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I.S. EN ISO 13120:2013

# Health informatics - Syntax to represent the content of healthcare classification systems - Classification Markup Language (ClaML) (ISO 13120:2013)

## I.S. EN ISO 13120:2013

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**NSAI**  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

**Sales:**  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

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English Version

Health informatics - Syntax to represent the content of  
healthcare classification systems - Classification Markup  
Language (ClaML) (ISO 13120:2013)

Informatique de santé - Syntaxe de représentation du  
contenu des systèmes de classification des soins de santé  
- Langage de marquage de la classification (ClaML) (ISO  
13120:2013)

Medizinische Informatik - Syntax zur Darstellung des  
Inhalts medizinischer Klassifikationssysteme -  
Klassifikations-Auszeichnungssprache ClaML (ISO  
13120:2013)

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Management Centre: Avenue Marnix 17, B-1000 Brussels

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## **Foreword**

This document (EN ISO 13120:2013) has been prepared by Technical Committee ISO/TC 215 "Health informatics" in collaboration with 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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14463:2007.

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### **Endorsement notice**

The text of ISO 13120:2013 has been approved by CEN as EN ISO 13120:2013 without any modification.

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**Health informatics — Syntax to  
represent the content of healthcare  
classification systems — Classification  
Markup Language (ClaML)**

*Informatique de santé — Syntaxe de représentation du contenu des  
systèmes de classification des soins de santé — Langage de marquage  
de la classification (ClaML)*



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## **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.

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ISO 13120 was prepared by Technical Committee ISO/TC 215, *Health informatics*.

## Introduction

Healthcare classifications are developed and distributed in a variety of informal formats, such as MS Word, with little consistency in approach between developers. Exchanging data from these systems or attempting to parse the informal text into a more formal structure, say for publishing purposes, presents many challenges because unwanted mistakes are easily made, and difficult to detect. For example, the accidental deletion of a tab can transform a sibling rubric into a parent. ASCII files with comma separated value fields is another mechanism widely used for storing and transferring data, but as a solution here is limited by insufficient formal structuring capabilities.

In the interests of safely exchanging and distributing the content and hierarchical structure of healthcare classification systems, this International Standard presents a simple XML specification, ClaML, for exchange and distribution of healthcare classifications systems. XML is the chosen format for this International Standard as: a) XML provides the necessary structuring elements, and b) there are many readily available XML parsers in existence.

This International Standard builds on CEN/TS 14463:2002 in that the primary focus of CEN/TS 14463:2002 was to support electronic data processing. Assessment of CEN/TS 14463:2002 revealed the need to extend the areas for version control and maintenance within the Standard and this was supported by insight from the health informatics community who have been active in the implementation of this International Standard.

This International Standard is intended to serve as the core representation from which all publication forms can be derived. It contains information of a depth sufficient to uniquely identify and describe the structure and relevant element of healthcare classification systems. This International Standard does not intend to prescribe to developers how healthcare classification systems should be structured, nor does it define or explain the meaning of the structuring elements. This International Standard is not meant to be a direct format for printing or viewing the content of a healthcare classification system. Views and prints are to be derived from this representation by post processing.

This International Standard is targeted at:

- a) developers of first generation<sup>[2]</sup> healthcare classification systems, 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 healthcare classification systems in their applications;
- c) organizations responsible for updating healthcare classification systems;
- d) institutions receiving updated healthcare classification systems.

**I.S. EN ISO 13120:2013**

# Health informatics — Syntax to represent the content of healthcare classification systems — Classification Markup Language (ClaML)

## 1 Scope

### 1.1 Main purposes

The main purpose of this International Standard is to formally represent the content and hierarchical structure of healthcare classification systems in a markup language for the safe exchange and distribution of data and structure between organizations and dissimilar software products.

The scope of healthcare classifications systems covered in this International Standard encompasses terminologies, and is constrained to traditional paper-based systems (like ICD-10) and systems built according to categorial structures and a cross thesaurus (like ICNP).<sup>[3]</sup> This International Standard is intended for representation of healthcare classification systems in which classes have textual definitions, hierarchical ordering, named hierarchical levels (such as “chapter”, “section”), inclusion- and exclusion criteria, and codes. It is not intended to cover any formal representation, either for definition or composition, of concepts, or for specification of classification rules. Systems with such formal specifications can at best be partially represented using this International Standard, and are hence out of scope.

### 1.2 Topics considered outside the scope of this International standard

This International Standard is not intended to:

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

## 2 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.

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

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