EUROCAE WG-78 Plenary # 29 / RTCA SC-214 Plenary # 37
"Standards for Air Traffic Data Communication Services" - Minutes

Date	October 18-October 21
Place	Virtual
Hosted by	RTCA

Meeting Summary:

The joint plenary of RTCA Special Committee 214 (SC-214) (#37) and EUROCAE Working Group 78 (WG-78) (#29) was held October 18-21, 2021. The meeting was conducted as a virtual meeting with the following attendees participating via WebEx.

Name	Company
Alex Engel	EUROCAE, WG-78 Technical Programme Manager
Aloke Roy	HONEYWELL
Ana Beroiz	EUROCONTROL
Andrew Ives	INMARSAT
Anna Cagidemetrio	ECTRL
Armin Schlereth	DFS
Arndt Suendermann	DFS
Bjarni K. Stefánsson	ISAVIA
Claire Robinson	UNIVERSAL AVIONICS, SC-214 Chair
Dave Nakamura	MITRE
David Illan	ESSP
David Lewin	NATS
Dongsong Zeng	MITRE
Darryl Kenington	ALPA
Ed Hahn	ALPA
Edward San	FAA
Eric Sadon	DSNA/DTI
Frank Lindenmayer	DFS

Frédéric Beltrando	AIRBUS
Frédéric Picard	THALES
Gary Colledge	INMARSAT
Greg Saccone	BOEING
Giulio Di Tillio	AIRTEL
Heidi Demoulins	On behalf of AIRBUS
Hendrik Oberheid	DFS
Jean Boucquey	EUROCONTROL
Joachim Hochwarth	GE AVIATION
Jose Godoy	SAE-ITC
Karan Hofmann	RTCA, SC-214 Program Director
Kim Cardosi	DOT
Kirk Kolek	ROCKWELL COLLINS
Luc Emberger	AIRBUS, WG-78 Chair
Madhu Niraula	ROCKWELL COLLINS
Mark Patterson	FAA
Martina Angelone	ESA
Mike Cramer	MITRE
Mike Jackson	HONEYWELL
Mike Matyas	BOEING
Milan Soukup	ANS CR
Moin Abulhosn	FAA
Nicolas Rossi	THALES
Pascal Rohault	THALES
Pete Muraca	FAA
Randy Bone	MITRE
Ricardo De Sousa	NATS
Richard Hayward	NATS
Richard Kynard	GARMIN
Rochelle Perera	BOEING, SC-214 Secretary
Sandra Schönbach	DFS
Shelley Bailey	NAV CANADA
Stewart West	HONEYWELL
Theresa Brewer	FAA
Thierry Lelievre	On behalf of AIRBUS
Thomas Hess	DFS
Thomas Mustach	FAA, SC-214 Government Authorized Representative
Todd Kilbourne	MOSAIC ATM
Tom Judd	HONEYWELL
Tracy Lennertz	DOT
Viktor Jagasits	EUROCONTROL
Zbig Jasiukajc	SITAONAIR

----

1. Welcome, Introductions and Administrative Remarks (Plenary)

The joint 37th Plenary of SC-214 / 29th Plenary of WG-78 was convened on October 18th, 2021, at 9:00 am EDT by Chairs Claire Robinson (Universal Avionics) and Luc Emberger (Airbus). RTCA anti-trust statement, as well as RTCA and EUROCAE proprietary policies, and

membership policies were read by Karan Hofmann (RTCA). Welcoming remarks were made followed by each attendee introducing themselves.

2. Agenda, Meeting Minutes and Action Item Review (Plenary)

The detailed agenda was reviewed and two changes were made. The discussion of the SC-186 ISRA was designated a plenary item and an additional presentation on Lessons Learned from 4D DataComm Demonstration was added to the day four agenda. The agenda was agreed to with the inclusion of the two changes.

Meeting minutes from SC-214 Plenary 36/WG-78 Plenary 28 were reviewed and approved without change.

Action item list was reviewed and any actions which were completed were officially closed. The action items were revisited at the closing plenary session as well.

All documents and presentation material reviewed during Plenary have been uploaded and are available in the RTCA AerOpus documents folder.

3. ToRs Status and Updates (Plenary)

Luc Emberger (Airbus) went over the results of the recently held EUROCAE TAC. It was determined at that meeting that they could not approve the Verification Test Standard being added to the WG-78 ToR yet. All comments which were received will be addressed and presented again at the November meeting.

