INTERNATIONAL STANDARD

ISO 22643

First edition
2003-03-15

Space data and information transfer systems — Data entity dictionary specification language (DEDSL) — XML/DTD Syntax

Systèmes de transfert des informations et données spatiales — Langage de spécification pour le dictionnaire d'entités de données — Syntaxe XML/DTD

Reference number
ISO 22643:2003(E)

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 22643 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 647.3-B-1, January 2002) 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 entity dictionary specification language (DEDSL) — XML/DTD Syntax

1 Scope

This International Standard specifies the requirements for an extensible-markup-language (XML)/document-type-declaration (DTD) syntax for a data entity dictionary specification language (DEDSL).

The scope and field of application are furthermore detailed in subclauses 1.1 and 1.2 of the enclosed CCSDS publication.

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 647.3-B-1, January 2002, *Space data and information transfer systems — Data entity dictionary specification language (DEDSL) — XML/DTD Syntax.*

For the purposes of international standardization, the modifications outlined below shall apply to the specific clauses and paragraphs of publication CCSDS 647.3-B-1.

Pages i to v

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

Page 1-6

Add the following information to the reference indicated:

[1] Document CCSDS 647.1-B-1, June 2001, is equivalent to ISO 21961:2003.

Page B-1

Update and add the following information to the reference indicated:

[B6] Document CCSDS 301.0-B-3, January 2002, is equivalent to ISO 11104:—[1)].

3 Revision of publication CCSDS 647.3-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 647.3-B-1. To this end, NASA will act as a liaison body between CCSDS and ISO.

1) To be published. (Revision of ISO 11104:1991)

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Consultative Committee for Space Data Systems

RECOMMENDATION FOR SPACE DATA SYSTEM STANDARDS

DATA ENTITY DICTIONARY SPECIFICATION LANGUAGE (DEDSL)—

XML/DTD SYNTAX

(CCSD0013)

CCSDS 647.3-B-1

BLUE BOOK

January 2002

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CCSDS RECOMMENDATION FOR DEDSL—XML/DTD SYNTAX

AUTHORITY

Issue:	Blue Book, Issue 1
Date:	January 2002
Location:	Not Applicable

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 *Procedures Manual for the Consultative Committee for Space Data Systems* (reference [B1]) and the record of Agency participation in the authorization of this document can be obtained from the CCSDS Secretariat at the address below.

This Recommendation is published and maintained by:

CCSDS Secretariat
Program Integration Division (Code M-3)
National Aeronautics and Space Administration
Washington, DC 20546, USA

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.

FOREWORD

This Recommendation provides a standard method to represent attributes and their values, as has been defined by the Abstract Syntax of the Data Entity Dictionary Specification Language (DEDSL) (reference [1]), using the Extensible Markup Language (XML) 1.0 Document Type Declaration (DTD) for the construction and interchange of data entity dictionaries.

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 *Procedures Manual for the Consultative Committee for Space Data Systems*. Current versions of CCSDS documents are maintained at the CCSDS Web site:

http://www.ccsds.org/

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 DEDSL—XML/DTD SYNTAX

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

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- Agenzia Spaziale Italiana (ASI)/Italy.
- British National Space Centre (BNSC)/United Kingdom.
- Canadian Space Agency (CSA)/Canada.
- Central Research Institute of Machine Building (TsNIIMash)/Russian Federation.
- Centre National d'Etudes Spatiales (CNES)/France.
- Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)/Germany.
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DOCUMENT CONTROL

Document	Title and Issue	Date	Status
CCSDS 647.3-B-1	Data Entity Dictionary Specification Language (DEDSL)—XML/DTD Syntax (CCSD0013)	January 2002	Original Issue

CCSDS RECOMMENDATION FOR DEDSL—XML/DTD SYNTAX

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