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Safety and Performance Standard for Air Traffic Data Link Services in Oceanic and Remote Airspace (Oceanic SPR Standard)

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FOREWORD

This document was jointly prepared by Special Committee 189 (SC-189) and the European Organization for Civil Aviation Equipment (EUROCAE) Working Group 53 (WG-53) and approved by the RTCA Program Management Committee (PMC) on October 11, 2007.

RTCA, Incorporated is a not-for-profit corporation formed to advance the art and science of aviation and aviation electronic systems for the benefit of the public. The organization functions as a Federal Advisory Committee and develops consensus based on recommendations on contemporary aviation issues. RTCA's objectives include, but are not limited to:

- coalescing aviation system user and provider technical requirements in a manner that helps government and industry meet their mutual objectives and responsibilities;
- analyzing and recommending solutions to the system technical issues that aviation faces as it continues to pursue increased safety, system capacity and efficiency;
- developing consensus on the application of pertinent technology to fulfill user and provider requirements, including development of minimum operational performance standards for electronic systems and equipment that support aviation; and
- assisting in developing the appropriate technical material upon which positions for the International Civil Aviation Organization and the International Telecommunications Union and other appropriate international organizations can be based.

The organization's recommendations are often used as the basis for government and private sector decisions as well as the foundation for many Federal Aviation Administration Technical Standard Orders.

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1 Introduction

This standard provides the operational, safety, and performance requirements (SPR) for the implementation of air traffic data link services in oceanic and remote airspace. It is intended to be used by air traffic service providers (ATSPs), communication service providers, aircraft manufacturers/modifiers, operators, military, and civil aviation authorities for the implementation of communication, navigation, and surveillance/air traffic management (CNS/ATM) systems in worldwide application.

This document was developed in accordance with the criteria for SPR standards set forth in RTCA DO-264/EUROCAE ED-78A, "Guidelines for Approval of the Provision and Use of Air Traffic Services (ATS) Supported by Data Communications." It provides the minimum operational, safety, and performance requirements and allocations based on the results of a coordinated requirements determination process, which includes an operational services and environment information capture, operational safety assessment (OSA), and an operational performance assessment (OPA). These requirements are necessary to provide adequate assurance that the elements of the CNS/ATM system, when operating together, will perform their intended function in an acceptably safe manner.

Figure 1-1 provides an overview of the CNS/ATM system and its elements. These elements comprise the aircraft system, the ATSP provisions, and the operator's provisions to use the data link services. The aeronautical operational control (AOC) services are provided through shared ground-ground and air-ground communications to the aircraft end-system. These services are described to the extent that they are used to support the intended ATS functions. The ATSP and the operator's provisions may include third party or contracted communication services, which are considered in this standard. While the figure is conceptual and shows only one of each kind of component, the actual CNS/ATM system in any airspace typically includes multiple ATSP facilities, operators, and aircraft, all of which provide the intended operational capability to multiple operators in a mixed fleet environment.