Terminology
Department

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EUROLOGOS Computerized Translation Technology

Technolects, Terminology and Computer-assisted translation

Technical Glossaries
Industrial neology
Linguistic engineering

EUROLOGOS

THE LANGUAGES OF COMMUNICATION

EDITING — TRANSLATIONS — LANGUAGE SERVICES — MULTILINGUAL LOCALIZATIONS — MULTIMEDIA PUBLISHING

TERMINOLOGY DEPARTMENT

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Graduate in terminology from the University of Metz in French, German, English and Spanish, in 1998 she conducted a study into computerized translation technology used within the terminology departments by all Eurologos Group offices.
She used the experience of these departments notably at Eurologos-Brussels and Eurologos-Cologne, which primarily work with Trados Workbench.

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Preface

The genesis of a work on terminology often entails a process similar to that found on a construction site or a film set. The author brings together, according to the overall objective and combination of languages involved, contributors from a variety of disciplines: linguists, documentalists, translators, computer specialists, experts in the field. More often than not, it is to create a product that is multilingual and multifunctional, relative to the vocabulary of a scientific or technical sub-area. For many contributors, particularly for experts in the field, it is often the first and indeed only time they will work on terminology. After the task is completed, the group disbands. Only the core of terminologists remains, already embarking on new adventures.

This work offers a different approach. Those who are often considered to be the principal clients for terminology, namely translators, themselves become the producers of terminology. To accomplish this, EUROLOGOS has created a thorough terminological infrastructure, developed by seamlessly integrating all the tools available to the translator and the terminologist, both in order to make optimal use of existing terminology and to systematically enrich the terminology database. Terminology is no longer considered an end product, but a vital element in a structure designed to provide clients with documents of the highest quality. Terminology is no longer an isolated product, but one that is linked at every stage to the process of translation.

The infrastructure presented here even incorporates the client, since it is through close consultation with the client's technicians that customized multilingual technolects are developed and managed. EUROLOGOS plays a direct role in managing the client's technical vocabulary. Although it is not mentioned in this work, it seems to me that a consequence of the tireless pursuit of quality is that the "translator" is sometimes allowed to step in as regards the terminology used in the documents to be translated, with a view to improving both internal and external coherence. We are therefore talking about integrated multilingual linguistic services and terminology management, services that are becoming increasingly indispensable to businesses.
The architecture, as set out in this work, has required considerable attention. It is borne of a vision, of entrepreneurial creativity, that is neither restricted by terminological conventions or traditions, or by the type of marketing that seeks to produce reams of banal terminology in as many languages as possible. It is aimed

exclusively at producing high quality for the client. The systematic recording of multilingual terminology, its continual updating, together with close cooperation with technicians, not only allows high quality documents to be produced more quickly, and thus to increase profitability, but also enables a terminology database to be created that is reliable and multifunctional.

The architecture described is also borne of the technical skill of the author, who conceived of the original idea to integrate a tool originally designed for translation, namely translation memories, into a terminology management system. In achieving this, Sandrine Olejnik has demonstrated her perfect understanding of the theoretical, technical and organizational aspects behind the implementation of such a competitive tool.

This work, which explains to clients the secrets of producing high-quality documents, is also recommended reading for students at institutes for translators, who will realize that what it has to teach them is not science fiction. This work also demonstrates the importance of terminology for translation and the creation of documents, and for managing documentation and information. It is a credit to the profession of terminologist.

Ad Hermans †
Professor at the *Institut Libre Marie Haps*
Project leader at the *Centre de terminologie de Bruxelles*

Foreword

Terminology as the keystone to modern linguistic engineering.

The boundaries between traditional translation companies and those, still less common, who are able to face modern multilingual publishing are the result of the use of systematic and controlled techniques of industrial terminology. They have not ceased to develop in the last ten years and have already totally revolutionized (especially technical) translation and multilingual editing.

From now on, the linguistic quality of texts said to be pragmatic (commercial, technical and promotional) cannot be produced without the help of memory aid programs, which prevent the same term or phrase being translated twice.
Corporate technolects and specific phraseologies no longer constitute a severe problem of linguistic DIY, which leads to incorrect solutions as random as they are mystifying.

If we think for example, that the hypocritical fabrication of the numerous "mailboxes" still have the nerve to suggest: "We have hundreds of specialist translators in every field, including yours…"
This deceit has been named "The imposture of the phantom army of *specialist* translators".

For sure, clients can recognize linguistic services agencies that are best avoided due to their lack of a terminology department and by the unavailability of a production process based on translation memories.
Indeed, linguistic quality assurance demands, as a prerequisite, the integrated use of CAHT (Computer Assisted Human Translation) with accumulated and technically validated glossaries: a true revolution in applied traductology.

This is the reason why Sandrine Olejnik, in charge of our terminology division, has written this work based on research carried out in 1998. The research was conducted at our Brussels headquarters, by gathering the results from the terminology departments of the different Eurologos offices.
I am proud to present it to you as a real answer to the problems posed by the modern production of quality translation techniques, especially multilingual ones.

And do not fear the enormity of this work as once you have mastered its complexity, all will appear simple, light and practical. Very practical indeed!

Franco Troiano
Managing Director
EUROLOGOS Group

Brussels, March 20, 1999

EUROLOGOS Group.
GLOBAL and
MULTILINGUAL
SOLUTIONS

GENERAL INTRODUCTION

Why terminology?

Be it a question of economics, science or even technology, as soon as the sub-language needs to be precise, terminology appears to be a crucial area in specialized translation. It is therefore very logical that EUROLOGOS, an international translation and multilingual editing company, has shown a particular interest in this discipline.

The EUROLOGOS Group terminology departments thus simultaneously manage, on behalf of various clients, bilingual and multilingual terminological databases from which multiple glossaries are created (extracts from various glossaries are available in the index).

From terminology to CAHT

Terminological data bases, put very much to use in translation carried out by EUROLOGOS, equally find a dew dimension within the frame of CAHT (Computer Assisted Human Technology).

The decision to have recourse to CAHT is most notably motivated by two reasons that we can now consider as being quite usual:

⇒ The need to translate terminologically and phraseologically uniform texts

⇒ The imperative to reduce production costs while guaranteeing an excellent level of linguistic quality

In fact, all AT/CAT systems (Automatic Translation/Computer Assisted Translation) share the ability to yield the best results, from both a linguistic and economic point of view, when the *volume to be translated is significant, the types of texts determined and the subject specific.*

In addition, when these conditions can be combined, considerable gains in terms of productivity can be expected: so that translators no longer have to deal with the most repetitive and monotone of tasks, AT/CAT allows them to focus their expertise on the more interesting aspect of translations and devote the desired amount of time to it.

