



RTCA Paper No. 85-23/SC206-197  
EUROCAE Paper No. 194-23/WG76-87

May 5, 2023

**Summary of the 71<sup>st</sup> Meeting**  
**Summary of the 67<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, March 13, 2023, and the Closing Plenary was held on Friday, March 17, 2023. The meetings this week were held at Airbus in Toulouse, France.

- The following sub-group activities were briefed
  - SC-206 SG-4/WG-76 SG-2: Turbulence White Paper
    - There were 67 comments received to the White Paper
    - The subgroup developed an updated Eddy Dissipation Rate (EDR) definition which is good for the industry and opens EDR up to additional solutions
    - The White Paper includes recommendations for future work
    - There are 14 prioritized considerations
    - Future SG-4/SG-2 work recommends development of a MASPS, which will be a joint document
    - Eventually want an invocable document by FAA Flight Standards
      - MASPS are typically invoked via an Advisory Circular (AC)
  - SC-206 SG-6/WG-76: MASPS (DO-364A/ED-XXX)
    - The group completed the Tiger Team resolution, and resolved all of the Open action items
    - The group resolved the D-ATIS Service Description (SD)
    - The D-ATIS SD was used as the “strawman” to work through the Digital-Runway Visual Range SD
    - The May 2023 meeting in Madrid will be held at the Boeing facility
      - During that meeting, Appendices A and C will be worked on
  - SC-206 SG-8/WG-76 WG-1: DLSAD (DO-XXX)
    - There is a move to “sunset” the group as all of the required products have been provided and the D-ATIS SD will now be included in the SG-6 efforts
    - Rocky Stone introduced this topic and asked if there are any objections
    - If sunset, this combined group will not meet anymore
    - Change 1 to ED-89A was a deliverable from WG-76, not from this group
    - There were no objections to sunsetting this group
  - WG-76 only: Approval of EUROCAE ED-89A Change 1 for Council Approval
    - Jean-Luc Thirion and Alex Engel presented this item

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- ED-89A specifies a maximum character length of 800 characters
  - ATIS and D-ATIS messages must be identical; therefore we cannot retain the 800 character length
    - o This required an update to ED-89A to note that there could be longer messages
  - Alex presented the proposed Change 1 language to ED-89A
  - This proposed change had been submitted to Open Consultation
    - o Only one comment was received which could not be considered as it requested to not increase the length of the messages
      - This is not feasible for the reasons explained above; therefore, the updated language in Change 1 was considered to be accepted
  - Collins Aerospace commented that messages with up to 2000 characters have been tested and shown not to be an issue
    - o Alex responded that, with this new information, they could update the document to reflect the fact that it was tested with no issue, which would be a much stronger statement than what is in the document now
    - o The WG-76 representatives will update the document to reflect these testing results, and then forward the revised document to a second Open Consultation for approval of the amended language
  - The decision to submit ED-89A Change 1 to Council Approval was deferred until after the second Open Consultation
- Industry briefings were presented on the following topics:
    - o Emerging Water Vapor Measurement Needs for Contrail Impact Mitigation and Analyses
    - o ADS-B Weather Implementation
    - o Path Forward for Reconciling Weather Observation Needs
    - o Advanced Air Mobility (AAM) Workshop Out Brief
  - Next meeting:
    - o June 26 - 30, 2023 (AOPA – Frederick, Maryland)
      - Joint RTCA SC-206 (Meeting 72)/EUROCAE WG-76 (Meeting 68) Plenary

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

**Opening Joint RTCA SC-206/EUROCAE WG-76 Plenary Meeting Summary – Monday, March 13, 2023. The meetings this week were held at Airbus in Toulouse, France.**

Presentations are posted at:

<https://aeropus.i3cloudservices.com/Group/GroupLanding/99?tab=Documents&folder=2023+Meetings%2F1-March+13-17%2C+2023+-+71st+Meeting>

The Opening Plenary convened at approximately 0900 CET (0400 EDT)

**1. Welcome and Opening Remarks**

- Reference the 2023 March SC206 WG76 Opening Plenary Leadership Slides final.pptx slides
- Tim Rahmes opened the meeting
  - With Rocky Stone's retirement from United Airlines, Tim will act as an interim Co-Chair until his position becomes official at the upcoming PMC meeting on Thursday, March 16
- Karan Hofmann and Alex Engel briefed their respective RTCA and EUROCAE slides
  - Reference slides 2 - 8 for specifics on RTCA and EUROCAE policies
  - Alex pointed out the upcoming 2023 EUROCAE Symposium to be held on April 26 and 27, in Paris, France
    - <https://www.eurocae.net/events/eurocae-symposium-2023/>

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

- Tim Rahmes                                   The Boeing Company (Interim SC-206 Co-Chair)
- Joe Bracken, Secretary\*               AvMet Applications, Inc.
- Eldridge Frazier                            FAA, Government Authorized Representative
- 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
- Hagay Makov                               SkyPath
- Macarena Martin-Viton                  Airbus (WG-76 Secretary)
- Carol Metais                                Airbus
- Jim Mills                                    HQ USAF/DoD
- Mark Phaneuf                              Air Line Pilots Association, Int'l
- Shoham Rosenfeld                        SkyPath
- Maya Shpak                                 SkyPath
- Partrik Synek                              Microstep
- Mihaly Szucks                             EUMETNET
- Marc Wetterwald                         Airbus

