



SLOVENSKI STANDARD
SIST-TS CEN/TS 14463:2006
01-april-2006

Zdravstvena informatika – Sintaksa predstavitev vsebine klasifikacijskih sistemov v medicini (ClAML)

Health informatics - A syntax to represent the content of medical classification systems (ClAML)

Medizinische Informatik - Syntax zur Darstellung des Inhalts medizinischer Klassifikationssysteme (ClAML)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: **CEN/TS 14463:2003**
<https://standards.iteh.ai/catalog/standards/sist/662536a9-af16-4500-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>

ICS:

01.140.20

11.020

35.240.80

SIST-TS CEN/TS 14463:2006

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST-TS CEN/TS 14463:2006

<https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>

July 2003

ICS 01.140.20; 11.020; 35.240.80

English version

Health informatics - A syntax to represent the content of medical classification systems (ClAML)

This Technical Specification (CEN/TS) was approved by CEN on 26 April 2002 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

[SIST-TS CEN/TS 14463:2006](https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006)

<https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword.....	3
Introduction	4
1 Scope	5
2 Normative References	5
3 Abbreviations	5
4 Classification mark-up language.....	6
Annex A (informative) Examples of usage of ClaML	9
Annex B (informative) Suggested Usage of ClaML-attributes	20
Bibliography	21

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST-TS CEN/TS 14463:2006](https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006)
[https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-
e0ce71579ef5/sist-ts-cen-ts-14463-2006](https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006)

Foreword

This document (CEN/TS 14463:2003) has been prepared by Technical Committee CEN /TC 251, "European Standardization of Health Informatics", the secretariat of which is held by SIS.

Annexes A and B are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification : Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST-TS CEN/TS 14463:2006

<https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>

Introduction

Many classification systems are still distributed in a form suitable for direct text processing like MSWord etc. This is a very dangerous format, because unwanted and unspotted mistakes are easily made. For example, the accidental deletion of a tab, makes a sibling rubric into a parent.

Industry is faced with a variety of formats in which classification systems are delivered. Many different parsers have to be maintained, and yet, due to the informal nature of texts, a 100% guarantee for correct parsing into more formal structures is hard to give.

For work on classification systems, revision work and especially when terminological tools are used for work on classification systems there is a need to store and transfer classification systems while maintaining the structure of codes, rubrics, comments, inclusion/exclusion criteria etc. A neutral format like plain ASCII files with comma separated value fields is widely used, but has insufficient structuring capabilities. XML is the chosen format for this Prestandard as a) XML provides the necessary structuring elements, and b) there are many readily available XML parsers in existence.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST-TS CEN/TS 14463:2006](https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006)

<https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>

1 Scope

1.1 Main purposes

The main purpose of this Technical Specification is to support the transfer of the majority of hierarchical healthcare classification systems between organisations and dissimilar software products. The Prestandard should therefore be rich enough to uniquely identify and describe the structure and the relevant elements in those systems. This Prestandard does not intend to prescribe the meaning of structuring elements in classification systems. This Prestandard is not meant to be a direct format for printing or viewing the contents of a classification system. Views and prints can be derived from this representation by post processing.

1.2 Target groups of this Technical Specification

This Technical Specification is applicable by

- a) developers of classification systems and terminologies, to assist in the dissemination and maintenance of a particular system, as well for comparisons among different versions;
- b) developers of information systems to assist in inclusion of mechanisms for unambiguous loading of classification systems in their applications;
- c) organisations responsible for updating classification systems;
- d) institutions receiving updated classification systems;

1.3 Topics considered outside the scope of this Technical Specification

This Technical specification is not intended for

- a) providing a normative syntax on how a classification system should be constructed;
- b) supporting full mark-up information for final printed delivery of classification systems;
- c) defining link types between elements in a classification system, this is left to the developers of classification systems;
- d) providing a representation for direct viewing or printing.

2 Normative References

This Technical Specification incorporates by dated or undated reference, provisions from other publications. These normative references are cited in the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments and revisions of any of these publications apply to this Technical Specification only when incorporated in it by amendment and revision. For undated references, the latest edition of the publication referred to applies.

Not applicable.

3 Abbreviations

ClAML	Classification Markup Language
XML	Extensible Markup Language 1.0
DTD	Document Type Definition

4 Classification mark-up language

4.1 Basis of the syntax

The basis of the syntax is to represent the content of medical classification systems. The syntax defined in this Prestandard is called Classification Mark-up Language. It is defined here in the form of a Document Type Definition (DTD). The reference to this syntax will be headed to ClaML in the remainder of this document

