Consulting experts on terminology

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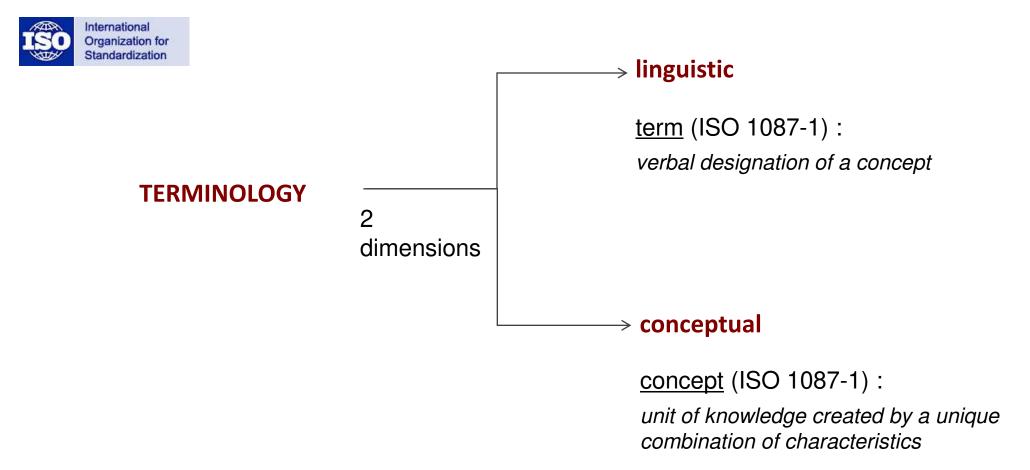UNIVERSIDADE NOVA DE LISBOA

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outline

- Short introduction to Terminology

- Projects
  - CogniNet
  - BDTT

- Different mediation strategies

- Brief remarks

terminology

TERMINOLOGY ——— 2 dimensions

linguistic

<u>term</u> (ISO 1087-1) :

verbal designation of a concept

conceptual

<u>concept</u> (ISO 1087-1) :

unit of knowledge created by a unique combination of characteristics

terminology – linguistic dimension

➔ **relation** between **knowledge organisation** and the construction of the **discourse**

➔ **to guarantee the quality of discourse in a multilingual communication context**

terminology - linguistic dimension

Why the concept?

*because terminology **is not only** a question of language, **but also** a question of knowledge*

→ **allows evaluation and validation of the definitions in natural language**

Why the term?

*Because terminology is concerned with discourse **about** knowledge [complex terms, terminological collocations, …]*

→ **allows management of the quality of discourse and, consequently, the quality of multilingual   communication**

projects

Two applications for different users, both with a terminological component:

CogniNET: **collaborative platform for experts in knowledge domains**
BDTT AR: **terminological database for language professionals**

To put the emphasis on the role of the expert in terminological methodologies. The emphasis results from a contrast between a text-based methodology developed **for** experts and a text-based methodology developed **with** experts.

The combination of the competences of linguists-terminologists with those of experts is fundamental to the quality of the content of the projects.

In order to best take advantage of this combination, the terminologist develops mediation strategies with the goal of obtaining consensus with experts, in view of a validation of contents.

Strategies are adopted to enable such a consensus.

CogniNet - Cognitive Semantics in Collaborative Networks

http://cogninet.pt/background-information/project-background

Financed by the Foundation for Science and Technology: 2009 – 2012 : PTDC/EIA-EIA/102779/2008

Collaboration between engineers and linguists-terminologists:

- ✓ Instituto de Engenharia de Sistema e Computadores do Porto – INESC TEC/ FE/UP [leader]
- ✓ CLUNL – Universidade Nova de Lisboa.
- ✓ Laboratory of Applied Ontology – Italy.

CogniNet

Problems raised by information and knowledge sharing in the context of short life-cycle collaborative networks.

Development of a prototype tool: assist experts in the process of reaching a shared conceptualisation of their domain .

Conceptualisation framework: interplay between terminology and knowledge representation.

CogniNet

Several conceptualisation scenarios, formed by a series of steps to guide him throughout a conceptualisation.

One possible scenario is conceived and prepared by the terminologist.

The terminologist anticipates the steps that the expert needs for his conceptualisation.

CogniNet – working **for** experts

The expert is not present during the terminological processes.

The terminologist selects information that is useful for conceptualisation.

Textual resources → textual typology
Terminology extraction → candidate terms
Contexts with linguistic markers → conceptual relationships

The terminologist provides the means for the expert to complete the steps in an autonomous way, and thus achieve a conceptualisation as an end-user.

BDTT - presentation of the project

The Terminological and Textual Database (BDTT-AR) results from the synergy between CLUNL and the Portuguese Parliament, with the aim of creating a terminological and textual database to support translation.

(1) Guarantee the linguistic and conceptual quality of terminological data

(2) Guarantee the quality of the whole process underlying the feeding of the database

(3) Guarantee the quality of discourse produced in the Parliament

partnership

The partnership between CLUNL and the Parliament results from the conviction that quality is only achieved through the application of methodologies that aim to improve professional performance in the long run, holding all the agents in this process responsible for it.

team

General Coordination
- Portuguese Parliament

Scientific Coordination
- Centro de Linguística da Universidade Nova de Lisboa

Multidisciplinary workgroups
- Group of terminologists and translators
- Group of experts in parliamentary subjects (members of the legal profession, economists, …)
- IT Centre of the Parliament

tasks

Translators
- deep domain knowledge

Experts
- validate the designation
- validate the relation between designation and concept
- validate the micro-conceptual system
- definition in natural language