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

3. Review and Approval of Meeting Agenda

- Reference slides 10 - 12 of the 2023 March SC206 WG76 Opening Plenary Leadership Slides\_final.pptx slides
  - Amanda Hoprich displayed the public agenda
    - New items have been added and are depicted in a light blue font
  - Tim Rahmes made a motion that the meeting agenda be approved
    - Tammy Flowe seconded the motion
    - The meeting agenda for the week was approved

4. SC-206 SG-4 / WG-76 SG-2 Review and Comment Resolution of *Recommendation to PMC/TAC on Additional Turbulence Activities White Paper*

- Reference the SC-206 SG4 – SG 76 SG2 March Opening Plenary Presentation\_v3\_20230311 slides
- Tammy Flowe presented the SG4/SG2 slides
- Tammy noted that SG-4 has been working hard on their White Paper, reviewed their work, and briefed the attendees on their Terms of Reference (TOR) Task
- Tim Rahmes briefed the attendees on their updated roadmap and noted that the subgroup did quite well in meeting their schedule
  - There were 67 comments received to the White Paper
- Tammy provided an outline of the structure of the White Paper
  - Section 4 is the “meat” of the document and does include recommendations
  - There are 14 prioritized considerations
- The subgroup developed an updated EDR definition
  - Tammy noted that over the last year, the subgroup slowly came to this revised definition
    - Hagay Makov (SkyPath) commented that this is a good definition, and that this definition opens EDR up to additional solutions
    - Tammy stressed that this new definition is good for industry
    - Eldridge Frazier concurred that this is a great definition
      1. However, the new definition impacts the DO-370 document
      2. We may need to address DO-370 first, then conduct the MASPS work
        - Tammy commented that the DO-370 document took 5 years to develop, but that included the research activity
- Eldridge commented that he sees two documents referenced in the TOR revision
  - Tammy responded that one of the two will definitely be needed
    - DO-370 was a good document, but it did not include data sets for technology that is available today
      1. We will need to update DO-370 to account for today’s technology
    - The second document referenced is an overall recommendation to develop a new MASPS
  - Eldridge suggested that the TOR should reference two deliverables:
    - DO-370 Update
    - New MASPS
  - Tammy concurred and noted that they will address that this week
  - Eldridge stressed that SG-4/SG-2 needs to consider the level of effort they are “stepping into”
- Louis Bailey asked if it is easier to manipulate the validation on the ground side, versus the aircraft side later
  - Tammy responded that DO-370 addresses adjusting the algorithms
    - There is no intent to validate the information on the aircraft
  - Tammy noted, as part of some follow-on work, they would like to look at the EDR thresholds in ICAO Annex 3

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- They may make recommendations to ICAO later
- o The subgroup will look at this in more detail this week
- Tammy commented that SkyPath has submitted an additional concept to consider
  - o This will be discussed this week
- Karan Hofmann commented that the benefit of having this White Paper as a non-FRAC document is that it can be updated right up to the date when it is presented to the PMC
- Alex Engel asked if these will be joint deliverables, knowing that participation from the international level was limited
  - o Alex added that within the EUROCAE TOR, they clearly have to specify the deliverables
    - Tammy concurred
- Alex asked if the joint activity would also include EUROCAE
  - o Tim responded that that will be discussed this week

## 5. Industry Coordination

- Emerging Water Vapor Measurement Needs for Contrail Impact Mitigation and Analyses
  - o Reference the [RTCA EUROCAE Rahmes waterVaporContrails 20230311](#) slides
  - o Tim Rahmes provided the update and initiated the discussion
  - o Boeing is reconciling some new things that are emerging within the industry
    - This topic that will persist for quite a while
    - This briefing is intended as the beginning of the discussion
  - o Eldridge Frazier asked if there is public concern over contrails
    - Tim responded that the scientific community is very interested
  - o Tim added that with respect to persistent contrails, we need good measurements of temperature and water vapor partial pressure
  - o Steve Darr asked, with respect to climbing to get out of persistent contrail areas, if anyone has looked at aircraft flying as high as possible for operational efficiency might need to descend, negating the efficiency
    - What would this do to excess fuel burn and optimal flight?
    - Tim responded that that is an issue to be considered
      1. The use cases are important and will stress the need for better tools
      2. This is not an easy problem and will be worked for years to come
    - Alex added that we also need to keep the ATC perspective in mind
      1. The airspace is densely populated and there is not enough room to simply change altitude
      2. As the effort proceeds, we need to consider impacts to ATC
      3. There are conflicting interests to consider when developing Regulations
  - o Reference Slide 9
    - Tim noted that we need to determine what measurements we can actually make and adjust the increments as necessary
  - o Reference Slide 10
    - Tim referred the participants to the “Recommendations” found at the bottom of the slide
    - Tim noted that “low hanging fruit” might be to consider an ADS-B MOPS update
    - Eldridge asked if there would be any interdependencies between the documents
    - Tim responded in the affirmative
      1. The dependency is on the sensor and what it is spec’d out to be
      2. There are dependencies upstream of the ARINC column
  - o Reference Slide 12
    - Alex Engel commented that he is surprised to see that SC-186 will be closing
      1. He is not sure SC-186, as a Special Committee, will be “sunset” anytime soon

