



RTCA Paper No. 183-23/SC206-200  
EUROCAE Paper No. 298-23/WG76-90

August 4, 2023

**Summary of the 72<sup>nd</sup> Meeting**  
**Summary of the 68<sup>th</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 26, 2023, and the Closing Plenary was held on Friday, June 30, 2023. The meetings were held at the Aircraft Owners and Pilots Association (AOPA) office in Frederick, Maryland.

- The following sub-group activities were briefed:
  - SC-206 SG-4/WG-76 SG-2: Turbulence White Paper
    - The White Paper and the proposed Terms of Reference (TOR) change was presented to the RTCA Program Management Committee (PMC) and was approved unanimously
    - The proposed Terms of Reference were initially rejected by the EUROCAE TAC
      - The TAC members requested additional information, mainly on the scope of the systems that would be subject to the MASPS
      - Clarification was provided, and the ToR was subsequently approved with the caveat that at the beginning of 2024 the TAC would like to get a more detailed report on the scope of the MASPS
    - A Request for Participation will be sent out to industry by both RTCA and EUROCAE
      - The Request for Participation will include safety and performance analysts on the list of participant areas of expertise needed
    - The Co-Chairs of SG-4/SG-2 will remain the same, however the subgroup is looking for European participation
    - The Kickoff of this next SG4/SG2 effort is scheduled to begin during the week of September 11<sup>th</sup> at a meeting at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado
      - The meeting at NCAR will take place parallel to the SC-206 and WG-76 joint Plenary week meetings
    - The joint Plenary will be held on Thursday of that week due to time differences between the United States and Amsterdam
  - SC-206 SG-6/WG-76: MASPS (DO-364A/ED-XXX)
    - SG-6 held a meeting in May at the Boeing facility in Madrid
      - All of the Service Descriptions (SDs) were folded into Appendix A, and they went through the Appendix and revised the text as necessary
    - SG-6 went through the Eddy Dissipation Rate (EDR) Turbulence Service (ETS) SD and added two modes of communication; Request-Reply and Publish-Subscribe

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- The SG-6 co-chair has a meeting scheduled with the Federal Aviation Administration (FAA) side of future connectivity and will bring the results of that discussion to the September Plenary meeting
  - SG-6 has been identifying the requirements to use any data link, and not specifying any specific data link for any of the services
- SG-6 was unable to accomplish all they had planned during the week
  - Due to a funding situation recently within the FAA, MITRE was not given an early opportunity to do some preliminary work
- SG-6 removed a lot of inconsistent language in the ETS SD during the week
  - The ETS SD is now a good SD with all of the modes being clarified
  - The sequence diagrams have been corrected
  - This SD is next-generation material
- SG-6 began the ETS Operational Safety Assessment (OSA)
- WG-76 only: Approval of EUROCAE ED-89A Change 1
  - The Change 1 document initially went through Open Consultation
  - Rockwell Collins had already collected some information on the 800-character limitation
    - WG-76 obtained the data and revised the Change 1 document once again
    - They clarified in the “note” that EUROCAE obtained test results that both manufacturers and data link service providers can handle messages greater than 800 characters
  - The document then went for a second Open Consultation
  - During the second open consultation a comment was raised which was considered by the WG members as not justified as the spirit of the comment was already covered in the text in which the document is written
    - This was explained to the commenter and no push-back was received
  - There were no further objections to this resolution were raised during Comment Resolution
  - Post-Meeting Note: During Council Approval, one Council Member raised an objection against the text as written
    - In discussion with that Council Member, a solution was found which was acceptable and subsequently the document was published by EUROCAE
  - This activity is now closed for WG-76
- Industry briefings were presented on the following topics:
  - Aircraft-based Observations; Current State and WMO Future Vision
  - Water Vapor and Contrails Update
  - Advanced Air Mobility (AAM) Update
- Next meeting:
  - September 11-15, 2023 [Boeing - Amsterdam, Netherlands (SC-206 SG-6/WG-76) / NCAR – Boulder, Colorado (SC-206 SG-4/WG-76 SG-2)]
    - Joint RTCA SC-206 (Meeting 73)/EUROCAE WG-76 (Meeting 69) Plenary

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**Opening Joint RTCA SC-206/EUROCAE WG-76 Plenary Meeting Summary – Monday, June 26, 2023. The meetings this week were held at the AOPA office in Frederick, Maryland.**

Presentations are posted at:

<https://aeropus.i3cloudservices.com/Group/GroupLanding/99?tab=Documents&folder=2023+Meetings%2F2-June+26-30%2C+2023+-+72nd+Meeting>

The Opening Plenary convened at approximately 0900 EDT (1500 CEST)

**1. Welcome and Opening Remarks**

- Reference the 2023 June SC206\_WG76 Opening Plenary Leadership Slides\_final.pptx slides
- Mark Libant and Tim Rahmes opened the meeting
- The AOPA host, Jim McClay, provided the logistics information on the facility
- Karan Hofmann and Alex Engel provided the briefing on their respective organizations
- Alex noted a recent incident where an individual took a EUROCAE document and obtained a patent on the capability
  - Alex stressed that that should not be done

