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 EUR 350-24 / WG78-75

November 13, 2024  
 St Denis & Washington

<b>EUROCAE WG-78 Plenary # 43 / RTCA SC-214 Plenary # 53</b> <b>“Standards for Air Traffic Data Communication Services” - Minutes</b>
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<b>Date</b>	<b>Oct 15-18, 2024</b>
<b>Place</b>	<b>Cedar Rapids, Iowa, USA</b>
<b>Hosted by</b>	<b>Collins Aerospace</b>

**Meeting Summary:**

The joint plenary of RTCA Special Committee 214 (SC-214) (#53) and EUROCAE Working Group 78 (WG-78) (#43) was held Oct 15<sup>th</sup> – Oct 18<sup>th</sup>, 2024. This meeting was held in person at Collins Aerospace in Cedar Rapids, Iowa, USA with a virtual attendance option via WebEx. Attendees who participated virtually are denoted with an “ \* ”.

<b>Name</b>	<b>Company</b>
Claire Robinson (Co-chair)	Universal Avionics
Luc Emberger (Co-chair)	Airbus
Rochelle Perera* (Secretary)	Boeing
Alex Engel	EUROCAE
Brandi Teel*	RTCA
Thomas Mustach*	FAA
Adam Sarhage*	Garmin
Andi Ballantyne*	NavCanada
Christophe Visee*	EUROCONTROL
Christopher Jirucha*	Boeing
Cindy Freud*	MITRE
Clint Melton*	Textron Aviation
Craig Boxrucker*	ALPA
Daniel Fontana	FAA
Florin Grafu*	Romatsa
Frédéric Beltrando	Airbus
Harrie Copeland*	FAA

Joachim Hochwarth*	Unviersal Avionics
Jose Luis Chinchilla*	Startical
Karthik Raja*	Collins
Kim Cardosi*	DOT
Mark Russell*	Honeywell
Mike Matyas*	Boeing
Moin Abulhosn	FAA
Nicolas Rossi	Thales
Peter Muraca	FAA
Sandra Gnichwitz*	DFS
Shannon Ivany*	NavCanada
Shelley Bailey	NavCanada
Shobana Jaganathan*	Collins
Steven Ferra	FAA
Thomas Hess*	DFS
Viktor Jagasits	EUROCONTROL
Vincent McMenamy	FAA
Wendy Gutierrez	Collins
Wes Googe*	American Airlines

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## 1. Welcome, Introductions and Administrative Remarks

The joint 53<sup>rd</sup> Plenary of SC-214 / 43<sup>rd</sup> Plenary of WG-78 was convened October 15<sup>th</sup>, 2024 at 9:15am CDT by Chairs Claire Robinson (Universal Avionics) and Luc Emberger (Airbus). The meeting began with Brandi Teel (RTCA) sharing the RTCA anti-trust policy. She then shared the new RTCA export compliance policy including discussing ITAR applicability. The RTCA proprietary policy as well as the policy on reproduction and referencing of RTCA standards was presented next. Alex Engel (EUROCAE) shared the EUROCAE intellectual property rights. Brandi Teel (RTCA) then shared the RTCA participation policy followed by Alex Engel (EUROCAE) sharing EUROCAE's participation policy. He then shared the GDPR and privacy policy followed by how both EUROCAE and RTCA share a policy of not recording meetings. EUROCAE further shared their policy prohibiting Russian participation at the meeting, followed by an introduction to the new EUROCAE webspace.

The group then introduced themselves, followed by welcoming remarks from Wendy Gutierrez and the Collins Aerospace company as the hosts.

## 2. Agenda, Meeting Minutes and Action Item Review

Claire Robinson (Universal) reviewed the agenda and no modifications were made. Rochelle Perera (Boeing) then went over the meeting minutes from the previous plenary. They were approved with no edits. She then reviewed the action items.

