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EUR323-22/WG92-82

St Denis & Washington, September 10, 2022

**Joint EUROCAE WG-92 “VDL Mode 2” / RTCA SC-214 SG-3 / AEEC DLK
“Standards for Air Traffic Data Communications Services” Plenary Meeting
Minutes**

DATE: July 18 – 22, 2022

July 18	Monday	SC-214 SG3 / WG-92 plenary session
July 19-21	Tuesday - Thursday	SC-214 SG3 / WG-92 / DLK SC working sessions
July 22	Friday	SC-214 SG3 / WG-92 plenary session

TIME: 9:00 AM – 5:00 PM Local Time

PLACE: EUROCAE Headquarters
9-23 rue Paul Lafargue
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PARTICIPANTS

Name	Company
ROBINSON, Claire	SC-214 Chair, UNIVERSAL AVIONICS
MUSTACH, Thomas	GAR, FEDERAL AVIATION ADMINISTRATION
ZENG, Dongsong	SC-214 SG-3 Secretary, THE MITRE CORPORATION
PELLESCI, Stephane	WG-92 Chair, COLLINS AEROSPACE
GODOY, José	AEEC DLK Systems SC Secretary, SAE ITC / ARINC IA
KANNAN, Abinaya	Technical Programme Manager, EUROCAE
HOLCOMB, Robert	AEEC DLK Systems SC Co-Chair, AMERICAN AIRLINES
WESTBROOK, Joseph	AEEC DLK Systems SC Co-Chair, FEDEX
DESCAILLOT, Jocelyn	SITAONAIR
DLOUHY, Ron	COLLINS AEROSPACE
EMBERGER, Luc	AIRBUS
JASIUKAJC, Zbigniew	SITAONAIR
JUDD, Tom	HONEYWELL
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KYNARD, Richard	GARMIN INTERNATIONAL
LEFEBVRE, Corinne	SITAONAIR
LEGER, Stephen R.	COLLINS AEROSPACE
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MCGUFFIN, Tom	SPECTRALUX AVIONICS
PATTERSON, Mark	FEDERAL AVIATION ADMINISTRATION
SCHLERETH, Armin	DFS
SCHONBACH, Sandra	DFS
TRUONG, Willie	HONEYWELL
WEST, Stewart	HONEYWELL
YOUNG, Chris	COLLINS AEROSPACE

1. Introductions, Administrative Remarks and Agenda Review

Abinaya Kannan, EUROCAE presented EUROCAE/RTCA antitrust statement, proprietary policy and membership policy. José Godoy announced ARINC IA's Intellectual Property (IP) policies and membership statements. All participants agreed on the statements and no issues were raised.

After a round-table introduction, Claire Robinson, Stephane Pelleschi, José Godoy, and Dongsong Zeng welcomed the participants and started the meeting.

The group reviewed and approved the meeting agenda.

2. Review of Previous Meeting Report

The group reviewed and approved the previous meeting minutes.

3. VDL2 Standardization Schedule Modification

Claire Robinson, Universal Avionics, presented a draft SC-214 Terms of Reference (TOR) Rev 18, which proposes to move the completion date of VDL2 standard revision from December 2022 to December 2023. Stephane Pelleschi, Collins Aerospace, also presented draft WG-92 schedule change which moves the VDL2 standard revision completion date out one more year. Jose Godoy, SAE ITC, presented draft APIM 17-002C ARINC 631 Supplement 9 revision, which proposes to move the ARINC Specification 631-9 completion date to December 2023.

The group generally agreed to change the VDL2 standard revision completion date from the end of 2022 to the end of 2023. SC-214 chair will seek the PMC approval of the draft SC-214 TOR Rev 18 in the September PMC meeting.

4. VDL2 Radio Receiver Interference Resolution

Steve Leger, Collins Aerospace, presented a white paper titled “Fallback to POA ACARS in the Presence of LED Interference,” which proposes changes to ARINC Specification 631 and ARINC Specification 618 to resolve the LED interference issue.

Luc Emberger, Airbus, raised concerns about falling back to POA as it may potentially infringe Honeywell’s intellectual property and it may not be a long-term solution since B2 will require ATN operations at the gate in the future. The group needed to give more thoughts to the proposal.

5. VDL2 Standard Revision Update

5.a VDL2 MASPS and MOPS

Claire Robinson, Universal Avionics, presented an update on the committee work and progresses made so far (Outstanding_Work_290622.pptx), including accepted proposals for VDL2 standardization, open items that still need to be worked out, and potential changes to the companion document.

Dongsong Zeng, MITRE, gave a presentation “On Subnet Behavior in Absence of Subnet Security,” in which MITRE proposes that when VDL2 subnet security is not available, VDL2 may indicate the security unavailability status to its upper layer and let the upper layer decide what to do next, e.g., whether to continue or discontinue the data communication. The group said according to the current draft ARINC Specification 858, the subnetwork is required to shut off IPS traffic when subnetwork security is not available. If IPS requirements are changed in the future, VDL2 implementation can be changed accordingly. Luc Emberger, Airbus, expressed that without VDL2 security IPS may not be able to use VDL2 on Airbus aircraft.

