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Terminology work in support of multilingual communication —

Part 1: Fundamentals of translation-oriented terminography

Travail terminologique appuyant la communication multilingue — Partie 1: Principes fondamentaux de la terminographie axée sur la traduction

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Foreword

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This document was prepared by Technical Committee ISO/TC 37, *Language and terminology*, Subcommittee SC 2, *Terminology workflow and language coding*.

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This document cancels and replaces the ISO 12616:2002, which has been technically revised.

The main changes compared to the previous edition are as follows:

— updates to focus on the broader environment in which terminology workers operate;

— deepening of the aspect of terminological data management and addition of processes, tools and skills necessary for terminology tasks;

— updates to align with the technical state-of-art and the evolution of the profession.

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Introduction

Terminology work is conducted by people with different backgrounds and for different purposes. This document focuses on the fundamentals necessary to perform basic terminology work in translation contexts. While some details are occasionally given, the document provides the minimum information necessary to set up and work in the simplest form of a terminological data collection (TDC). The more complex tasks and processes performed by terminologists with more sophisticated technologies and in larger production environments will be covered in a future ISO 12616-2.

For clear communication, the title "terminology worker" has been chosen to represent anyone doing terminology work as an ancillary function of their professional activities. A terminology worker might be a translator, project manager or technical communicator, and might work as a single-person enterprise, for a language service provider, or in-house at a company or other organization. Terminologists and terminology workers share the same basic skill set covered in this document; however, terminologists have broader knowledge and competences, which will be discussed further in a future ISO 12616-2.

One of the most common scenarios for a terminology worker in translation contexts is the following: a client produces documentation in a particular subject field in a source language and asks a translator to translate a variety of interrelated documents. Since no terminology was provided, the translator recognises that it would be beneficial to document the terminology found during translation work to maintain consistency across documents in the target language. This document provides terminographical best practices and data modelling principles to this end.

In this document's examples, designations and other text elements are indicated by double quotation marks, whereas objects, concepts, properties, characteristics, and types of characteristics are indicated by single quotation marks. When referring to fields in a terminology database, the first letter of the field name is capitalized and the field name is followed by the word "field" (e.g. Term field, Transfer comment field). Data categories are indicated by slashes preceding and following the data category's name (e.g. /term/, /transfer comment/). This markup is intended to facilitate the distinction between references to the three terminological levels and other text throughout this document.

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Terminology work in support of multilingual communication —

Part 1: Fundamentals of translation-oriented terminography

1 Scope

This document specifies requirements and recommendations related to fundamentals of translation-oriented terminography for producing sound bilingual or multilingual terminology collections. It deals with the main tasks, skills, processes and technologies for translation-oriented terminography practiced by terminology workers who do terminology work in low-complexity settings as part of non-terminological activities. It does not cover terminology management involving sophisticated workflows, a multitude of roles, or advanced terminological skills and competences.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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ISO 704, *Terminology work — Principles and methods*

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ISO 16642, *Computer applications in terminology — Terminological markup framework*

ISO 26162-1, *Management of terminology resources — Terminology databases — Part 1: Design*

ISO 30042, *Management of terminology resources — TermBase eXchange (TBX)*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
terminology
set of *designations* (3.7) and *concepts* (3.4) belonging to one *subject field* (3.2) or *subject*

[SOURCE: ISO 1087:2019, 3.1.11, modified — "domain" replaced with "subject field", which is the preferred term in this document.]

3.2
subject field
domain
field of special knowledge

Note 1 to entry: The borderlines and the granularity of a subject field are determined from a purpose-related point of view. If a subject field is subdivided, the result is again a subject field.

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[SOURCE: ISO 1087:2019, 3.1.4, modified — The preferred term in this document is “subject field”, instead of “domain”.]

3.3
object
anything perceivable or conceivable

Note 1 to entry: Objects can be material (e.g. ‘engine’, ‘sheet of paper’, ‘diamond’), immaterial (e.g. ‘conversion ratio’, ‘project plan’) or imagined (e.g. ‘unicorn’, ‘scientific hypothesis’).

[SOURCE: ISO 1087:2019, 3.1.1]

3.4
concept
unit of knowledge created by a unique combination of characteristics

Note 1 to entry: Concepts are not necessarily bound to particular natural languages. They are, however, influenced by the social or cultural background which often leads to different categorizations.

[SOURCE: ISO 1087:2019, 3.2.1 modified — Removed Note 2 to entry.]

