

RTCA, Inc.
1150 18th Street NW, Suite 910
Washington, DC 20036
USA

Considerations for Aeronautical Data Alteration

RTCA DO-394
June 23, 2022

Prepared by: SC-217
© 2022 RTCA, Inc.

Copies of this document may be obtained from
RTCA, Inc.

Telephone: 202-833-3339

Facsimile: 202-333-434

Internet: www.rtca.org

Please visit the RTCA Online Store for document pricing and ordering information.

FOREWORD

This document was prepared by Special Committee 217 (SC-217) jointly with EUROCAE Working Group 44 (WG-44) and approved by the RTCA Program Management Committee (PMC) and the EUROCAE Council on June 23, 2022.

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 Standards Development Organization 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 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 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.

DISCLAIMER

This publication is based on material submitted by various participants during the SC approval process. Neither the SC nor RTCA has made any determination whether these materials could be subject to valid claims of patent, copyright or other proprietary rights by third parties, and no representation or warranty, expressed or implied is made in this regard. Any use of or reliance on this document shall constitute an acceptance thereof "as is" and be subject to this disclaimer.

Currently in preview, click buy full version

This Page Intentionally Left Blank

EXECUTIVE SUMMARY

This is a guidance document that clarifies and expounds on the criteria and processes associated with the alteration of aeronautical data in support of the requirements defined in RTCA DO-200B/EUROCAE ED-76A. It does not define any requirements, rather it provides considerations, examples, and guidelines for the disposition and processing of altered aeronautical data.

The document is organized as follows:

Section 1 - An introductory section which provides:

- Background information as well as the purpose and scope of the document
- A discussion of key terminology used in the document
- A listing of stakeholders and their intended use of the document
- A list of reference documents

Section 2 - A discussion of general considerations when altering aeronautical data. This section includes:

- An explanation of this document's relationship to DO-200B/ED-76A
- A discussion of why a data supplier may seek to change Source data
- The impacts of altering data

Section 3 - Scenarios based on Source responses to error reports and examples for how to handle situations when the response is unclear or non-existent. This section includes both errors of omission and commission.

Section 4 - Recommended guidelines for alteration of aeronautical data in support of DO-200B/ED-76A requirements.

Section 5 - Lists the membership of RTCA SC 217/EUROCAE WG-44 that contributed to this document.

Appendix A - Glossary of relevant terms

Appendix B - Abbreviations and acronyms

Currently in preview, click buy full version

This Page Intentionally Left Blank

TABLE OF CONTENTS

1	Introduction and Scope	1
1.1	Introduction.....	1
1.2	Scope.....	1
1.3	Background.....	1
1.4	Key Terminology	1
1.5	Stakeholders.....	2
1.6	Reference Documents	3
2	General Considerations	5
2.1	Relationship to DO-200B/ED-76A.....	5
2.2	Changes to Aeronautical Data.....	5
2.3	Impacts of Data Alteration.....	5
3	Response Scenarios and Data Error Examples	7
3.1	Errors of Commission	7
3.1.1	Scenario 1 – Source Approval of Notification of Issue/Intent to Change.....	8
3.1.2	Scenario 2 – Source Rejection of Notification of Issue/Intent to Change.....	8
3.1.3	Scenario 3 – Unclear Source Response to Notification of Issue/Intent to Change	8
3.1.3.1	Example: Discrepancies in Source Values.....	9
3.1.3.2	Example: Location Data Incorrect Due to Transposition.....	9
3.1.3.3	Example: Time Impact on Declination Values	10
3.1.3.4	Example: Incorrect Title	10
3.1.3.5	Example: Incorrect Frequency Reported by End-User(s).....	10
3.2	Errors of Omission.....	10
3.2.1	Example: Missing Runway Information	11
3.2.2	Example: Missing Station Declination.....	11
4	Guidelines for Data Alteration.....	13
4.1	Assumptions Impacting Purpose and Scope	13
4.2	Compliance Documentation (DO-200B/ED-76A section 2.2.2)	13
4.3	Defining DQRs (DO-200B/ED-76A section 2.3).....	13
4.4	Defining Aeronautical Data Processing Requirements.....	13
4.4.1	Data Processing Procedure Requirements (DO-200B/ED-76A section 2.4.1)	13
4.4.2	Data Alteration Communication Requirement (DO-200B/ED-76A section 2.4.2)	13
4.4.2.1	Upstream.....	13
4.4.2.2	Downstream	14

4.4.3	Data Configuration Management (DO-200B/ED-76A section 2.4.3).....	14
4.4.4	Competency Management (DO-200B/ED-76A section 2.4.4)	14
4.4.5	Aeronautical Tool Qualification (DO-200B/ED-76A section 2.4.5)	14
4.5	Defining Quality Management Requirements (DO-200B/ED-76A section 2.5)	14
4.6	Compliance (DO-200B/ED-76A section 3).....	14
5	Membership	15
APPENDIX A - GLOSSARY		A-1
APPENDIX B - LIST OF ABBREVIATIONS AND ACRONYMS		B-1

TABLE OF FIGURES

Figure 3-1: Scenario 1 Diagram.....	8
Figure 3-2: Scenario 3 Diagram.....	9
Figure 3-3: Error of Omission.....	11

TABLE OF TABLES

Table 1-1: Stakeholders and the Intended Uses of This Document.....	3
---	---

1 INTRODUCTION AND SCOPE

1.1 Introduction

This document provides clarifying information regarding data alteration for aeronautical data chain participants. The document provides background, key terminology, general considerations for data alteration, examples of data error scenarios, and ends with guidelines for data alteration.

1.2 Scope

This document addresses the alteration of data and guides entities in the processing, disposition, and/or use of altered aeronautical data. These entities may be any or the stakeholders involved in the aeronautical data chain and listed in Table 1.1. This document does not establish requirements above what is required in RTCA DO-200B/EUROCAE ED-76A, nor is it prescriptive in how existing aeronautical data chains process data. Alteration is separate from assembling, translating, selecting, or reformatting of data. Withholding data found to be in error is not considered alteration. Consequently, this document does not apply to data changes which preserve the meaning of the data.

While this document refers to origination in order to differentiate it from alteration, it does not provide any additional guidance for origination. Given that it is deemed sufficiently covered by DO-200B/ED-76A.

1.3 Background

Data suppliers have the ability to originate data or make alterations of the data they receive per approved processes. Before this document, industry guidance was not available for data suppliers to use in determining when alteration changes are appropriate. As data supplier processes became more complex, need for clarity around data alteration was identified.

There are several contributing factors as to why data suppliers may consider altering the data received from Source, such as:

1. Incorrect, inconsistent, or incomplete data.
2. Other sources of information that are more recent and/or more accurate.
3. Information from multiple sources that disagree.

DO-200B/ED-76A, section 2.4.2, states that data may be altered if permission from the Source is granted. However, it does not explicitly address what to do if the Source fails to respond to the report of the perceived error. This document addresses the issues, concerns, and potential confusion among aeronautical data chain participants when considering data alteration. It further clarifies existing requirements, expectations, and processes related to data alteration.

1.4 Key Terminology

The definitions of terms used in this document are provided to clarify or add to those found in the glossary in DO-200B/ED-76A and ICAO Annex 15. They are not intended to amend current requirements or definitions, but to provide further context.