4.2 Document Type Definition

```
<!DOCTYPE CodingScheme [

  <!ELEMENT CodingScheme (Name?, Version?, Date?, Title?, RubricKinds?, Modifier*, ModifierClass*, Class*)>
  <!ELEMENT Name (#PCDATA)>
  <!ELEMENT Version (#PCDATA)>
  <!ELEMENT Title (#PCDATA)>
  <!ELEMENT Date (#PCDATA)>
  <!ELEMENT RubricKinds (RubricKind*) >
  <!ELEMENT RubricKind (#PCDATA)>
  <!ELEMENT Modifier (Symbol, Rubric*) >
  <!ELEMENT ModifierClass (Symbol, SuperClass, Rubric* )>
  <!ELEMENT Class (Symbol, SuperClass*, ModifiedBy*, ExcludeModifier*, Rubric*
  )>
  <!ELEMENT Symbol (#PCDATA)>
  <!ELEMENT SuperClass (#PCDATA)>
  <!ELEMENT ModifiedBy (#PCDATA)>
  <!ELEMENT ExcludeModifier <#PCDATA>>
  <!ELEMENT Rubric (#PCDATA | Reference | ExternalReference | i | b )* >
  <!ELEMENT Reference (#PCDATA)>
  <!ELEMENT ExternalReference (SchemeName, SchemeVersion, Symbol)>
  <!ELEMENT SchemeName (#PCDATA)>
  <!ELEMENT SchemeVersion (#PCDATA)>
  <!ELEMENT i (#PCDATA)>
  <!ELEMENT b (#PCDATA)>
  <!ATTLIST Class kind NMTOKEN #REQUIRED>
  <!ATTLIST Rubric xml:lang NMTOKEN #REQUIRED>
  <!ATTLIST Rubric kind NMTOKEN #REQUIRED>]
```


NOTE `xml:lang` - defines the language code in which the content of the element is written in. The attribute values of `xml:lang` should follow ISO-639-2 if they are three-letter codes, and ISO-3166 if they contain two-letter sub codes. Language identifiers registered with the IANA should contain the prefix "I-" or "i-". Any privately used codes should contain the prefix "X-" or "x-".

4.3 Explanation

A coding scheme consists of:

- an optional name, this is a piece of free text
- an optional version identification, this can be a number or a piece of text
- an optional date, this is a piece of free text
- an optional title, this is a piece of free text
- an optional list of rubric kinds
- zero or more modifiers
- zero or more modifier classes
- zero or more classes

iTeh STANDARD PREVIEW
(standards.iteh.ai)

A list of rubric kinds consists of:

- zero or more rubric kinds

A modifier consists of: <https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>

- a mandatory symbol, this is a piece of free text

- zero or more rubrics

A modifier class consists of:

- a mandatory symbol, this is a piece of free text
- exactly one mandatory super class, which identifies an existing modifier
- zero or more rubrics

A class consists of:

- a mandatory kind identifier, e.g. chapter, block, category
- a mandatory symbol
- zero or more super classes, which identify existing classes within the same coding scheme
- zero or more 'modified by' statements, which identify existing modifiers
- zero or more 'excludemodifier' statements, which identify existing modifiers
- zero or more rubrics

A rubric consists of:

- a mandatory language identifier

a mandatory kind identifier, e.g. preferred, includes, excludes

free text, which may include:

references to other codes within the coding scheme

references to other codes in other coding schemes

italic formatted text

bold formatted text

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST-TS CEN/TS 14463:2006

<https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006>

Annex A (informative) Examples of usage of ClaML

A.1 Introduction

A coding scheme is a mapping between a set of code values and a set of code meanings. Central overall aspects of the coding scheme is described by metadata, using the tags Name, Version, Title, Date

In this standard, each code value is represented as a Symbol element and the related code meaning is represented by a set of Rubric elements. Each such relation is represented in a Class element along with optional links to more general classes (pointed to by SuperClass elements), and optional modifiers (pointed to by ModifiedBy elements). The Class is further specified by a class kind which is specific for the classification in question and typically represents the Class's level in the hierarchy¹.

A rubric may contain text formatted in *italics* and **bold**, it may also contain references to classes within the same classification or in other, external classifications. It is mandatory to specify the kind (e.g. 'includes', 'excludes', 'preferred', etcetera) of rubric, and the language of the rubric.

Classes can in some cases be further specified by one or more modifiers, referred to by a ModifiedBy element, and described in a Modifier element. Allowable values of such a modifier are described by ModifierClass elements, each of which has a symbol and a set of Rubric elements describing its meaning.

iTeh STANDARD PREVIEW (standards.iteh.ai)

A.2 References to different languages

The next piece of ClaML demonstrates how the same rubric in different languages would be represented.

[SIST-TS CEN/TS 14463:2006](https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006)

```
<CodingScheme> https://standards.iteh.ai/catalog/standards/sist/862538a9-a118-4900-be51-e0ce71579ef5/sist-ts-cen-ts-14463-2006
  <Name>ICD</Name>
  <Version>10</Version>
  <Date>2000-12-01</Date>
  <Title>International Codes for Diseases, version 10</Title>
  <Class kind="Chapter">
    <Symbol>A00-B99</Symbol>
    <Rubric xml:lang="en" kind="preferred">Certain infectious and parasitic diseases</Rubric>
    <Rubric xml:lang="du" kind="preferred">Bepaalde infectieziekten en parasitaire aandoeningen</Rubric>
    <Rubric xml:lang="ge" kind="preferred">Bestimmte infektiöse und parasitäre Krankheiten</Rubric>
  </Class>
</CodingScheme>
```

A.3 Representing hierarchy

The hierarchy in a classification system is represented by the SuperClass tag, as is demonstrated in the next piece of ClaML.

```
<Class kind="block">
  <Symbol>A00-A09</Symbol>
```

¹ For example, Class kinds used in ICD might include Chapter, Section and Block.