Ambitions of the EUROLOGOS Group

The EUROLOGOS terminology departments therefore aspire to two principal ambitions, that is to say:

➢ centralized management and enrichment of terminological databases in each office;

➢ the progressive posting of memory translations on the Intranet and Extranet.

Also, in order to bring its projects to a successful end, EUROLOGOS has invested in software and, to do this, has adopted, among others, with the following systems:

• Trados MultiTerm'95 (management of multilingual terminologies)

• Trados Translator's Workbench (translation memory system)

• Trados WinAlign (software for the alignment of phrases)

• Trados S-Tagger for Interleaf (converter for Interleaf-RTF formats)

• IBM Translator's Manager

What is more, our investment plan for IT equipment (Very high-powered Pentium processors and an Intranet-Extranet network), for sophisticated programs (linguistic engineering) and above all, in human resources (Terminologists and Translation Quality Control) for the years 2000-2005 anticipates considerable investments able to increase the integration of nearly all of EUROLOGOS' linguistic production.

PART ONE

1.1. PRESENTATION OF THE DISCIPLINE OF TERMINOLOGY

This chapter deals with the evolution of terminology. First of all we will discuss the context that gave rise to and allowed for the appearance and development of this discipline, as well as the modern ambitions that characterize it. We will then hone in on the current status of the terminologist and the IT tools that terminologists use today. Finally, we will introduce the European Association of Terminology (EAT) of which EUROLOGOS is a member and sponsor.

1.1.1. Reminder of key notions

First and foremost, let us remember that it is important to distinguish the following notions when dealing with terminology.

Disciplines

⇒ **Theoretical terminology** is the linguistic discipline that studies:

- the notional systems that organize the various specialist areas of knowledge;
- processes that use languages to designate components (concepts or notions) by means of names[1].

⇒ Terminography (sometimes referred to as descriptive terminology[2]) is the activity that consists of listing terms and gathering relevant information in view of various applications. Terminography is therefore linked to lexicography, to translation and to documentation.

⇒ **Terminotics, a fusion between terminology and information technology**, joins together all the activities in which we need to resort to IT tools in order to create, manage and operate terminologies.

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[1] Let us not forget that in effect, terminology has a denominative function. "It is not interested only in words, but in the relationship between words and what they signify. To give a name to reality, in a sufficient and precise way, such is its specialty", Jean-Marie Fartin, Director of linguistic sciences, Office of French Language, Quebec. *L'apport de la terminologie dans la promotion d'une langue*, from Terminologies nouvelles, n°6, December 1991.

[2] For Arntz, the descriptive approach represents the foundation of a multilingual terminology, which is geared towards translation. It allows a comparison between the notional systems in every language in order to discover all the variants to take into account when equivalents are established. "Terminological Equivalence and Translation", dans Sonneveld H. et Loening (K.), ed., *Terminology. Applications in Interdisciplinary Communication*.

- ***Connecting terminology notions:***

  - *Semantics:*

    This refers to the general study of the relationship between linguistic signs and their referents. Semantics is primarily interested in determining how a linguistic sign has become associated with a particular referent, in other words, how we came to call a chair a chair. Semantics and terminology differ essentially in the way they see a relationship between sign and referent. Semantics explains the relationship, terminology applies it.

  - *Lexicography:*

    Although terminology is onomasiological, that is to say it takes the notion to explain the sign, lexicography is semasiological, that is to say it takes the sign to explain the notion.

Professionals

⇒ Terminology is defined as:

  - In a broad sense, as a "professional" of terminology in general.
    This is involved in anything to do with specialized language.
  - In a specific sense, for example the specialist of theoretical terminology.
    It develops and illustrates the terminology discipline on an analytical basis.

⇒ Terminology proceeds to the gathering and structuring of terminological data. What is more, terminologists must validate the terminological data and verify that they conform to the model.

Products resulting from terminological activity

⇒ **Terminologies** are structured "catalogues" of terms, which belong to a specific sector of activity and correspond to a system of notions[3] (e.g., terminology of medicine).

⇒ A **lexicon** is an inventory of lexical units, which contains information of a semantic, notional, referential, grammatical or phonetic nature.

⇒ A **dictionary** is an inventory that lists terms accompanied by their equivalents in one or several other languages, but does not provide definitions.

⇒ A **nomenclature** is an inventory of terms representing their notional relationships, which are well structured and comply with systematic denomination rules.

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[3] "A domain (or sub-section of a domain) is only mentally accessible if the notional field is structured, that is to say if it is made up what is referred to as a notional system. In this whole, each notion reveals its relationships with other notions." (Felber, 1987).

⇒ A **thesaurus** is a language documentary based on a hierarchical structure of one or several field of knowledge and in which notions are represented by terms in one or more natural languages and the relationship between notions through conventional signs.

⇒ A **vocabulary** is an inventory that lists terms in a certain field, and describes the notions designated by these terms by means of definitions and illustrations.

1.1.2. History

In its initial stages, IT was seen as being aimed at automating numeric calculations. However, it was soon noticed that it could also help to manage information flow and storage, and notably terminological databases[4].

Hence the beginning of the 60s saw the appearance of such projects as Dicautom in 1963 (Automatic dictionary of the European Coal and Steel Community, Luxembourg), which was to become Eurodicautom some 10 years later (Terminological database of the Commission of European Communities).

The merger of applied terminology and information technology gave birth to what is now referred to as **terminotics**. A new application that proves that terminology was one of the first linguistic disciplines to resort very actively to IT tools in order to be able to disseminate the entirety of this data.

One therefore sees a certain diversification of large terminological databases (CD-ROM for Termium, consultation of the Internet for Eurodicautom, etc.) as well as the appearance of several specialized databases (Euroterm at Elsevier, Normaterm at the AFNOR, etc.).

Following in the footsteps of terminological databases, universities are developing terminological management systems in order to meet the requirements of terminographers. Terminographical activity then saw the beginning of its computerization: concordance builders[5] were added to glossary or program managers in multilingual versions aimed at lexicographers and terminographers working on computers.

