# INTERNATIONAL STANDARD

# ISO
# 15889

First edition
2000-10-01

# Space data and information transfer systems — Data description language — EAST specification

*Systèmes de transfert des informations et données spatiales — Langage de description des données — Spécification EAST*

---

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

---

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 15889:2000
https://standards.iteh.ai/catalog/standards/sist/353c2bb3-a6a1-437d-8aed-
be1ccc8038c1/iso-15889-2000

# 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15889 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 644.0-B-1, May 1997) 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*.

iTeh STANDARD PREVIEW

(standards.iteh.ai)

ISO 15889:2000
https://standards.iteh.ai/catalog/standards/sist/353c2bb3-a6a1-437d-8aed-
be1ccc8038c1/iso-15889-2000

# Space data and information transfer systems — Data description language — EAST specification

## 1 Scope

This International Standard specifies the requirements for the data description language EAST specification (CCSDS 0010) for space data and information transfer systems.

## 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 644.0-B-1, May 1997, *Recommendation for space data system standards — The data description language — EAST specification (CCSD0010).*

iTeh STANDARD PREVIEW

For the purposes of international standardization, the modifications outlined below shall apply to the specific clauses and paragraphs of publication CCSDS 644.0-B-1.
(standards.iteh.ai)

*Pages i to v*

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

*Page 1-5*

Reference to ISO/IEC 10646-1:1993 is informative (see reference [2]). It should be moved to the informative Annex E on page E-1 where it should read:

[E6]    10646-1:1993, *Information technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 1: Architecture and Basic Multilingual Plan*e.

## 3 Revision of publication CCSDS 644.0-B-1

It has been agreed with the Consultative Committee for Space Data Systems that Subcommittee ISO/TC 20/SC 13 will be consulted in the event of any revision or amendment of publication CCSDS 644.0-B-1. To this end, NASA will act as a liaison body between CCSDS and ISO.

iTeh STANDARD PREVIEW
(blank page)
(standards.iteh.ai)

ISO 15889:2000
https://standards.iteh.ai/catalog/standards/sist/353c2bb3-a6a1-437d-8aed-
be1ccc8038c1/iso-15889-2000

# *Consultative Committee for Space Data Systems*
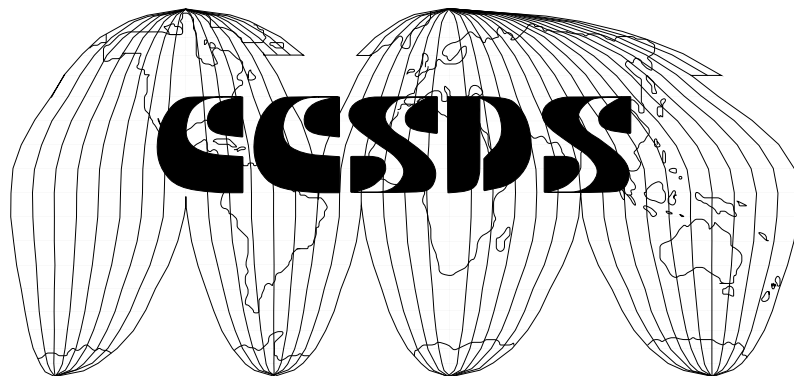
**RECOMMENDATION FOR SPACE
DATA SYSTEM STANDARDS**

## THE DATA DESCRIPTION LANGUAGE EAST SPECIFICATION (CCSD0010)

**CCSDS 644.0-B-1**

**BLUE BOOK**

May 1997

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

# AUTHORITY

| | |
|---|---|
| Issue: | Blue Book, Issue 1 |
| Date: | May 1997 |
| Location: | São José dos Campos |
| | São Paulo, Brazil |

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 Recommendations is detailed in the *Procedures Manual for the Consultative Committee for Space Data Systems* (reference [E1]), and the record of Agency participation in the authorization of this document can be obtained from the CCSDS Secretariat at the address below.

iTeh STANDARD PREVIEW

(standards.iteh.ai)

This Recommendation is published and maintained by:

CCSDS Secretariat
Program Integration Division (Code MG)
National Aeronautics and Space Administration
Washington, DC  20546, USA

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

# STATEMENT OF INTENT

The Consultative Committee for Space Data Systems (CCSDS) is an organization officially established by the management of member space Agencies. 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 **Recommendations** and are not considered binding on any Agency.

