



RTCA Paper No. 167-24/SC206-208  
EUROCAE Paper No. 218-24/WG76-97

July 24, 2024

**Summary of the 76<sup>th</sup> Meeting**  
**Summary of the 72<sup>nd</sup> Meeting**

**RTCA Special Committee 206 (SC-206)**  
**EUROCAE Working Group (WG-76)**

## **Aeronautical Information Services (AIS) and Meteorological (MET) Data Link Services**

### **Executive Summary**

The joint RTCA SC-206/EUROCAE WG-76 Opening Plenary meeting was held on Monday, June 24, 2024, and the Closing Plenary was held on Friday, June 28, 2024. The meetings were held at The Boeing Company offices in Vancouver, Canada.

- The following sub-group activities were briefed:
  - SC-206 SG-4/WG-76 SG-2: Turbulence MASPS
    - SG-4/SG-2 is striving for “operational comparability” which means that a crew could make the same operational decision regardless of the application being used
    - There was a discussion held this week on which type of standards document this sub-group will generate
    - SG-4/SG-2 noted that the “data for evaluation” that the new entrant collects will be described in the final standard document
    - The “pass/fail” check noted as part of the process will be up to the writers of Advisory Circular (AC) 00-63 whether the entrant will do their own comparison or by someone within the Federal Aviation Administration (FAA)
    - The Terms of Reference (TOR) was revised to remove the reference to a Minimum Aviation System Performance Standard (MASPS) as that type of document will not be generated as part of this effort
      - The document coming from this effort must be able to be invoked by the regulatory authority
    - A system safety assessment will be considered as part of the SG-4/SG-2 effort
    - FAA Flight Standards (AFS) has been communicated with and likes the approach of this sub-group
  - SC-206 SG-5/WG-76 SG-3: FIS-B MOPS (DO-358C/ED-XXX)
    - SG-5/SG-3 began their review of DO-358B and began mapping their effort to the TOR
    - SG-5/SG-3 is attempting to understand the level of effort needed for each section within the document
    - SG-5/SG-3 has begun mapping the Operational Performance Requirements (OPRs) for each section expected to be in DO-358C
  - SC-206 SG-6/WG-76 MASPS (DO-364A/ED-XXX)
    - The MASPS document is “almost there”
    - The document is expected to be approved for Final Review and Comment (FRAC) release during the September 2024 meeting in Brussels
    - SG-6 is unsure how many comments will be received during FRAC

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- In order to ensure that all FRAC comments will be addressed, SG-6 will need participation during the December 2024 meeting from those that had a hand in writing the document
- The December 2024 Plenary Meeting is an RTCA/EUROCAE working group meeting, and input and voting will be needed from the SC-206/WG-76 membership
- The focus of the December 2024 Plenary Meeting has to be on comment resolution, as this is an official step in the development of process of RTCA “DO” and EUROCAE “ED” documents.
  - At the end of this meeting, the document will need to be approved for submission to RTCA PMC and EUROCAE Council
- SC-206 SG-9/WG-76 SG-4: ABO RTCA/EUROCAE Report
  - SG-9/SG-4 has defined what stakeholders they are going to speak with
  - SG-9/SG-4 will no longer be conducting a survey, but will be holding stakeholder interviews
  - The Sub-group intends to target the following stakeholders
    - World Meteorological Organization
    - European MetNet
    - European Centre for Medium-Range Weather Forecasts (ECMWF)
    - German Aerospace Center (DLR)
    - Airbus
    - Vertical flight
  - The Sub-group intends to focus on the following topics with the stakeholders
    - Unmanned Aircraft Systems (UAS)
    - Volcanic ash advisories
    - Space weather
    - Airline operators
  - SG-9/SG-4 intends to interview different individuals within the same cells as they may obtain different perspectives
  - SC-206 wants to ensure that the TOR is scoped appropriately so that the SG-9/SG-4 work will be successful
    - SG-9/SG-4 wants to identify where there are and are not standards, and then recommend standards when necessary
    - Space Weather is also a user of the Aircraft Based Observation (ABO) data
- Industry briefings were presented on the following topics:
  - Update on Hyperconnected Aircraft
  - Overview of the FAA’s Space Weather for Aviation Research Program
  - Honeywell Product Line Emerging Capabilities
- Next Plenary meeting:
  - September 16-20, 2024 [EUROCONTROL – Brussels, Belgium]
    - Joint RTCA SC-206 (Meeting 77)/EUROCAE WG-76 (Meeting 73) Plenary

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**Opening Joint RTCA SC-206/EUROCAE WG-76 Plenary Meeting Summary – Monday, June 24, 2024**

The meetings this week were held at The Boeing Company offices in Vancouver, Canada

Presentations are posted at:

<https://aeropus.i3cloudservices.com/Group/GroupLanding/99?tab=Documents&folder=2024+Meetings%2F2F2-June+24-28%2C+2024+-+76th+Meeting>

The Opening Plenary convened at approximately 0900 PDT (1800 CEST) on Monday, June 24, 2024

