TAC before the degree of cooperation between EUROCAE and RTCA committees could be finalized. The draft ToR was approved by the plenary.
  8. Plenary consensus was reached approving the initial tasking and the draft terms of reference.
  9. Mike and Barry will present to the PMC March 26, 2020. When approved, further planning for meetings and schedule will commence, with a possible first face-to-face plenary in June 2020.
  10. Mike adjourned the meeting at 2:00 PM.