



SLOVENSKI STANDARD

SIST EN 14463:2008

01-februar-2008

BUXca Yý U.

SIST-TS CEN/TS 14463:2006

Zdravstvena informatika - Sintaksa predstavitve 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)

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Informatique de santé - Syntaxe permettant de représenter le contenu des systèmes de classification médicaux - ClaML

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ICS:

35.240.80	Uporabniške rešitve IT v zdravstveni tehniki	IT applications in health care technology
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English Version

Health informatics - A syntax to represent the content of medical classification systems - ClaML

Informatique de la santé - Syntaxe permettant de représenter le contenu des systèmes de classification médicaux - ClaML

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

This European Standard was approved by CEN on 7 October 2007.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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

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Foreword

This document (EN 14463:2007) has been prepared by Technical Committee CEN/TC 251 "Health informatics", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2008, and conflicting national standards shall be withdrawn at the latest by May 2008.

This document supersedes CEN/TS 14463:2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

Many classification systems are still distributed in a form suitable for direct text processing like MS Word etc. This is a very dangerous form 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, it is hard to give a 100 % guarantee for correct parsing into more formal structures.

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 Standard as a) XML provides the necessary structuring elements, and b) there are many readily available XML parsers in existence.

This standard builds on CEN/TS 14463:2002 in that CEN/TS 14463:2002 primary focus was to support Electronic Data Processing. Assessment of CEN/TS 14463:2002 as well as growing insights from other areas has revealed the need for a tighter version management. The scope of the standard therefore has been explicitly extended.

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1 Scope

1.1 Main purposes

The main purpose of this European Standard is to support the safe transfer of the majority of hierarchical healthcare classification systems between organisations and dissimilar software products. It is intended to serve as the core representation, from which all publication forms can be derived. The Standard shall therefore be in depth enough to uniquely identify and describe the structure and the relevant elements in those systems. This Standard does not intend to prescribe the meaning of structuring elements in classification systems. This Standard is not meant to be a direct format for printing or viewing the contents of a classification system. Views and prints shall be derived from this representation by post processing.

1.2 Target groups of this European Standard

This European Standard is applicable to:

- a) developers of first and second generation [2] classification systems and terminologies, to assist in the construction, maintenance and publication (both in paper and electronic formats) of a particular system;
- b) developers of information systems to assist in the 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.

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1.3 Topics considered outside the scope of this European Standard

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This European Standard is not intended to:

- a) provide a normative syntax on how a classification system shall be constructed;
- b) define link types between elements in a classification system; this is left to the developers of classification systems;
- c) provide a representation for direct viewing or printing.

2 Conformance

The normative part of this standard is written in the form of a DTD. Many commercially available XML tools provide facilities to test the conformance of an XML document with a DTD. Users of this standard are encouraged to perform such a test before distributing their classifications in the format of this standard.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 3166-1, *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes (ISO 3166-1:2006)*

ISO 639-2, *Codes for the representation of names of languages – Part 2: Alpha-3 code*

4 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

4.1

preferred term

term rated according to the scale of the **term acceptability rating** as the primary term for a given **code**

[ISO 1087-1:2000]

4.2

reference

pointer within a **rubric** to an other class

NOTE The reference may be either within or between classifications. A reference does not specify the nature of the pointer. It is not necessarily a mapping.

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4.3

rubric

descriptive phrase for a given concept

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NOTE Preferred term is an example of a rubric kind. Other examples are inclusions, exclusions and editorial notes.

4.4

variant

one instance of a collection of related documents

EXAMPLE The ICD10-CM is a variant of the WHO ICD10 classification.

4.5

version

exclusive identifier of a **variant**

NOTE It is suggested to use the major.minor.patch scheme for version numbering.

5 Symbols and abbreviations

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

6 Classification mark-up language

6.1 Basis of the syntax

The basis of the syntax is to represent the content of medical classification systems. The syntax defined in this Standard 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.