**1. Remarks (RTCA/EUROCAE, Chairmen, Host)**

- Reference the [2024 June SC206\\_WG76 Opening Plenary Leadership Slides\\_final.pptx](#) slides
- Tim Rahmes and Mark Libant opened the meeting and welcomed everyone
- Louis Bailey provided the administrative and logistical information for the venue
- Karan Hofmann and Alex Engel provided the briefings on their respective organizations

**2. Introduction of Attendees (\* denotes remote participation)**

- Tim Rahmes                      The Boeing Company (SC-206 Co-Chair)
- Mark Libant                     NAV CANADA (SC-206 Co-Chair)
- Joe Bracken\*                  AvMet Applications, Inc. (SC-206 Secretary)
- Eldridge Frazier                FAA, Government Authorized Representative
- Moin Abulhosn                  FAA
- Louis Bailey                     The Boeing Company
- Bill Carson                        The MITRE Corporation
- Patrick Conry\*                  Honeywell
- Rick Curtis                       Collins Aerospace
- Stephane Dubet                 DGAC/DNSA
- Matt Eckstein                    Widget Weather (Delta Air Lines)
- Alexander Engel                EUROCAE (WG-76 Technical Programme Manager)
- Tammy Flowe                    FAA
- Karan Hofmann\*                RTCA, Inc. (SC-206 Program Director)
- Jeremy Holman                  Garmin
- Amanda Hoprich                AvMet Applications, Inc.
- Ed Johnson                        FAA
- Hagay Makov\*                  SkyPath
- Macarena Martin-Viton        Airbus (WG-76 Secretary)
- Jim Mills                          HQ USAF/DoD
- Mark Phaneuf                    Air Line Pilots Association, Intl
- Brian Pettegrew\*                The MITRE Corporation
- Greg Saccone                    The Boeing Company
- Anne Senechal                  European Union Aviation Safety Agency
- Karen Shelton-Mur\*            FAA
- Stefan Spaeth\*                 Airbus Helicopters
- Rocky Stone\*                    NTSB
- Martyn Sunter\*                 UKMETNET
- Samantha Watson\*              FAA

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- Matt Wiebold                                      Honeywell International, Inc.

3. Review and Approval of Meeting Agenda

- Reference slides 10 - 11 of the [2024 April SC206\\_WG76 Opening Plenary Leadership Slides\\_final.pptx](#) slides
- Amanda Hoprich displayed the agenda for the week and the opening Plenary agenda
- There were no objections to the meeting agendas, and both were approved

4. Sub-Groups' Work Plan for the Week

- SC-206 SG-4/WG-76 SG-2: Turbulence MASPS
  - Reference the [SG4-2\\_SC206-WG76\\_SG2 Opening Plenary Slides\\_20240624\\_Vancouver\\_Finalv2.pptx](#) slides
  - Tammy Flowe presented the SG-4/SG-2 work plan for the week
  - Tammy reported that while the agenda item states that this work will result in a Minimum Aviation System Performance Standard (MASPS), this effort will not be developing a MASPS
    - The accelerometers within an Electronic Flight Bag (EFB) tablet are not certified, therefore, they are still determining how to handle that
  - Reference Slide 2
    - SG-4/SG-2 is looking at various technologies that can produce an Eddy Dissipation Rate (EDR) value
    - Tim Rahmes noted that working from right to left on the slide, the far right points to the International Civil Aviation Organization (ICAO) EDR requirements
      - Moving left in the diagram describes the various algorithms and techniques within the industry
      - This is the quickest way to describe the relationship between the industry and the Regulators
  - Eldridge Frazier commented that we are looking for FAA Flight Standards (AFS) to obtain European Union Aviation Safety Agency (EASA) input on this
  - Tammy added that, with respect to the Terms of Reference (TOR), SG-4/SG-2 may be requesting a six-month slip in schedule due to the change in scope
    - They are also in discussions with the FAA to use Advisory Circular (AC) 00-63C as a means of publishing / invoking any technical standard they come up with
  - Tim noted that SG-4/SG-2 and SG-9/SG-4 will be sharing a lot of work and resources this week
- SC-206 SG-5/WG-76 SG-3: FIS-B MOPS (DO-358C/ED-XXX)
  - Reference the [SG5 Opening Plenary\\_2024June24.pdf](#) slides
  - Jim Mills presented the SG-5/SG-3 work plan for the week
  - Jim noted that SG-5/SG-3 held a meeting last Tuesday (June 18)
    - SG-5/SG-3 is looking for as much participation as possible
  - Monthly SG-5/SG-3 meetings are anticipated to take place on the 4th Wednesday of each month
  - SG-5/SG-3 is trying to map the current document and determine what product to work on
  - Eldridge commented that there has not been any European participation, and if this continues, SC-206 can “decouple” from EUROCAE and make this a U.S.-only document
    - Jim responded that RTCA SC-206/EUROCAE WG-76 have issued a “Call for Participation”

