

ProTermino: a comprehensive web-based terminological management tool based on knowledge representation

Isabel Durán-Muñoz, Gloria Corpas-Pastor and Le An Ha
{iduran, gcorpas}@uma.es, Ha.L.A@wlv.ac.uk

Abstract

This paper aims to describe *ProTermino*, a comprehensive web-based terminological management system that is been recently developed.¹ This new system is a prototype that intends to fulfill translators' terminological needs regarding multilingual terminological resources and fill the existing gap of comprehensive terminological management tool. In this paper, we present the main functionalities of *ProTermino* and briefly outline the needs for such a tool in the terminology and translation context. Subsequently, we discuss the advantages offered by *ProTermino* comparing it with other similar systems.

Introduction

Terminology management is been subjected to a number of changes during the last decade which have prompted a radical turn from the traditional assumptions and methodologies. At present the influence of computational and corpus linguistics is observed in almost every terminological project, and terminographers' tasks have been facilitated thanks to the introduction of computational linguistic technologies. However, they do not cover all terminographers' needs, and thus they are obliged to combine several tools and technologies to carry out a terminological project. For example, they need a terminological management tool to create a terminology database, along with term extractors, concordancers, concept map editors among other tools, so as to accomplish the different phases and steps of any terminological project. This situation provokes a mushrooming of these tools which hampers terminographers' tasks. As a consequence, technology, on the one hand, facilitates these tasks by avoiding time-

¹ The research reported in this paper has been carried out in the framework of project BBF2003-04616 (Spanish Ministry of Science and Technology/EU ERDF. 2008-2011).

consuming manual processing but, on the other, the great number of it hinders their tasks by requiring the employment of different tools for different purposes.

As a matter of fact, it is urged to investigate on new resources addressed to terminographers that provides them with an efficient comprehensive tool integrating all the tools that are required for a terminological project. *ProTermino* is a solution to this. It is a comprehensive tool that provides the tools that are required for this purpose and, thus, covers all the phases of such a project.

2. Functionalities of *ProTermino*

ProTermino is a modular tool which consists of three main modules: corpus management, terminological database and knowledge patterns, allowing terminographers to carry out the different phases of a multilingual terminological project based on knowledge representation (Durán-Muñoz 2012), namely, corpus management, concordance search, term and equivalent extraction, ontology creation, selection of term entry and export to edition. These three modules are also divided into several sub-modules, which facilitate terminographers' tasks: the first one, corpus management includes a) corpus uploading and b) term extraction; the second module integrates a) terminological entry templates according to the ISO standard, b) cognate identification to extract equivalent candidates, c) a concordancer, d) ontology building, and d) terminology export in several formats (.PDF, .RTF, .HTML and .TBX); and finally the third module includes the option to upload semantic patterns and provide candidate semantic relationships and instances taken from the corpus. In Table 1 the different functionalities are classified in the corresponding modules and sub-modules:

MODULE	SUB-MODULES
Corpus module	Upload a corpus (compressed, text by text, copy-paste)
	Consult the corpus (by terms or by documents)
	Term extractor
Terminological database module	Seek terms
	Validate term candidates
	Eliminate term candidates
	Consult validated, eliminated and extracted candidate terms
	Fill in term entries
	Manually introduce terms
	Export (.rtf, .pdf, .html, .xml)
Knowledge patterns module	Add knowledge patterns and relations
	Search semantic relations in the corpus
	Represent detected semantic relations
	Edit detected semantic relations

Table 1. Classification of modules and sub-modules.

The *ProTermino* tool is also multilingual (currently working with English, German, Spanish, Italian and French), and it displays a very user-friendly interface. Besides, it is a very flexible tool as it also provides different exportation options and selection of fields to the term entry along with other possibilities, such as the multi-user access to work simultaneously, remote access, the creation of different projects, so as to foster a collaborative working environment and facilitate terminographers' tasks as much as possible.

3. Advantages of *ProTermino*

As stated above, terminographers are obliged to combine a number of tools so as to carry out a terminological project, and even more when their project is knowledge-based. There are some comprehensive systems at the market that intend to satisfy their requirements, such as *Terminus*, *Corpógrafo*, *Ontoterm* or *Termontography Tools*,² but they still require the combination of different tools and do not utterly fulfill their needs.

² To know more on these tools, please visit their websites : *Terminus* (<http://igraine.upf.edu/Terminus2/index.html>), *Corpógrafo* (<http://www.linguateca.pt/corpografo/>), *Ontoterm* (<http://www.ontoterm.com/>), *Termontography Tools* (<http://taalkunde.ehb.be/cvc/software>) and also Durán-Muñoz (2010).

ProTermino can be considered a suitable solution for knowledge-based terminological projects due to its main advantages:

1. It is a comprehensive tool that allows terminographers to carry out all the main phases of any terminological project based on knowledge representation, from corpus management to export.
2. It is web-based and, as such, it permits remote, simultaneous and multiple-user access.
3. It provides a semantic relation search option based on semantic patterns provided by the user and encountered by means of tools within the system, namely the concordancer and the term extractor.
4. Both term and equivalent extractors provide precise and accurate results in all the working languages.
5. It provides several options in the different modules: choose among languages (Spanish, English, German, Italian, French), export formats, term fields, corpus uploading, corpus and term checker, among others.
6. It includes a concordancer to search for KWIC in the uploaded corpora.
7. It provides an ontology editor displaying graphs that allow terminographers to visualise knowledge representation and edit it.

We could continue depicting the functionalities and advantages offered by *ProTermino* much further, but due to space constraints this is not possible. In any case, we are concerned about the fact that the previous outline is good enough to prove the validity and suitability of *ProTermino* in the domain of modern terminology.

References

Durán-Muñoz, I. 2012. *La ontoterminografía aplicada a la traducción. Propuesta metodológica para la elaboración de recursos terminológicos dirigidos a traductores*. Berlin: Peter Lang.

Durán-Muñoz, I. 2010. "Herramientas para la gestión y elaboración de recursos ontoterminográficos", in M. Ibáñez Rodríguez (ed.). *Lenguas de especialidad y terminología*. Granada: Comares. 111-123.

Vargas Sierra, C. 2009. "Do-it-yourself IT for Terminology o experiencias de bricolaje informático en la elaboración de diccionarios terminológicos." *Puntoycoma*, 115s. 42-49.