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- Alex noted that it is true that there is no work on the ADS-B MOPS (DO-260/ED-102) at this time, but there is activity going on in SC-186/WG-4 (ADS-B In) until at least the end of 2023
  - 2. Karan Hofmann concurred
  - Eldridge asked, since there are no more ISRAs, how we can work with SC-186
    1. Karan added that the ISRA process is formally “no more”
      - This Special Committee would agree that this needs to be done, and then our SC-206/WG-76 leadership would work with the other SC leads
    2. Eldridge commented that the next SC-186 Plenary is April 20<sup>th</sup>
      - We may want to coordinate with the SC-186 co-chairs for an agenda item
    3. Steve added that we cannot touch ADS-B without getting into discussions about Mode-S
      - That is addressed within SC-209/WG-49
      - There is a parking lot of planned fixes that probably will not be addressed until 2025/2026 to get those efforts stood back up
    4. Karan suggested that the SC-206 and SC-186 leadership have a discussion prior to the SC-186 Plenary and add an agenda item for discussion
  - Alex added that we also need to address impacts to the ground systems and interfaces which are currently being defined for the processing of ADS-B Version 3 data
    1. We need to ensure the ground environment can decode the information and provide the proper output
  - Tim commented that if we want to use ADS-B to bring a humidity parameter down from the aircraft, these are the discussions that need to take place
    - Alex stressed “the earlier the better” that these discussions take place
      1. We need to consider ADS-B version releases and the potential impacts to the implementers
  - Steve noted that the SBS office received approval in 2018 to update the ground receiver network
    - The plan is to have the ground network fully updated for V3 by the end of next year; so any changes need to take place quickly
  - Tim noted that his slide presentation will be posted to AerOpus and urged the participants to give it a read
6. Call for Interest
- Reference the [RTCA-EUROCAE DRAFT Call for Interest-Weather Surveillance-Mar2023 Ldr Mtg\(jbsd\) – ae Opening Plenary](#) document
  - Amanda Hoprich displayed the current version of the Call for Interest document on screen
  - Steve Darr briefed the participants on the format and content of the document
  - Steve noted that, within the SC-206 leadership, there have been a couple of iterations
  - This version represents a broad-based call for interest
  - Eldridge Frazier commented on the “...lack of requirements for the performance...” excerpt at the end of the first paragraph
    - Eldridge noted that there are requirements for the performance of the system, but they may not be adequate for the emerging capability
    - Steve responded that there are existing requirements, but they may not require the level of performance that gets down to the required level to meet the proper resolution
      - Current requirements may be lacking
      - Steve agreed to rework the language to note that there are requirements, but they may be insufficient

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- Alex Engel commented that the study group would be run within SC-206/WG-76, but standards development may be addressed within another group as necessary
  - Steve responded that that would be up to Alex and Karan
- Tim Rahmes asked if the Call for Interest document still needs some work
  - Steve responded that he will work with Eldridge to address his earlier comment
  - Steve added that he is asking the group to review the document this week in order to address any additional comments by the end of the week and the closing Plenary
    - Tim concurred
    - During the Friday closing Plenary session, the group will provide final approval and the document can be sent out after that
- Karan noted that if the Call for Interest does not receive any interest from the industry, then the PMC and the TAC would not approve the effort
- Tim stressed the need to get this Call for Interest out
  - SC-206 could use additional participants
- Karan added that the Call for Interest would be out for review and input for 30 days
- Alex has already alerted the TAC that the Call for Interest would be going out
  - Eldridge has also briefed the PMC

7. Terms of Reference Discussion

- There was no Opening Plenary discussion related to this agenda item

8. Adjourn

- The Opening Joint Plenary session adjourned at approximately 1145 CET (0745 EDT) on Monday, March 13, 2023

\*\*\*\*\*

**Closing Joint RTCA SC-206/EUROCAE WG-76 Plenary Meeting Summary - Friday, March 17, 2023. The meetings this week were held at Airbus in Toulouse, France.**

Presentations are posted at:

<https://aeropus.i3cloudservices.com/Group/GroupLanding/99?tab=Documents&folder=2023+Meetings%2F1-March+13-17%2C+2023+-+71st+Meeting>

The Closing Plenary convened at approximately 0900 CET (0400 EDT)

**1. Welcome and Opening Remarks**

- Reference the 2023 March SC206\_WG76 Closing Plenary Leadership Slides\_final slides
- Rocky Stone opened the meeting
- Rocky noted that this will be his last meeting as a co-chair
  - Tim Rahmes (Boeing) was approved this week by the PMC as Rocky's replacement as a co-chair of SC-206
  - Karan noted that Rocky was presented a plaque at the Team Dinner in recognition of his leadership and contributions to RTCA, specifically as Co-Chair of both SC-206 and SC-186
- Karan Hofmann and Alex Engel briefed their respective RTCA and EUROCAE slides
- Alex recognized Rocky, from the EUROCAE perspective, on his contributions over the years to RTCA
- Alex pointed out the upcoming 2023 EUROCAE Symposium to be held on April 26 and 27, in Paris, France
  - <https://www.eurocae.net/events/eurocae-symposium-2023/>