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- Jim asked if anyone on the Plenary call today is intending to join the SG-5/SG-3 working group
  - Stefan Spaeth responded that he plans to participate and support the activity
- Alex Engel responded by noting that if RTCA decouples from EUROCAE, that will require a TOR change by both RTCA and EUROCAE
  - Alex asked what will be gained by decoupling from EUROCAE and noted that the sub-group would lose any input on what Alex is doing within EUROCAE
  - Eldridge noted that the current DO-358B document is very US-centric, and we need EUROCAE participation to make the document more harmonized
  - Stephane Dubet added that using UAT, this document is not applicable in European Airspace and that is why there may be limited European input
    - Stephane added that publishing the Revision as a joint document could be misleading to the aviation community
- Jim recommended that SG-5/SG-3 “press on” the way they are at this time as they do not need buy-in or a participation commitment today
- Mark Libant commented by asking if we need to consider this in future TOR revisions
  - Tim Rahmes responded that we do have Stefan Spaeth from Airbus Helicopters participating, so Tim is not sure what the issue is
    - Stefan concurred and added that Airbus Helicopters is interested in this activity and will be monitoring all activities, outcomes, and discussions as it relates to European applications
  - Eldridge stressed that “monitoring” the activities is not strong enough
    - SG-5/SG-3 will be developing a document, and they will need European input and strong participation
    - Stefan responded that he understands
    - A decision was deferred to the December timeframe
- SC-206 SG-6 / WG-76 MASPS (DO-364A/ED-XXX)
  - Reference the [Sg6\\_WG76\\_June2024\\_Agenda\\_opening.pptx](#) slides
  - Eldridge Frazier presented the SG-6 work plan for the week
  - Eldridge noted that SG-6 is trying to get the document ready for Final Review and Comment (FRAC) release and hopes to report by the end of this week that the document will be ready for FRAC release in July 2024
  - SG-6 needs to first release the document to the Special Committee for review and comment
  - Eldridge noted that the document will be approximately 700 pages in length
  - Eldridge stressed that Bill Carson and Izabela Gheorghisor are doing a wonderful job with the Operational Safety Assessment (OSA) and Operational Performance Assessment (OPA)
    - The resource issue with MITRE has been resolved
  - When questioned, Eldridge reported that his last day with the FAA will be December 31, 2024, and that he plans to attend the December 2024 Plenary meeting in Palm Bay, Florida
- SC-206 SG-9/WG-76 SG-4: ABO RTCA Report
  - Reference the [20240624\\_SG9\\_Opening\\_Plenary\\_Slides.pptx](#) slides
  - Matt Wiebold presented the SG-9/SG-4 work plan for the week
  - Reference Slide 3
    - Matt reported that SG-9/SG-4 would like to get the survey in the bottom right graphic filled out
    - They will be assembling a list of individuals to obtain feedback from
    - Eldridge asked what the term “NGO” is referring to

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- Matt responded that those are Non-Governmental Organizations
- Tim Rahmes asked, with respect to the current plan, what the due date is within the TOR for the SG-9/SG-4 report
  - Matt responded that they will likely exceed that deadline
- There was a discussion regarding future work being done between SG-4/SG-2 and SG-9/SG-4, and which Webex sessions will be used
  - The group discussed setting up “breakout rooms” within the various SG-4/SG-2 or SG-9/SG-4 sessions as necessary

5. Industry Coordination:

- Update on Hyper Connected Aircraft
  - Reference the [Airbus – Boeing Hyperconnected ATM overview to DLUF v3.pdf](#) slides
  - Greg Saccone (Boeing) provided the briefing
  - Reference Slide 3
  - Greg indicated that this effort began in 2021 with an agreement between EASA, FAA, Airbus, and Boeing
  - Reference Slide 6
    - Eldridge asked about the difference between L-band Safety and L-band
      - Greg responded that these are separated on the aircraft, but go over the same link
  - Reference Slide 10
    - Greg indicated that there are the following challenges associated with Hyper Connected Air Traffic Management (ATM)
      - Spectrum Regulation
      - Cyber Security
      - Safety Requirements
      - Performance Requirements
      - Certification
    - Reference Slides 13 and 14 for the associated analyses of each challenge listed above
  - Eldridge asked who would be responsible for maintaining the Gateway
    - Greg responded that it could be a service provider like ARINC, or any vendor that passes the requirements
      - They would have to have some knowledge of ground routing
  - Joe Bracken asked if there are any future spectrum issues associated with Unmanned Aircraft System / Advanced Air Mobility (UAS/AAM) for UAS Traffic Management (UTM)
    - Greg responded that those are issues that need to be addressed
  - Reference Slide 14
    - Tim Rahmes asked if the reference to Aircraft Communications Addressing and Reporting System (ACARS) over Internet Protocol (IP) is the most logical stepping-stone and if that level will always be maintained as we go to Hyper Connected
    - Greg responded that ACARS over IP is not safety related
      - With a Hyper Connected ATM, we will have to switch and resend
  - Tim asked if Hyper Connected ATM will be Level C or higher in the future
    - Greg responded that he does not think Hyper Connected will be higher than a Level D
    - Tim added that he is concerned this could go to higher than Level C to Level B
  - Eldridge commented that the safety of protected networks is pretty old using old technology, and asked if any of that infrastructure will be updated to make Hyper Connected ATM happen
    - Greg referred Eldridge to Slide 4
      - The newer links are on the right side of the graphic