## 3. DO-353B Change 1 FRAC Comment Review

As the comment period of the FRAC and OC differed, only the FRAC comments were reviewed at this meeting. The comments via EUROCAE open consultation would be reviewed at a later plenary. There were zero Non-Concur and HIGH comments, nine MEDIUM comments, four LOW comments and eight EDITORIAL comments for a total of 21 comments submitted through the RTCA FRAC process. The group started with the medium comments.

*Comment 72358-* Group agreed to reword the sentence to reflect that DO-353B/ED-231B only deal with CPDLC and not ADS-C, therefore only one plain text file would be needed.

*Comment 72359-* Group agreed to change sentence to cite DO-353B instead of ED-231B

*Comment 72360-* Group agreed to change the sentence to cite ED-231B.

*Comment 72361-*Group agreed to replace the sentence in the original change document “The changes in this document...” with “ “The changes in this document are intended to address issues with ASN.1 interop compatibly with DO-351B Change 1, and ASN.1 compilation issues”.

*Comment 72367-*The group agreed to replace uM391 with uM390 in the 8<sup>th</sup> line of the table.

*Comment 72373-*The group agreed to replace UM233 Air(M) with Air(N) in ASN.1 CPDLC V41.

*Comment 72374-* The group agreed to replace all occurrences of “messenger elements” with “data types” in lines 48 through 57.

*Comment 72376-* The group agreed to replace UM174B with UM147B on the 19<sup>th</sup> line of the table.

*Comment 72377-* The group agreed remove the extraneous “/”.

*Comment 72365-* The group agreed to replace “parameters” with “element names” in the 4<sup>th</sup> line of the table.

*Comment 72372-* The group agreed to ensure alignment in wording between DO-353B and ED-231B regarding the color being used and the comment content.

*Comment 72375-* The group agreed to remove the shaded (grey) font used from line 2044 to 2066 if possible.

*Comment 72378-* The group agreed to remove the duplicate “—Reserved” in line 1308

Frederic Beltrando (Airbus) brought up a new concern which he considered LOW. In the DO-353B Change 1 Document, line 10, it refers to just DO-353B rather than including reference to the ED-231B document as well. The group agreed to the change to include both DO-353B and ED-231B in the reference. Frederic Beltrando (Airbus) then brought up another concern regarding the plain text file. In this file, the indentations vary per line and makes it difficult to read in places, even though the content is correct. The group discussed this and decided not to change anything at this time, but assigned Claire Robinson (Universal) an action item to look into potentially modify the formatting.

The group agreed to the resolution of all medium and low comments as above. The group also agreed to assign the remaining editorial items to Claire Robinson (Universal) to be worked offline. As the OC comment review has not been completed at the time of this plenary, the agreed upon comment resolutions could not be approved for submission to the PMC yet. However, the group has agreed to the resolutions for all FRAC comments as documented above.

#### **4. FAA Verification Test Development**

Pete Muraca (FAA) presented the status of the FAA effort to convert the current FAA DataComm Interoperability test cases into the verification template format. Currently 25% of the 120 test cases have been converted. The highest value cases were identified as route clearances and transfer scenarios and therefore prioritized in the conversion. The conversion work will continue until all cases are converted to the verification test format, at which point requirements mapping for the test conditions will be completed, followed by adding of any necessary test diagrams.

The group discussed where the verification test would fit with respect to operational and certification requirements. After some discussion it was agreed that this test would be outside of any datalink certification framework and rather would be an additional operational requirement that can be used by ANSPs as enabling criteria for certain operations.

The group then reviewed the specific FAA test cases in detail and edited as needed. An action was assigned to the FAA DataComm team to incorporate the edits into their working document prior to providing it for incorporation into the official verification test document. For the test cases with loadable elements, it was emphasized that the intent is to show that the uplink can be implemented in the FMS correctly but not go further into non-datalink related FMS functions. As there may be some implementations which do not support push to load functionality, the group agreed to leave such steps in the test and systems which do not support loadability will note that in the test.