The image is a promotional banner for the EUROCAE 2023 Symposium. It features the EUROCAE logo on the left, a central text area, and a photograph of the Arc de Triomphe in Paris on the right. The text area includes the title 'Register for the 2023 Symposium', a description of the symposium, dates (26-27 April 2023), location (Paris, France), and a QR code for more information. The photograph shows the Arc de Triomphe with several flags flying from the top.

- Alex noted that there will be a total of eight panels over the course of two days
- Karan noted that RTCA held a leadership meeting on Wednesday, March 15<sup>th</sup>
  - Mark Libant represented SC-206
  - Karan noted that RTCA will be sending out a notice to RTCA members about the updated RTCA Special Committee Guidance Document, as presented during the March 15<sup>th</sup> RTCA Leadership Meeting
    - This is a “living document,” so comments are always welcome

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

- Tim Rahmes, Co-chair      The Boeing Company



RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- Joe Bracken, Secretary\* AvMet Applications, Inc.
- Eldridge Frazier FAA, Government Authorized Representative
- Louis Bailey\* The Boeing Company
- Steve Darr\* Dynamic Aerospace
- Mark Eden\* Air Line Pilots Association, Int'l
- 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
- Hagay Makov SkyPath
- Macarena Martin-Viton Airbus (WG-76 Secretary)
- Carole Metais Airbus
- Jim Mills HQ USAF/DoD
- Mark Phaneuf Air Line Pilots Association, Int'l
- Shoham Rosenfeld SkyPath
- Maya Shpak SkyPath
- Klaus Sievers\* VC German Airline Pilots' Association
- Rocky Stone United Airlines (retired)
- Jean-Luc Thirion DSNA

3. WG-76 only: Approval of EUROCAE ED-89A Change 1 for Council Approval

- Jean-Luc Thirion and Alex Engel presented this item
  - Alex noted that they received guidance from the TAC to route Change 1 to ED-89A
  - With the implementation of the ICAO Global Reporting Format (GRF) for runway condition reporting, ATIS messages can get quite long
  - ED-89A specifies a maximum character length of 800 characters
  - ATIS and D-ATIS messages must be identical; therefore we cannot retain the 800 character length
    - This required an update to ED-89A to note that there could be longer messages
  - Alex presented the proposed Change 1 language to ED-89A

[4] → Due to the implementation of a new format for Runway Conditions Reports (ICAO's Global Reporting Format GRF [ICAO Circular 355, 2019]), the length of the ATIS information in adverse weather conditions may exceed 800 characters. According to existing rules and regulations the contents of Voice ATIS and Digital ATIS need to be identical, meaning that also D-ATIS messages would become longer than 800 characters. Expert judgment from communication service providers is that ATIS information in excess of 800 and up to 2000 characters should be delivered to the aircraft in most cases. Compliance with the performance requirements, however, cannot be guaranteed. This expert judgement has not been confirmed by any technical analysis or testing.¶

- This language was submitted to Open Consultation during which only one comment was received
  - The comment could not be accepted because it requested to not exceed the length of 800 characters, which is not feasible
- Alex asked if there were any objections by the WG-76 members to go forward with Change 1
  - There were no objections raised

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- Alex added that they have received feedback from most vendors that this is not an issue
    - Therefore, we are at a point to request TAC approval
  - Wendy Gutierrez commented that messages with up to 2000 characters have been tested and shown not to be an issue
    - Alex responded that, with this new information, they could update the document to reflect the fact that it was tested with no issue, which would be a much stronger statement than what is in the document now
    - Therefore, the WG-76 representatives need to reject the current Change 1 language proposal, update the document to reflect these testing results, and then forward the revised document to a second Open Consultation for approval of the amended language
    - Jean-Luc concurred
  - Alex noted that his initial proposal to go forward for Council approval is therefore rejected, and that WG-76 will update the ED-89A Change 1 language to reflect the information from Wendy
    - **Action: Wendy Gutierrez to send WG-76 (Alex Engel) the results from the Collins Aerospace ATIS message test**
    - **Action: 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**
4. Review and Acceptance of Minutes of the SC-206 Meeting 70/WG-76 Meeting 66 (December – Washington, DC)
- Amanda Hoprich displayed the revised December 2022 Plenary meeting summary and Joe Bracken walked the participants through each change area
  - The intent of the revisions was to highlight areas where a commenter noted that clarification was needed
  - The document was edited on screen
  - After completion of comment adjudication and acceptance of the revised text, Rocky Stone made a motion to accept the December 2022 Plenary Meeting Summary
    - Jim Mills seconded the motion
  - The December 2022 Plenary Meeting Summary was approved, and the updated version will be posted to AerOpus
  - **Action: Joe Bracken to post the revised and approved December 2022 Plenary Meeting Summary to AerOpus**
5. Report of Sub-Groups:
- SC-206 SG-4/WG-76 SG-2: Turbulence White Paper
    - Reference the SC-206 SG4 – SG 76 SG2 March Closing Plenary Presentation\_final2\_20230317 slides
    - Tammy Flowe provided the update
    - Tammy commented that the majority of comments to the white paper came from SkyPath
    - Reference Slide 11
      - SG4/SG2 was able to update the definition of EDR
      - The underlined text was not clear in the original definition
    - SG4/SG2 has proposed a TOR change and is making recommendations for follow on work
      - They are recommending the development of a MASPS
      - A question was asked why the group is recommending a MASPS versus a MOPS
        1. Tim Rahmes responded that we usually begin with a MASPS where the requirements are generated