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- Hyper Connected is more attractive in that it can use “Starlink-like” systems instead of recreating networks and infrastructures
- Greg suggested that everyone read the White Paper on Future Connectivity for Aviation (<https://www.easa.europa.eu/en/document-library/general-publications/future-connectivity-aviation>)
- Reference Slides 15 and 16
  - Greg then briefed the participants on what is occurring in Europe/Airbus and in the U.S./Boeing
- Greg then referred the participants back to Slide 9
  - Multiple commercial links are available
  - A complete failure of one link does not mean all traffic is impacted
  - They are looking at other ways to throttle traffic through other data feed mechanisms
  - We do not want 85% of the traffic within the Hyper Connected ATM
- Overview of the FAA’s Space Weather for Aviation Research Program
  - Reference the 06.24.2024 Overview of FAAs SWx for Aviation Research Program.pptx slides
  - Samantha Watson provided the briefing
  - Tammy Flowe first introduced Samantha to the participants
    - Samantha works for the FAA’s Aviation Weather Division and has a Master’s Degree in space-based aviation weather
  - Tammy noted that they will be holding a Space Weather (SWx) Technical Interchange Meeting (TIM) in Boulder, Colorado in July
    - This will be held in conjunction with the weather research meeting
  - Reference Slides 15 – 18
    - Tammy noted that these research items are what the Aviation Weather Division is focused on at this time due to limited funding
    - They intend to expand their research later as funding increases or becomes available
    - Current research is more interested on forecasting of the SWx events
  - Mark Phaneuf offered, in response to a comment made by Samantha that U.S. flights typically do not fly polar routes, that they in fact do fly polar routes on a regular basis
  - Reference Slide 16
    - Mark Phaneuf indicated that he would like to follow up on the MITRE study
    - Pilots struggle to get information, and often when they do get it, it is too late and typically comes out in a Notice to Airmen (NOTAM) versus an Advisory
  - Mark Phaneuf indicated that he would like to obtain more information on the SWx TIM being held in July in Boulder in order to get pilots to participate
    - Tammy responded that an invitation did go to Airlines for America (A4A), but she can provide a copy of the invitation to Mark Phaneuf (ALPA) also
    - **Action: Tammy Flowe to send the July 2024 SWx TIM invitation to ALPA**
  - Tim Rahmes commented, with respect to the July TIM, that since SC-206 is associated with meteorological data link services, do we know what data the models need and how do we get it into the models
    - This is information we would like to have over the next few months
    - Samantha responded that it would be helpful to have more measurements at more of the latitudes

6. Terms of Reference Discussion

- This agenda item was postponed until the Friday June 28 closing Plenary session

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- Mark Libant asked if there will be an updated TOR to review by Friday
  - Tim Rahmes responded there could possibly be an updated version by then

7. Other Business

- There were no new business items added
- The group did review the Closing Plenary agenda before adjourning for the day

8. Adjourn

- The Opening Joint Plenary session adjourned at 1145 PDT (2045 CEST) on Monday, June 24, 2024

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**Closing Joint RTCA SC-206/EUROCAE WG-76 Plenary Meeting Summary – Friday, June 28, 2024**

The meetings this week were held at The Boeing Company offices in Vancouver, Canada.

Presentations are posted at:

<https://aeropus.i3cloudservices.com/Group/GroupLanding/99?tab=Documents&folder=2024+Meetings%2F2-June+24-28%2C+2024+-+76th+Meeting>

The Closing Plenary convened at approximately 0900 PDT (1800 CEST)

**1. Remarks (RTCA/EUROCAE, Chairmen, Host)**

- Reference the [2024 June SC206\\_WG76 ClosingPlenary Leadership Slides\\_final.pptx](#) slides
- Tim Rahmes thanked Louis Bailey for setting up the logistics for the meeting
  - Mark Libant reiterated the thanks to Louis
  - Tim noted that a lot of good work was completed this week
- Reference Slides 2-9
  - Alex Engel and Karan Hofmann briefed the group on their respective organizations
  - Alex thanked all of the participants this week

**2. Introduction of Attendees (\* denotes remote participation)**

- Mark Libant, Co-Chair      NAVCANADA
- Tim Rahmes                      The Boeing Company
- Joe Bracken, Secretary\*      AvMet Applications, Inc.
- Eldridge Frazier                FAA, Government Authorized Representative
- Moin Abulhosn                  FAA
- Louis Bailey                      The Boeing Company
- Bill Carson                        The MITRE Corporation
- Patrick Conry\*                  Honeywell
- Rick Curtis\*                      Collins Aerospace
- Steve Darr\*                      Dynamic Aerospace
- Matt Eckstein\*                  Delta Air Lines
- Mark Eden\*                        Air Line Pilots Association, Int'l
- Alexander Engel                EUROCAE (WG-76 Technical Programme Manager)
- Rob Flowe                        Department of the Navy (guest)
- Tammy Flowe                      FAA
- Karan Hofmann\*                 RTCA, Inc. (SC-206 Program Director)
- Amanda Hoprich                AvMet Applications, Inc.
- Ed Johnson                        FAA
- Rebecca Lawlor                United Airlines
- Macarena Martin-Viton        Airbus (WG-76 Secretary)
- Michael McPartland\*         MIT/LL
- Stuart McKay\*                 UK CAA
- Jim Mills                         HQ USAF/DoD
- Mark Phaneuf                    Air Line Pilots Association, Int'l
- Greg Saccone                    The Boeing Company
- Anne Senechal                 EASA
- Martyn Sunter\*                 UKMETNET

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- Matt Wiebold\*                      Honeywell International, Inc.
  