Nevertheless, it was not really until the mid-80s that we could talk about terminotics, a new activity with new processes of **terminographic automation**. The development of microcomputing is in fact alleged to have surpassed this mere function of terminological data storage. Increasingly efficient IT tools therefore continue to be

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[4] A "database" is in principle a coherent collection of information, data, gathered (stockpiled, archived) in memories, which can be processed electronically according to the relevant queries. (A. Rey, 1992).

[5] " The concordance builder not only allows to produce lists of key words in context but also an occurrence rate list and a list situating these words within the body of the text." (Francès Filon, Terminology and translation, 02/1998).

developed and terminology finds itself where all communication-based disciplines meet: translation, technical drafting, information technologies and automated language processing.

1.1.3. Aims and Objectives

Considering that the globalization of information in electronic form implies the multilingualism of data, questions of translation and terminology are today of crucial importance. The need to translate technical and scientific texts quickly and accurately in fact requires an in-depth analysis of terms and terminologies included in the text. This is why it is necessary to resort to terminological tools, which become from now a specialized information support and are therefore an undeniable trump card for companies.

1.1.3.1   Assuring coherence and consistency

Recourse to terminological tools henceforth appears obvious in order to guarantee *coherence*, *linguistic consistency* and *technological validity*[6] of a company's services or products.

Indeed, there is no doubt that the use of a coherent and unambiguous terminology will allow for accuracy in the transmission (in this case, in the translation) of information.

From now on, every company needs to be able to guarantee the transmission of various concepts without ambiguity or loss of meaning, and in order to do this, it is essential that one have technological resources at one's disposal. The result is faster and better-quality translation, which allows for the better dissemination of information.

What is more, it seems obvious that to have reliable and coherent terminology systems available is of the utmost importance once one has decided to resort to IT systems to process textual data (e.g., Computer Assisted Translation).

1.1.3.2.   Assuring better flow of information

Terminology greatly contributes to the *speed* and *accuracy* of information exchange, which is an additional advantage for the translator who therefore has instant, clear and reliable information available to carry out the job.

Also, in order to develop databases, glossaries or even lexicons, efficient management of the language and its words becomes essential. In other words, terminology

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[6]   Ulrich Heid, researcher at the University of Stuttgart, in his address at the seminar on Diachronic Terminology, stated that translators should devote around 40% of their time to terminological research (Address to the seminar organized by the Brussels center of Terminology – Acts published, coordinated and written by Caroline de Schaetzen).

constitutes the alphabet of information of which the quality will affect not only the effectiveness of information but also its dissemination.

To illustrate this point, it is understood, for example, that an field such as medicine, whose complexity does not need to be proven, becomes easier for someone who has started to get to know its language.

1.1.3.3. Facing the growing use of mass documentation

The ever-increasing importance of mass documentation makes the manual processing of documents more and more difficult. Hence the necessary recourse to IT and its ever more important memory capabilities.

Besides, the amount of documents to be translated and the volume of terminologies is turning terminology today into economically significant stakes.

1.1.4. Terminologist and terminographer

Before developing a model, management and dissemination model of terminological data, it is necessary to proceed to an analysis of the situation. We have studied in particular the role played by terminologists and terminographers as well as the problems they face.

1.1.4.1. Roles of terminologist and terminographer

Role of the terminologist

Before all it is up to the terminologists to elaborate, illustrate and develop the terminology discipline by proceeding to the analysis of various terminologies and proposing models and methods for terminography. They notably have to determine the contents of the specifications, which will serve as reference for the terminographer.

Terminological work therefore is made up of

- the study of notions and their denominations within specialized vocabulary;
- the study of methods unique to terminographical work;
- the standardization of terms;
- the neological creation.

Role of the Terminographer

The terminographer could be defined as a compiler of dictionaries or databases. Indeed the terminographer's principal role is to build multilingual technical glossaries unique to each company[7].

This activity requires the following different skills:

- inventory of terminological entities of a chosen field;

- comparison of terminologies in the different languages chosen;

- drafting of records according to recognized validity criteria;

- notion classification according to a field tree;

- knowledge of terminotics tools;

- knowledge of online navigation software.

In addition, it is also up to the terminotics expert to develop dictionary application for translation aid machines[8], assisted translation, or automatic translation.

1.1.4.2. *Problems faced by the terminologist and terminographer*

Within the framework of their work, terminologists and terminographers are faced with numerous problems that unfortunately all too often end up slowing down the corporate policy aimed at favoring terminological capitalization. The task of the terminologist is thus seen to be hindered in several ways, i.e.,

- Need to invest

- Lack of time

- Excessive waiting times

  * *Need to invest*

  There is no doubt that the setting up of a terminology department within a linguistic services company is costly:

  ▪ On the one hand because of the personnel and materials required. Once a department devoted to terminology has been created, it is necessary above all things to acquire an adapted terminology administrator (e.g., Trados MultiTerm'95).

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[7] One must not forget that "terminology is the art of spotting, analyzing and, if need be, creating vocabulary references for a given technique, in a concrete situation operating in a way to meet users' needs." (Rondeau, 1979).

[8] "The term (translation aid) normally designated IT aids. These aids include word-processing hardware and software, as well as word-processing software with advanced functions, which allow access to one or more terminological databases (automatic dictionaries), window splitting, which allows access to databases, text files or memory aid files". Daniel Gouadec, *The translator, translation and the company*, AFNOR Gestion (1989).

▪ On the other hand, because in the beginning, it inevitably generates a loss of earnings. Databases must indeed be fed regularly before they can prove their cost effectiveness[9].

* *Lack of time*

In today's context, immediate profitability requirements have been raised to the rank of absolute priority. In terminology as in translation, quantity becomes the criteria for good returns. In such conditions, the terminographer is often confronted with a conflict that opposes the two principal terminographic options, i.e.,

▪ Short-term option: it concerns an instantly diffused terminography, generally designed for a single recipient (meticulous translation research for a translator or client). The major inconvenience with this type of terminography is that it brings no returns. Due to its punctual nature, it can in fact not be followed up.

▪ Long-term option: it concerns a so-called capitalization terminography book. Not being subject to an emergency situation, this terminography book may be produced conscientiously (inventory of terms, updates of information, possible corrections, etc.) and, what is more, with the ambition of one day providing a fully operational source of information for the user, whether it is the translator or the client.