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

2. Karan Hofmann commented that a lot of groups do not develop a MASPS and that they feel the need for a MOPS is greater
    - A MOPS may not be appropriate at this time
    - Developing a MASPS is not a bad thing
  3. Karan asked if this group eventually envisions developing a MOPS
    - Tammy responded that the work this group conducted five years ago began as a MOPS
    - However, Tammy concurs that at this time we should begin with a MASPS
    - Tim added that if we change our minds later, we can pursue a MOPS
    - But for now, we have identified a MASPS in the TOR and feel this is the place to begin
- Eldridge Frazier stressed that we eventually want an invocable document by FAA Flight Standards and EASA as an Advisory Circular (AC) or a Technical Standard Order (TSO)
    - MASPS are typically invoked via an AC
    - MOPS are typically invoked via a TSO
  - Tim commented that we are opening up with something new that has not been done before
    - We are opening up to using accelerometers that will output EDR
    - Therefore, taking an initial systems view might be the place to begin
    - This provides justification to begin with a MASPS
  - Rocky Stone made a motion to accept the White Paper as written
    - Macarena Martin-Viton seconded the motion
  - Tammy commented that the recommended TOR change language will be discussed later in the agenda
  - Karan commented that she feels the document will be well received by the PMC
    - This is a good document
    - Karan thanked the SG4/SG2 leadership and Amanda Hoprich for their efforts
- SC-206 SG-6/WG-76: MASPS (DO-364A/ED-XXX)
    - Reference the Sg6\_WG76\_March-2023\_Closing3.17.2023 slides
    - Eldridge Frazier provided the briefing
    - Eldridge thanked all of the participants this week
    - The group completed the Tiger Team resolution, and resolved some of the open action items
    - There was a lot of work done on the SD's this week
      - They resolved the D-ATIS SD
      - The D-ATIS SD was used as the “strawman” to work through the Digital-RVR SD
      - There is still a lot of work to do on the Airborne Reroute Information (ARI) SD
      - After today, there will be no more stand-alone SDs as they will be merged into Appendix A of DO-364A/ED-XXX prior to the May 2023 meeting in Madrid
    - The group would like to hold a virtual session in June of 2023, prior to the June Plenary Meeting
      - The virtual session will be held over two to three days with three to five hour sessions
      - Eldridge will send out a poll to determine the best days/times
    - The May 2023 meeting in Madrid will be held at the Boeing facility
      - During that meeting, we will be working on Appendices A and C
      - We will need to include the services functionality in the main body of the document to make it clear to the reader as we already cover system functionality
    - Steve Darr asked if the existing DO-364 SDs in Appendix A will be changing
      - There will be no changes to the existing SDs except to reorder them within Appendix A

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- Sunset SC-206 SG-8/WG-76 WG-1: DLSAD (DO-XXX)
  - There is a move to “sunset” the group as all of the required products have been provided [*Post Meeting Note: A decision was made at a prior meeting to integrate D-ATIS into DO-364A/ED-XXX, therefore a separate ED-89B would not be published; hence the move to “sunset” this particular group. This integration of D-ATIS into DO-364A/ED-XXX was already included in a previously revised and approved Terms of Reference (TOR).*]
  - Rocky Stone introduced this topic and asked if there are any objections
  - Karan Hofmann noted that if sunset, this combined group will not meet anymore
  - Alex Engel added that Change 1 to ED-89A was a deliverable from WG-76, not from this group
  - Alex added that the TOR for WG-76 has been updated accordingly
  - Karan concurred
  - There were no objections to sunsetting this group