- 3. Review and Approval of Meeting Agenda
  - Reference Slide 10 of the [2024 June SC206\\_WG76 ClosingPlenary Leadership Slides\\_final.pptx](#) slides
  - Tim Rahmes made a motion to approve the Closing Plenary meeting agenda
    - The motion was seconded
    - The meeting agenda was approved
  
- 4. Review and Acceptance of Minutes of WG-76 Meeting 71/SC-206 Meeting 75 (April 2024 – Geneva, Switzerland)
  - Joe Bracken reported that the subject document was uploaded to AerOpus on May 30<sup>th</sup>
  - All comments received were adjudicated prior to uploading
  - There were two (2) industry updates provided during the December Plenary
    - Trajectory Based Operations
    - Machine Learning
  - Six (6) action items were closed during the Plenary and four (4) new action items were identified
  - Tim Rahmes made a motion to accept the April 2024 Plenary minutes
    - Mark Libant seconded the motion
    - The April 2024 Plenary minutes were approved
  
- 5. Report of Sub-Groups:
  - SC-206 SG-4/WG-76 SG-2: Turbulence MASPS
    - Reference the [SG4-2\\_SC206-WG76\\_SG2 Closing Plenary Slides\\_20240628Vancouver\\_v2.pptx](#) slides
    - Tammy Flowe provided the update
    - Tammy noted that the opening title still references a “Turbulence MASPS”, and stated that that designator will change during the following discussion
    - Tammy commented that SG-4/SG-2 is striving for “operational comparability” which means that a crew could make the same operational decision regardless of the application being used
    - SG-4/SG-2 had a very productive week
    - There was a discussion held this week on which document this sub-group will generate
    - The sub-group came to an agreement on the methodology that will go into the final document
    - Reference Slide 4
      - Eldridge Frazier commented that a description of the “data for evaluation” that the new entrant collects should be in the standard
        - Tammy concurred and noted that it will be
        - AC 00-63 references back to the standard
      - Joe Bracken asked, with respect to the “pass/fail” check on the right side of the slide, who will conduct that comparison
        - Tammy responded that that will be up to the writers of AC 00-63 whether the entrant will do their own comparison or by someone within the FAA
      - Steve Darr asked if there is any way of determining if any DO-370-compliant algorithm can be used as the benchmark
        - Tammy responded that that would be up to the writers of AC 00-63
    - Reference Slide 5
      - Tammy noted that this new TOR language is similar to the previous TOR language, however this proposed revision removes the reference to a MASPS

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- The newly proposed document title is “Performance Standard for Automated Atmospheric Turbulence Derivation Techniques”
- SG-4/SG-2 will be asking for a 6-month slip in their schedule
- Tim Rahmes suggested that the participants hold any discussion related to the “Title” until the TOR portion of today’s meeting, as Karan Hofmann will need to be present
- Eldridge asked if SG-4/SG-2 is considering a system safety assessment
  - Tammy responded in the affirmative and stated that that will need to be considered
  - Tim added that they have already spoke with John Steventon (AFS-410E), and John likes the path they are taking
- A question was asked if the final document will be a MASPS, Minimum Operational Performance Standard (MOPS), or something in between
  - Tim responded that a Technical Standard is the closest document within EUROCAE, but there is not a comparable document within RTCA
  - Alex Engel commented that a MASPS or MOPS is typically due to a regulatory requirement, however the content in a Technical Standard is not that different
  - Louis Bailey commented that it comes down to the question of education of the audience
    - If we introduce a term Technical Standard, we need to provide guidance to the customer of how to comply with it
    - Tammy added that she thinks this will end up in an AC versus a Technical Standard Order (TSO)
      1. If the application is compliant with the AC, then it will be good
  - Alex added that the Regulator can mention or refer to any standard they want
    - The Regulator can describe the state of the architecture, and the developer can determine how to meet it
- Eldridge stressed that the documents we generate in RTCA need to support the regulators’ need or be invoked
  - In this particular case, we cannot create a MASPS
  - We are creating a Standard that we can invoke via an AC
  - We have spoken with the Regulators and manufacturers. and this is the document/process we came up with
  - Work within this committee must be invokable
- A question was asked, if we have performance requirements, why are we not developing a MOPS
  - Tammy responded that this group tried to develop a MOPS years ago, and the structure and content did not work
    - In addition, any method that includes accelerometers within an iPad cannot be in a MASPS because those accelerometers are not certified
    - However, SkyPath is generating good data using the iPad accelerometers, so we do not want to exclude that technology
  - Alex noted initial pushback from the EUROCAE Technical Advisory Committee (TAC) in that these types of devices are not accepted in the regulatory environment
- SC-206 SG-5/WG-76 SG-3: FIS-B MOPS (DO-358C/ED-XXX)
  - Reference the [SG5\\_SC206\\_WG76 Plenary Leadership Slides\\_27 June 2024.pptx](#) slides
  - Jim Mills provided the briefing
  - There were no questions from the attendees
- SC-206 SG-6/WG-76: MASPS (DO-364A/ED-XXX)