Claire Robinson (Universal Avionics) noted that no changes had been made to the current version of the SC-214 ToR rev16. SC-214 ToR rev 16 will be submitted to the December PMC for approval.

4. ISRA from SC-186 (Plenary)

Randy Bone (MITRE) presented an ISRA from SC-186. The ISRA requests the support of SC-214/WG-78 in updating the currently defined Interval Management (IM) requirements in the Baseline 2 documents as part of the overall rev B update. The updated material will support the use of data link communications for the IM function defined in DO-361A/ED-236A. This ISRA is a continuation of a former ISRA (SC-186/003) and would expect to follow the same Tiger Team paradigm followed under the former ISRA with members from both SC-186 and SC214/WG-78 participating.

Pairwise Trajectory Management (PTM) operations were discussed and it was noted that PTM is an oceanic concept and there are currently no MOPS/SRP for those. Randy Bone (MITRE) went back to SC-186 for clarification and the input from SC-186 was that PTM message requirements should be left as is for now. While there has been renewed interest in PTM, no work has been started on it yet. If a need for changes does arise, those will be brought back to SC-214/WG-78 separately.

Thomas Mustach (FAA) brought up that while there are defined IM-PTM requirements in oceanic airspace there was none for Dynamic Required Navigation Performance (D-RNP) requirements. An action was taken to find out within the FAA if there is interest to pursue D-RNP.

Claire Robinson (Universal Avionics) motioned for approval of the ISRA and Thomas Mustach (FAA) seconded the motion, which was then approved. This concluded the plenary portion of day one.

5. Verification Standard Process Discussion

The discussion of the Verification Test Standard deliverable was led by Thomas Mustach (FAA). The intent of this test is to have a verification test for FANS 1/A+, ATN B1 and B2 with both an aircraft and ground component for each.

Several members suggested that a presentation of the issues with detailed examples should be provided so the group can better understand what the issues are that this deliverable is supposed to address. Many of the issues identified come from FAA DataComm Implementation Team (DCIT) and not all SC-214/WG-78 members participate in that group.

There was further discussion of how this type of test can be accomplished without introducing new requirements as it was already agreed that no new requirements would be introduced. Frederic Beltrando (Airbus) commented that FANS 1/A was originally designed for oceanic and remote airspaces, as the SPR discusses oceanic implementation rather than domestic, but it is now being used for domestic operations. However, there has not been any drive for a FANS 1/A verification test at the oceanic level.

Thomas Mustach (FAA) said that the main intent of the verification test is to ensure that if an aircraft has a particular designator, it can be expected to have the same end system behavior as all other aircraft with the same designator.

After further discussion on the intent of this test and how it can be achieved without adding new requirements, it was agreed that the next step is to have Pete Muraca (FAA)/Ed Hahn (ALPA) and other invested stakeholders provide examples to the group of what is desired from this task. Once the content of this task is agreed upon in the group, further detail into development including how many documents it would be comprised of would be finalized.

6. Baseline 2 Revision Process

Thierry Lelievre and Heidi Demoulins (both on behalf of Airbus) presented the proposed revision process for revision B to the SPR and B2 Interop Standards.

The updates would be done in phases, of which phase 1 would be to update the documents with the work done in each sub group. Phase two would be the internal review of the updated documents followed by FRAC. A notional schedule was shared although it was commented that this is mostly to show the high level milestones and not specific dates.

There would be a separate matrix for each document which would track the proposed updates identified by the subgroups. This matrix will also include a separate entry in order to track the effect of the changes on the interop.

Thomas Mustach (FAA) brought up that while the current ToR specifies that our work has to be backwards compatible, it might make sense to add a new interop designator if the changes in B2 revB results in precluding certain ATM operations. Mike Matyas (Boeing) commented that today we do not have different interop designators in B1 even though some aircraft load the B1 route clearances and others do not, so why would B2 need multiple designators. Further

discussion was had on the use of interop designators and whether a new one would be required for B2 rev B operations. The main concern from the FAA was around how the ground would know whether an aircraft has B2 with an additional capability such as D-RNP or without.

As explained by Frédéric Beltrando (Airbus), this distinction is already possible, based on the CPDLC and ADS-C applications versions (e.g. CPDLC v1, v2, v3; ADS-C v1, v2), as defined in the B2 Interop Standards. It will be the same when revision B will be published with new CPDLC and ADS-C applications versions: CPDLC version 4 and version 5, ADS-C version 3 and version 4. Paragraph 2.1.3 of Interop Standard will correlate what datalink application version support what ATM Operation (see 2.4.4 of DO-350/ED-228) to preclude potential confusion.