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

- Tim Rahmes                      The Boeing Company (SC-206 Co-Chair)
- Mark Libant                    NAVCANADA (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
- Meredith Bell\*                FLYHT
- Bill Carson                     The MITRE Corporation
- Steve Darr\*                    Dynamic Aerospace
- Mark Eden                     Air Line Pilots Association, Intl
- Alexander Engel              EUROCAE (WG-76 Technical Programme Manager)
- Tammy Flowe                 FAA
- Izabela Gheorghisor        The MITRE Corporation
- Wendy Gutierrez\*            Collins Aerospace
- Karan Hofmann                RTCA, Inc. (SC-206 Program Director)
- Amanda Hoprich              AvMet Applications, Inc.
- Edward Johnson\*            FAA
- Martin Kearney-Fischer\*    The Boeing Company
- Nazih Khaouly\*              FAA
- Macarena Martin-Viton      Airbus (WG-76 Secretary)
- Jim McClay                    AOPA
- Carol Metais\*                Airbus
- Jim Mills                      HQ USAF/DoD
- Nathan Polderman\*         United Airlines
- David Robinson              AVIONICA
- Kurt Stiefel\*                 FAA
- Jean-Luc Thirion             DSNA

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3. Review and Approval of Meeting Agenda

- Reference slides 9 - 10 of the 2023 June SC206\_WG76 Opening Plenary Leadership Slides\_final.pptx slides
- Eldridge Frazier provided an overview of the week's activities
  - SG-6 will be meeting this week to work on the DO-364A/ED-XXX document
  - There will be team dinner held on Wednesday, June 28<sup>th</sup>, at the AOPA community center
- Following the Thursday morning session, the Plenary will break and travel to the FAA's Command Center and TRACON for a tour
- The plan is for the Joint Plenary to end by 1200 EDT on Friday, June 30<sup>th</sup>
- Eldridge recognized and commended Bill Carson and Izabela Gheorghisor for their efforts to get ready for this week
  - Bill and Izabela did not come back on contract until Thursday, June 22<sup>nd</sup>
- A motion was made to approve this week's meeting agenda
  - The motion was seconded
  - The meeting agenda was approved

4. SC-206 SG-6 / WG-76 MASPS: Work Plan for the Week

- Reference the Sg6\_WG76\_June-2023\_Agenda\_v4.pptx slides
- Eldridge Frazier presented the SG-6 work plan for the week
- The subgroup plans to complete the ETS OSA and Operational Performance Assessment (OPA)
- SG-6 held a meeting in May at the Boeing facility in Madrid
  - The subgroup accomplished a lot at that meeting
  - All of the SDs were folded into Appendix A, and the subgroup went through the Appendix and revised the text as necessary
- SG-6 went through the ETS and added two modes of communication; Request-Reply and Publish-Subscribe
  - ETS was only a crosslink (air-to-air) capability, however downlink and uplink capabilities have been added
  - They used the Hazardous Weather SD as a guideline and added to the SD the uplink of turbulence information to the cockpit
    - This required a big change to the current SD and to DO-364A/ED-XXX itself
  - Eldridge added that as they move into the ETS OSA, Bill Carson has a number of considerations to be looked at
  - The intent is to discuss the various sections before getting into the ETS OSA and OPA
- Bill requested a review from SG-6 of everything done in Madrid
  - Louis Bailey commented that the guidance for Request-Reply and Publish-Subscribe was pulled from Section 3.2.2 in the DO-364 document
    - There was no new language or capabilities introduced in the revised SD
  - Bill noted that we have three defined modes (uplink, downlink, and crosslink), and that he is seeing a lot of "red lines" in the document
    - Bill asked for a cursory review of what was done in Madrid and why the "red lines" are there
    - We need to come to a common level of understanding before starting the OSA and OPA
  - Eldridge responded that the first order of business during today's SG-6 meeting will be to go through the ETS line-by-line
- Eldridge noted that he has a meeting scheduled with the FAA side of future connectivity and will bring the results of that discussion to the September 2023 Plenary meeting
  - Future connectivity was never going to identify a data link for weather

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- SG-6 has been identifying the requirements to use any data link, and not specifying any specific data link for any of the services
- Eldridge indicated that SG-6 may have to push the line-by-line review of DO-364 work plan item to the September Plenary meeting
- Reference Slide 7
  - Alex Engel asked about the gap in time and what the plan is for SG-6 between the December 2023 and mid-January Final Review and Comment (FRAC) release
    - Eldridge responded that Amanda Hoprich will have to prepare the document (e.g., formatting, etc.) to get it ready for FRAC release
      - The final document will be over 400 pages long and will take some time to format and clean up acronyms, etc. once we agree with the content
    - Alex noted that once the document is approved for release for FRAC and Open Consultation, that is the version that should go out
      - Eldridge concurred
  - Alex commented that once SG-6 completes FRAC comment resolution at the June Plenary, it is not mandatory to have all resolutions included in the document at this time
    - The process is that, at the end of the FRAC comment resolution meeting, we have agreed upon resolutions to all comments (via the comment worksheet), but not all changes need to be incorporated into the document by the end of the meeting
  - Alex added that after the comment resolution meeting, the subgroup could, as an option, set a date to have all resolutions incorporated into the document to provide it to the commentors to review resolutions
    - After those updates have been incorporated, the group could, as an option, have an additional two weeks to review the final before going for FRAC resolution approval via a virtual Plenary meeting
    - Eldridge clarified by saying that after we have resolved the FRAC comments, we give SC-206 and WG-76 two weeks to look at the document
      - We may need to discuss these steps at a later date to determine when resolutions will need to be included in the document
  - Eldridge commented that he was unclear if the reviewers would need to see the document one last time after all comments were resolved and incorporated
    - Alex responded that that is not a mandatory step

