



EUR 177-20/WG92-69  
RTCA 184-20/SC214-115

St Denis & Washington, July 15, 2020

**EUROCAE WG-92 “VDL Mode 2” Meeting 44 / RTCA SC-214 Plenary #34 /  
AEEEC DLK “Standards for Air Traffic Data Communications Services”  
Virtual Plenary Meeting Minutes**

**DATE:** July 7 - 9, 2020, SC-214 / WG-92 / DLK, Plenary  
July 10, SC-214 / WG-92 / DLK, Working Group sessions

**TIME:** 10:00 AM – 3:00 PM EDT  
16:00 PM – 21:00 PM CEST

**PLACE:** Virtual

**CONTACTS:**

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Chuck Stewart, SC-214 Chair ([Chuck.Stewart@united.com](mailto:Chuck.Stewart@united.com))  
Stephane Pelleschi, WG-92 Chair ([stephane.pelleschi@collins.com](mailto:stephane.pelleschi@collins.com))

**AGENDA**

1. Welcome, Introductions and Administrative Remarks
2. Agenda Review
3. Previous Meeting Minutes Review
4. Resolution of DO-383 / ED-276, Guidance of Air/Ground VDL Mode 2 Interoperability Updates, Final Review and Comment / Open Consultation (FRAC / OC)
5. Approve DO-383 / ED-276 to forward to Program Management Committee and Council for publication consideration
6. Revised Terms of Reference Discussion
7. VDL2 Standards
8. Future Meetings
9. Other Topics
10. Adjourn

## **PARTICIPANTS**

<b>Name</b>	<b>Company</b>	<b>Country</b>
ABULHOSN, Moin	FEDERAL AVIATION ADMINISTRATION (FAA)	USA
BOURCIER, Bernard	THALES GROUP	FRANCE
BURDA, Jiri	HONEYWELL	USA
DI TILLIO, Giulio	Airtel-ATN	UK
DLOUHY, Ron	COLLINS AEROSPACE IMS	USA
EMBERGER, Luc	AIRBUS	FRANCE
FREUD, Cindy	THE MITRE Corporation	USA
GODOY, Jose	ARINC IA / SAE ITC	USA
HANAFL, Adam	L3HARRIS TECHNOLOGIES	USA
HOFMANN, Karan	Program Director, RTCA	USA
JAIN, Ravi	FEDERAL AVIATION ADMINISTRATION (FAA)	USA
JASIUKAJC, Zbig	SITA ON AIR	CANADA
JUDD, Tom	HONEYWELL	USA
KEARNS, Kathleen	ALTERNASOURCE INC.	USA
KYNARD, Richard	GARMIN	USA
LEGER, Stephen	COLLINS AEROSPACE IMS	USA
LIPIEC, Piotr	LOT POLISH AIRLINES	POLAND
MATYAS, Michael	THE BOEING COMPANY	USA
MCGUFFIN, Tom	SPECTRALUX AVIONICS	USA
MCMENAMY, Vincent	FEDERAL AVIATION ADMINISTRATION (FAA)	USA
MCNAIR, Mike	ARINC IA / SAE ITC	USA
MORRISON, Rebecca	RTCA	USA
MURACA, Peter	FEDERAL AVIATION ADMINISTRATION (FAA)	USA
MUSTACH, Thomas	Government Authorized Representative, FAA	USA
NESEMEIER, Gregg	FEDERAL AVIATION ADMINISTRATION (FAA)	USA
PATTERSON, Mark	FEDERAL AVIATION ADMINISTRATION (FAA)	USA
PELLESCHI, Stephane	WG-92 Chair, COLLINS AEROSPACE	FRANCE
PENNINGTON, Darrell	AIR LINE PILOTS ASSOCIATION (ALPA)	USA
ROSSI, Angelo	THE MITRE CORPORATION	USA
SHABAIK, Kareem	THE BOEING COMPANY	USA
STEWART, Chuck	UNITED AIRLINES	USA
VISEE, Christophe	EUROCONTROL	FRANCE
ZENG, Dongsong	Secretary of SC-214, THE MITRE CORPORATION	USA

### **1. Welcome, Introductions and Administrative Remarks**

After a round-table introduction, Stephane Pelleschi, Collins Aerospace, Dongsong Zeng, MITRE, Karan Hofmann, RTCA and Thomas Mustach, the FAA, welcomed the participants.

Karan Hofmann, program director, RTCA, presented RTCA and EUROCAE Proprietary References Policy, which has the following key points:

- If a participant is personally aware, participant must disclose if the use of any proprietary information is proposed and/or required to comply with an RTCA document being developed.
- A commitment to license (CtL) the relevant technology, patent, patent pending, or copyrighted material either without compensation (e.g. royalty-free) or in a form and substance that is demonstrably free of any unfair discrimination or limitation of access must be obtained from the proponent (proprietary information owner). If a CtL is not obtained, the information must not be included in the document
- The Chairman of a SC/WG proposing to use proprietary information will coordinate with SC's Program Director and EUROCAE TPM:
  - Provide a White Paper/presentation covering need
  - Once approved at the SC/WG plenary session, White Paper/Presentation and CtL will be forwarded to the Program Management Committee (PMC) / Council prior to any further discussion within the SC
- Once reviewed by the PMC / Council, the SC will take appropriate action
- Any party participating in the work of EUROCAE is requested, in the timeliest possible manner and to the best of their knowledge, to draw attention to any known patent or to any known pending application on patent, either their own or of other organizations, that, according to their own judgment, may be considered to be or become an essential patent for the deliverable.
- Conditions for use of such material are further detailed in the EUROCAE Handbook.
- Final decision by EUROCAE Council based on justification provided by WG.
- No issues were raised.