## 6. Industry Coordination

- ADS-B Weather Implementation
  - Reference the 2023-03-17 ADS-B Wx Implementation slides
  - Steve Darr provided the briefing
  - Steve noted that, at a high level, a number of things have been completed and a number are still to be done
    - The FAA closed the public comment period for the associated TSOs and have adjudicated all comments
    - On Wednesday, March 15<sup>th</sup>, the new TSOs that were signed on March 10<sup>th</sup> were posted
    - A number of organizations that provided comment recommended that ADS-B Weather (WX) be included as a “native function”
      1. However, the FAA did not comply with those recommendations
    - Steve noted that the intent of the NTSB’s original request was to make this a “native” capability
  - There is still a lot of work to be done with respect to standard setting
  - Reference Slide 2 for a list of completed items
  - They are still in the comment resolution phase for the ED-129C document (Technical Specification for a 1090 MHz Extended Squitter ADS-B Surveillance System)
    - ED-129C is a partial implementation of ADS-B V3
    - ED-129D will fully implement ADS-B V3
  - Because the ADS-B Rule refers to the TSOs, the TSO date is contingent on the Rule change to allow ADS-B to be used
    - 18 months after the rule changes, nobody will be able to apply for ADS-B V2 certification for new products
  - Air-to-air receipt will be fully enabled with the TSOs
  - The effort is still working towards getting data out of the receivers and into the hands of the users
  - Reference Slide 9 for a list of ADS-B Wx next steps
  - There will be a WMO Workshop on water vapor measurement in December 2023
    - ADS-B Wx can be incorporated into that Workshop
  - Questions
    - Mark Phaneuf asked when the TSOs were issued
      1. Steve responded that they were signed on March 10<sup>th</sup>, and were publicly available on March 15<sup>th</sup> in the RDS system
      2. It is unfortunate that the FAA did not incorporate the request to go “native,” in spite of industry support for that capability

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- Klaus Sievers commented that it looks like weather information will be transmitted via satellite and asked in what format (graphics, text, etc.) the weather will be provided
  1. Steve responded that he can provide Klaus a more detailed briefing offline if requested
    - The downlink of weather information to be used by other aircraft and nearby in air-to-air transmission is intended to be distributed via ADS-B or via ground distribution
- Path Forward for Reconciling Weather Observation Needs
  - Reference the RTCA EUROCAE closing plenary weather obs needs 20230316 slides
  - Tim Rahmes provided the briefing
  - Tim noted that there was a good discussion on this topic during the Monday Plenary
    - Tim had presented the background and motivations behind this proposed effort
  - Reference Slide 2
    - Tim noted that they reconciled the many standards they are considering
  - How do we back into a requirement for the measurements we need?
  - Reference Slide 4
    - Fixing the DO / ED documents is easy “low hanging fruit”
      1. However, there is still more required
    - Can we also consider revising the ADS-B MOPS?
  - There is a lot of activity going on in parallel to improving water vapor capability
  - Reference Slide 5
    - The group ended the week with a proposed plan
    - Unfortunately, the TSOs have already been issued
    - Rocky Stone noted that he sees the need, but we need to take action soon
      1. SC-206 does not maintain the ADS-B MOPS
      2. However, we could recommend to SC-186 that they allow for the modification of the water vapor field for contrail analysis
    - Eldridge Frazier commented that WTIC is conducting a feasibility study of developing EDR from ADS-B Vertical Rate (VR)
      1. There is the potential that we may need to obtain higher rate VR data from ADS-B
      2. Eldridge stated that he would like to add an additional item to the TOR change bullet
      3. Tim commented that we can obtain finer resolution for VR from ADS-B, but that will require more bits
      4. Rocky responded that there may be strong resistance to modifying bits
      5. Rocky asked, with respect to WTIC and NCAR, if there is any other way to do this in the short term
  - Rocky noted that the FAA has already published the TSOs, so we would be asking for a modification to that
    - If there are bit-equivalent solutions, we should pursue that
  - Karan Hofmann commented that SC-206 can make recommendations to other Special Committees
    - There would not be any TOR changes required to do this
    - A Special Committee (SC) can make a recommendation to another SC and present to the PMC leadership and to the SC during their Plenary
    - Jessie Turner is now the SC-186 “only” Chair
    - Steve Darr noted that he did speak with Matt Haskin when the TSOs were issued
      1. Matt is the Government Authorized Representative (GAR) for SC-186
      2. Steve mentioned this was a possible forthcoming recommendation

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

3. Matt reminded Steve that within SC-186 and SC-209, there is a parking lot of items to consider in the next version
  - Standards are maintained for forward compatibility, so we have to find a new space for changes to future generations
  - They cannot change encoding within the current field
- Alex Engel commented that we also have to consider that messages from the aircraft are translated by the ground environment
  - Therefore, we need to consider implementation not only at the aircraft
- Tim stated that we should consider doing this now and discussing any current roadblocks
  - The contrail issue is not going away
  - There is a need for water vapor data in the upper troposphere
- Rocky commented that we had a similar situation in 2009 when we were considering the V2 MASPS
  - After V2 closed, because there was mandate for 10 years down the road, the FAA position was that we cannot change a version as it was being implemented
  - This is a slightly different situation
    1. There is no current mandate for V3
    2. This could be included as part of V4
- Rocky reiterated that a recommendation from SC-206 does not require a TOR change
  - We could make a decision to develop a rationale and some additional guidance to forward to SC-186 to take action on
  - We should note in the Plenary Summary that we want to do this as a formal recommendation
  - Rocky made a motion from SC-206 that SC-186 consider adding the water vapor field
  - Ed Johnson added that he appreciates the discussion on using ADS-B to downlink weather data
    1. However, the hurdles that Steve and Alex noted are going to be hard to overcome
    2. There is interest at high levels of government to look into the contrail issue
      - Rocky concurred
    3. Ed asked if there has been any socialization with the space launch group about changing their use of vertical rate messages
      - Eldridge responded in the negative
    4. Eldridge added that we need consensus on changes to vertical rate data from those that are using those messages
  - Steve asked if it would make more sense to make two separate resolutions
    1. One related to water vapor and the other related to vertical rate
    2. Rocky concurred
      - SC-206 should send two independent recommendations forward
      - These two aspects are not dependent on each other
- Rocky made a motion to send recommendations on these two items
  - They should be presented independently and acted upon separately
  - The recommendations should request that these be addressed very soon
  - Tim added that we are at consensus to send something
  - Rocky added that it would be nice to have a proposed solution in mind
    1. We want to send more than just an idea, but a suggestion on how to address the issues
  - Steve commented that he has all the spreadsheets that show all the mapping of the various fields if want those to be a part of the coordination