7. SC-227 Clarification Discussion

The second day began with discussion of SC-227 issues which were raised at the previous meeting. Mike Cramer (MITRE) who chairs SC-227 joined the discussion. The first point discussed was the use of fixed radius turns (FRT). Mike Cramer (MITRE) wants to make sure that there is no intention to uplink FRTs in D-RNP procedures unless they are part of an airway transition. The concern was mainly that the way the wording currently is in DO-350A/ED-228A, it implies that FRTs can be used to transition between other flight plan leg types.

Pete Muraca (FAA) shared the current FAA DataComm roadmap which shows D-RNP and A-IM as part of the FAA B2 implementation. They are expecting implementation to occur around 2029 or 2030 although that segment is unfunded as of today.

Based on the discussion it was agreed that the use of FRTs in D-RNP procedures was understood by the group but that a change to the existing note in DO-350A/ED-228A section 3.13.1 would be done to provide better clarify going forward. An action was assigned taken to work with SC-227 on the proposed wording.

The second SC-227 topic to be discussed was the use of lateral offsets in uplinks. The group understood that while lateral offsets are uplinked, the transition path is an internal FMS construct which is not part of the uplink.

8. B2 Change Proposals- NATS

David Lewin and Ricardo De Sousa (NATS) presented their proposed changes for ATS-B2 RevB standards.

First Proposal - Make V_{APP} (approach speed) which is currently its own, optional ADS-C message group, a mandatory value for downlinking. By including this value, it would allow for reduction on longitudinal spacing on final approach and lead to increased landing runway capacity.

Ed Hahn (ALPA) noted that sometimes pilots will add an additional speed component to V_{APP} in order to deal with things like wind shear, and this addition may not be captured by what the FMS downlinks. Frederic Beltrando (Airbus) commented that currently while this speed is not defined in EPP, it is already included in ADS-C version 2 (which includes D-RNP and A-IM).

Joachim Hochwarth (GE Aviation) commented that initially this value was intended for just A-IM purposes because there were no use cases identified outside of A-IM. Now that there is a new use case, it should be explored.

<u>Second Proposal -</u> Use of DM89 Monitoring [unitname] [frequency]. The operational benefit of sending a UM120 Monitor [unitname] [frequency] with a DM89 can result in significant reduction in controller workload and could potentially remove the need to verbally confirm voice contact prior to CPDLC use. DM89 currently exists in ATN B1 but not in B2.

Frederic Beltrando (Airbus) said that there has been a lot of discussion on this and it resulted in DM89 being removed from ATN B2, GOLD and PANS documents. Additionally it was taken out of the European datalink mandate and it will be difficult to reintroduce something that is not per the mandate.

Arndt Suendermann (DFS) commented that based on an ATSU survey, there was no one currently using it, however a few ATSUs were interested in keeping it for the same reason as the NATS. But the main issue identified was that there was no guarantee that the aircraft was confirmed to be using that frequency and therefore there was a high risk of losing the airplane on voice. Although DM89 might be downlinked, there is no real confirmation that the frequency has been dialed in correctly, the radio volume is adequate or that the frequency is being monitored.

NATS would still like to pursue looking into this and seeing how this data can be sent to the ground. Frederic Beltrando (Airbus) suggested contacting the SESAR deployment manager for further discussions.

<u>Third Proposal</u>- ATS B2 Application Availability. ED-228/DO-350 has an availability of 0.9995 assigned to both RCP130 and RSP160. However ED-120/DO-290 provides an availability of 0.999 for RCP. There was concern whether certain technologies like SATCOM IRIS or VDLM2 would be able to meet this availability figure as it is not currently clear that these values can be met by one single link.

The group commented that this availability was really a value put on the aggregate availability of the links, not just one single one. And the 0.999 value is the value for a minor level hazard, so if a system cannot meet that, then it would be difficult to certify that system at all.

Theresa Brewer (FAA) noted and the group agreed that the most difficult part of all this is measuring against the requirement to validate if it is being met. While outages can be measured, there aren't always notifications or there may be ones that are partial or result in no adverse effect on ATS services. Discussion of these allocations would be continued during the performance discussion later in the meeting.

