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Information Security Guidance for Continuing Airworthiness

RTCA DO-355
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FOREWORD

This document was prepared by Special Committee 216 (SC-216) and was approved by the RTCA Program Management Committee (PMC) on June 17, 2014.

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 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.

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 INTRODUCTION

This document is a joint product of two industry committees: the EUROCAE Working Group WG-72, titled "Aeronautical Systems Security" and the RTCA Special Committee SC-216, also titled "Aeronautical Systems Security". WG-72 was formed to address information security and the overall Aeronautical Information System Security (AISS) of airborne systems in conjunction with related ground systems and environment, while SC-216 was formed more specifically to address information security for certification and operation of aircraft and its systems. Both committees agreed that the guidance provided by this document and its companion documents constitute an acceptable means to address the increasing potential of information security threats against aircraft information systems.

This document provides guidance for the operation and maintenance of aircraft and for organizations and personnel involved in these tasks. It shall support the responsibilities of the Design Approval Holder (DAH) to obtain a valid airworthiness certificate and aircraft operators to maintain their aircraft to demonstrate that the effects on the safety of the aircraft of information security threats are confined within acceptable levels. As all information security threats may have an intentional origin, this document also covers electronic sabotage (as used in AMC 25.1309).

1.1 PURPOSE

This document is a resource for civil aviation authorities and the aviation industry when the operation and maintenance of aircraft and the effects of information security threats can affect aircraft safety. It deals with the activities that need to be performed in operation and maintenance of the aircraft related to information security threats.

This document gives also guidance that is related to operational and commercial effects (i.e. guidance that exceeds the safety-only effects). Thus, it also supports harmonizing security guidance documents among Design Approval Holders (DAH), which is deemed beneficial to DAHs, operators and civil aviation authorities.

ED-204/DO-355 is a companion document[1] to ED-202A/DO-326A that supports security in the development and modification part of the airworthiness process.

NOTE: *This document was developed in the European context of the European Aviation Safety Agency (EASA) Certification Specification CS-25 "Large Aeroplanes" and the American context of Title 14 Code of Federal Regulations (14CFR) Part 25 "Transport Category Aircraft". Tailoring of this guidance may be used in other regulatory contexts including but not limited to JAA JAR 25, CS-23, CS-27, CS-29, CS-E, Part 23, Part 27, Part 29, and Part 33.*

The most comprehensive possible area of the application of this guidance is deemed to be Large Transport Aircraft programs. However, this document does not make any assumptions about and is without prejudice to its applicability.

[1] This document is also intended to be a companion to other documents being produced by EUROCAE WG-72 and RTCA SC-216 relating to Aeronautical Information System Security that were under development by the time this document was issued.