- **Action: 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:**
  1. **Action: Tim Rahmes to draft SC-186/WG-51 recommendation language related to water vapor observation needs**
  2. **Action: Eldridge Frazier to draft SC-186/WG-51 recommendation language related to the need for higher ADS-B Vertical Rate sample rate**
- Alex noted that SC-186 will include WG-51
- Ed recommended that this be socialized with the appropriate communities (Commercial Space and accident investigation)
- Rocky reiterated the motion to send two recommendations to SC-186
  - These recommendations should be sent to SC-186 prior to their next Plenary (April 20<sup>th</sup>)
  - The motion was seconded
- Advanced Air Mobility (AAM) Workshop
  - Reference the RTCA AAM Workshop 2 Overview (03142023) – V0.3a slides
  - Eldridge Frazier and Joe Bracken provided the briefing
  - There were no questions or comments associated with this briefing



## 9. Terms of Reference

- Rocky Stone introduced the discussion
- Eldridge Frazier commented that there is a move within the FAA to reopen the DO-358 (MOPS) document
  - This is a matter of funding, and there is no definitive decision at this time
- Rocky noted that we have proposed wording from SC-206 SG-4/WG-76 SG-2 to begin development of a MASPS
  - Rocky feels we will be able to get approval of the new SC-206 TOR language
  - During the week, the group also decided to forego the update to DO-370 as discussed during the opening plenary
- Rocky made a motion to approve the revisions to the SC-206 TOR
  - The motion was seconded
- Karan Hofmann commented that we have approved the changes to the TOR as written, but the deliverable table will need to be revised
  - Karan added that if these TOR revisions need to be briefed to the PMC in June, we will need to modify the deliverable table
  - Rocky proposed that we amend the deliverable table to reflect a June 2025 MASPS document delivery date
    - The participants concurred
  - The deliverable table in the TOR was revised to reflect the MASPS delivery date and removal of the White Paper
    - Karan added that this will also be shared with WG-76
    - **Action: 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**
- **Action: SC-206 SG-4/WG-76 SG-2 to develop slides related to the Turbulence White Paper for presentation at the June 22, 2023 PMC Meeting**

## 10. Future Meetings, Plans, and Dates

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

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
 EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
 AIS/MET Data Link Services

Future Meetings		
		<a href="#">Open items</a> <a href="#">Differs from TOR</a>
Plenary Meeting Dates	Plenary Meeting Locations (Hosts)	Notes
June 26-30, 2023	Frederick, Maryland, USA (AOPA - Eldridge)	Joint WG-76/SC-206 Plenary
September 11-15, 2023	Brussels, Belgium (EUROCONTROL - Alex)	Joint WG-76/SC-206 Plenary (DO-364A/ED/XXX FRAC release)
December 4-8, 2023	Phoenix, Arizona, USA (Honeywell - Willie)	Joint WG-76/SC-206 Plenary (DO-364A/ED/XXX FRAC resolution)
March x-x, 2024	United Kingdom (TBD - UK MET Office in Exeter or ECMWF in Reading)	Joint WG-76/SC-206 Plenary
SG/WG Meeting Dates	SG/WG Meeting Locations (Hosts)	Notes
May 8-12, 2023	Madrid, Spain (Boeing - Louis)	RTCA SG-6/WG-76 Meeting; Maximum of 22 participants

- Eldridge Frazier noted that the FAA has to plan out their travel budget for the year
- For the March 2024 meeting, it was suggested that the Committee avoid the week of March 11<sup>th</sup>
  - Therefore, the Committee will focus on the 1<sup>st</sup> or 3<sup>rd</sup> weeks
  - After some discussion, the group decided on the week of 18-22 March 2024
- June 2024
  - **Action: Tim Rahmes to check with Meredith Bell of FLYHT on FLYHT’s ability to host the June 2024 Joint Plenary in Calgary, Canada**
- September 2024
  - This meeting will be held in a European location
  - **Action: Macarena Martin-Viton agreed to book rooms in Toulouse, France for the September 2024 Joint Plenary as a backup**
- December 2024
  - Jim Mills asked about the future of SC-206 work and what that looks like related to airborne information
  - The date and location of this meeting will be determined at a later date
  - Melbourne, Florida was suggested if SG-5 efforts are reinstated