9. Departure Clearance Without Read Back- DFS

Frank Lindenmayer (DFS) went over the "Departure Clearance CPDLC" presentation. In 2016, ICAO changed voice communication to add new verbal options so controllers have more flexibility including the ability to add or cancel level restrictions. However, this additional capability is not reflected in the CPDLC standards. Currently messages do exist individually for certain additional instruction but they must be concatenated with other uplinks.

Bjarni Stefansson (ISAVIA) commented that changes related to this topic have been incorporated into the GOLD edition 2 and will be updated in the next revision of the PANS Doc 4444 document. However, since that next revision is due in Nov 2024, practically speaking the work of this group should use GOLD edition 2 (which is expected to be released imminently). An action was taken for the operational working group to stay in line with the contents of GOLD edition2.

10. ADS- C Common Service (ACS)- DFS

Hendrik Oberheid (DFS) presented the "Inputs from Work on ADS-C Common Service in SESAR 2020 PJ38-ADSCENSIO WP5". ADS-C Common Service (ACS) is a service which would collect relevant ADS-C data from aircraft via ATN once, and then share that data amongst multiple clients via SWIM-yellow protocol link.

Pascal Rohault (Thales) noted that the SWIM yellow protocol was developed for non-safety messages so additional requirements would be needed. Thomas Mustach (FAA) commented that the SWIM yellow protocol could be used if we can show that the safety/reliability/availability requirements are being met. The current plan is to identify the data needed offline with all interested stakeholders first. There is some limitation to this as clients cannot just modify these main contracts easily. However individual stakeholders will still be able to use on demand contracts.

The presentation then went into several inputs and change proposals:

1) EPP tolerance monitoring for more than one waypoint at a time
2) ACS priority- currently it is neither CDA nor NDA. The request was to allow ACS to have medium priority so it can have priority over traffic of ATSUs without dedicated role.
3) Support multiple Demand Contracts- an action was taken to evaluate ADS-C OR 5
4) Number of ATSU connections confusion- The group commented that it should support **at least** four connections (ADS-C OR 1).
5) Add the option of allowing ACS to handle ADS-C contracts into ED-228A/DO-350A
6) Review ED-228A/DO-350A ADS-OR requirements to allow ACS to be considered an ATSU for the purposes of getting ADS-C data
7) Clarify the need for DLIC before ADS-C contracts can be established
8) Check whether ADS-C connection can be established, possibly on the basis of an alternative declaration of airspace user consent to the connection with a ground facility.

While feedback was provided on all the proposed changes based on group discussion, there was no overall consensus reached. In particular, the discussion highlighted

- A risk is identified on the potential volume of traffic generated by the ACS if there is no optimization at server level
- DLIC initiation is mandatory today, and necessary for the ground system to know the A/C address.
- ADS concept may not fully comply with the current concepts, with ADS-C Interoperability requirements being applicable to the server itself, while answering End-to-end SPR requirements (and therefore up to the ATSU).

The proposals will be worked by the operational working group for further resolution.

11. Performance Allocation Discussion

Day three of the meeting began with discussion of performance allocations, especially those issues raised by Inmarsat working paper in the July plenary meeting. The group discussed the allocation in DO-350A/ED-228A app B Volume 1, table 5-14 where there were availability concerns.

Table 5-14:   CPDLC Performance Requirements

Parameter	RCP 130 ET	RCP 130 TT95%	RCP 240 ET	RCP 240 TT95%	RCP 400 (Note 4) ET	RCP 400 (Note 4) TT95%
Transaction Time (Sec)	130	67	240	210	400	350
Continuity (C)	0.999	0.95	0.999	0.95	0.999	0.95
Availability (A)	0.989		0.989 (safety) 0.9899 (efficiency)		0.989	
Integrity (I)	1E-5 per FH		1E-5 per FH		1E-5 per FH	

RCP Monitoring and Alerting Criteria

MA-1	The system shall be capable of detecting failures and configurations changes that would cause the communication service to no longer meet the RCP specification for the intended use.
MA-2	When the communication service can no longer meet the RCP specification for the intended function, the flight crew and/or the controller shall take appropriate actions.