5. Call for Interest Responses Summary

- Reference the Call for Interest Inputs.pptx slides
- Karan Hofmann noted that they did receive quite a bit of support and interest for the effort
  - Several responses came from non-RTCA members, however those individuals are in the process of becoming members
- Karan asked, when we are discussing the Terms of Reference (TOR) on Friday, if we want to consider submitting this to the Program Management Committee (PMC) like we did with the SG-4/SG-2 effort
  - It was noted that this is scheduled as part of the Friday TOR agenda item
- Tim Rahmes asked if anyone volunteered for a leadership position
  - Karan responded in the affirmative and that that individual was Steve Darr (Dynamic Aerospace)
- Eldridge asked about the plan of the Committee and if we will have a TOR statement ready to discuss on Friday
  - Karan responded that if we want to add it to the TOR, the next PMC meeting will be held in September

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- We could draft some TOR language and approve that language at the next SC-206/WG-76 Joint Plenary in September
- We could also ask the PMC to do an “out of cycle” approval of the TOR change
- o Steve Darr noted that we did have TOR language on this activity drafted back in December 2022 that we could review during this Friday’s Plenary session
  - Eldridge concurred and suggested that we have a good draft of the TOR language to discuss on Friday
- o Tim added that we published the Call for Interest (CFI) to generate more interest, but is noting not a whole lot of new people joining the Plenary at this time to discuss it
  - Karan responded that the responders were told they would be notified when the TOR change has been approved
- Alex Engel noted that fifteen (15) responses is a good response
  - o Tim asked if we might reach out to responders between now and Friday and invite them to participate
    - Karan responded in the affirmative and noted that that could be done
  - o Tim added that he would rather canvas a wider group to see what their priorities are
  - o Steve responded that that was the purpose of the study group to stand up the committee and obtain inputs
    - Eldridge concurred and added that the actual work will come from what is contained in the White Paper
- Tim reiterated that the TOR is on the agenda for the Friday closing Plenary
  - o Between now and Friday, Karan and Alex will notify the respondents to let them know this will be discussed on Friday

6. Industry Coordination

- Summary of 20 April SC-186/WG-51 Discussion of Water Vapor Field
  - o Reference the [RTCA EUROCAE Rahmes waterVaporContrails 1pager 20230626.pptx](#) slides
  - o Tim Rahmes provided the update and initiated the discussion
  - o Tim noted that, for the Closing Plenary session, he and Tammy Flowe have coordinated with Curtis Marshall
    - Curtis will be present and go into more detail on this topic
  - o Tim provided a recap of what was done to date
  - o Tim was told that inclusion of the water vapor measurement is not possible for Automatic Dependent Surveillance – Broadcast (ADS-B) Version 3, but could be possible within Version 4
  - o This will be a “work-in-progress” for a little while
    - There will be more information provided during the Friday discussion with Curtis
  - o There are two areas of consideration:
    1. Sensor
    2. Data link
  - o Sampling to the level of 10 parts-per-million (ppm) for water vapor in the upper troposphere is not good enough
  - o Alex commented that EUROCAE is, at this time, defining the All-purpose Structured EUROCONTROL Surveillance Information Exchange (ASTERIX) interface for the ground infrastructure
    - It is difficult to change the existing document for backwards compatibility
    - This capability would be better within Version 4
  - o Alex suggested they consider an update to the phased overlay approach

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- Tim, Steve, and Alex agreed to discuss this concept further this week
- o Reference Slide 3
- Eldridge asked which data links Tim is considering
  - Tim responded that for the near-term, they have to use something like Aircraft Communications Addressing and Reporting System (ACARS) or broadband
  - Eldridge added that we need to develop the requirement, then determine who can meet it and bring the information to the table

7. RTCA PMC 22 June Decision on Turbulence White Paper

- Reference the SC-206 SG4 WG-76 SG2 TurbWhitePaper Update to June 2023 Opening Plenary.pptx slides
- Tammy Flowe briefed the participants
- Tammy noted that SG-4/SG-2 presented the White Paper and the proposed TOR change to the PMC last Thursday
  - o The TOR change was approved unanimously
- Assuming that WG-76 gets EUROCAE approval, they will be sending out a Request for Participation after that
- Tim Rahmes, Mark Phaneuf, and Tammy will continue as Co-Chairs of SG-4/SG-2
  - o However, they would like to obtain EUROCAE participation
- Alex Engel responded that the EUROCAE Technical Advisory Committee (TAC) requested more information
  - o Alex will be speaking with the TAC tomorrow and will provide them the additional information they are looking for
  - o Alex added that the effort can continue as an RTCA-only activity if the TAC does not approve EUROCAE participation
- Tammy noted that SG-4/SG-2 will not be meeting this week
  - o Karan acknowledged the leadership of SG-4/SG-2 as their efforts were well noticed by the PMC
- Eldridge also acknowledged the RTCA Program Coordinator for always providing support and making the Special Committee membership feel welcome

8. Adjourn

- The Opening Joint Plenary session adjourned at approximately 1045 EDT (1645 CEST) on Monday, June 26, 2023