3.5
individual concept
concept (3.4) that corresponds to a unique *object* (3.3)

EXAMPLE ‘Saturn’, ‘Eiffel Tower’, ‘Moon’, ‘serial number FRHR603928’, ‘2016 Nobel Prize in Physics’.

Note 1 to entry: Individual concepts are represented by *proper names* (3.10).

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[SOURCE: ISO 1087:2019, 3.2.8]

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3.6
general concept
concept (3.4) that corresponds to a potentially unlimited number of *objects* (3.3) which form a group by reason of shared properties

EXAMPLE ‘planet’, ‘tower’, ‘moon’, ‘Nobel Prize in Physics’.

Note 1 to entry: For a general concept, it is essential that a number of corresponding objects greater than 1 can be perceived or conceived of. For example, ‘spaceship’ has been a general concept before such a material object existed, at the time when there existed only 1 such object, and later, when there existed several such objects.

[SOURCE: ISO 1087:2019, 3.2.9]

3.7
designation
representation of a *concept* (3.4) by a sign which denotes it in a *domain* (3.2) or subject

Note 1 to entry: A designation can be linguistic or non-linguistic. It can consist of various types of characters, but also punctuation marks such as hyphens and parentheses, governed by domain-, subject-, or language-specific conventions.

Note 2 to entry: A designation can be a *term* (3.8) including *appellations* (3.9), a *proper name* (3.10), or a *symbol* (3.11).

[SOURCE: ISO 1087:2019, 3.4.1; modified — Removed “designator” as a synonym.]

3.8
term
designation (3.7) that represents a *general concept* (3.6) by linguistic means

EXAMPLE “laser printer”, “planet”, “pacemaker”, “chemical compound”, “¾ time”, “Influenza A virus”, “oil painting”.

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Note 1 to entry: Terms may be partly or wholly verbal.

[SOURCE: ISO 1087:2019, 3.4.2]

3.9
appellation
term (3.8) that is applied to a group of *objects* (3.3) whose relevant properties are identical

EXAMPLE "Nokia 7 Plus®" (mobile phone), "Adobe® Acrobat® X Pro" (software), "Road King®" (motorcycle)[1].

[SOURCE: ISO 1087:2019, 3.4.3]

3.10
proper name
designation (3.7) that represents an *individual concept* (3.5)

EXAMPLE "International Organization for Standardization", "IBM®"[2], "British Isles", "United Nations".

[SOURCE: ISO 1087:2019, 3.4.4]

3.11
symbol
designation (3.7) that represents a *concept* (3.4) by non-linguistic means

Note 1 to entry: There are several types of symbols such as graphical symbols [ISO 3864 (all parts)] and letter symbols [ISO 80000 (all parts)].

[SOURCE: ISO 1087:2019, 3.4.5]

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3.12
terminology work
terminology management
work concerned with the collection, description, processing and presentation of *concepts* (3.4) and their *designations* (3.7)

Note 1 to entry: Terminology work often aims at creating and maintaining *terminology resources* (3.21).

Note 2 to entry: Terminology work often aims at terminology planning and can involve all of concept harmonization, term harmonization, and term formation.

Note 3 to entry: Terminology work can be carried out in a systematic or an ad hoc fashion.

[SOURCE: ISO 1087:2019, 3.5.1, modified — Removed "systematic" in the definition, and added Note 3 to entry.]

3.13
prescriptive terminology work
terminology work (3.12) that aims at deciding on preferred usage of *designations* (3.7)

3.14
descriptive terminology work
terminology work (3.12) that aims at documenting *designations* (3.7) as they are used in contexts without favouring preferred usage

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3.15
terminography
terminology work (3.12) aimed at creating and maintaining *terminology resources* (3.21)

[SOURCE: ISO 1087:2019, 3.5.2]

3.16
term extraction
terminology work (3.12) that involves the identification and excerption of *terminological data* (3.19) by searching through a *text corpus* (3.17)

Note 1 to entry: *Terminological data* (3.19) of primary interest are typically *designations* (3.7), definitions and contexts.

Note 2 to entry: Term extraction is often supported by dedicated software tools.

[SOURCE: ISO 1087:2019, 3.5.6]

3.17
text corpus
corpus
collection of natural language data

Note 1 to entry: Text corpora can be used for various activities such as text analysis or *terminology work* (3.12).

[SOURCE: ISO 1087:2019, 3.6.4]

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3.18
candidate term
string of characters that has been collected by means of *term extraction* (3.16) but has not yet been selected as a text element to be documented in the *terminological data collection* (3.21)

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3.19
terminological data
data related to *concepts* (3.4) and their *designations* (3.7)

Note 1 to entry: Common terminological data include *designations* (3.7), definitions, contexts, notes to entry, grammatical labels, subject labels, language identifiers, country identifiers, and source identifiers.

