INTERNATIONAL STANDARD

ISO 17808

First edition
2014-07-01

Space data and information transfer systems — Telemetry (TM) channel coding profiles

Systèmes de transfert des données et informations spatiales — Profils de codage de canal pour télémesure (TM)

Reference number
ISO 17808:2014(E)

© ISO 2014



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

ISO 17808 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 131.4-M-1, July 2011) 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*.

Space data and information transfer systems — Telemetry (TM) channel coding profiles

1 Scope

This International Standard presents recommendations regarding the usage of coding schemes described in references [1]-[2] in the various mission profiles that are encountered in space research, space operations, and Earth exploration.

Within this document, it is assumed that at the sending end the Synchronization and Channel Coding sublayer

— accepts at a constant rate transfer frames of fixed length from the Data Link protocol sublayer;

— performs the encoding and synchronization functions selected for the mission; and

— delivers a continuous and contiguous stream of channel symbols to the Physical layer.

At the receiving end, the Synchronization and Channel Coding sublayer:

— accepts a continuous and contiguous stream of channel symbols from the Physical layer;

— performs the synchronization and decoding functions selected for the mission;

NOTE The decoding functions include validation of frames to determine their quality with respect to the possible presence of undetected errors.

— delivers transfer frames to the Data Link protocol sublayer.

Profiles for Earth-to-space and Proximity links are out of scope and are not addressed in this document. Communication profiles for space-to-Earth links that are currently not supported by CCSDS, e.g. via data relay satellites, are not addressed in this document.

2 Requirements

Requirements are the technical recommendations made in the following publication (reproduced on the following pages), which is adopted as an International Standard:

CCSDS 131.4-M-1, July 2011, TM Channel Coding Profiles

For the purposes of international standardization, the modifications outlined below shall apply to the specific clauses and paragraphs of publication CCSDS 131.4-M-1.

Pages i to vi

This part is information which is relevant to the CCSDS publication only.

Pages 1-2

Add the following information to the reference indicated:

© ISO 2014 – All rights reserved