Defined Allocations for RCP Specifications

Parameter	RCP 130 ET	RCP 130 TT95%	RCP 240 ET	RCP 240 TT95%	RCP 400/A1 ET	RCP 400/A1 TT95%	RCP 400/A2 ET	RCP 400/A2 TT95%
Transaction Time (Sec)								
Initiator	30	13	30	30	30	30	30	13
TRN	120	60	210	180	370	320	380	174
Responder	100	44	60	60	60	60	371	161
RCTP	32	20	150	120	310	260	32	20
RCTP$_{ATSP}$	23	14	n/a	n/a	n/a	n/a	23	14
RCTP$_{ATSU}$	14 [Note1]	6 [Note1]	15	10	15	10	14 [Note1]	6 [Note1]
RCTP$_{CSP}$	18 [Note1]	10 [Note1]	120	100	280	240	18 [Note1]	10 [Note1]
RCTP$_{Aircraft}$	23	10	15	10	15	10	23	10
Continuity (C)								
C$_{ATSU,\ CSP,\ and\ Aircraft}$ (See Note 2)	0.999	0.95	0.999	0.95	0.999	0.95	0.999	0.95
Availability (A)								
A$_{ATSU}$	0.9995		n/a		n/a		0.9995	
A$_{CSP}$	0.9995		0.999 (safety) 0.9999 (efficiency)		0.999		0.9995	
A$_{Aircraft}$	0.99		0.99		0.99		0.99	
Unplanned outage duration limit$_{ATSU\ \&\ CSP}$ (min)	6		10 (CSP only)		20		6	
Maximum number of unplanned outages$_{ATSU}$	40		n/a		n/a		40	

Thomas Mustach (FAA) said that he would be comfortable having an availability value for just safety. There is already a lot of industry guidance on this being a minor level hazard so we must determine the individual parts so that we can achieve and end-end allocation of 0.999. Therefore the 0.989 needs to be changed to 0.999 to meet the minor level hazard requirement.

There was a lot of discussion around whether the 0.9899 efficiency value should be kept in the RCP240 allocation as it has been a source of confusion for many years. It was agreed to remove the 0.9899 efficiency allocation from RCP240 and keep just the safety allocation of 0.999. However, several members did note that historically, some of the worst impacts have been due to ATSU availability issues. Based on that, it was agreed to add a note to encourage ATSUs to strive to meet efficiency in addition to safety allocations.

Frédéric Beltrando (Airbus) went over some of the historical work done when coming up with the current allocations. Some of the allocations for RCP130 come from ED120/DO-290 which is an SPR document for ATN. In DO-290/ED-120, it has no safety impact but an operational requirement. For example, that is why it has a value of 0.990 for expiration timer. But in RCP130, it is tied to a hazard category (of minor) which requires it to have a 0.999 allocation. ED120/DO-290 had no RCP value defined, just defined allocations for different parameters such as Responder. Then it was decided that RCP130 would keep those values especially on the aircraft side as the aircraft system was going to be the same. Statistical analysis was done on available empirical data to arrive at the current allocated time values.

It was noted that the overall RCTP value is most important. Since the sub allocations will vary based on system implementation, and as long as it is met for the overall system, it is adequate.

Frédéric Beltrando (Airbus) continued to explain that the responder time of 60 seconds was a legacy value which was kept. And that the value was the same for both 95% and 99% since it

was determined if you meet 99% with that value you would be meeting 95% as well. There was additional statistical analysis done to come up with the other values in the table, such as for RCTP$_{ATSU}$. For the differences in RSP160 and RSP180/RSP400 allocations, it mostly comes down to the additional time needed for prediction of route dat. For RSP180/RSP400 there is no predicted route data.

The group discussion concluded and will be continued during the performance subgroup meetings.

12. Assessing SESAR Proposals from VLD

Luc Emberger (Airbus) went over the SESAR proposals which came out of the VLD:

1. Create an ADS-C event contract to trigger EPP when a waypoint is sequenced.

Ana Maria Beroiz (EUROCONTROL) said the reason they are asking for reports whenever a waypoint is sequenced is to help the ground stay in synch with what the airplane is doing. Currently they have the flight plan on the ground but only an estimate of airplane location since it may be sequencing waypoints differently than the ground is expecting.

Thierry Lelievre (on behalf of Airbus) commented that this should already be covered in the EPP flight plan change report. It will be triggered when a waypoint is inserted or deleted in the event window which includes sequencing. However, EPP should be triggered when there is a change to the trajectory, but when sequencing a waypoint, you are not actually changing the trajectory, just the flight plan.

Pascal Rohault (Thales) noted that it depends on what EPP is being used for. It is intended to exchange of trajectory between ground and FMS, but to keep updating EPP every time you sequence a waypoint would mean it is being used for surveillance. The ground should assume flight following if they do not get any change notifications.