Faced with the short-term terminographical opposition/long-term terminography, terminographers still have the possibility of opting for terminography that could be regarded as "post-executory", in the sense that terminographers list terminological information as they proceed in their work. However, it must be remembered, due to the obligation to make their work profitable in the short term, terminographers are all too often constrained to sacrifice their desire for capitalization that is nonetheless required by the access to excellence in terminology.

* *Excessive waiting times*

As terminographers have efficient IT tools available aimed at making their work easier, a large number of translator colleagues assume that they must be able to supply, in a relatively restricted timeframe, a consistent, coherent and reliable work. It is, however, well known that the term queried by the translator never appears in the database created by the terminographer, or even if the term is entered into the database, it is translated into every language except the one desired. In the long term this situation becomes

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[9] "Des trésors sont peut-être cachés dedans. Mais mazette, qu'est-ce qu'il faut bosser pour qu'un jour la terminologie, en tant que prestation de services, devienne rentable!" N. Kalfon, *Terminologie et rentabilité*, (Address during the Second Autumn University and Terminology held at the University of Rennes II).

understandably a little discouraging for the terminographer whose sole ambition it the desire to help translators.

1.1.5. Terminological management tools

Terminotics are understood to mean:

- In a very general sense, the activity that aims to automate the terminologists tasks.

- More specifically, all the tools and methods that contribute to the automation of the terminologist's tasks.

In addition, let us specify that in the case of partial automation, we will prefer to refer to Computer-Assisted Terminology (as well as Computer-Assisted Translation, or CAT). What is more, once terminology aid software is completely integrated into the user's workbench, we will refer to **the terminologist's workbench[10].** However, there is an arbitrary degree to want to differentiate the terminologist's workbench and the translator's workbench given that the latter increasingly includes terminology aid software (multilingual terminological management, electronic dictionaries, etc.).

Here we are interested in the typology of structured products according to the unwinding of the terminographer's work chain[11]. Terminographic activity can notably be divided into three stages:

- Data collection

- Data processing according to terminographic methods

- Retrieval and formalization of data (disseminated in the form of electronic dictionaries, lexicons, glossaries, etc.)

This splitting up of the terminographer's tasks allows to determine an initial typology of software to aid terminology. In terminographic work it is also necessary to use various software to collect different data gathered by the terminographer, to process it and use it.

1.1.5.1. Data collection software

Given that the automation of the various processes of the terminographic production line depends on the availability of data on electronic support, it is necessary that the terminographer have access to tools adapted to the electronic capture of data.

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[10] The expression "translator's workbench" was coined by the Canadian Government's translation office.

[11] In his *Terminology Manual,* Felber notably defined terminology as "all the methods used for collecting and classifying terms, of neological creation, of standardization of terms, of dissemination of terms".

➢ Collecting data in the field:

- The use of word processing software (e.g., Word) allows for the direct capture, handling and layout of collected data in order for it to be fully used.

➢ To process written data:

- The use of optical character recognition (OCR), for example Omnipage Pro, allows for the digitalization of printed texts in order to be used on computers.
- The use of digital data transfer software between formats (e.g., S-Tagger, Interleaf-RTF converter).

➢ In order to download digital data:

The corpus of available texts on the Internet may constitute a very worthwhile source of information for the terminographer's work. Among the electronic dictionaries available online, we cite as examples:

- EUTERPE

  This dictionary was compiled by the European Parliament and currently includes more than 150,000 entries in the 12 official languages of the European Union.

- Credit Suisse Banking Terms

  This database was compiled by Crédit Suisse. It contains financial terms as well as English, German, French and Spanish definitions.

1.1.5.2.   Data processing software

The range of software that allows to proceed to the electronic processing of textual data is extensive. Also, the use of said software depends on the desired level of automation of the terminographic procedures. In the case of full automation of the terminographic chain, the software will enable, for example, the automatic extraction of a text's terminology, then to store, manage and edit it. Here is an overview of the various types of software that can be used:

➢ Automatic text correction software (e.g., Cordial)

➢ Concordance builders

➢ Text segmentation software

- ➢ Lemmatization software[12]

- ➢ Notional analysis software[13]

1.1.5.3. *Database querying software*

Terminological activity, traditionally based on records containing a term and information about this term, used to lend itself particularly well to computerization. However, it is not rare to still find the archaic system of lists penciled onto paper in some translation companies. The problem with this system are nonetheless evident: doubtful coherence, not very easy to edit, only useable by one person.

In order to assure a certain standardization of terminology, IT products and services have been developed. Most importantly this means bilingual and multilingual databases available on CD-ROM or that can be consulted online.

As an illustration we will introduce below the terminological databases Termium and Eurodicautom:

- ➢ **Termium**

    Termium is a database available on CD-ROM. The data available on this database is read-only (it is impossible to add, modify or delete terms). This data bank edited by the Secretary of State for Canada, comprises a little over 985,000 terminological records between English and French.

- ➢ **Eurodicautom**

    Eurodicautom[14] is one of the major terminological databases providing equivalents in the nine official working languages of the Community (German, English, Danish, Spanish, French, Greek, Italian, Dutch and Portuguese). This database, set up in 1973 by the Commission services of the European Communities, is now available online.

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[12] Lemmatization software allows for the automatic identification of repetitive groups of lexemes.

[13] Notional analytical software allows to obtain in a tree form a representation of the notions present in a text.

[14] Read on this subject: "EURODICAUTOM: presentation on terminological consolidation and its application at the Training Center for translators and terminologists", M.L. Binesse and C. Legrand, or "The formats of data exchange", A. Le Meur (Lectures during the second autumn session i n terminology held at the University of Rennes II).

1.1.5.4. Software to aid with terminology

The problem with terminology is relatively complex in that there is a significant number of specialized languages[15]. What is more, the use of technical terms generally varies according to the application sector and the company itself.

Consequently, it is necessary for translators to have access to systems, which allow them to create, improve, manage and thus use their own glossaries. In addition, posting engines online allows several translators to share the same terminological base. This method clearly has many advantages given that each translator is able to contribute to enriching the common database.

Translation aid tools currently available on the market are numerous. For example to be noted is MultiTerm'95 (product of the TRADOS company) and Termstar (product of the STAR company), which are terminological data management applications, which allow users to create and exploit their own multilingual database.

