INTERNATIONAL STANDARD

ISO 21082

First edition
2016-07-01

Mission operations — MAL space packet transport binding and binary encoding

Opérations de mission - transport de paquets de l'espace MAL reliés et codage binaire

Reference number
ISO 21082:2016(E)

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Foreword

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ISO 21082 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 524.1-B-1, August 2015) and was adopted (without modifications except those stated in clause 2 of this International Standard) by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 13, *Space data and information transfer systems*.

STATEMENT OF INTENT

The Consultative Committee for Space Data Systems (CCSDS) is an organization officially established by the management of its members. The Committee meets periodically to address data systems problems that are common to all participants, and to formulate sound technical solutions to these problems. Inasmuch as participation in the CCSDS is completely voluntary, the results of Committee actions are termed **Recommended Standards** and are not considered binding on any Agency.

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  - -- The anticipated date of initial operational capability.
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FOREWORD

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Questions relating to the contents or status of this document should be sent to the CCSDS Secretariat at the e-mail address indicated on page i.

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DOCUMENT CONTROL

Document	Title	Date	Status
CCSDS 524.1-B-1	Mission Operations—MAL Space Packet Transport Binding and Binary Encoding, Recommended Standard, Issue 1	August 2015	Original issue

CONTENTS

CONTENTS (continued)

CONTENTS (continued)

Figure Page

Table

1 INTRODUCTION

1.1 PURPOSE

This Recommended Standard defines the binding between the Mission Operations (MO) Message Abstraction Layer (MAL) specified in reference [2] and the Space Packet Protocol specified in reference [1]. This binding allows MO Services to use the Space Packet Protocol as messaging technology in all situations where this may be required.

1.2 SCOPE

The scope of this Recommended Standard is the specification of the binding in terms of technology mapping to the Space Packet Protocol of:

a) MAL message;

b) MAL Transport Interface.

The MAL Blue Book (reference [2]) specifies the MAL protocol in an abstract way, i.e., without defining the concrete protocol data units. The MAL Space Packet Transport Binding and Binary Encoding specifies:

a) a complete and unambiguous mapping of the MAL message to the Space Packet;

b) a complete and unambiguous mapping of the MAL transport interface to the Space Packet Protocol interface;

c) a complete and unambiguous mapping of the MAL data types to fixed and variable length binary encoding formats.

This Recommended Standard does not specify:

a) individual implementations or products;

b) the implementation of entities or interfaces within real systems.

MO services defined in terms of MAL using the Space Packet Transport Binding as defined in this Recommended Standard are fully interoperable.

1.3 APPLICABILITY

This Recommended Standard specifies a technology mapping that enables different implementations of the MO service framework (see 2.2) to interoperate through the Space Packet Protocol.