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- Reference the Sg6\_WG76\_June2024\_Agenda\_v2\_completed items.pptx slides
- Eldridge Frazier provided the briefing
- Eldridge noted that SG-6 had a good week, and they were very busy
- The MASPS document is “almost there”
- SG-6 was able to close out items except for the Digital – Automated Terminal Information System (D-ATIS) Operational Safety Assessment (OSA) action item
- SG-6 is still comfortable with their schedule
- Reference Slide 10
  - Eldridge noted that their schedule is good up until the document is released for FRAC
  - The document is expected to be approved for FRAC release during the September 2024 meeting in Brussels
    - This is a slip in schedule from the Plenary opening presentation
    - The document will be out for FRAC for 45 days
  - SG-6 plans to distribute the document to the SC-206 members for a preliminary review by 3 September 2024 (two weeks prior to the September 2024 Plenary Meeting)
    - This version will still have some formatting/editorial items to be resolved before FRAC release that will be worked after the early release up until the FRAC release approval during the September Plenary Meeting
  - SG-6 is unsure how many comments will be received during FRAC
    - The length of the FRAC resolution will depend on the number and type of comments received
  - SG-6 will start the FRAC resolution during the SG-6/WG-76 meeting the week of 18-22 November 2024 in Toulouse, France (there will be an option to attend virtually)
    - This meeting is important as it will include reviewing and assigning all comments to the FRAC resolution team as well as starting to address the higher-level comments received
  - Eldridge stressed that SG-6 will need participation from those that had a hand in writing the document during the December 2024 Plenary Meeting to ensure all FRAC comments have been addressed
    - A lot of the individuals that assisted in the development of this document are now involved in other sub-groups
    - Their involvement in the December 2024 Plenary Meeting will impact the work of those other sub-groups
  - Louis Bailey added that this will definitely impact other sub-group agenda and reiterated that we are unsure how many comments will be received during FRAC
  - Tammy Flowe commented that she understands SG-6’s need for support and subject matter experts
    - Tammy suggested that any FRAC comments be sent out in advance of the December Plenary Meeting to those SMEs who will be attending other SGs that week
    - Regarding each individual’s ability to travel to Palm Bay to assist SG-6, we will need input from other sub-groups on how this might impact the SG-6 March 2025 deadline
  - Alex Engel stressed that the meeting in Palm Bay needs to be an RTCA/EUROCAE all-week Plenary meeting, and input and voting will be needed from the SC-206/WG-76 membership
    - The focus of the December 2024 Plenary Meeting has to be on comment resolution, as this is an official step in the development of process of RTCA “DO” and EUROCAE “ED” documents
    - Karan Hofmann stressed that we are still trying to meet the March 2025 Program Management Committee (PMC) approval deadline, other groups may need to give a little

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- At the end of the meeting, the documents are scheduled to be approved for submission to the RTCA PMC and the EUROCAE Council
- Mark Libant suggested that SG-5/SG-3 go forward as planned during the Palm Bay meeting as not a lot of SG-5/SG-3 members participated in the development of the SG-6 document
- SC-206 SG-9/WG-76 SG-4: ABO RTCA Report
  - Reference the [20240624 SG9 ClosingPlenary Slides.pptx](#) slides
  - Rebecca Lawlor provided the briefing
  - Rebecca reported that they had a great week this week, and have figured what they are and are not doing
  - They have defined what stakeholders they are going to speak with
  - They will no longer be conducting a survey, but will be holding stakeholder interviews
    - *Post-Meeting Note by Karan Hofmann: Any contact with non-RTCA or non-EUROCAE stakeholders must be done through RTCA and/or EUROCAE*
  - SG-9/SG-4 will continue with bi-weekly telecons, with the first portion of each telecon being with a particular stakeholder
  - Reference Slide 3
    - Rebecca noted that they intend to target those topics and stakeholders
    - It was suggested that the “WMO” stakeholder bullet refer to standards versus Regulatory
    - It was suggested that SG-9/SG-4 include ICAO on their list of stakeholders to speak with
    - Matt Wiebold indicated that they will want to interview different individuals within the same cells as they may obtain different perspectives
      - The survey was originally intended to open the door to each of the stakeholders
    - Joe Bracken asked, with respect to the UAS interview topic, if they intend to speak with UAS operators specifically collecting meteorological information (e.g., Meteomatics), or UAS operators that will be collecting and reporting in-situ meteorological information during routine operations
      - Matt responded that that will be considered
      - Joe also added that depending on the operation (e.g., Small UAS, Beyond Visual Line of Sight, Advanced Air Mobility), the responses may be significantly different
  - Reference Slide 2
    - Louis Bailey stressed that we want to ensure that the TOR is scoped appropriately so that the SG-9/SG-4 work will be successful
      - Rebecca noted that they will want to identify where there are and are not standards, and then recommend standards when necessary
    - Matt added that they are also looking at ABO used by not just aircraft operations
      - Space Weather is a user of the data
    - Tim Rahmes stressed that SC-206 did not include Space Weather in DO-252 when that document was created
      - SC-206 could look at updating that document at some point to include Space Weather