1.1.6. The European Association of Terminology

1.1.6.1. History

Resulting from the preparatory meetings of a work group made up of specialists, The European Association of Terminology (E.A.T.)[16] was officially created on 3 October 1996 in Kolding (Denmark), following the final report of the Pointer project (Proposals for an Operational Infrastructure for Terminology in Europe) published in early 1996.

The Pointer project, financed by the DG XIII of the European Union and carried out by more than 40 European Terminology organizations, included among its conclusions the need to create an association that works for the European Terminology Sector.

1.1.6.2. Objectives

The European Association of Terminology that aims to bring together as may people as possible interested in terminology, was created in order to fill the existing gaps in terms of terminology (involving more particularly information, training, tools, services and methodology).

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[15] "All terminology is relative to a specific field. In a given culture, with a given language and in a precise field, we will consider the concept as the unity of system (called "conceptology") functioning on a cognitive level." Philippe Thoiron, *Multilingual terminology and the translator* (Lecture to the seminar organized by the Terminology Center of Brussels – Acts published, coordinated and edited by Ad Hermans).

[16] On this subject we recommend the reading of the article by Daniel Prado that appeared in Terminometro no. 22.

In order to represent all of the terminological interests within Europe, the European Association of Terminology aims to develop multilingualism through terminology, to coordinate terminological activities, and to devote itself to the valorization of the sector. Also, it establishes links and cooperation with other organizations of a terminological nature in order to collaborate towards the organization of terminological activity in Europe.

1.1.7. Evaluation

The influence of IT is growing in the language-related professions.

The development and recognition of the profession of terminographer is due partly to the success of terminology databases. The emergence of multilingual terminology management systems notably demonstrates the bureaucratization of terminography, which integrates itself little by little into the chain of documentary computerization.

Additionally, one must not forget the economic stakes represented by terminology. Like any other electronic product, it must from now on satisfy the needs of the market[17]. Today we have to set up a full marketing strategy based on terminology for, as we all know, it is not always the best product that sells the most, but the one with the best orchestrated publicity.

Finally, terminotics has allowed us to redefine terminology. More and more powerful tools for terminology aid have finally allowed the emergence of the discipline.

Also, if today we had to limit our notions of terminography and terminotics, it would seem sensible to refer to terminology as the computerization of the creation of specialist dictionaries, and to terminography as the combination of the creation of dictionaries in a broader sense.

---

[17] "One cannot always spend several weeks finding a solution to a single terminological problem nor can one be content to produce only one or two records a week. Linguistic specialties have become highly competitive. It is a piece of information one cannot ignore. Terminological work should not become a luxury the client cannot afford" (extract from a lecture given by R. Dubuc to the students of the translating and interpreting school of the University of Ottawa, November 1997).

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1.2. TERMINOLOGY WITHIN THE EUROLOGOS GROUP

In this chapter we will discuss the presentation of the activities of the Eurologos Terminology division. After a brief presentation of the software used (MultiTerm'95), we will study the various terminological databases managed by Eurologos and the applied procedure for each of these databases, i.e., feeding, management and use.

1.2.1. MultiTerm'95

After analyzing the various terminology management applications available on the current market, the Eurologos Terminology Division has shown a preference for the MultiTerm'95[18] system, produced by Trados.

1.2.1.1. *Aims*

MultiTerm'95 is a multilingual manager, which runs on Windows and is aimed at translators and terminologists who wish to save and manage their terminological knowledge on their own databases. This software was especially designed for the construction of more or less complex terminologies and allows them to be disseminated in the form of glossaries or electronic dictionaries.

1.2.1.2. *Principal characteristics*

➢ MultiTerm'95 manages textual entries or **records**.

➢ It is possible to indicate denominations for each concept in a maximum of **20 languages**.

➢ Due to its **conceptual orientation** (when one record is devoted to one concept) of MultiTerm'95, it is possible to run queries in the database into each language.

➢ The **search functions** allow for fast access to the requested information. Notably, the wildcard may be inserted into the researched word anywhere and as often as necessary.

➢ MultiTerm'95 also allows for textual fields to be inserted into each **textual form** in order to add descriptive information, such as a definition, context, example or linguistic note.

---

[18] The description of the MultiTerm'95 terminology manager presented below is based on documents supplied by Trados (user manual).

➢ MultiTerm'95 also allows **attribute fields** to be inserted into each terminological record in order to classify information. They are used, for example, to indicate the grammatical gender of a term, or even when it should be used (the various values that can be assigned to the attribute fields come from the user's predefined list).

➢ MultiTerm'95 allows graphics to be inserted in order to illustrate terminological information.

➢ A **cross-reference system** allows for the linking of records containing related terms (compound words, derived words, collocation, etc.) by inserting hypertext links.

➢ The presentation function on the View menu allows for the **personalization of the way in which data is viewed** on the screen.

➢ MultiTerm'95 runs on the **network**, which means that all users connected to the network can access the most up-to-date information at any time.

1.2.1.3.   Creation of a database

Once a database has been created on MultiTerm'95, the structure of the overall data base as well as that of the individual data records must be defined.

Structure of the database

To start let us recall that a database can be defined as a collection of structured data saved on electronic support and organized in such a way as to allow queries to be run containing several criteria. Following this principle, MultiTerm'95 provides numerous options to access terminological information.

Also, in order for MultiTerm'95 to quickly retrieve the information from the database, the structure of the database must be defined. In order to do so, it will be necessary to indicate what kind of data will actually be contained in the database (examples: French, English, Source, Context, Definition, Field, etc.).

Record structure

In terminology, we can normally distinguish between the following aspects:

⇒ *Concept*

A concept[19] is an intellectual abstraction of a tangible or intangible object and is therefore not linked to a language (even if one can notice influences resulting from cultural connotations).

---

[19]   In its current state, terminology is based on the tripartite model of which the three key points are the object, the concept and the sign (Pierre Lerat, 1989).

Remark: MultiTerm is conceptually oriented, which implies that each concept corresponds to a single record in the terminological database. A term and its synonyms will therefore all appear on a single record.

⇒ *Term*

A term is the linguistic transcription of a concept. Thus, a single concept could correspond with several terms in a language, different terms in different languages or even the same term in several languages.

