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Minimum Operational Performance Standards (MOPS) for Flight Information Services - Broadcast (FIS-B) with Universal Access Transceiver (UAT)

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Prepared by SC-206

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FOREWORD

This document was prepared by Special Committee 206 (SC-206) and approved by the RTCA Program Management Committee (PMC) on March 18, 2021.

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 develops consensus-based 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 Telecommunication 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 and several advisory circulars.

Since RTCA is not an official agency of the United States Government, its recommendations may not be regarded as statements of official government policy unless so enunciated by the U.S. government organization or agency having statutory jurisdiction over any matters to which the recommendations relate.

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1 PURPOSE AND SCOPE

1.1 Introduction

This document contains Minimum Operational Performance Standards (MOPS) for Flight Information Services – Broadcast (FIS-B) system with Universal Access Transceiver (UAT). These standards specify system characteristics that should be useful to designers, manufacturers, installers and users of the equipment.

Compliance with these standards is recommended as one means of assuring that the equipment will perform its intended function(s) satisfactorily under all conditions normally encountered in routine aeronautical operation. Any regulatory application of this document is the sole responsibility of appropriate governmental agencies.

This document considers an equipment configuration consisting of the airborne processing and cockpit display of aeronautical and meteorological data known as FIS-B provided by the Federal Aviation Administration (FAA).[1] Functions or components that refer to equipment capabilities that exceed the stated minimum requirements are identified as optional features.

Section 1 of this document provides information needed to understand the rationale for equipment characteristics and requirements stated in the remaining sections. It describes typical equipment operations and operation goals, as envisioned by the members of Special Committee 206 (SC-206), and establishes the basis for the standards stated in Section 2. Definitions and assumptions essential to proper understanding of this document are also provided in this section.

Section 2 contains the minimum performance standards for the equipment. These standards specify the required performance under standard environmental conditions. Also included are recommended bench test procedures necessary to demonstrate equipment compliance with the stated minimum requirements.

Section 3 describes the performance required of installed equipment. Tests for the installed equipment are included when performance cannot be adequately determined through bench testing.

Section 4 contains a description of the relationship between the aircraft characteristics and the FIS-B equipment conforming to this MOPS.

Section 5 lists the members of SC-206 who developed the document.

APPENDIX A, a normative appendix, provides formatting and encoding details of FIS-B Uplink Products, including the UAT Ground Uplink Message formatting, the Application

[1] The FIS-B service is part of the FAA's Surveillance and Broadcast Services System (SBSS).