## 6. Industry Coordination

- Honeywell Product Line Emerging Capabilities
  - Reference the [20240628 Honeywell Sensors Presented.pdf](#) slides
  - Matt Wiebold provided the status update
  - Matt noted that there are two categories of new sensor technology development at Honeywell
    - High Altitude Lidar Atmospheric Sensing (HALAS)
      - Reference Slides 2-13

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- HALAS is similar to a radiosonde today
    - Elements are measured along a laser line
    - Reference Slide 4
      1. Eldridge Frazier asked about the definition of “extinction”
      2. Matt responded that that is how fast light is attenuated as a function of distance
      3. For example, smoke would result in high extinction
    - Ed Johnson asked if HALAS is a type of VAD scan
      1. Matt responded that the device can point anywhere in the upper area
    - Matt noted that there is a HALAS system deployed in Sterling, Virginia
      1. National Oceanic and Atmospheric Administration (NOAA) is looking at data as a service
    - Tammy Flowe asked if Honeywell is in discussion with NOAA as to where this might be most useful, as not all sites can launch radiosondes
      1. Matt responded in the affirmative and that those discussions are part of their Cooperative Research and Development Agreement (CRADA)
  - Airborne Atmospheric Sensing
    - Reference Slides 14-20 for a description of these activities
  - Questions
    - Reference Slide 14
      - Tammy asked, with respect to the optical system to detect turbulence, how far in advance of the turbulence can it detect
        1. Matt responded that they do have some requirements, but it typically between 100 and 300 meters ahead of the aircraft
        2. Tammy asked what Honeywell expects a crew to do with that amount of notice
          - a. Matt responded that the crew could not do anything proactively in that amount of time, but it does allow them to provide feedback to flight service
      - Joe Bracken asked what the system is reporting in terms of turbulence intensity
        1. Matt responded that the device is looking for vertical shear, and could eventually provide some sort of EDR value
    - Reference Slide 15
      - Tammy asked, with respect to volcanic ash reporting, if Honeywell is working with the engine manufacturers
        1. Matt responded in the affirmative
    - Reference Slide 14
      - Rebecca Lawlor asked what they are doing with respect to contrail mitigation
        1. Matt responded that the sensor may be used if the aircraft is in an environment generating a contrail, but the sensor is not providing any mitigation
        2. Tim added that the sensor is looking for where impactful regions may be
- Advanced Air Mobility (AAM) Update
  - There was no update at this time
7. Terms of Reference
  - SC-206 SG-4/WG-76 SG-2: Turbulence MASPS
    - Tim Rahmes provided the update

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- Reference the [SC-206 TOR Rev 23 redlines 20240627 closing plenary.docx](#) document
- Amanda Hoprich displayed and modified the TOR in real time and on screen
- Karan Hofmann reported that we are now using a new TOR format
- After all revisions were made and agreed to by the Special Committee, there was a motion to approve the revised TOR
  - That motion was seconded
  - The revised TOR was approved
  - Karan noted that this will be presented at the September PMC meeting which is scheduled for September 26<sup>th</sup> (the week after the Brussels RTCA SC-206/EUROCAE WG-76 Plenary meeting)
  - **Action: Karan Hofmann to send the September PMC invitation to Tammy Flowe, Tim Rahmes, and Mark Phaneuf**
- Alex Engel then presented the associated revised WG-76 Work Programme Summary and the revised Task Sheet.
  - Reference the Draft WG-76 WP for TAC Approval 2024\_09\_19.docx document and the Draft WG-76 TS (ED-XXX\_DO-XXX - EDR Derivation Techniques) for TAC Approval 2024\_09\_19.docx document

8. Future Meetings, Plans, and Dates

- The following table of future meeting dates/locations was discussed

Plenary Meetings		
Plenary Meeting Dates	Plenary Meeting Locations (Hosts)	Notes
26 July 2024	Virtual Plenary	Joint WG-76/SC-206 Plenary
16-20 September 2024	Brussels, Belgium (EUROCONTROL - Alex)	Joint WG-76/SC-206 Plenary
2-6 December 2024	Palm Bay, Florida, USA (L3 Harris - Paul)	Joint WG-76/SC-206 Plenary (DO-364A/ED-XXX FRAC Resolution)
10-14 March 2025	Bristol, United Kingdom (Boeing - Louis)	Joint WG-76/SC-206 Plenary
9-13 June 2025	Washington, DC (RTCA-Karan)	Joint WG-76/SC-206 Plenary (Turbulence MASPS FRAC Resolution/AbO RTCA Report Due)
x-x September 2025	TBD Europe	Joint WG-76/SC-206 Plenary (DO-358C/ED-XXX FRAC Resolution)