⇒ *Complementary information*

- *Descriptive information* can guarantee better understanding of a concept, of a term or of other information. Notably, it is possible to add complementary descriptive information:

  * To concepts (for example to identify encyclopedic information)
  * To terms (for example to identify definitions)
  * To additional information (for example to identify a context source)

- Categorization information is made up of repetitive information, which allows for the categorization of concepts, terms or other information. Notably it is possible to add information for complementary categorization:

  * To concepts (for example, to identify a domain)
  * To terms (for example, to give grammatical indications)
  * to other information (for example, to identify the type of context)

These terminological elements make up a hierarchical structure, which can also be represented in MultiTerm'95. In order to do this, MultiTerm'95 offers the user the four following fields:

♦ *Administrative Fields*

A heading is associated with each field, which contains various administrative fields, for example the record number or the date it was made, which are automatically managed by the system.

♦ *Index fields*

Index fields, as the name implies, allow terms and synonyms to be indexed, which makes it possible for the user, not only to access information quickly, but also for terms to be listed alphabetically. In addition, users can decide on the name that they wish to give the different index fields (for example: French, English, German or French, English, Deutsch).

♦ *Text fields*

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Textual fields serve to add *descriptive information* relating to concepts or terms. This could be, for example, a definition, a context, linguistic or technical notes. Besides, the user can choose the name to be given to the textual fields (for example, "Definition" or "Def.").

♦ *Attribute fields*

Attribute fields allow *complementary categorization information* to be added *that* relates to the concepts, terms or information contained in the textual field. For example this could be a domain, client, etc. In addition, for each attribute field, there is a corresponding list of attribute values, which have been predefined by the user. This has the advantage of being able to guarantee the coherence of categorization elements. To illustrate this point, here is an example of a terminological record, which presents the use of different fields (the example is an extract of the database created for our client New Holland, specialists in agricultural machinery):

	Record Nº	3067
	Subject Area(s)	Balers
	Client	NEW HOLLAND
Textual field	Definition	[NET WRAP > Metering arm] Long piece of metal which controls the time at which the knife severs the net during the net wrapping cycle.
	Source	FNH: Baler Glossary WP / English - 4 / 10 / 89

	English	**metering arm**
	Source	FNH: Baler Glossary WP / English - 4/10/89
Attribution field	**Deutsch**	**Meßarm**
	Source	FNH Glossary - EN-DE - March 1989
	Français	**levier de mesure**
	Source	FNH Glossary - EN-FR - April 1989

	Nederlands	**arm van het meetwiel**
Index field	*Source*	FNH Glossary - EN-NL - March 1989
	Italiano	**braccio dosatore**
	Source	FNH Glossary - EN-IT - March 1989
	Italiano	**braccio misuratore**
	Source	FNH Glossary - EN-IT - March 1989

1.2.1.4.   *Software evaluation*

Flexibility

MultiTerm'95 offers complete flexibility in terminological data management:

• Fields can be created as and when required. The structure of the database can also be completed at any time.

• Different fonts are available in order to have the maximum number of languages in the index fields (we can use the Cyrillic or Greek alphabet, among others).

- It is possible to register up to 500 fields per record and each field can include up to 4,096 characters. However, only the space actually used by entries is taken up.

Coherence

Despite all these possibilities, MultiTerm'95 still preserves the coherence of a database:

- Thanks to the system of linguistic units, each piece of information (for example a definition or context) has a univocal relationship with the term.

- Attribute fields allow the coherence of attribute names to be controlled during capture. Thus, we can be certain that the "client" field will always correspond, for example, to "FNH Glossaries" and not, in one case, to "Ford NH Glossaries" and, in another, to "Ford New Holland Glossaries".

- Capture models allow the coherence of terminological data to be assured. In fact, they offer the user the possibility to define the default value by field, and to decide whether certain fields are going to be present or not in a terminological record. For example, if we want to be certain that each entry contains a source, you only have to define the source field as an "required" field in a capture model.

Network operation

Besides, MultiTerm'95 reveals itself to be even more effective when used in a network:

- The network administrator can decide on the different access rights for users (read and/or write rights) for each database.

- Thanks to the capture models, the MultiTerm'95 administrator can define and monitor terminological capture on a case by case basis.

1.2.2. Terminological databases managed by the Eurologos Group

1.2.2.1. General presentation

Before even referring to terminology, we must discuss specialty language[20]. In fact in every field of knowledge, specialist terms are used, which relate to well-defined realities in these areas.

Following this principle, EUROLOGOS has elaborated multilingual technical glossaries unique to each company[21]. Within the Terminology division, we can currently list the following databases (spread over various areas of activities).

- *Mechanics, Electromechanics and Construction*
  - ➤ New Holland (English, French, German, Dutch, Spanish and Italian)
  - ➤ Wilo (English, French, German, Dutch, Spanish and Italian)
  - ➤ Siegenia (German, French)

- *Advertising and Editing*
  - ➤ Littera Graphis (English, French, Dutch)

- *Socio-economic*
  - ➤ Unipost (English, French)

- *IT and telecommunications*
  - ➤ Lanier (English, French, Italian, Spanish)

- *Financial and Legal*
  - ➤ Fortis (English, French, German, Dutch, Spanish, Italian, and Portuguese)

---

[20] Specialist language (or language of specialty) refers to the natural language used to technically account for specialized knowledge. This distinguishes general language from specialized language, it is the concept of knowledge that is shared or not shared by all speakers of a natural language (Lerat, 1995).

[21] Loïc Depecker describes a dictionary as "a kind of ideal", rightly so. Notably he stresses that "it is economically evident spin-offs, led by translation, technical editing, documentation, which the language industries aim for when they place dictionaries in the front line." (Speech at the seminar organized by the Terminology Center of Brussels– Act published, coordinated and edited by Ad Hermans).

- *Chemistry and Medicine*
  - ➢ Baxter (English, French, German)
- *Agrofood*
  - ➢ Pizza Hut (English, French, Dutch)
  - ➢ Aveve (English, French, Dutch)
- *Others*
  - ➢ Wizards of the Coast (English, French)
  - ➢ Klopman (English, French, Italian).