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**Closing Joint RTCA SC-206/EUROCAE WG-76 Plenary Meeting Summary - Friday, June 30, 2023. The meetings this week were held at AOPA in Frederick, Maryland.**

Presentations are posted at:

<https://aeropus.i3cloudservices.com/Group/GroupLanding/99?tab=Documents&folder=2023+Meetings%2F2-June+26-30%2C+2023+-+72nd+Meeting>

The Closing Plenary convened at approximately 0900 EDT (1500 CEST)

**1. Welcome and Opening Remarks**

- Reference the 2023 March SC206\_WG76 Closing Plenary Leadership Slides\_final slides
- Tim Rahmes opened the meeting
- Tim thanked Jim McClay for hosting this week's Plenary
- Tim also thanked Jim Mills for setting up the FAA Command Center and TRACON tours
- Karan Hofmann and Alex Engel provided the briefing on their respective organizations

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

- Tim Rahmes, Co-chair           The Boeing Company
- Mark Libant, Co-Chair        NAVCANADA
- Joe Bracken, Secretary      AvMet Applications, Inc.
- Eldridge Frazier             FAA, Government Authorized Representative
- Moin Abulhosn                FAA
- Nick Amundson\*              FAA (intern)
- Meredith Bell\*                FLYHT
- Louis Bailey                  The Boeing Company
- Bill Carson                    The MITRE Corporation
- Rick Curtis                    Collins Aerospace
- Steve Darr\*                  Dynamic Aerospace
- Mark Eden                    Air Line Pilots Association, Int'l
- Alexander Engel              EUROCAE (WG-76 Technical Programme Manager)
- Tammy Flowe                 FAA
- Matt Fronzak                 The MITRE Corporation
- Izabela Gheorghisor         The MITRE Corporation
- Wendy Gutierrez\*            Collins Aerospace
- Karan Hofmann                RTCA, Inc. (SC-206 Program Director)
- Amanda Hoprich              AvMet Applications, Inc.
- Edward Johnson\*             FAA
- Curtis Marshal                NOAA
- Macarena Martin-Viton        Airbus (WG-76 Secretary)
- Jim Mills                      HQ USAF/DoD
- Austin Orchard\*              L3Harris
- Nathan Polderman\*          United Airlines
- David Robinson              AVIONICA
- Stefan Schwanke\*            DFS
- Jean-Luc Thirion             DSNA

**3. Review and Approval of Meeting Agenda**



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- Tim Rahmes made a motion to approve the Plenary meeting agenda for the day
  - Mark Eden seconded the motion
  - The meeting agenda was approved
  
- 4. Review and Acceptance of Minutes of the SC-206 Meeting 71/WG-76 Meeting 67 (March – Toulouse, France)
  - Joe Bracken reported that the subject document was uploaded to AerOpus on May 4<sup>th</sup> after receiving and adjudicating all comments received
  - There were four (4) industry updates provided and topics discussed during the March Plenary
    - Emerging Water Vapor Measurements for Contrail Mitigation
    - ADS-B Weather Implementation
    - Path forward for reconciling weather observation needs
    - The most recent RTCA AAM Workshop
  - Nine (9) action items were closed during the Plenary and eleven (11) new action items were assigned
  - Also, during this Plenary, SC-206 SG-8 / WG-76 SG-1 was “sunset” due to the fact that all of the required products had been satisfied and provided
  - Alex made a motion to accept the March Plenary minutes
    - Mark Libant seconded the motion
    - The March Plenary minutes were approved
  
- 5. Report of Sub-Groups:
  - SC-206 SG-4/WG-76 SG-2: Turbulence MASPS
    - Reference the [SC-206 SG4 – SG 76 SG2 March Closing Plenary Presentation final2\\_20230317](#) slides
    - Tammy Flowe provided the update
    - Tammy noted that SG-4/SG-2 did not officially meet this week
    - Tammy added that the EUROCAE TAC did provide conditional approval of the work
      - Alex will provide more details later in the meeting today
    - Tim Rahmes commented they have met with Darryl Kleist (NOAA / NWS)
      - There is a lot of data being assimilated into the forecast models
      - Meeting with Darryl was a great step
      - Hearing from Curtis Marshall today will also be very helpful
    - SG-4/SG-2 created a Call for Participation emphasizing the participants areas of expertise needed in the group
      - The Call for Participation will be sent out next week and will close at the end of the month
      - The Kickoff of this next SG-4/SG-2 effort is scheduled to begin during the week of September 11<sup>th</sup> at a meeting at NCAR in Boulder, Colorado
      - Tim added that the meeting at NCAR will be held during the same time as the next plenary
        - The joint Plenary will be held on Thursday of that week due to time differences between the United States and Amsterdam
      - Alex Engel noted that EUROCAE will distribute the Call for Participation using their automated tool versus distributing via email
      - Eldridge recommended that the Call for Participation should include safety and performance analysts in the list of participant areas of expertise needed
  
  - SC-206 SG-6/WG-76: MASPS (DO-364A/ED-XXX)

