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| From: ENAV Committee | ARM10-3.3 |
| To: ARM and VTS Committee | 5 April 2019 |

LIAISON NOTE

Ranging Mode (R-Mode)

# Introduction

ENAV Working Group 3 is developing R-Mode using VDES and developed a document on stakeholder requirements. This document contains the identified stakeholder requirements.

# R-Mode

VDES R-mode sends accurately timed VHF transmissions and measures the timing (and possibly other) parameters of the received signals. The measured observables are output to an external Position, Navigation and Time (PNT) processor, which determines the user’s position, speed over ground and other navigation parameters. VDES R-mode should, as far as possible, use pre-existing shore side infrastructure, including shore stations and monitoring and control centres, and pre-existing AIS/VDES shipborne installations. Monitoring and control data is likely to be carried via pre-existing wide area networks. VDES R-mode is synchronised to an external timing source traceable to a common time scale in order to facilitate interoperability with other PNT systems.

Further, a stakeholder requirements document for R-Mode was developed.

# Action requested

The ARM and VTS Committees are requested to:

* + - 1. Note the information provided,
      2. Provide feedback on the stakeholder requirements document at annex 1 to this paper (ENAV23-12.1.15).