[SOURCE: ISO 1087:2019, 3.6.1]

3.20
terminological entry
concept entry
CE
collection of *terminological data* (3.19) related to only one *concept* (3.4)

[SOURCE: ISO 1087:2019, 3.6.2, modified — Added “concept entry” and “CE” as preferred and admitted terms, respectively.]

3.21
terminological data collection
TDC
terminology resource
resource consisting of *concept entries* (3.20) with associated metadata and documentary information

[SOURCE: ISO 26162:2019, 3.2.4, modified — Added “terminology resource” from ISO 1087:2019, 3.7.1.]

3.22
data category
class of data items that are closely related from a formal or semantic point of view

EXAMPLE /part of speech/, /subject field/, /definition/.

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Note 1 to entry: A data category can be viewed as a generalization of the notion of a field in a database.

Note 2 to entry: In running text, such as in this document, data category names are enclosed in forward slashes (e.g. /part of speech/).

[SOURCE: ISO 26162:2019, 3.2.11]

3.23
terminology management system
TMS
software tool specifically designed with a metadata structure for collecting, maintaining, and accessing *terminological data* (3.19)

[SOURCE: ISO 1087:2019, 3.6.13]

3.24
concept orientation
principle whereby a *concept entry* (3.20) describes a single *concept* (3.4)

Note 1 to entry: When two or more different *concepts* (3.4) are represented by the same *designation* (3.7) (in the same language), this designation is considered a homograph. Such *concepts are documented in separate concept entries* (3.20).

[SOURCE: ISO 26162-1:2019, 3.2.13]

3.25
term autonomy
principle whereby all *terms* (3.8) in a *concept entry* (3.20) are considered independent sub-units and can be described using the same set of *data categories* (3.22)

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Note 1 to entry: By analogy, this principle applies to *designations* (3.7) as well as other text elements.

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[SOURCE: ISO 26162-1:2019, 3.2.14]

3.26
data granularity
degree of precision of data

Note 1 to entry: For example, the set of individual data categories /part of speech/, /grammatical gender/, and /grammatical number/ provides for greater data granularity than does the single data category /grammar/.

[SOURCE: ISO 26162-1:2019, 3.2.15]

3.27
repeatability
principle whereby a *data category* (3.22) can be repeated within a database definition and whereby it can also be combined with other data categories

[SOURCE: ISO 26162-1:2019, 3.2.12]

3.28
data elementarity
principle whereby a data field contains only one data element

EXAMPLE For example, including both a full form and an abbreviation of a term in the same data field would be a violation of data elementarity

[SOURCE: ISO 26162-1:2019, 3.2.16]

3.29
terminology worker
person whose role is to perform *terminology work* (3.12) as an ancillary function of other professional activities

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3.30
terminologist
expert who performs *terminology work* (3.12) as a main function of a professional activity

3.31
technical communicator
expert who defines, creates and delivers information products for the safe, efficient and effective use of products

Note 1 to entry: Products may be technical systems, software, or services.

3.32
source language
language of the content to be translated

[SOURCE: ISO 18587:2017, 3.2.2]

3.33
target language
language into which source language content is translated

[SOURCE: ISO 17100:2015, 2.3.6]

3.34
transfer comment
note in a *terminological data collection* (3.21) providing information on the degree of equivalence, directionality or other special features affecting equivalence between a *designation* (3.7) in one language and another designation in a second language

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4 Fundamentals of terminology management

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4.1 Goals

Terminology management has various goals. A basic goal is that users of a terminological data collection (TDC) are able to retrieve information that answers their question. The TDC shall thus cover the pertinent subject fields and terminologies. Concept entries in the collection shall be correct and complete and not exhibit any data integrity issues with other entries in the collection.

An extension of the basic goal above for translation support is that data is optimised for use in computer-aided translation (CAT) systems. Such systems have a terminology component. During the translation process, the content of the translation segment in the source language is matched against the TDC. Matches are displayed in the terminology component or made available for easy integration into the translation in the target-language segment.

4.2 Work environments

Work in pursuit of this basic goal is performed in many different work environments with one person or several doing terminology work, supported by tools, following working methods along a particular workflow, etc. These terminology workers document the result of their work, and their work is guided by training and documentation. They have certain skills and deal with one, two or many languages.