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- Reference the Sg6\_WG76\_March-2023\_Closing3.17.2023 slides
- Eldridge Frazier provided the briefing
- Eldridge noted that SG-6 was unable to accomplish all they had planned during the week
  - Due to a funding situation recently within the FAA, MITRE was not given an early opportunity to do some preliminary work
    - Eldridge thanked Bill and Izabela for their efforts in getting prepared for this meeting in a short amount of time
- SG-6 removed a lot of inconsistent language in the ETS SD during the week
  - The ETS SD is now a good SD with all of the modes being clarified
  - The sequence diagrams have been corrected
- Eldridge noted that this SD is next-generation material
- There was no work accomplished in the DO-364A burndown status this week
- Eldridge indicated that he does not have the Hampton facility reserved yet for the October SG-6 working session
  - **Action: Eldridge to confirm that NIA in Hampton is able to accommodate SG-6 in October**
  - **Action: Ed Johnson agreed to notify NIA that Eldridge is trying to contact them regarding their availability to host an SG-6 meeting in October**
- Eldridge stressed that the October meeting is critical to get the document ready by November

## 6. Industry Coordination

- Aircraft-based Observations: Current State and WMO Future Vision
  - Reference the ABO Presentation to RTCA 30 June 2023 slides
  - Curtis Marshall provided the briefing
  - Reference Slide 2
    - Curtis noted that there are seven main areas of current / future Aircraft Based Observations (AbO) work
    - Moin Abulhosn asked if pilot reports (PIREPs) are being sent to Automatic Dependent Surveillance – Contract (ADS-C)
      - Curtis responded in the affirmative
  - Reference Slide 3
    - Curtis noted that they are receiving 3.2 million soundings per year worldwide
    - The number of soundings “took a hit” during COVID from outside the contiguous United States (OCONUS)
      - However, they are currently back up to 80% of their pre-COVID reports
  - Reference Slide 4
    - Lufthansa, Southwest, and UPS are equipped with the water vapor sensing system (WVSS)-II sensor
    - They are inputting these data into numerical weather predictions for forecasts
      - Inclusion of this data results in better forecasts and provides benefits to the models
      - Weather balloons were the backbone for forecasts
      - Meteorological Data Collection and Reporting System (MDCRS) and Aircraft Meteorological Data Relay (AMDAR) data supplements balloon data
      - These reports are the most important for the hourly high-resolution weather model
      - A World Meteorological Organization (WMO) study showed that AbO is the second or third most important source of weather prediction
  - Reference Slide 8
    - In 2016, we began to receive ADS-C data
    - We receive wind and temperature data every 15 minutes

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- Nathan Polderman asked about the spurious ADS-C wind data being provided by the B787
  - Curtis responded that they have identified a temporary fix / workaround, but it is in “NOAA’s (National Oceanic and Atmospheric Administration) court”
  - Nathan asked if there is a way to mitigate the B787 spurious wind data on the NOAA side
    - Curtis responded in the affirmative
    - There is a file that created a correction vector for each airframe
    - This is being corrected in-house until the problem is corrected within the avionics
    - Curtis indicated that he would track down the file and put out details on how to use it
  - Nathan asked Curtis to let him know what United Airlines can do to help
- Reference Slide 12
  - Curtis noted that there is not a lot of growth in the Tropospheric Airborne Meteorological Data Reporting (TAMDAR) fleet
  - FLYHT has acquired the SpectraSensor production line for the WVSS-II water vapor sensor
    - This is expected to result in an increase in the growth of WVSS sensor production
    - We should begin to see growth in water vapor data we have not seen since 2017
- Questions
  - Reference Slide 18
    - Eldridge asked, with respect to the final bullet, who the formal requirement went to
      - Curtis responded that the Capabilities and Requirements Decision Support (CaRDS) committee sits in the requirements area of the National Weather Service (NWS)
      - This requirement went through the committee process
      - There is a requirement within NWS, that if a requirement is levied, the NWS is required to make it work
      - Steve Darr added that the council is similar to the Joint Resource Council (JRC) at the FAA where there is an acquisition process
        - The council is the NOAA equivalent and the NWS CaRDS process establishes requirements, but not funding
        - It is possible that the spectrum folks have approved the spectrum for ADS-B
        - The Surveillance and Broadcast Services (SBS) office is aware of this requirement within NOAA
    - Tim Rahmes asked for clarification of final bullet as it relates to “little weather data”
      - Is there any weather data?
        - Curtis and Steve responded in the negative
    - Tim noted that with the adoption of EDR messages, this is also applicable to winds and temperature
      - A message is triggered both by a turbulence event and periodically (every 15 minutes)
      - The message is triggered every one minute when an event occurs
      - Curtis indicated that he is interested in obtaining that data
    - Karan asked if RTCA can share these slides on the AerOpus site
      - Curtis agreed to scrub the slides of any sensitive material and provide them to Tammy Flowe
- Water Vapor and Contrails Update