Luc Emberger (Airbus) stated that some ANSPs may make the execution of some of the tests optional, and/or consider that failing a step can be acceptable (for example in cases such as not supporting push to load functionality). The group agreed with this approach. This will be done by including steps such as push to load capability when it is required in the SPR document, however avionics can fail those steps if their implementation does not support it. Not passing these steps does not necessarily mean that the avionics cannot be eligible for specific operations (e.g. for the FAA Data Com program).

#### **5. B2 TTR History**

Frederic Beltrando (Airbus) presented a history on why the Airborne response timer (TTR) was not included in the current SPR (technology agnostic) document and Interop B2 documents. The overall reason that there is currently no Airborne response timer (TTR) for B2 is due to the output of the safety assessment in the SPR (technology agnostic) document done by RTCA/EUROCAE WG78/SC214. There is no safety requirement which prescribes a need for an airborne response timer nor a ground response timer. The former safety assessment for ATN B1 (provided in SPR ED-120/DO-290) did result in needing an Airborne response timer (TTR) and Ground response timer which is why it is included in the ATN B1 standards (ED-120/DO-290 and ED-110B/DO-280B). Additionally, B2 messages can be used in areas with differing RCP needs. So, assigning one Airborne response timer (TTR) value to a message or to all messages would not be conducive to supporting all world regions. Therefore, as B2 technology is designed to be used for all ATM operations using ATS datalink communications in all kinds of airspaces, implementation should not be specific to one airspace.

#### **6. TTR and Standards Rev C discussion**

Viktor Jagasits (EUROCONTROL) presented a paper previously shared at OPDLWG-JPT/DP03 regarding EUROCONTROL's request to add a TTR back into the B2 standards. He presented many cases of pilots responding to uplinks well after the TTS=120 timer had expired. Current ICAO procedures require controllers to act on all dialogue failures. However in B2, even if the message times out on the ground due to TTS expiration, it is still not a failure because it is not closed on the airborne side. So there is a risk that the pilots may see a clearance much later, think it is new and act on it. A response from the aircraft after TTS has

expired will result in an error from the ground, however that may or may not make it to the aircraft due to the network. The group asked how the FAA currently deals with this situation. Pete Muraca (FAA) said that the FAA currently handles it the way NavCanada does where once the TTS has expired, the controller will contact the aircraft via voice and manually close the dialogue. However, once this has happened, they consider the aircraft to be done with datalink and will utilize voice going forward, manually terminating datalink connection. Luc Emberger (Airbus) stated that maybe the answer is to manually close the dialogue, as currently in Europe they do not do that when the controller has to contact the aircraft via voice. Viktor Jagasists (EUROCONTROL) also stated that part of the confusion is because there are two ways to deal with a pilot not responding in the PANS ATM, you can either go to voice or resend the message. Furthermore, he stated that while 100 seconds should be suitable for their domestic airspace, it is agreed that the TTR should be usable for all airspace.

Christophe Visee (EUROCONTROL) presented a paper on the difference between requirements applicable to different timers in DO-351B/ED-229B (Interop) and those found in DO-350B/ED-228B (SPR), highlighting that a requirement to include a TTR seems to have been missed. Additionally, he noted that based on the current implementation, the standard operating procedure for pilot response can differ by airline operator:

- Send WILCO, then execute the instruction
- Send WILCO, then wait for the acknowledgement of the received WILCO sent by the ground unit (“Received by ATC”) and then execute the instruction
- Execute the instruction and then send WILCO

In 2023, MUAC identified 209 instances where the pilots responded to a message after the TTS=120seconds expired.

Further discussion on the relevant existing safety and operational requirements was presented. A summary of the corresponding requirements was provided in the table below, highlighting what EUROCONTROL believes is missing from the standards and should be added.