Ana Maria Beroiz (EUROCONTROL) agreed to discuss internally within the SESAR group to determine if they would need a full EPP report or if there was another existing report which could provide sufficient data.

2. Extend monitoring of ADS-C event contract "EPP tolerance" beyond the current one waypoint only window.

Ana Maria Beroiz (EUROCONTROL) said their current use case is that they will request about 10 waypoints in order to cover just their airspace. However, they are interested in certain specific waypoints such as Initial Approach Fix (IAF), points of coordination, etc which may fall outside of their initial EPP window.

Joachim Hochwarth (GE Aviation) mentioned that it is not feasible to monitor all waypoints due to strain on FMS processing. If LNAV/VNAV is engaged the aircraft will be flying the exact EPP trajectory. If it is not engaged, the EPP data would not be valid as it would include predictions of what the FMS thinks is needed to recapture path.

3. Create an ADS-C EPP event contract to trigger an EPP report when managed mode information changes.

Since EPP reports may not be completely accurate if LNAV/VNAV is not engaged, it was decided that a FMS subject matter expert should go through various scenarios to better understand how this works.

4. Speed Schedule report trigger.

Currently there is no information on how speed schedule group is being used and was originally removed from EPP and put in another group on purpose. Further information would be required to proceed with this.

5. Add entire Runway information to EPP content.

Current waypoint definition is limited to 5 characters whereas 7 characters would be necessary to entirely define a runway (In the departure airport information). It was not clear which entities were currently using this. Further information is required for discussion.

6. ADS-C trigger in case of Altitude or Speed constraint status change.

This is really to consider adding a trigger to notify the ground if the FMS thinks it cannot achieve an altitude or speed constraint (much like RTA)

7. Hold entry/exit information in ADS-C.

The request is really to assist in conformance monitoring and knowing if the airplane is planning on exiting or remaining in the hold once it reaches its hold fix. An action was assigned to the NATS to determine if knowing the entry/exit point is sufficient or if all hold information would be required.

8. ADS-C trigger for when FOM falls below threshold.

What is important is notification when FOM falls below threshold and also when it recovers, not the actual value.

9. Add additional trigger conditions such as cruise alt update cost index (CI) change.

The group did not support including cost index change as a trigger. While it can affect speed changes in some flight modes, the ground really needs the speed change value not the CI

Feedback was provided by the group on each of these proposals however no consensus was reached. More information was required on many of these proposals in order to better understand the request and impact.

Additional details of the discussion can be found in the presentation titled "4D SESAR VLD outcomes" on AerOpus.

13. Lessons Learned from 4DT DataComm Demonstration

Joachim Hochwarth (GE Aviation) presented the Lessons Learned from the 4DT DataComm Demonstration.
Of note were group discussions on the following:

Dynamic Waypoint naming- it is a capability that is allowed by DO-351A/ED-229A and therefore should be kept. However one point that may need more work is the naming of lat/lon waypoints which can be up to 10 characters but in CPDLC you can only use up to five characters.

Proposal to delete UM345 and UM346: Incorporate into route clearance uplinks and delete the individual uplinks. The group commented that it would be better to keep as it is today, since the function can still be supported by concatenating existing messages rather than doing more changes which would require validation.

ATS Wind uplinks: Drive to bring ATS winds back to the CPDLC application as that would allow the ground to be able to send the wind data immediately after a clearance uplink as well. Rochelle Perera (Boeing) commented that the current use of A702 winds was merely a method

of getting the data to the aircraft and has been defined, but the real issue lies in the fact that each FMS can use the winds differently or only process a subset of the data. This results in the ground not necessarily being able to predict the trajectory of an aircraft based on the data uplinked. Putting ATS winds back in CPDLC would create a lot of work while not addressing the main issue. Luc Emberger (Airbus) agreed and did not support reopening this issue.

14. Any Other Business

No other business was discussed.

15. Review of Action Items (Plenary)

The group returned to the concluding plenary portion of the meeting. Alex Engel (EUROCAE) read the relevant RTCA/EUROCAE policies

The action item list was reviewed and updated as necessary.

16. Upcoming Schedule (Plenary)

The upcoming schedule was discussed. December meeting may require a plenary portion in order to close out action items. It will also have a subgroup working schedule.

The current plan is to have our first face to face meeting Feb 28, 2022 – Mar 4, 2022. The location is TBD.

17. Adjourn

The meeting was adjourned on October 21st, 2021 at 3:00pm EDT.

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