SG/WG Meetings		
SG/WG Meeting Dates	SG/WG Meeting Locations (Hosts)	Notes
18-22 November 2024	Toulouse, France (Airbus - Macarena)	SG6/WG-76 FRAC Resolution Meeting

- September 2024
  - Alex Engel indicated that he has got meeting rooms reserved and asked if we need all of them
  - SG-4/SG-2 and SG-9/SG-4 will only need one combined meeting room
  - SG-6 will require a meeting room
  - Jim Mills indicated that SG-5/SG-3 will require a meeting room Tuesday through Thursday from 4pm to 6pm Central European Standard Time (CEST)
- December 2024
  - No additional discussion
- March 2025
  - Louis Bailey noted that this date is one week earlier than original, and asked if there were any objections to the change in meeting date
    - Karan Hofmann noted the following:

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- This is the same week of the RTCA PMC meeting
- Karan will have retired by then and a replacement Program Director may not be available to attend at that time
  - Alex indicated that he will be present at the March 2025 meeting
  - Mark Libant commented that if there is no replacement by then, we can still proceed
  - Mark also suggested that we approve the new date and move forward
  - The Special Committee approved the new meeting date per Louis' request
- June 2025
  - No additional discussion
- September 2025
  - Eldridge Frazier stressed that we will probably need to identify a venue for the September 2025 meeting so the FAA can budget for the travel
  - Tim Rahmes suggested that we consider a venue in Germany/Europe
    - The Special Committee concurred
  - **Action: Jim Mills to work with his contact to determine if the September 2025 Plenary Meeting can be hosted in Germany**

9. Action Items Review

- Action Item 423
  - This Action Item was reassigned to the SG-9/SG-4 Leadership
    - This Action Item was Closed
- Action Item 438
  - This Action Item was Closed
- Action Item 440
  - This Action Item was Closed
- Action Item 441
  - This Action Item was Closed
- Action Item 442
  - This action item was discussed during the June 14<sup>th</sup> Leadership telecon as investigating a possible Memorandum of Understanding (MOU) between entities
  - This Action Item was Closed as investigating an MOU is not a Special Committee function
- Action Item 443
  - This Action Item was Closed
- Three new Plenary action items were identified during the Opening and Closing Plenary sessions and are shaded in green below



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- The current SC-206/WG-76 Plenary Action Item list is as follows:

#	Owner	Action	Date	Due Date	Status
<b>Open Action Items</b>					
423	SG-9/SG-4 Leadership	Collaborate with SC-230 leadership (Dawn Gidner) on the value of onboard weather radar for datalink observations	Reassigned April 2024		Closed June 2024
438	Mark Libant	Check into hosting the March 2025 Plenary Meeting in Malaga, Spain	December 2023	April 2024	Closed June 2024
440	Tammy Flowe Eldridge Frazier Tim Rahmes Mark Phaneuf Karan Hofmann	Meet with the RTCA Government Authorized Representative (Bruce DeCleene) regarding the change in scope for SG-4/SG-2 and what type of document would be invocable by the FAA	April 2024		Closed June 2024
441	Karan Hofmann	As it relates to the SG-4/SG-2 activity, look for RTCA equivalent document to EUROCAE “technical specification”	April 2024		Closed June 2024
442	Karan Hofmann Alex Engel	Investigate possible MOU between RTCA/EUROCAE and WMO	April 2024	OBE as this is RTCA/EUROCAE Secretariat action	Closed June 2024
443	Alex Engel	Reserve conference rooms (one large, two small) in Brussels as backup for the March 2025 Plenary	April 2024		Closed June 2024
444	Tammy Flowe	Send the July 2024 SWX TIM invitation to ALPA	June 2024		Closed June 2024
445	Karan Hofmann	Send the September PMC invitation to Tammy Flowe, Tim Rahmes, and Mark Phaneuf	June 2024		Open
446	Jim Mills	Work with his contact to determine if the September 2025 Plenary Meeting can be hosted in Germany	June 2024		Open

**10. Other Business**

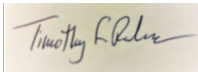
- No new business was raised

**11. Adjourn**

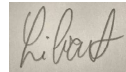
- The Closing Plenary adjourned at approximately 1130 PDT (2030 CEST) on Friday, June 28, 2024

CERTIFIED as a true and accurate summary of the meeting.

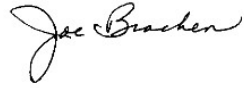
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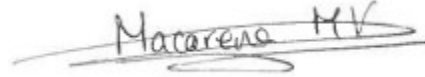
Tim Rahmes, SC-206 Co-chair



Mark Libant, SC-206 Co-chair



Joe Bracken, SC-206 Secretary



Macarena Martin-Viton, WG-76 Secretary