
**Space data and information transfer
systems — Mission operations message
abstraction layer**

*Systèmes de transfert des informations et données spatiales — Couche
d'abstraction des messages des opérations de mission*

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ISO 18202 was prepared by the Consultative Committee for Space Data Systems (CCSDS) as CCSDS 521.0-B-2, March 2013 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*.

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Recommendation for Space Data System Standards

MISSION OPERATIONS MESSAGE ABSTRACTION LAYER

RECOMMENDED STANDARD

CCSDS 521.0-B-2

BLUE BOOK
March 2013

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CCSDS RECOMMENDED STANDARD FOR
MISSION OPERATIONS MESSAGE ABSTRACTION LAYER**AUTHORITY**

Issue:	Recommended Standard, Issue 2
Date:	March 2013
Location:	Washington, DC, USA

This document has been approved for publication by the Management Council of the Consultative Committee for Space Data Systems (CCSDS) and represents the consensus technical agreement of the participating CCSDS Member Agencies. The procedure for review and authorization of CCSDS documents is detailed in *Organization and Processes for the Consultative Committee for Space Data Systems*, and the record of Agency participation in the authorization of this document can be obtained from the CCSDS Secretariat at the address below.

This document is published and maintained by:

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NASA Headquarters
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CCSDS RECOMMENDED STANDARD FOR
MISSION OPERATIONS MESSAGE ABSTRACTION LAYER

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 - The anticipated date of initial operational capability.
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CCSDS RECOMMENDED STANDARD FOR
MISSION OPERATIONS MESSAGE ABSTRACTION LAYER**FOREWORD**

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

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CCSDS RECOMMENDED STANDARD FOR
MISSION OPERATIONS MESSAGE ABSTRACTION LAYER

DOCUMENT CONTROL

Document	Title	Date	Status
CCSDS 521.0-B-1	Mission Operations Message Abstraction Layer, Recommended Standard, Issue 1	October 2010	Original issue (superseded)
CCSDS 521.0-B-2	Mission Operations Message Abstraction Layer, Recommended Standard, Issue 2	March 2013	Current issue (note): – addresses the request to add a slight restriction to the MAL data model regarding polymorphism; – adds ability to use external data type specifications such as XML Schemas; – moves XML to the SANA registry; – changes type short forms to integers rather than strings; – shows optional fields in composites; – changes lists to a template rather than explicit types; – adds unsigned integer and File data types.

NOTE – Changes from the original issue are too numerous to permit markup.

CCSDS RECOMMENDED STANDARD FOR
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