1.2.2.2. Database design

As we have already explained (see paragraph 1.2.1.3.), the terminological record contains three types of fields: index fields, attribute fields, text fields. Below you will find the list of the various fields:

➢ *Index fields*

These represent the various languages supported by the database in question (see hereafter the screenshot "Add an index field").
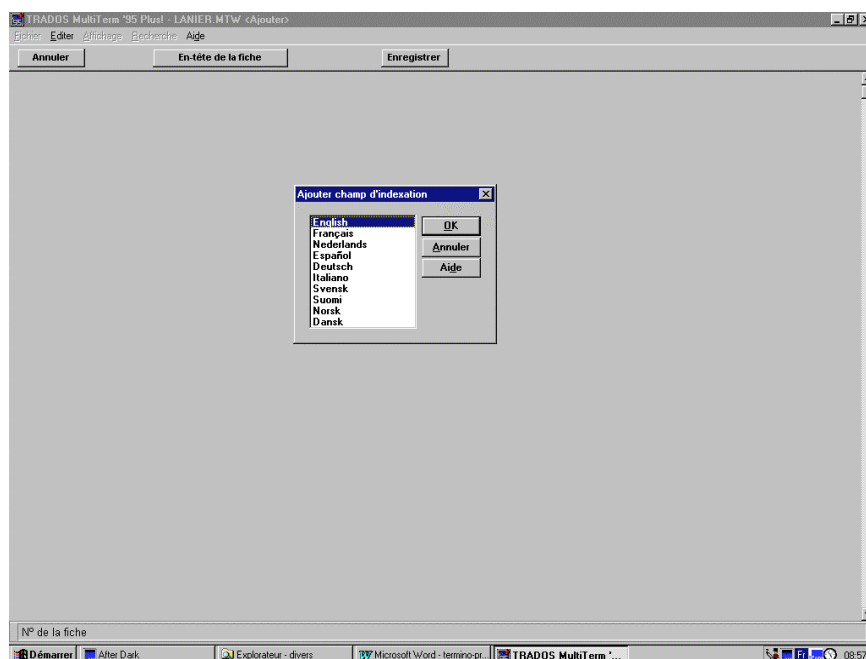
It must be noted that an index field can be repeated several times in the same record. It is therefore possible to encode a term with all its synonyms, and in every language.

Example (Extract record from the Wilo database)

```
Record No.  1277
Client          WILO
Subject         Typ TMP 32 - 0,5
```

German synonyms
German   **Abhilfe**
                Source   53 616/97 - TMP

German   **Beseitigung**
                Source   53 616/97 - TMP

French synonyms
French   **remède**
                Source   53 616/97 - TMP

French   **solution**
                Source   53 616/97 - TMP

English   **solution**
                Source   53 616/97 – TMP

Spanish synonyms
Spanish   **eliminación**
                Source   53 616/97 - TMP

Spanish   **solución**
                Source   53 616/97 - TMP

Italian   **rimedio**
                Source   54404/98 - Umwälzpumpen

Dutch   **oplossing**
                Source   53 616/97 – TMP

➢ *Attribute fields*

Base structures managed by Eurologos contain the following attribute fields:

- Subject Area
- Client
- Grammatical Label
- Term Category
- Language Area

- Type of Relation
- Usage Status

The various fields are illustrated below

❖ The "Subject Area" field is represented in every record in order to be able to classify terminological data according to a field tree created for each client.

To illustrate this we have presented below the screenshot, which represents this attribute field with the various values that are likely to be assigned to it (this screenshot is from the terminology database created for New Holland).

- Screenshot "Subject Area"
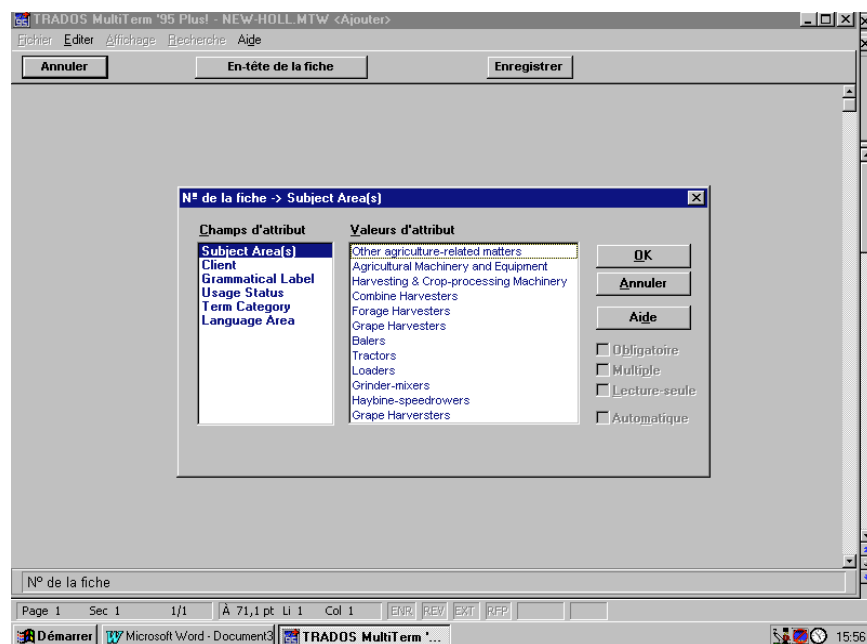
❖ The "Client" field is represented in each record in order to be able to specify which terminological data is specific to a particular client. Thus, a single notion can be defined differently depending on whether client A or B has defined the definition.

❖ The "Grammatical Label" field can be used to distinguish two homonymous entries with a different grammatical gender. For example, if there is a need to distinguish the verb from the name, as is the case in the

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following entry (the record presented below is from the "New Holland" terminology database):

◊ "monitor" exists in the database as a verb

Record No.   145
Subject Area(s)   Combine Harvesters
Client   NEW HOLLAND

English   **monitor**
Grammatical Label vb.
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual
Context   RPM monitor: monitors shaft speeds such as grain elevator
                  and straw walker shaft

German   **überwachen**
Usage Status   Validated
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

French   **contrôler**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

Spanish   **supervisar**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

Spanish   **vigilar**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

Italian   **controllare**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

Italian   **monitorare**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

◊ "monitor" also exists in the database as a noun

Record No. 527
Subject Area(s)   Agricultural Machinery and Equipment
Client   NEW HOLLAND

English   **monitor**
Context   the monitor in the cab displays ...
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

German   **Monitor**
Usage Status   Validated
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

French   **moniteur**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

Dutch   **monitor**
Source   FNH Glossary - EN-NL - March 1989

Spanish   **monitor**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

Italian   **monitor**
Source   TC 54, 56 & AL 59 (S.96) - Prod. Training Manual

❖ The attribute field "Term Category" allows to distinguish the particular form of a term (e.g., abbreviation, acronym, loan word, etc.).

