**Input paper: [[1]](#footnote-1)** ENG18-3.2.2.8

**Input paper for the following Committee(s):** **Purpose of paper:**

(Select as appropriate)

ARM  ENG  PAP  Input

ENAV VTS  Information

**Agenda item** [[2]](#footnote-2)

**Technical domain/ Task number** 2

**Author(s)/Submitter(s)** Stefan Gewies (DLR)

Intersessional work on draft of IALA Guideline on Medium Frequency R-Mode signal structure and navigation message[[3]](#footnote-3)

# Summary

## Purpose of the document

This paper provides information about the intersessional work on the “IALA Guideline on Medium Frequency R-Mode Signal Structure and Navigation Message”.

# Background

During ENG16 committee meeting it was decided to take the part of the description of the Medium Frequency (MF) R-Mode signal out from the draft of the “IALA Guideline on Implementation of R-Mode on MF and VHF frequencies” and generate a new R-Mode related Guideline on MF R-Mode signal structure and navigation message. This is beneficial because

* it will make the MF R-Mode standardisation more aligned with the VDES R-Mode standard where the IALA Guideline G1158 [1] describes the R-Mode ranging signal and
* secondly, with the signal related MF R-Mode Guideline it will be easier to start the MF R-Mode standardisation activities at RTCM and ITU-R. Here updates of the RTCM 10403.2 [2] and the ITU-R Recommendation M823-3 [3] are necessary to cover the modification of the maritime radio-beacon transmissions to support the R-Mode service.

After intersessional work between ENG16 and ENG17 and additional work during ENG17 a good draft of the new Guideline was generated with view gaps and the need for review. It was decided in ENG17 to have additional intersessional work between ENG17 and ENG18 to finish the Guideline draft before ENG18.

# Discussion

In the time between ENG17 and ENG18 the Task Group 3.2.2 added text to the Guideline that the draft covers all addressed topics. A first review of the Guideline draft took place. The draft was discussed during an intersessional online meeting and based on that discussion further elaborated.

The latest version of draft Guideline on Medium Frequency R-Mode signal structure and navigation message is annexed to this document. The submitters feel that the Guideline has reached a mature stage and can be finalized during the ENG 18 meeting. The remaining work includes:

* Accepting the track changes
* Discussing and solving the remaining comments
* Reviewing the final homework

The Task Group 3.2.2 leader thanks the task group members for their voluntary work. The members are:

|  |  |
| --- | --- |
| Name | Organisation |
| Michael Hoppe | Federal Waterways and Shipping Administration-Germany |
| Michael Schütteler | Federal Waterways and Shipping Administration-Germany |
| Kaisu Heikonen | Finnish Transport Infrastructure Agency |
| Johnny Menard | Swedish Maritime Administration |
| Caroline Huot | Canadian Coast Guard |
| Xiaoye Wang | China MSA |
| Younghoon Han | Korea Research Institute of Ships and Ocean Engineering |
| Pyo-Woong Son | Korea Research Institute of Ships and Ocean Engineering |
| Jaime Alvarez | [IALA](mailto:jaime.alvarez@iala-aism.org) |
| Stefan Gewies | German Aerospace Centre - Institute of Communications and Navigation |

# References

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| --- | --- |
| [1] | IALA, “IALA Guideline G1158 VDES R-Mode,” Edition 1.0, December 2020. |
| [2] | RTCM, “RTCM Standard 10403.2 Differential GNSS services - version 3,” July 2013. |
| [3] | ITU-R, “Recommendation ITU-R M.823-3 - Technical characteristics of differential transmissions for global navigation,” 2006. |

# Action requested of the Committee

The Committee is requested to:

1. Note the outcome of Task Group 3.2.2 intersessional work.
2. Participate in finalising the draft Guideline ENG18-3.2.2.8.1 on Medium Frequency R-Mode signal structure and navigation message during ENG18.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)
3. Footer will automatically populate [↑](#footnote-ref-3)