		ATSU	Aircraft
tts	SR	SR-GD-CPDLC-14A	None
	OR	OR-33 OR-34	OR-23 OR-24
	INTEROP	CPC-IR 123	Local matter
ttr	SR	SR-GD-CPDLC 35B	SR-FC-CPDLC 35A
	OR	OR-31	missing
	INTEROP	CPC-IR 120	missing

Frederic Beltrando (Airbus) commented that:

- OR-23 and OR-24 don't specify requiring an airborne sender timer (TTS), but rather how the aircraft should behave if it is implemented. Whereas OR-33 and OR-34 states that the sender timer TTS is required to be implemented on the ground;
- the safety assessment completed and provided in the SPR ED-228/DO-350 (IR, Rev A or RevB) was done as per the guidelines from ED-78A/DO-264 as well as the process described in the SPR. This assessment resulted in no safety requirements prescribing a response timer (ttr) for either the ground or aircraft, i.e. there is no missing safety requirement (meaning that the existence one or several operational and/or interop requirements while no safety requirement exist does not demonstrate that the safety assessment is incorrect and that some safety requirements are missing).

Luc Emberger (Airbus) stated that he believes the original safety assessment was done correctly, however environments can change as time goes on.

## **7. Additional Considerations for Reopening Standards**

Rochelle Perera (Boeing) presented Boeing's view on concerns surrounding reopening the standards to begin work on Revision C. Overall, Boeing is not opposed to reopening the standards, however believes that doing it immediately after finishing Rev B puts avionics development to meet the B2 mandate at risk. Additionally, adding a TTR timer to the standards will not address existing potential safety concerns as Rev A and Rev B aircraft will continue to participate in domestic European airspace. Boeing would prefer to align a new revision with the implementation of B2 CPDLC on a wider scale and integrate lessons learned from Rev B implementations. Luc Emberger (Airbus) and Shelley Bailey (NavCanada) stated they shared similar sentiments as the Boeing presentation. While sharing the same concerns, Luc Emberger (Airbus) is however not opposed to reopening the standard in the short term, but believes that sufficient time should be given to include any suitable new material. As no CPDLC Rev B implementations have been planned and announced today, there is no urgency to develop such new revision.

Thomas Mustach (FAA) stated he supports addressing the issue and that the real discussion seems to be on timing. The group then discussed the possibility of doing this via a change document however due to the need for a new requirement, Brandi Teel (RTCA) stated that it would have to be a revision.

Shelley Bailey (NavCanada) then gave feedback from OPDLWG when this was discussed. That meeting included pilots from IFALPA and ALPA. They expressed concern about an airborne response timer TTR value pressuring pilots to respond before they are ready, and would prefer to press STANDBY and reset the timer. They would also like it to be modifiable to different airspaces. However, this still does not prevent pilots from acting on an old uplink even if they cannot respond to it anymore. Main input given was that the pilot community would like to review proposed ways forward on this before it gets standardized.

Overall the group agreed to the following:

- New Rev C of the B2 standards will include an airborne TTR, properly designed to accommodate global needs.
  - The update cannot be done via a change document per RTCA policy
    - The update will be coordinated with ICAO as there is related guidance in the GOLD document.
      - The current GOLD ed 2 is now closed to new material
    - There is currently no known, airborne and ground development of B2 Rev B CPDLC.

The group also stated that currently there is no known operational mitigation to the issues presented by EUROCONTROL. Additionally, the group stated that there is no known date for a potential CPDLC mandate which would cause larger implementation of B2 CPDLC on the air side.

The group then discussed when to open a Revision C. Claire Robinson (Universal) reminded the group that we can only work on what is approved in our ToR so the group must agree on the plan. The group discussed opening up the revision in the mid 2026 timeframe. This would allow some time for lessons learned during Rev B development but not too far out. Alex Engel (EUROCAE) stated that this still won't address the issue in the short term as no one is currently implementing any new CPDLC versions. Frederic Beltrando (Airbus) stated that he believes that the TTR can be added without modifying the safety analysis as the group agrees the original safety analysis was correct. However, if this issue becomes formally decreed a safety issue by the worldwide ATC datalink community, the safety analysis will probably have to be

updated as well. Shelley Bailey (NavCanada) commented that this behavior exists today in FANS but is not a safety concern. So we need to fully understand how and when it is an issue to make sure it is addressed correctly and not done on the fly.

