INTERNATIONAL STANDARD

ISO/IEC 15475-2

First edition
2002-11-01

Information technology — CDIF transfer format —

Part 2: Syntax SYNTAX.1

Technologies de l'information — Format de transfert CDIF —

Partie 2: Syntaxe SYNTAX.1

Reference number
ISO/IEC 15475-2:2002(E)

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO/IEC 15475 may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15475-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and system engineering*.

ISO/IEC 15475 consists of the following parts, under the general title *Information technology — CDIF transfer format* :

— *Part 1: General rules for syntaxes and encodings*

— *Part 2: Syntax SYNTAX.1*

— *Part 3: Encoding ENCODING.1*

Annex A forms a normative part of this part of ISO/IEC 15475. Annex B is for information only.

Introduction

This standard will assist the vendors and users of modelling tools and metadata repositories in developing mechanisms for interchanging information. This standard specifies an element of a family of related standards. When used together, these standards specify a mechanism for transferring information between tools.

ISO/IEC 15474-1:2002, *Information technology — CDIF framework — Part 1: Overview* and ISO/IEC 15474-2:2002, *Information technology — CDIF framework — Part 2: Modelling and extensibility* should be read first when initially exploring CDIF. The first explains the overall CDIF Architecture and how the family of standards fits together. The second explains the scope, and modelling approach in CDIF. The CDIF Meta-metamodel and extensibility mechanisms are also defined in that document.

ISO/IEC 15475-3:2002, *Information technology — CDIF transfer format — Part 3: Encoding ENCODING.1,* defines an encoding of SYNTAX.1. ISO/IEC 15475-1:2002, *Information technology — CDIF transfer format — Part 1: General rules for syntaxes and encodings* define how CDIF supports multiple exchange syntaxes and encodings.

This document, ISO/IEC 15475-2:2002, *Information technology — CDIF transfer format — Part 2: Syntax SYNTAX.1* defines the CDIF transfer format syntax, SYNTAX.1.

This standard has been developed with the wide support and participation of vendors, users, academia and government involved in or familiar with the CASE industry, its products and the general requirements associated with interchanging information between these products.

This document is organized into the following Clauses:

— Clauses 1 to 5 are prescribed ISO/IEC Clauses

— Clause 6: Concepts and facilities

  This specifies the unique identifier for the syntax defined in this document and describes the concept of token separation used in this document.

— Clause 7: Syntax sections and structures in the CDIF transfer

  This section describes, in detail, the exact syntax of each of the three major sections of a transfer.

— Annex A (normative): SYNTAX.1 formal grammar

  This defines the grammar rules for the syntax in Backus Naur Form (BNF).

— Annex B (informative): Multibyte examples

  Supplementary Examples using multibyte codeset encoding are provided.

Information technology — CDIF transfer format —

Part 2:
Syntax SYNTAX.1

1 Scope

The CDIF family of standards is primarily designed to be used as a description of a mechanism for transferring information between modelling tools. It facilitates a successful transfer when the authors of the importing and exporting tools have nothing in common except an agreement to conform to CDIF. The language that is defined for the transfer format also has applicability as a general language for Import/Export from repositories. The CDIF semantic metamodel defined for modelling tools also has applicability as the basis of standard definitions for use in repositories.

The standards, which form the complete family of CDIF Standards, are documented in ISO/IEC 15474-1:2002, *Information technology — CDIF framework — Part 1: Overview.* These standards cover the overall framework, the transfer format and the CDIF semantic metamodel.