Figure 1 shows a list of features that characterise work environments where terminology work is performed. The colour intensity shows the varying degree of complexity of a feature. For example, the top-most arrow indicates that terminology work can support one process in low-complexity environments and several processes in more complex environments.

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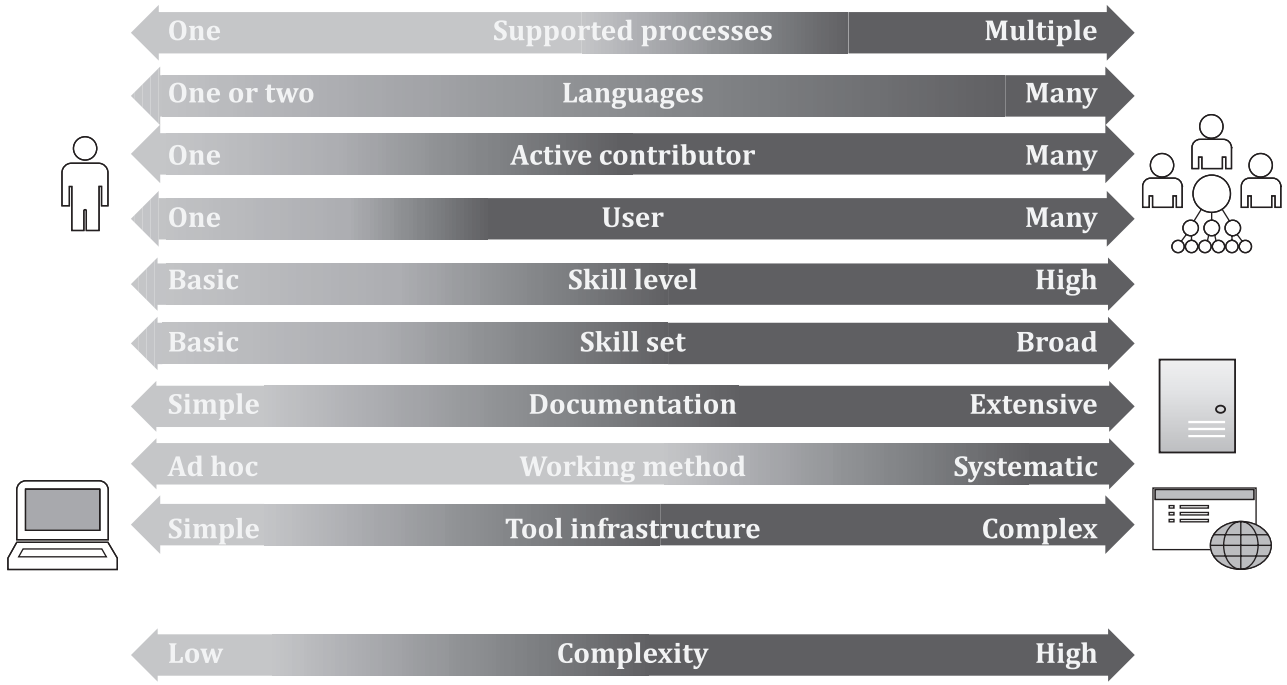

Figure 1 — Level of complexity in different environments

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The type or complexity of the feature varies from one environment to the next or even from one project within the environment to the next project, as the colour shading indicates.

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EXAMPLE 1 A freelance translator who works on terminology for a patent translation project is the only active contributor to the TDC and the only user of the data. Although he does not do terminology work full time, he can have a very high level and broad set of terminology skills. And for certain concepts, he might need to do extensive research.

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EXAMPLE 2 In contrast, a terminologist works in a complex tool infrastructure. She is one of many terminologists who serve dozens of languages. In one project, she might be doing only ad hoc terminology work (see 4.4.2) to try to solve a particular terminological problem quickly.

Much of this document applies to any environment. The main focus, however, is on the low-complexity types of environments, which can be characterised as follows.

— One process (e.g. support of the translation process) is the main focus.

— The need for documentation, e.g. in the form of a guide or training material, is low.

— The terminological data collection itself is simpler and generally contains fewer data categories.

— There is one active contributor or only a few. They can include the translator, a subject matter expert, and the client. And there might only be a few users. That means that the workflow is simple.

— The skill level is assumed to be low and fairly narrow. This document covers anything that is necessary to set up a correct terminological entry with a minimum of terminological information.

— This document can be helpful in a monolingual environment. But terminology work for at least two languages is assumed.

— Ideally, a terminology worker uses a terminology management system (TMS), but many aspects of this document also apply to simpler repositories (e.g. spreadsheets).

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