Jocelyn Descaillot and Zbigniew Jasiukajc, SITAONAIR, presented an “Update on the Super VGS Development and Deployment,” which includes a brief reminder about the background, SITA Super VGS implementation architecture, SITA super VGS project, initial validation sites and results, and Super VGS project timeline. The group welcomed the information provided by SITA. SITA will continue to brief the VDL Standards Group as further testing and deployment trials are implemented.

Zbigniew Jasiukajc, SITAONAIR, presented a set of slides titled “Orange v2 Implementation Aspects,” in which he compared two implementation options of VDL2 subnetwork security: Option 1 is to add a MIC to each IPS packet, and Option 2 is to add a MIC to every AVLC packet, and recommended Option 1 for VDL2 implementation. Ron Dlouhy, Collins Aerospace, pointed out that Option 2 has an advantage of

early detection and early defense over Option 1 although at the cost of higher overheads. The group decided to bring in security experts to discuss this at a future meeting.

Stephane Pelleschi, Collins Aerospace, went over the draft Orange protocol for DO-224D. The group reviewed and commented on the Orange protocol draft.

Stephane Pelleschi, Collins Aerospace, presented a set of slides titled “VDL MASPS/MOPS IPS Support Validation,” which provide Collins’ VDL2 validation results on nominal Orange/TLS/MIC transmission cases, AVLC disconnection cases, hand-off scenarios, AVLC degraded links, and N1 cases.

Stewart West, Honeywell, presented “VLDM2 Parameter Adjustments for Better Performance,” which lays out the groundwork for VDL2 latency improvement and proposes three potential solutions: Proposal A: reduce VDL2 retries counter N2, Proposal B: use T4 and TG2 timers, and Proposal C: reduce the time between retries T1 and T3. The group welcomed the ideas and needed more time to pour over the proposals.

Tom McGuffin, Spectralux, presented a white paper titled “Optional Parameter Testing,” in which he proposed MASPS changes and crafted additional MOPS test cases for optional parameter testing. The group agreed to the proposal in general.

Tom McGuffin, Spectralux, went over the current draft VDL2 MASPS changes with the group (VDL2 Part MASPS mcguffin-2022june16.docx). The group reviewed and commented on the draft.

Tom McGuffin, Spectralux, presented a white paper titled “AVLC Specific Options Parameter Clarification,” which proposes a series of changes in the MASPS to clarify the AVLC options parameter requirements.

Tom McGuffin, Spectralux, presented a white paper titled “Proposed Coordinated Channel Utilization Reporting,” which proposes draft modifications to ARINC 631 Section 7.15 Channel Utilization Report Parameter and a new Section 3.2.2.5.2.5.5 Channel Utilization Report Parameter to MASPS.

Tom McGuffin, Spectralux, presented a set of slides titled “VDL2 MASPS/MOPS RF Collision Issue,” which points out some clarity issues in VDL2 RF performance requirements and corresponding test cases and proposes changes to MASPS and MOPS.

Ron Dlouhy, Collins Aerospace, presented “GSIF Update for IPS for Connected VDL Mode 2,” in which he proposed to update AVLC Specific Options Parameter to indicate IPS service availability, and add a new private parameter to provide the IPS router address. The group reviewed and agreed on the proposal.

Stephane Pelleschi, Collins Aerospace, presented “VDM2 open items” on potential clarifications of some VDL Mode 2 behaviors (GIHO, GRAIHO, Cat B stations and VAT13) that may lead to clarifications in the VDL standards.

5.b ARINC 620

Tom McGuffin, Spectralux, presented a white paper titled “Proposed 620 Change for Label Q0 Link Test Message,” which proposes to add an optional reason code to Q0 link test messages. The group believed this is a good idea but needed more time to review the proposal details.

6. Resolution of FAA Data Comm and European DLS Operational Issues

Stephane Pelleschi, Collins Aerospace, went over the list of Data Link operational issues and reviewed the resolutions with the group. The updated resolution list was documented in file “DLK Std Items list_2022 Feb 1st.xlsx.”

7. Update Action Items

José Godoy, ARINC IA / SAE ITC, reviewed and updated the action item list with the group.

8. Schedule and Future Meetings

1. Joint SC-214 SG3/WG-92/DLK Plenary meeting: September 21-23, collocated with AEEC Data Link Users Forum (DLUF), EUROCONTROL, Brussels, Belgium.

Current EUROCONTROL Travel Rules:

Upon arrival, all visitors entering the EUROCONTROL Brussels HQ will be invited to present their EU Digital COVID Certificate (the QR code will be scanned whilst respecting the protection of personal data). EU citizens without an EU Digital COVID Certificate, and all other nationalities, need to inform their meeting organizer and send their documentation confidentially to the Agency Medical Service (MedicalServicesHQ@eurocontrol.int) stating that they have:

- been fully vaccinated with at least 14 days since the last vaccine received, or
- a negative rapid antigen or PCR/NAAT test (Polymerase Chain Reaction / molecular nucleic acid amplification test (NAAT) done in the last 72 hours, or
- recovered from COVID following a positive PCR/NAAT test in the last 6 months.

The Agency Medical Service will email them in advance confirming eligibility and inform the meeting organizer and Security.

2. Joint SC-214 SG3/WG-92/DLK Plenary meeting: Nov. 28 – Dec. 2, L3Harris, Melbourne, FL. Logistic information will be provided later.

9. Adjourn

The meeting adjourned around 12:00pm local time, July 22, 2022.