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Minimum Aviation System Performance Standards (MASPS) for Aeronautical Information/Meteorological Data Link Services

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FOREWORD

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1 PURPOSE AND SCOPE

1.1 Purpose of the Document

The purpose of this document is to provide Minimum Aviation System Performance Standards (MASPS) for Aeronautical Information Services (AIS) and Meteorological (MET) Data Link Services System. Eleven AIS/MET Data Link Services are fully defined in the Service Descriptions in Appendix A.

This MASPS addresses system characteristics and allocation of requirements that support data link Services. This is intended to be useful to designers, manufacturers, installers, service providers, regulators, and users of the AIS/MET Data Link Services System.

The requirements contained in this document are necessary to provide adequate assurance that AIS/MET Data Link Services System will function in an acceptable manner. Compliance with this standard is recommended as one means of assuring that AIS/MET Data Link Services System performs satisfactorily under all conditions normally encountered in aeronautical operations.

1.2 Scope of the Document

This MASPS harmonizes AIS/MET Data Link Services minimum system requirements and for global Air Traffic Management (ATM) operations. AIS/MET information and associated attributes for the Services are assumed to be provided by approved AIS/MET service providers, and the information is assumed to be approved for aeronautical/operational use.

This document builds on RTCA DO-364 with an update to the Eddy Dissipation Rate (EDR) Turbulence Service (ETS), adds a Collaborative Decision Making (CDM) Service titled Airborne Rerouting Information (ARI), and adds eight additional AIS/MET Services as listed in Table 1-1. These newly defined Services' Service Descriptions used a different methodology to complete and harmonize the Operational Safety Assessments (OSAs) and Operational Performance Assessments (OPAs). The Special Activity Airspace (SAA) and the Weather Surveillance (WxS) Services were not updated and remain in the same form as in RTCA DO-364.

The system description in the WxS Service Description is based on the Automatic Dependent Surveillance – Broadcast (ADS-B) data link.

The differences between the Service Descriptions of the new Services and former Services include format, granularity of information exchange, terminology in sequence diagrams, system description, system operational characteristics, and system timing characteristics.

Each Data Link Services System shown in Table 1-1 may specify a communication or data link specific for the scope of intended use for that AIS/MET Data Link Service System. This may include safety and non-safety links. A Service System has to consider the operational and performance requirements for that service, which could determine one or more links for operation of that Service System. As stated in the Introduction, Section 3.1, a Data Link Service System is not intended to infer any notional link as used today, rather it is meant to be agnostic to a link(s).

The architectural design considerations of a Service System are also not meant to infer a physical location to perform a function of the Data Link Service System. One or more function(s) can be located on the ground, airborne, or even spatially located. This is a consideration for implementation. Figure 1-1 introduces a notional architecture with notional functions; see the note after Figure 1-1 related to conceptual and architectural elements and *Concept of Use (ConUse) for Aeronautical Information Services (AIS) and*

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