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- Reference the Rahmes\_waterVaporContrais\_20230630 slides
  - Tim Rahmes provided the briefing
  - Tim noted that if we can find climate and meteorological needs, this is a good opportunity to gather more information
  - We are looking for one sensor to collect all the data that is needed
  - To be suitable to address the contrail issue, we need to improve the water vapor sensor accuracy to less than 50 parts per million (ppm)
  - The sensor must be low cost, light weight, and of good quality
  - Reference Slide 8
    - We need to determine:
      - What is in scope and who should do what
      - The role of the WMO
    - The reported parameters, numerical precision, and reporting frequency is in scope
    - The accuracy requirements, databus types, and other species are still in question
  - Advanced Air Mobility (AAM) Update
    - Reference the RTCA AAM Workshop 2 Overview (03142023) – V0.3a slides
    - Joe Bracken provided the briefing
    - There were no questions or comments associated with this briefing
7. WG-76 only: Approval of EUROCAE ED-89A Change 1
- Jean-Luc Thirion and Alex Engel presented this item
  - Reference the D-ATIS specification
    - Alex noted that the Change 1 document initially went through Open Consultation
    - Rockwell Collins had already collected some information on the 800-character limitation
      - WG-76 obtained the data and revised the Change 1 document
      - They clarified in the “note” that EUROCAE obtained test results that both manufacturers and data link service providers can handle messages greater than 800 characters
    - The document then went for a second Open Consultation
  - WG-76 members were given an opportunity to raise any questions or concerns
    - Jean-Luc reported that the deadline for comments was last Sunday, June 25th
    - One comment was received
  - Jean-Luc and Alex asked if the group accepts the current recommended language for the Note
    - There were no objections to this resolution and the document was approved for submission to Council Approval
    - Alex noted that this activity is now closed for WG-76
  - However, during Council Approval a Council Member raised concerns against the language as it was used in the new note
    - In discussion with the Council Member an updated text was drafted and accepted as resolution of the comment
    - Following this resolution, the document was published by EUROCAE.
8. Call for Interest Update
- There was no further discussion on this item apart from what was presented during the Opening Plenary
9. Terms of Reference
- Approval of WG-76 Task Sheet and Work Programme
    - Alex Engel introduced the discussion

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- In the White Paper developed by SG-4 and SG-2, there was a recommendation to develop a MASPS on EDR calculation algorithms
  - The TOR had to be updated
  - Their e-vote included three elements:
    - During the e-vote, the proposal was rejected and additional information was requested for the next TAC meeting
    - There were concerns over the scope of the document and the systems that the MASPS would apply to
    - The TAC was concerned about systems not connected to the aircraft
  - In the end, and because the TOR including the MASPS was already approved by the RTCA PMC, the TAC agreed to go ahead, but requested more detail on the scope of the document
    - This will be presented to the TAC in January
  - It has been discussed with Tammy that during the initial meetings of the MASPS development, that they focus on scope so Alex can report back to the TAC
  - The risk in January is that the TAC may indicate that this is not what they were expecting and may pull out of the activity
  - Karan stressed that we want this to be a joint document and that we will work with the TAC to get them what they want
  - Alex noted that we hope to get additional European participation through the Call for Participation
- Discussion on Restarting SG-5 (DO-358C) / Joint Activity
    - Eldridge Frazier began the discussion and indicated that Bill Carson will describe what needs to be considered in restarting SG-5
      - Eldridge added, from a program management standpoint, we want to make sure that any activation of a subgroup has the proper leadership being sponsored and has enough participation to get the job done
    - Bill then briefed the group
      - MITRE supports the SBS side of the FAA, and within that system, there is Flight Information System Broadcast (FIS-B), which MITRE monitors
      - The SBS office can, and has agreed to support the SG-5 effort and the revision of DO-358B
      - Bill indicated that he did put together 10-15 bulleted items of things to consider and handed that off to Eldridge
        - Eldridge responded that he has not gone to the PMC with this yet
    - Tim Rahmes asked what the timeframe is to begin the SG-5 effort, given the ongoing SG-6 work
      - Bill responded that there is no reason the SG-5 work cannot begin
      - When SG-5 is reinstated, the work can begin along with the SG-6 work
    - Eldridge asked if there is any consideration to make this joint with EUROCAE
      - Alex Engel asked if this is a Universal Access Transceiver (UAT) document
        - Bill responded in the affirmative
      - Alex added that DO-283 is not a joint document
      - The technology for UAT is not something that EUROCAE has worked on, therefore he is not sure if this would be a joint activity / document
        - However, if there is interest within EUROCAE, he could ask the TAC if EUROCAE has sufficient resources to support it
      - Eldridge stressed that if EUROCAE is willing to participate and has the resources, RTCA would welcome it
      - Mark Libant noted that bringing in Europe will extend the timeline

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- Mark asked what the timeline is to complete the DO-358B revision
  - Bill responded that twelve months might be too soon, so perhaps eighteen months would be more appropriate
  - Alex added that he has no objection in making this a joint document
    - However, this is a technology that is not used in Europe
    - Running a Call for Interest is something Alex could do to see what the level of interest might be
  - Eldridge suggested that we target the December PMC meeting to present a TOR revision
    - Karan Hofmann added that we could wait until the December PMC for approval, with a Kickoff of the subgroup in January 2024
  - Mark asked if we could expect responses to the Call for Interest in time for the next TAC meeting
    - Alex responded in the affirmative
    - Alex could report at the September joint Plenary on the Call for Interest results
  - Karan asked if we want to send out a Call for Interest to determine interest in the United States
    - **Action: Bill Carson and Eldridge Frazier to draft a paragraph to include in a Call for Interest related to restarting SG-5**
      - Target sending out the Call for Interest in August 2023, and having results in time for the September 2023 Plenary
    - **Action: Karan Hofmann and Alex Engel to send out the Call for Interest related to restarting SG-5**
      - Louis Bailey added that, within the Call for Interest, they should include some specificity on target areas of expertise
- TOR Revision Related to White Paper on Aircraft Based Observations
  - Steve Darr was unable to attend this portion of the Plenary discussion
  - Louis Bailey asked for background on why this activity is needed
    - Current services should already be compliant with this
  - This is not about meteorological accuracy
  - After discussion, the participants indicated that this appears to be within scope of the existing SG-6
    - Ed added that this is intended to develop the white paper in response to the Call for Interest
    - Tim Rahmes noted that he is curious why this is not part of the existing SG-6 scope and asked what is beyond SG-6's existing scope
    - SG-6 should determine what is outside their scope
  - Tim added that, with respect to the last sentence in the TOR revision, we already have those data link services
  - Jim Mills commented that Steve needs to be present to present his position on why this is needed and how it is different from existing SG-6 work
    - Ed responded that the proposed TOR language puts forth the White Paper that everyone agreed to
    - Tim commented that the Call for Interest that was sent out was not specific to a subgroup, but simply to gauge interest in participation
    - Tim asked if SG-6 could invite Steve and Ed to their next subgroup meeting to discuss this to ensure that this is addressed during the September Plenary
      - Eldridge responded that this is a Plenary discussion item
    - Karan Hofmann noted we could set up an ad hoc group of the leadership, Steve Darr, and Ed Johnson to prepare for a presentation to the PMC after the September Plenary