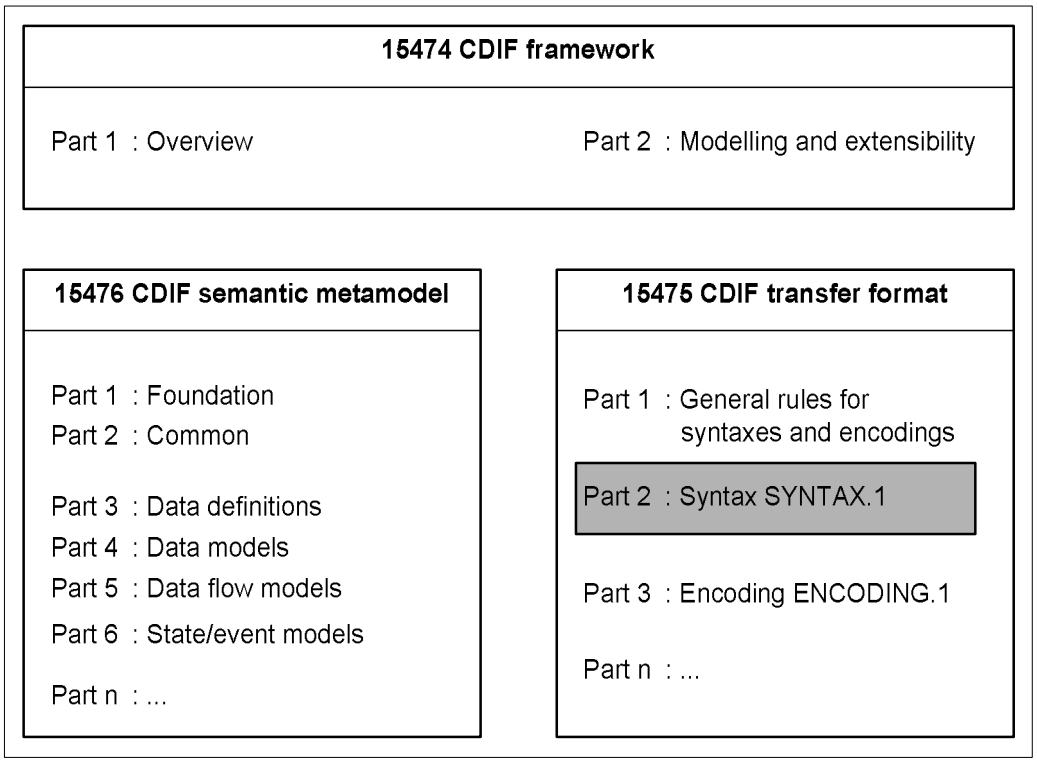

Figure 1 – Position in the CDIF family of standards

The diagram in Figure 1 depicts the various standards that comprise the CDIF family of standards. The shaded box depicts this Standard and its position in the CDIF family of standards.

This document describes the standard CDIF transfer syntax. No encodings for SYNTAX.1 are specified in this document. ISO/IEC 15475-3:2002, *Information technology — CDIF transfer format — Part 3: Encoding ENCODING.1*, specifies one standard encoding for this syntax.

This document is intended to be used by anyone wishing to understand and/or use CDIF. This document provides an introduction to the entire CDIF family of standards. It is suitable for:

— Those evaluating CDIF,

— Those who wish to understand the principles and concepts of a CDIF transfer, and

— Those developing importers and exporters.

The documents ISO/IEC 15474-1:2002, *Information technology — CDIF framework — Part 1: Overview* and ISO/IEC 15474-2:2002, *Information technology — CDIF framework — Part 2: Modelling and extensibility* should be read first when initially exploring CDIF and before attempting to read other documents in the CDIF family of standards.

This document should be read in conjunction with ISO/IEC 15475-1:2002, *Information technology — CDIF transfer format — Part 1: General rules for syntaxes and encodings*.

While there are no specific prerequisites for reading this document, it will be helpful for the reader to have familiarity with the following:

— Entity-Relationship-Attribute modelling;

— Modelling (CASE) tools;

— Information repositories;

— Data dictionaries;

— Multiple meta-layer modelling;

— Formal grammars;

— Transfer formats.

2 Conformance

A product is standards conformant this standard if and only if the product obeys all definitions and rules in Annex A of this standard, and is also CDIF architecture conformant, as defined in Clause 2 of ISO/IEC 15474-1:2002, *Information technology — CDIF framework — Part 1: Overview*. A product can be either transfer format standards conformant or non-conformant. Partial standards conformance to a standard defining a part of the CDIF transfer format is not defined.

A product is standards conformant to a CDIF encoding standard only if it is standards conformant to Annex A of ISO/IEC 15475-3:2002, *Information technology — CDIF transfer format — Part 3: Encoding ENCODING.1* and also conformant to Annex A of ISO/IEC 15475-2:2002, *Information technology — CDIF transfer format — Part 2: Syntax SYNTAX.1*. A product is standard conformant to a CDIF syntax standard only if it is standards conformant to Annex A of ISO/IEC 15475-2:2002, *Information technology — CDIF transfer format — Part 2: Syntax SYNTAX.1*.

3 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 15475. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 15475 are encouraged to

investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 9075:1992, *Information technology — Database languages — SQL*

ISO/IEC 10646-1:1993, *Information technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 1: Architecture and Basic Multilingual Plane*

ISO/IEC 10646-1:1993/Amd:2:1996, *Information technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 1: Architecture and Basic Multilingual Plane. Amendment 2: UCS Transformation Format 8 (UTF-8)*

ISO/IEC 13238-1:—[1)], *Information technology — Data management export/import — Part 1: Standardization framework*

ISO/IEC 15474-1:2002, *Information technology — CDIF framework — Part 1: Overview*

ISO/IEC 15474-2:2002, *Information technology — CDIF framework — Part 2: Modelling and extensibility*

ISO/IEC 15475-1:2002, *Information technology — CDIF transfer format — Part 1: General rules for syntaxes and encodings*

1) To be published.