RTCA, Inc.
1828 L Street, NW, Suite 805
Washington, D.C. 20036-5133 USA

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

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Prepared by: SC-189
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Telephone: 202-833-9339
Facsimile: 202-833-9434
Internet: www.rtca.org

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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.

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- 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
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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.

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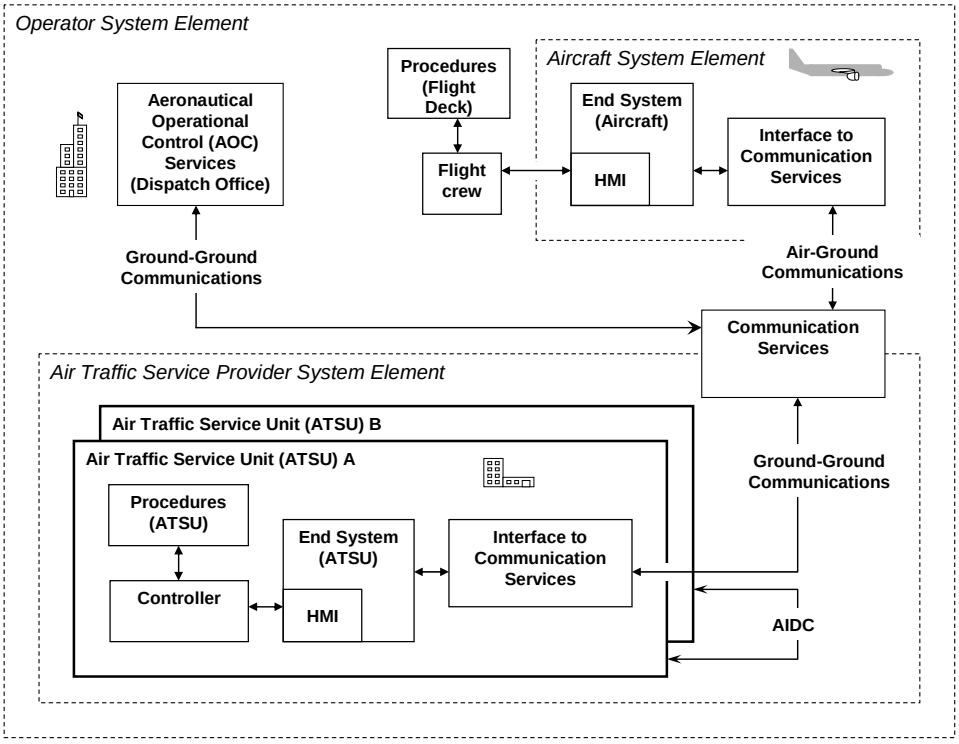


Figure 1-1: Overview of the CNS/ATM system

1.1 Purpose

This document defines and allocates the set of minimum requirements for the operational, safety, and performance aspects for implementations of air traffic data link services in oceanic and remote airspace. Allocation is done by this SPR standard to the necessary elements of the CNS/ATM system.

This SPR standard is intended for use with interoperability requirements (INTEROP) standards, and the guidelines described in DO-264/ED-78A.

Note: Based on ED-78A/DO-264, INTEROP and SPR standards provide recommendations intended for government organizations, conference of governments, or agencies having statutory jurisdiction over the use and provision of data link services. These recommendations are for use by such government organizations to enunciate official policy related to such matters in aeronautical information publications (AIPs), notices to airmen (NOTAMs), airplane flight manuals (AFMs), and operator specifications.

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1.2 Scope

This document provides the operational, safety, and performance requirements for data link services that support specific ATS functions in oceanic and remote airspace. Figure 1-2 provides an overview of the scope of the ATS functions and data link services as it relates to the air traffic services and communication, surveillance, and navigation components.

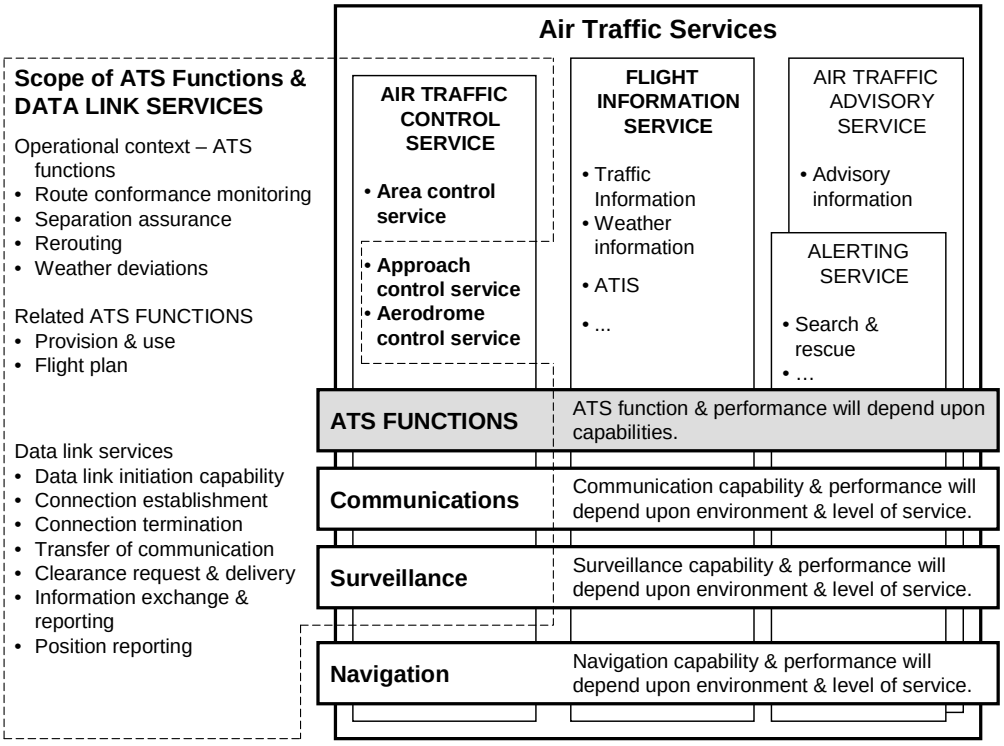


Figure 1-2: Notional relationship of ATS, ATS functions, communications, navigation and surveillance capabilities, and data link services

1.2.1 ATS functions supported by data link services

The ATS functions supported by data link services are:

a) Route conformance monitoring (RCM);

b) Separation assurance (SA);

   1) 30 NM lateral, 30 NM longitudinal, and 50 NM longitudinal separation minima (require data link services);

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