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- Many noted that the scope wording in the proposed TOR is too generic and should be modified per the language in the Call for Interest
- Alex Engel commented that this is an activity that we have presented already
  - The intent of the Call for Interest was to identify a level of interest in an activity we already discussed doing
  - Individuals responded to the Call for Interest with interest
  - It is up to the Plenary to decide whether to do the activity or not
- o Tim noted that to begin a new activity, we need resources and a clearly defined goal
  - The leadership team agreed to interface with Steve and Ed between now and the next PMC meeting
  - Ed commented that revising the wording in the TOR is “on the table”
- o **Action: Tim Rahmes and Mark Libant to stand up a group to work with Steve Darr to revise the language of the TOR revision as it relates to standards development for aircraft-based meteorological observation data link services**
- o **Action: SC-206 Leadership to provide direction to Steve Darr on how to prepare for the September Plenary as it relates to standards development for aircraft-based meteorological observation data link services**

10. Future Meetings, Plans, and Dates

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

RTCA Future Meetings		EUROCAE
Plenary Meetings		<a href="#">Open items</a> Differs from TOR
Plenary Meeting Dates	Plenary Meeting Locations (Hosts)	Notes
September 11-15, 2023	Amsterdam, Netherlands (Boeing - Louis)	Joint WG-76/SC-206 SG-6 Plenary
	Boulder, Colorado, USA (NCAR - Greg)	Joint WG-76 SG-2/SC-206 SG-4 Plenary
December 4-8, 2023	Phoenix, Arizona, USA (Honeywell - Willie)	Joint WG-76/SC-206 Plenary (DO-364A/ED/XXX FRAC release)
		Joint WG-76/SC-206 Plenary
March 18-22, 2024	Geneva, Switzerland (IATA - Stuart/Emily)	
June x-x, 2024	Calgary, Canada (FLYHT - Meredith)	Joint WG-76/SC-206 Plenary (DO-364A/ED/XXX FRAC resolution)
September 16-20, 2024	Brussels, Belgium (EUROCONTROL - Alex)	Joint WG-76/SC-206 Plenary (DO-364A/ED/XXX PMC/TAC approval)
December x-x, 2024	Melbourne, Florida, USA (TBD); backup Orlando, Fl. (Mark E)	Joint WG-76/SC-206 Plenary
SG/WG Meetings		
SG/WG Meeting Dates	SG/WG Meeting Locations (Hosts)	Notes
October 23-27, 2023	Hampton, Virginia, USA (NIA - Eldridge)	RTCA SG-6/WG-76 Meeting (DO-364A/ED-XXX MASPS)
November 28-30, 2023	Kansas City, Missouri, USA (AWC - Tammy)	RTCA SG-4/WG-76 SG-2 Meeting (Turbulence MASPS)

- Reference the September 2023 joint Plenary
  - o Louis Bailey provided an update on the Amsterdam meeting venue
    - Louis will be at the venue early and will notify the participants of any issues in a timely manner
    - Louis has sent out the hotel information and noted that Amsterdam is very expensive at that time of year
    - Louis recommended those attending review and become familiar with how the trains and buses work in the area
    - Karan Hofmann stressed that Louis conduct an audio check of the facility prior to the meeting
- The Geneva location has been confirmed for the March 2024 joint Plenary

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- **Action: Karan Hofmann to obtain and send out the address for the March 2024 meeting in Geneva as soon as possible**
- Reference the June 2024 joint Plenary, there are still some logistical details to check on
  - **Action: Meredith Bell to confirm if the FLYHT facility in Calgary is able to host the June 2024 Joint Plenary meeting and identify the best dates**
  - Mark Libant offered Edmonton as a backup location
    - **Action: Mark Libant to look into the possibility of NAV CANADA hosting the June 2024 Joint Plenary in Edmonton**
- Reference the September 2024 joint Plenary
  - Brussels (EUROCONTROL) is being considered as the primary location
    - Alex agreed to check on the availability to host
    - The dates of this meeting will be September 16 – 20, 2024
- Reference the December 2024 joint Plenary
  - Mark Eden offered Orlando as a backup to Melbourne
  - The dates and location of this meeting will be determined at a later date
- Reference the Subgroup / Working Group meetings
  - Eldridge noted that the Hampton location is not locked in yet
  - Eldridge will continue to follow up with his NIA points of contact