This **Recommendation** is issued by, and represents the consensus of, the CCSDS Plenary body. Agency endorsement of this **Recommendation** is entirely voluntary. Endorsement, however, indicates the following understandings:

o    Whenever an Agency establishes a CCSDS-related **standard**, this **standard** will be in accord with the relevant **Recommendation**. Establishing such a **standard** does not preclude other provisions which an Agency may develop.

o    Whenever an Agency establishes a CCSDS-related **standard**, the Agency will provide other CCSDS member Agencies with the following information:

--    The **standard** itself.

--    The anticipated date of initial operational capability.

--    The anticipated duration of operational service.

o    Specific service arrangements shall be made via memoranda of agreement. Neither this **Recommendation** nor any ensuing **standard** is a substitute for a memorandum of agreement.

No later than five years from its date of issuance, this **Recommendation** will be reviewed by the CCSDS to determine whether it should: (1) remain in effect without change; (2) be changed to reflect the impact of new technologies, new requirements, or new directions; or, (3) be retired or canceled.

In those instances when a new version of a **Recommendation** is issued, existing CCSDS-related Agency standards and implementations are not negated or deemed to be non-CCSDS compatible. It is the responsibility of each Agency to determine when such standards or implementations are to be modified. Each Agency is, however, strongly encouraged to direct planning for its new standards and implementations towards the later version of the Recommendation.

CCSDS 644.0 -B-1                      Page ii                      May 1997

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

# FOREWORD

This Recommendation is a technical Recommendation for the standardization of a language to be used for providing syntactic and in some degree semantic information about data interchange using Standard Formatted Data Units (SFDUs).

This Recommendation provides the syntax specification of the language EAST which is a subset of the Ada language.

Through the process of normal evolution, it is expected that expansion, deletion, or modification of this document may occur. This Recommendation is therefore subject to CCSDS document management and change control procedures which are defined in reference [E1]. Current versions of CCSDS documents are maintained at the CCSDS Web site:

http://www.ccsds.org/ccsds/

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

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

At time of publication, the active Member and Observer Agencies of the CCSDS were

<u>Member Agencies</u>

- Agenzia Spaziale Italiana (ASI)/Italy.
- British National Space Centre (BNSC)/United Kingdom.
- Canadian Space Agency (CSA)/Canada.
- Centre National d'Etudes Spatiales (CNES)/France.
- Deutsche Forschungsanstalt für Luft- und Raumfahrt e.V. (DLR)/Germany.
- European Space Agency (ESA)/Europe.
- Instituto Nacional de Pesquisas Espaciais (INPE)/Brazil.
- National Aeronautics and Space Administration (NASA)/USA.
- National Space Development Agency of Japan (NASDA)/Japan.
- Russian Space Agency (RSA)/Russian Federation.

<u>Observer Agencies</u>

- Austrian Space Agency (ASA)/Austria.
- Central Research Institute of Machine Building (TsNIIMash)/Russian Federation.
- Centro Tecnico Aeroespacial (CTA)/Brazil.
- Chinese Academy of Space Technology (CAST)/China.
- Commonwealth Scientific and Industrial Research Organization (CSIRO)/Australia.
- Communications Research Laboratory (CRL)/Japan.
- Danish Space Research Institute (DSRI)/Denmark.
- European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)/Europe.
- European Telecommunications Satellite Organization (EUTELSAT)/Europe.
- Federal Service of Scientific, Technical & Cultural Affairs (FSST&CA)/Belgium.
- Hellenic National Space Committee (HNSC)/Greece.
- Indian Space Research Organization (ISRO)/India.
- Industry Canada/Communications Research Centre (CRC)/Canada.
- Institute of Space and Astronautical Science (ISAS)/Japan.
- Institute of Space Research (IKI)/Russian Federation.
- KFKI Research Institute for Particle & Nuclear Physics (KFKI)/Hungary.
- MIKOMTEK: CSIR (CSIR)/Republic of South Africa.
- Korea Aerospace Research Institute (KARI)/Korea.
- Ministry of Communications (MOC)/Israel.
- National Oceanic & Atmospheric Administration (NOAA)/USA.
- National Space Program Office (NSPO)/Taipei.
- Swedish Space Corporation (SSC)/Sweden.
- United States Geological Survey (USGS)/USA.

CCSDS 644.0 -B-1        **Page** iv        May 1997

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

## DOCUMENT CONTROL

| Document | Title | Date | Status/Remarks |
|---|---|---|---|
| CCSDS 644.0-B-1 | Recommendation for Space Data System Standards:  The Data Description Language EAST Specification (CCSD0010) | May 1997 | Original Issue |

CCSDS 644.0 -B-1          Page v          May 1997

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

# CONTENTS

**9**

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

# CONTENTS (continued)

<u>Figure</u>

CCSDS RECOMMENDATION FOR EAST SPECIFICATION

# CONTENTS (continued)