Terminologists
- Responsible for the methodological design
- Mediators between the experts and the translators

tasks

IT Centre

- Creation and implementation of the BDTT-AR

Librarians

- Computerise references according to the NP 405-1(1994) standard

methodology

i.   textual organisation
ii. terminology validation
iii. creation of conceptual micro-systems
iv. validation of definitions

a. build a terminological database
b. build a textual database

→ **relate both**

methodology – textual organisation

1. The status and value of texts in the Parliament
2. Criteria for textual organisation:

   three large groups

   constitutional law

   ordinary law

   non-binding normative act

methodology – textual organisation

Ordinary law

- law
- executive law
- regional legislative decree
- Assembly resolution
- regulation
    - regulatory order of the Government
    - Council of Ministers' resolution
    - Order of the Government
    - Decree issued by the President of the Republic

Basis for the organisation of the textual database closely related to the terminological database

methodology – terminology validation

Preservation of the quality of the data for an efficient management of information:

Creation of a circuit to validate all information in the database

Acceptance and recognition of the concepts produced in the Parliament by the experts

Linguistic validation of terms by the CLUNL researchers

methodology – terminology validation

1. Candidate terms are extracted from the texts
2. Candidate terms and sources are given to the experts in an Excel file

   i.   Yes: scale from 1 to 8
   ii. No: scale from 1 to 3
   iii. I don't know
   iv. Notes

methodology – terminology validation

3. From experts to terminologists

- If Yes → BDTT-AR
- If No or I don't know → back to other experts
- If No for the second time → rejected

combine 2 types of validation
- linguistic
- conceptual

methodology – micro-system of concepts

For the moment we don't need to structure the whole domain.

But we need to structure the micro-system of concepts for those concepts which are ambiguous in textual contexts, in order to:

(i) find equivalents

(ii) write definitions

methodology – micro-system of concepts

Why do we need to build micro-systems?

Language is *per natura* ambiguous and polysemic;

Try to handle concepts in a discourse independent way, to reduce ambiguity and polysemy as much as possible

methodology – micro-system of concepts

(1) does the term "vote" represent the same concept?

(2) does every single multi-term represent different concepts?

(3) are they all terms or are they terminological collocations?

(4) are they non-terms or terminological collocations? (free lexical combinations?)

(5) …

methodology – micro-system of concepts

Conceptual maps are proposed by terminologists based on:

      i.   knowledge of translators and texts
      ii.   interviews with employees of the Parliament departments
      iii.   validation by the expert group

Ready to search for equivalents and write definitions

methodology – definitions

2 phases

(i)   rewrite existing definitions - finalising

(i)   write brand new definitions - beginning

terminological processes

Process	Parties
domain understanding	terminologist
identification of sources	terminologist with expert validation
collect specialised texts	terminologist
construction of a textual typology	terminologist with expert validation
extraction of terminology	terminologist
selection of candidate terms	terminologist with expert validation
maps of concepts	terminologist with expert validation
writing definitions	terminologist with expert validation
terminology management	terminologist

BDTT – Working **with** experts

Working with experts guarantees relation between the linguistic and conceptual dimensions of terminological data.

It assures the quality of the whole process underlying the feeding of the database and the quality of its contents.

The terminological process in collaboration with experts is not straightforward: the terminologist faces several obstacles which he must overcome by adopting strategies.

BDTT – Working **with** experts

Some frequent obstacles:

The expert is able to identify the concept and describe its characteristics but may not be able to define it in natural language.

The expert is able to identify the relations between concepts but may not be able to identify the type of relation that exists between those concepts.

The terminologist is able to identify the linguistic units that designate concepts but may not be able to identify the characteristics of the concept

mediation strategies

Considering the obstacles identified, the terminologist must adopt strategies, for example:

- Present a list of terms related under a same generic concept, so that experts can identify essential and specific characteristics, thus enabling the addition or removal of elements in the list.

    - **→ guide the experts towards a validation.**

- Present a draft proposal of definition in natural language to experts.

    - **→ guide the experts towards a validation.**

- Present a proposal of an organisation of concepts to experts .

    - **→ guide the experts towards a validation.**

mediation

Mediation is based on the joint competences of terminologists and experts, of which there are two different kinds:

- **Linguistic dimension**

  - Experts inform terminologists about reliable textual sources of knowledge and terminologists organise and treat those texts efficiently;

- **Conceptual dimension**

  - Experts know the terms/concepts of their domain and terminologists make that knowledge explicit;

Terminologists must apprehend both dimensions in order to design methodologies suitable for the type of validation envisaged, whether the expert is *in praesentia* or *in absentia* during the terminological processes.

some conclusions

The different methodologies adopted by the linguist/terminologist depend on each application, and the end-users:

- Understand the expert's *modus operandi* in defining and structuring concepts of his domain.

- Develop the strategies while consolidating a relationship of trust with the expert.

The space occupied by the expert in both projects has methodological implications, at different levels:

- For capturing knowledge in different ways.

- For validating terminological information.

some brief conclusions - BDTT

i. identifying the most frequent terms used in the texts produced in the Parliament

ii. stabilising and harmonising the terminology used in the Parliament, proactively involving professionals

iii. contributing to decreasing terminological and discourse variation

iv. a possible reference for all other Parliaments of Portuguese Speaking Countries

v. it allows a more effective collaboration with other peers? and similar institutions

some brief conclusions

Working with experts guarantees the relation between the linguistic and conceptual dimensions of terminological data.

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Thank you

- www.parlamento.pt/pls/ter/terwintra.home~

- www.clunl.edu.pt/PT/home.asp

Reference

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