6.2 Document Type Definition

```
<!ENTITY % rubric.simple "#PCDATA | Reference | Term">
<!ENTITY % rubric.complex "%rubric.simple; | Para | Include |
  IncludeDescendants | Fragment | List | Table">
<!ELEMENT ClAML (
  Meta*,
  Identifier*SIST EN 14463:2008https://standards.itech.ai/catalog/standards/sist/ad78d074-1e3f-43ac-931b-470f24779e0f/sist-en-14463-2008,
  Title,
  Authors?,
  Variants?,
  ClassKinds,
  UsageKinds?,
  RubricKinds,
  Modifier*,
  ModifierClass*,
  Class*)
>
<!ATTLIST ClAML
  version CDATA #REQUIRED
>
```

```

<!ELEMENT Variants (Variant+)>
<!ELEMENT Variant (#PCDATA)>
<!ATTLIST Variant
    name ID #REQUIRED
>
<!ELEMENT Meta EMPTY>
<!ATTLIST Meta
    name CDATA #REQUIRED
    value CDATA #REQUIRED
    variants IDREFS #IMPLIED
>
<!ELEMENT Identifier EMPTY>
<!ATTLIST Identifier
    authority NMTOKEN #IMPLIED
    uid CDATA #REQUIRED
>
    https://standards.iteh.ai/catalog/standards/sist/ad78d074-1e3f-43ac-931b-470f24779e0f/sist-en-14463-2008
<!ELEMENT Title (#PCDATA)>
<!ATTLIST Title
    name NMTOKEN #REQUIRED
    version CDATA #IMPLIED
    date CDATA #IMPLIED
>
<!ELEMENT Authors (Author* )>
<!ELEMENT Author (#PCDATA)>
<!ATTLIST Author
    name ID #REQUIRED
>
<!ELEMENT ClassKinds (ClassKind+)>
<!ELEMENT RubricKinds (RubricKind+)>

```

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<!ELEMENT UsageKinds (UsageKind+)>

<!ELEMENT ClassKind (Display*)>

<!ATTLIST ClassKind

name ID #REQUIRED

>

<!ELEMENT RubricKind (Display*)>

<!ATTLIST RubricKind

name ID #REQUIRED

inherited (true|false) "false"

>

<!ELEMENT UsageKind EMPTY>

<!ATTLIST UsageKind

name ID #REQUIRED

mark CDATA #REQUIRED

>

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<!ELEMENT Display (#PCDATA)>

<!ATTLIST Display

xml:lang NMTOKEN #REQUIRED

variants IDREF #IMPLIED

>

<!ELEMENT Modifier (

Meta*,

SubClass*,

Rubric*,

History*)

>

<!ATTLIST Modifier

code NMTOKEN #REQUIRED

```

        variants IDREFS #IMPLIED
    >
<!ELEMENT ModifierClass (
    Meta*,
    SuperClass,
    SubClass*,
    Rubric*,
    History*)
>
<!ATTLIST ModifierClass
    modifier NMTOKEN #REQUIRED
    code NMTOKEN #REQUIRED
    usage IDREF #IMPLIED
    variants IDREFS #IMPLIED
>
<!ELEMENT Class (
    Meta*,
    SuperClass*,
    SubClass*,
    ModifiedBy*,
    ExcludeModifier*,
    Rubric*,
    History*)
>
<!ATTLIST Class
    code NMTOKEN #REQUIRED
    kind IDREF #REQUIRED
    usage IDREF #IMPLIED
    variants IDREFS #IMPLIED

```

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```
>
<!ELEMENT ModifiedBy (
    Meta*,
    ValidModifierClass*)
>
<!ATTLIST ModifiedBy
    code NMTOKEN #REQUIRED
    all (true|false) "true"
    position CDATA #IMPLIED
    variants IDREFS #IMPLIED
>
<!ELEMENT ExcludeModifier EMPTY>
<!ATTLIST ExcludeModifier
    code NMTOKEN #REQUIRED
    variants IDREFS #IMPLIED
>
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    SIST EN 14463:2008
<!ELEMENT ValidModifierClass EMPTY>
<!ATTLIST ValidModifierClass
    code NMTOKEN #REQUIRED
    variants IDREFS #IMPLIED
>
<!ELEMENT Rubric (
    Label+,
    History*)
>
<!ATTLIST Rubric
    id ID #IMPLIED
    kind IDREF #REQUIRED
    usage IDREF #IMPLIED
```

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```

>
<!ELEMENT Label (%rubric.complex;)*>
<!ATTLIST Label
    xml:lang NMTOKEN #REQUIRED
    xml:space (default|preserve) "default"
    variants IDREFS #IMPLIED
>
<!ELEMENT History (#PCDATA)>
<!ATTLIST History
    author IDREF #REQUIRED
    date NMTOKEN #REQUIRED
>
<!ELEMENT SuperClass EMPTY>
<!ATTLIST SuperClass
    code NMTOKEN #REQUIRED
    variants IDREFS #IMPLIED
>
<!ELEMENT SubClass EMPTY>
<!ATTLIST SubClass
    code NMTOKEN #REQUIRED
    variants IDREFS #IMPLIED
>
<!ELEMENT Reference (#PCDATA)>
<!ATTLIST Reference
    class CDATA #IMPLIED
    authority NMTOKEN #IMPLIED
    uid NMTOKEN #IMPLIED
    code NMTOKEN #IMPLIED
    usage IDREF #IMPLIED

```

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