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Space data and information transfer systems — Data transmission and pseudo-random noise (PN) ranging for 2 GHz code division multiple access (CDMA) link via data relay satellite

Systèmes de transfert des données et informations spatiales — Transmission de données et mesure du pseudo bruit pour la liaison AMRC à 2 GHz par satellite relais de données

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Foreword

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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).

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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 17810 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 415.1-B-1, September 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 — Data transmission and pseudo-random noise (PN) ranging for 2 GHz code division multiple access (CDMA) link via data relay satellite

1 Scope

This International Standard defines CDMA spread spectrum modulation schemes in terms of:

a) the services provided to the users of this specification;

b) spreading code formats; and

c) the procedures performed to generate and process the code formats.

It does not specify:

a) individual implementations or products;

b) the methods or technologies required to perform the procedures; or

c) the management activities required to configure and control the system.

This International Standard provides only those parameter requirements relating to signal compatibility with the existing SNIP PN spread modulation systems (see C.1). There are many other types of requirements, not specifically related to PN spread modulation signal formats, which must be met to ensure system compatibility with existing SNIP hardware. Examples would include forward error correction coding format, data signal formats, etc.

This International Standard applies to the creation of agency standards and to the future data communications over space links between CCSDS agencies in cross-support situations. This International Standard includes comprehensive specification of the data formats and procedures for inter-agency cross support. It is neither a specification of, nor a design for, real systems that may be implemented for existing or future missions.

This International Standard is to be invoked through the normal standards programs of each CCSDS agency, and is applicable to those missions for which cross support based on capabilities described in this International Standard is anticipated. Where mandatory capabilities are clearly indicated in sections of this International Standard, they must be implemented when this document is used as a basis for cross support. Where options are allowed or implied, implementation of these options is subject to specific bilateral cross-support agreements between the agencies involved.

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 415.1-B-1, September 2011, *Data transmission and PN ranging for 2 GHz CDMA link via data relay satellite*

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