RTCA Special Committees and EUROCAE WGs require membership to participate. In case of joint activities, participant must be a member of at least one of the involved standardization bodies.

## **2. Agenda Review**

The group reviewed and approved the meeting agenda.

## **3. Previous Meeting Minutes Review**

Dongsong Zeng, MITRE, briefly went through the minutes of the previous meeting. The group reviewed and approved the previous meeting minutes.

#### **4. Resolution of DO-383 / ED-276, Guidance of Air/Ground VDL Mode 2 Interoperability Updates, Final Review and Comment / Open Consultation (FRAC / OC)**

The draft DO-383/ED-276 was released for Final Review and Comment / Open Consultation (FRAC / OC) on April 25, 2020. The FRAC/OC period is from April 25 to June 23, 2020. During the FRAC/OC period, a total of 57 comments were received, among that 5 comments are high, 4 comments are medium, 23 comments are low, and 25 comments are editorial. No non-concur comments were received. During this meeting, all the received comments were resolved.

#### **5. Approve DO-383 / ED-276 to forward to Program Management Committee and Council for publication consideration**

The group unanimously approved that the draft DO-383/ED-276 when comment resolutions are fully implemented is ready for PMC's/Council's consideration of approval.

#### **6. Revised Terms of Reference Discussion**

The goal of this round of TOR Revision (Rev 13) is to seek PMC/Council's agreement on the SC-214/WG-92's plan of revising VDL2 MASPS and MOPS standards to enable Internet Protocol Suite (IPS) over VDL2 operations by the end of 2022 in support of the U.S./EU data link IPS transition strategy.

Thomas Mustach, the FAA, went over the draft SC-214 TOR Revision 13 with the group. The group approved the draft SC-214 TOR Revision 13 with minor modifications. The proposed SC-214 TOR changes were also approved for inclusion in WG-92 TOR/Work Programme.

#### **7. VDL2 Standards**

Stephane Pelleschi, Collins Aerospace, presented the orange protocol requirement spreadsheet. The group reviewed and updated the orange protocol requirements.

Zbig Jasiukajc, SITAONAIR, reported on the status of SITA's VDL2 broadcast activities. SITA is now performing lab tests of VDL2 broadcast operation, which can supposedly provide some performance benefits without any changes to the VDL2 protocol. Test results will be reported to the group in the future when they are available.

Zbig Jasiukajc, SITAONAIR, presented slides, titled "Proposal for Aircraft reporting of VDL channel utilization," which proposes that VDL2 avionic radios should send channel utilization information to ground stations using downlink XIDs. The group agreed on the proposal and the VDL2 standards will be updated accordingly.

Mike Matyas, Boeing, presented an update to the information paper, titled "Connectionless VDL Mode 2 Standards Impacts." The group reviewed and discussed the paper. In general, the group agrees on the connectionless idea, but some details still need to be worked out in the next couple of meetings.

Stephen Leger, Collins Aerospace, presented slides, titled "IMPROVING RESILIENCE OF VDL2 COMMUNICATIONS IN THE PRESENCE OF BROADBAND VHF

INTERFERENCE,” in which he recommended the industry consider adopting a revised channel busy/idle threshold either using fixed values such as -90/-92 dBm or applying some sophisticated noise tracking algorithms that can dynamically track the noise environment. The group was interested in the concept and requested more information on test results for different channel busy/idle detection methods.

Christophe Visee, EUROCONTROL, presented slides, titled “ICAO-RTCA Busy-Idle detection levels,” which explains that the seeming differences of the VDL2 busy-idle threshold specifications from ICAO SARPS and RTCA DO-224D are due to the measurement point differences although the two specifications actually refer to the same noise level. For instance, in ICAO SARPS, the channel idle-to-busy threshold is specified as -90dBm at the antenna port, while in DO-224D, it is specified as -98dBm at the receiver port. The 8 dB difference is from the antenna gain (e.g., ~ -4 dB) and cable loss (~ 4 dB) between the antenna port and receiver port.

## **8. Future Meetings**

SC-214/WG-92/DLK WebEx meeting, 11:00 AM – 1:00 PM, July 20, 2020.

SC-214/WG-92/DLK WebEx meeting, 11:00 AM – 1:00 PM, July 23, 2020.

SC-214/WG-92/DLK working group meeting, September 8 - 11, 2020, Virtual.

SC-214/WG-92/DLK working group meeting, November 16 - 20, 2020, Virtual.

SC-214/WG-92/DLK working group meeting, joint with DLUF and PARC CWG, February 1 - 5, 2021, Miami.

## **9. Other Topics**

No other business topics were brought up during the meeting.

## **10. Adjourn**

The meeting adjourned around 3:00pm, July 10, 2020.