#### 11. Action Items Review

- Action Item 405
  - This item was Closed
- Action Item 406
  - This item was Closed
- Action Item 407
  - This item was Closed
- Action Item 408
  - This item was Closed
- Action Item 408A
  - This item was Closed
- Action Item 408B
  - This item was Closed
- Action Item 409
  - This item was Closed
- Action Item 410
  - This item was Closed
- Action Item 411
  - This item remains Open
- Action Item 412
  - This item was Closed
- Action Item 413
  - This item was Closed
- Seven 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>					
405	Wendy Gutierrez	Wendy Gutierrez to send WG-76 (Alex Engel) the results from the Collins Aerospace ATIS message test	March 17, 2023		Closed
406	Alex Engel Jean-Luc Thirion	Alex Engel and Jean-Luc Thirion to revise the ED-89A Change 1 language to strengthen the wording as it relates to message character count testing based on Wendy Gutierrez action (AI405)	March 17, 2023		Closed
407	Joe Bracken	Joe Bracken to post the revised and approved December 2022 Plenary Meeting Summary to AerOpus	March 17, 2023		Closed
408	SC-206 Leadership	SC-206/WG-76 to send two independent recommendations to SC-186/WG-51 for consideration during the 20 April 2023 SC-186/WG-51 Plenary Meeting:	March 17, 2023	April 20, 2023	Closed
408A	Tim Rahmes	Tim Rahmes to draft SC-186/WG-51 recommendation language related to water vapor observation needs	March 17, 2023	April 20, 2023	Closed
408B	Eldridge Frazier	Eldridge Frazier to draft SC-186/WG-51 recommendation language related to the need for higher ADS-B Vertical Rate sample rate	March 17, 2023	April 20, 2023	Closed
409	Alex Engel Macarena Martin-Viton	Alex Engel and Macarena Martin-Viton to ensure that the WG-76 TOR reflects the new SC-206 SG-4/WG-76 SG-2 MASPS delivery date	March 17, 2023		Closed
410	SG-4 Leadership	SG-4 to develop slides related to the Turbulence White Paper for presentation at the June 22, 2023 PMC Meeting	March 17, 2023	June 22, 2023	Closed
411	Tim Rahmes	Tim Rahmes to check with Meredith Bell of FLYHT on their ability to host the June 2024 Joint Plenary in Calgary, Canada	March 17, 2023	June 2023	Open
412	Macarena Martin-Viton	Macarena Martin-Viton agreed to book rooms in Toulouse, France for the September 2024 Joint Plenary	March 17, 2023	June 2023	Closed
413	Karan Hofmann Alex Engel	Karan Hofmann and Alex Engel to send the Call for Interest	March 17, 2023		Closed
414	Bill Carson Eldridge Frazier	Bill Carson and Eldridge Frazier to draft a paragraph to include in a Call for Interest related to restarting SG-5	June 2023	July 31, 2023	Open
415	Karan Hofmann Alex Engel	Karan Hofmann and Alex Engel to send out the Call for Interest related to restarting SG-5	June 2023	August 2023	Open

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416	Tim Rahmes Mark Libant	Tim Rahmes and Mark Libant to stand up a group to work with Steve Darr to revise the language of the TOR revision as it relates to standards development for aircraft-based meteorological observation data link services	June 2023	August 2023	Open
417	Leadership	SC-206 Leadership to provide direction to Steve Darr on how to prepare for the September Plenary as it relates to standards development for aircraft-based meteorological observation data link services	June 2023	August 2023	Open
418	Meredith Bell	Meredith Bell to confirm if the FLYHT facility in Calgary is able to host the June 2024 Joint Plenary meeting	June 2023	September 2023	Open
419	Mark Libant	Mark Libant to look into the possibility of NAV CANADA hosting the June 2024 Joint Plenary in Edmonton	June 2023	September 2023	Open
420	Karan Hofmann	Karan Hofmann to obtain and send out the address for the March 2024 meeting in Geneva as soon as possible	June 2023	July 31, 2023	Open
421	Eldridge Frazier	Eldridge to confirm that NIA in Hampton is able to accommodate SG-6 in October	June 2023	July 31, 2023	Open
422	Ed Johnson	Ed Johnson agreed to notify NIA that Eldridge is trying to contact them regarding their availability to host an SG-6 meeting in October	June 2023	July 31, 2023	Open

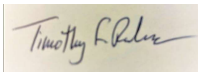
**12. Other Business**

- Alex and Karan noted that there is a separate folder in AerOpus that includes photos from the joint Plenary
- No new business items were identified

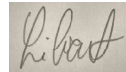
**13. Adjourn**

- The Closing Plenary adjourned at approximately 1230 EDT (0730 CEST) on Friday, June 30, 2023.

CERTIFIED as a true and accurate summary of the meeting.



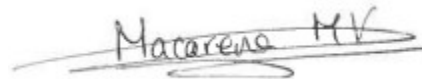
Tim Rahmes, SC-206 Co-chair



Mark Libant, SC-206 Co-chair



Joe Bracken, SC-206 Secretary



Macarena Martin-Viton, WG-76 Secretary