**11. Action Items Review**

- Action Item 385
  - This item was Closed
- Action Item 393
  - This item was Closed
- Action Item 398
  - This item was Closed
- Action Item 399
  - This item was Closed
- Action Item 400
  - This item was Closed
- Action Item 401
  - This item was Closed
- Action Item 402
  - This item was Closed



RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
 EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
 AIS/MET Data Link Services

- Action Item 403
  - This item was Closed
- Action Item 404
  - This item was Closed

Eleven new Plenary action items were identified during the Opening and Closing Plenary sessions and are shaded in green below

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

<b>Open Action Items</b>					
#	Owner	Action	Date	Due Date	Status
385	Eldridge Frazier	Eldridge to contact AOPA to see if they would be willing to host the joint June 2023 Plenary meeting at their facility in Frederick, MD	March 2022	June 2022	Closed March 2023
393	Alex Engel	Coordinate with DLR (Bavaria) to determine their availability to host the September 2023 SC-206/WG-76 Plenary	September 2022		Closed March 2023
398	Eldridge Frazier	Contact Willie Truong to determine if Honeywell (Phoenix) is able to host the December 2023 Plenary	December 2022	March 2023	Closed March 2023
399	Eldridge Frazier	Develop slides to present at the December 15 <sup>th</sup> PMC meeting	December 2022	December 15, 2022	Closed March 2023
400	Alex Engel	Change “For Publication” date from 12/2023 to 3/2024 in the WG-76 Task Sheet	December 2022	March 2022	Closed March 2023
401	Karan Hofmann	Provide sample “Call for Interest” announcements to Ed Johnson/Steve Darr	December 2022	ASAP	Closed March 2023
402	Ed Johnson Steve Darr	Provide draft “Call for Interest” language to RTCA SC-206/WG-76 Leadership (to be approved by Leadership during January 6, 2023 leadership telecon)	December 2022	December 30, 2022	Closed March 2023
403	Rocky Stone	Provide the latest Airborne Reroute Information (ARI) Service Description (SD) to TJ Tejasen	December 2022	December 2022	Closed March 2023
404	Rocky Stone	Finalize SC-206 Chairman Report and provide to Karan Hofmann	December 9, 2022	December 12, 2022	Closed March 2023
405	Wendy Gutierrez	Wendy Gutierrez to send WG-76 (Alex Engel) the results from the Collins Aerospace ATIS message test	March 17, 2023		Open
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	March 17, 2023		Open

RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
 EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
 AIS/MET Data Link Services

<b>Open Action Items</b>					
#	Owner	Action	Date	Due Date	Status
		message character count testing based on Wendy Gutierrez action (AI405)			
407	Joe Bracken	Joe Bracken to post the revised and approved December 2022 Plenary Meeting Summary to AerOpus	March 17, 2023		Open
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	Open
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	Open
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	Open
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		Open
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	Open
411	Tim Rahmes	Tim Rahmes to check with Meredith Bell of FLYHT on FLYHT's 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	Open
413	Karan Hofmann Alex Engel	Karan Hofmann and Alex Engel to send the Call for Interest	March 17, 2023		Open

**12. Other Business**

- Call for Interest
  - Reference the [RTCA-EUROCAE DRAFT Call for Interest-Weather Surveillance – 2023-03-17 Closing Plenary](#) document
  - Eldridge Frazier accepted the revised text in the Call for Interest, as raised during the opening plenary session
  - Rocky Stone made a motion to accept the Call for Interest as revised and written
    - Eldridge seconded the motion

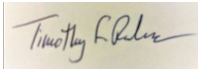
RTCA SC-206: Summary of the 71<sup>st</sup> meeting  
EUROCAE WG-76: Summary of the 67<sup>th</sup> meeting  
*AIS/MET Data Link Services*

- **Action: Karan Hofmann and Alex Engel to send out the Call for Interest**
- Steve Darr modified the motion to allow Karan and Alex to modify the document make it compliant with the respective RTCA and EUROCAE document formats
- Tim, in recognition of Rocky's retirement, complimented Rocky on his leadership and participation in all of the various industry efforts over the years
- Tim presented slides of Rocky's involvement in RTCA activities over the years
  - Rocky's leadership to the aviation community is outstanding
  - Karan added that at the most recent PMC meeting, the entire PMC thanked Rocky for his work and efforts
  - Mark Phaneuf, on behalf of the many thousands of commercial pilots, thanked Rocky for making flying a safer environment
- Macarena, Carole, and Airbus were thanked for hosting the meetings this week

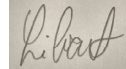
13. Adjourn

- The Closing Plenary adjourned at approximately 1230 CET (0730 EDT) on Friday, March 17, 2023.

CERTIFIED as a true and accurate summary of the meeting.



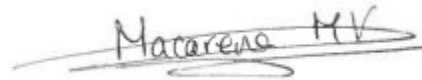
Tim Rahmes, SC-206 Co-chair



Mark Libant, SC-206 Co-chair



Joe Bracken, SC-206 Secretary



Macarena Martin-Viton, WG-76 Secretary