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Guidance on VDL Mode 2 Air / Ground Interoperability

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FOREWORD

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1 INTRODUCTION

1.1 Purpose

In the VDLM2 environment where the protocol and infrastructure are a challenge in terms of interoperability, it is important to provide recommendations about how the ground systems are expected to behave and what is the expected avionics answer.

This document aims at defining a coordinated understanding of the ground behaviors in addition to the MOPS which are more related to avionics systems. In particular some out of sync cases have been identified in operations, showing a need for interoperability improvement.

1.2 Scope

This document supplements DO-224 MASPS applicable to ground systems, and the requirements in MASPS still apply. For airworthiness and TSO/E-TSO approval the MASPS have precedence over this document and avionics requirements are defined in the MASPS.

The main focus of the document is VDLM2, but it also addresses specific issues above VDLM2 when they are related to the VDLM2 operations.

1.3 Structure of the Document

The document is composed of the following sections:

1. Chapter 1: Introduction,
2. Chapter 2: Air-Ground Interoperability,
3. Chapter 3: Routing and Neighbor Discovery.

In potential next revisions of the document, additional chapters may be added to cover additional guidance.

1.4 Relationship to ICAO Documents

This document supplements the document ICAO 9776 which defines VDL M2. The information provided in the current document does not supersede the ICAO definition but provides guidance on how the system should behave in compliance with the ICAO standards.

1.5 References

The following documents are used as reference:

Document	Description
ICAO Doc 9776	ICAO Manual on VHF Digital Link (VDL) Mode 2 Part II, Edition 2 published in 2015
ICAO Doc 9705	Manual of Technical Provisions for the Aeronautical Telecommunication Network (ATN), Second Edition published in 1999

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