The group discussed the potential ToR update to do this work. After some discussion the group decided the method forward would include writing an Internal Report on the scope definition for a potential rev C update. This would then be submitted to PMC/TAC as the justification for opening up the ToRs. The ToRs would be updated at the same time. Alex Engel (EUROCAE) suggested targeting the 2025 December PMC for the report submittal. The group agreed to this and Claire Robinson (Universal) and Luc Emberger (Airbus) would be the co-editors of the report.

## **8. FAA Test Scenarios Continued**

The group continued to review the draft test conditions submitted by the FAA. It was stated that when doing the requirements tracing, the requirements used must be from the Rev B version of the standards rather than Rev A. Viktor Jagasits (EUROCONTROL) asked about including steps for LACKs. Claire Robinson (Universal) stated that we should make sure to have test case(s) to look at problematic LACKs in the B1/B2 sections, both on the ground and airside. The group reviewed several different uplink elements including UM77, UM79 and UM80. It was noted that we also need to make sure to have steps to test the ground implementation as well. Since the FAA draft cases are built from FANS test cases, a suggestion was made to have working groups to determine which of these cases would also apply to B1 and B2 implementers. The draft conditions reviewed by the group were edited during the meeting by Dan Fontana (FAA) who was then tasked with making any additional updates as needed and posting the reviewed test cases on AerOpus.

## **9. Verification Test Development**

Vince McMenemy (FAA) reviewed the actual test document template. The group edited the opening descriptive sections such as the purpose and reviewed to ensure alignment with the ToRs. Thomas Mustach (FAA) and Rochelle Perera (Boeing) both requested adding some verbiage to clearly state that this document is not a certification document, but rather guidance. The group agreed and stated that it should be put earlier in the document for clarity.

## **10. Freetext Appended Messages**

Wes Googe (American Airlines) presented a list of messages which pilots expressed they do or would like to be able to append freetext to. It basically translates to any situation where they need to add more context to give the controller a better understanding of the situation. Steve Ferra (FAA) stated that this functionality also depends on the ground having implemented freetext. Wes will work with Steve to put some of these messages with freetext into scenario test cases to be reviewed at a later meeting. Frederic Beltrando (Airbus) stated that there is no requirement stating that for each downlink element, appending a freetext message must be allowed. Therefore, this would not be traceable. Steve Ferra (FAA) stated that in that scenario, an implementer may fail some test steps, however they would just identify that their implementation is still per design. The group agreed to further discuss this during the test case review.

## **11. ToR Update**

Luc Emberger (Airbus) presented the EUROCAE ToR update to include the Internal Report. The group subsequently approved it for submission to TAC. Claire Robinson (Universal) then updated the RTCA ToR similarly. The Internal Report documenting the need for a Rev C will be done by November 2025 in order to be ready to submit to TAC/PMC by December 2025.

## **12. Any Other Business**

No other business was discussed.

### **13. Upcoming Schedule**

- March 18-21, 2025, Plenary (tentatively Toulouse, France)
- July 7-11, 2025, Working Meeting (tentative Seattle, USA)
- October 17-21 Plenary, (Washington DC, USA)

Note, there is a new RTCA policy which states that all US based plenaries must be held at the RTCA office in Washington, DC.

### **14. Adjourn**

The meeting was adjourned on October 18<sup>th</sup>, 2024 at 12:30pm CDT. All documents and presentation material reviewed during Plenary will be uploaded in the applicable RTCA AerOpus documents folder.

Rochelle Perera  
Secretary, SC-214

**CERTIFIED** as a true and accurate summary of the meeting.

Claire Robinson  
Chair, SC-214

Luc Emberger  
Chair, WG-78