Example (extract form from the terminological database "Aveve")

```
Record No.        41
Client    AVEVE
```

Dutch   **Centrale Dienst Informatica**

Term Category   Full Form
Source   Jaarverslag 1997

Dutch   **CDI**

Term Category   Acronym
Source   Jaarverslag 1997

French   **Service central informatique**

Term Category   Full Form
Source   Jaarverslag 1997

French   **SCI**

Term Category   Acronym
Source   Jaarverslag 1997

❖ The "Language Area" field allows to produce supplementary indications about the translation of a term. It involves notably specifying the disparities that may exist within a language (e.g., between the German spoken in Germany and the German spoken in Austria). In the following example it is important differentiate between the UK English term and the US English term (the record presented below is an extract from the terminology database created for our client New Holland).

```
Record No.        1461
Subject Area(s)        Harvesting & Crop-processing Machinery
Client    NEW HOLLAND
```

English   digger-loader

Language Area   United States
Source   CEMAGREF (1990): Machinisme et équipements agricoles (13)

English lifter-loader

Source   CEMAGREF (1990): Machinisme et équipements agricoles (13)

German Rüben-Rodelader

Source   CEMAGREF (1990): Machinisme et équipements agricoles (13)

German Wagenroder

Source   CEMAGREF (1990): Machinisme et équipements agricoles (13)

French arracheuse-chargeuse

Source   CEMAGREF (1990): Machinisme et équipements agricoles (13)

Spanish arrancadora-cargadora de remolacha

Source   CEMAGREF (1990): Machinisme et équipements agricoles
(13)

Italian   estirpacaricatore

Source   CEMAGREF (1990): Machinisme et équipements agricoles
(13)

Portuguese arrancador-carregador

Source   CEMAGREF (1990): Machinisme et équipements agricoles
(13)

❖ The "Type of Relation" field allows to distinguish a particular
relationship between two terms. This could mean for example, indicating
the antonym of a term or even its superordinate, its co-superordinate, etc.,
(the example shown below is from the terminology database created for
our client Wizards of the Coast).

Record No.   3476
Client   Wizards of the Coast - Magic The Gathering
Subject(s)   game

English   air war

Source   ESB 4 (15)
Grammatical Label sg. n.
Related Term(s)   ground war
Type of Relation   Antonym

French   attaques aériennes

Source   ESB 4 (15)
Grammatical Label fem. pl. n.
Related Term(s)   guerre au sol
Type of Relation   Antonym

❖ The use of the "Usage Status" field is paramount in the construction of a
terminology database in that it allows to indicate whether the translation
suggested by Eurologos has been validated or not by the client. This
validation then allows the translator to know which term to use in the
translation.

Examples

1) Record from the terminology database "Unipost":
(this record has not yet been revised by the client):

Record No.   15
Subject Area(s)   Postal services
Client   Unipost

Usage Status   To be checked

English   aircraft launch schedule

Source   Glossaire Sébastien

French   **horaire de décollage des avions**

     Source   Glossaire Sébastien

2) Record from the database "Wizards of the Coast"
    (this record has not yet been validated by the client):

Record No.   2442
Client   Wizards of the Coast - Magic The Gathering
Subject area(s)   game
Usage Status   Client-approved

English active player

     Source   ESB 1 (3)

French joueur actif

     Source   ESB 1 (3), ESB 4 (2)
     Context   Les effets de phase sont joués par le JOUEUR ACTIF mais
                       contrôlés par le F contrôleur de la source de l'effet de phase.

Remark: due to the very specific nature of their activities it was necessary to
                 create supplementary attribute fields, i.e., type of card, color of the
                 card, its rarity, force and endurance for Wizards of the Coast.

Example of a record:

Record No. 81
Client   Wizards of the Coast - Magic The Gathering
Subject area(s) card
Type of card   artefact
Color of card   none
Rarity   uncommon
Force   3
Endurance   3

English   **Adarkar Sentinel**
     Source   Liste des cartes

French   **sentinelle adarkare**
     Source   Liste des cartes

➢ *Text fields*

The structure of databases managed by Eurologos includes the following
fields:

- Definition
- Context
- Encycl. Information
- Ling. Information
- Combinatorics
- Derivates and Compounds
- Related Term(s)

- NB

Here are a few examples of terminology records that illustrate the way in which textual fields are used in terminology databases managed by Eurologos.

❖ Record containing the text field "Definition" (allows to **clarify the meaning of a term**).

Example from a terminology database created for New Holland

Record No.   171
Subject Area(s)   Combine Harvesters, Forage Harvesters
Client   NEW HOLLAND
Definition   [Plaque] En sidérurgie, produit plat qui n'est ni un large-plat ni une tôle.
Source CILF (1986)
Definition   [Tôle] Produit plat laminé en laissant libre la déformation des rives, livré en feuilles, le plus souvent sous forme quadrangulaire (carré ou rectangle), mais aussi sous tout autre forme.
Source CILF (1986)

French   **plaque**
               Source   TC 54, 56 & AL 59 (S.96) - Training manual

French   **tôle**
               Source   TC 54, 56 & AL 59 (S.96) - Training manual

English   **plate**
               Source   TC 54, 56 & AL 59 (S.96) - Training manual
               Context   front plate hinged [stone trap]

Deutsch   **Platte**
               Usage Status Validated
               Source   TC 54, 56 & AL 59 (S.96) - Training manual

German   **Blech**
               Usage Status Validated
               Source   TC 54, 56 & AL 59 (S.96) - Training manual

Spanish   **placa**
               Source   TC 54, 56 & AL 59 (S.96) - Training manual

❖ Record containing the text field "Context" (allows to **situate the use of the term in question**).

Example from the terminology database created for Klopman

Record No.   35
Client   KLOPMAN

English   **all-round durability**

               Context   The superior characteristics of the PROBAN finish, together with the fabrics' inherent strength, resistance to abrasion/tear and proven ability to withstand regular high temperature laundering, combine to contribute to the all-round durability and cost-effectiveness of garments made in Flamesafe fabrics.

               source   Master Text 7185

French   **durabilité accrue**

Context		Les qualités supérieures de la finition PROBAN combinées aux caractéristiques propres au tissus, c'est-à-dire sa solidité, sa résistance à l'usure, aux déchirures et aux lavages fréquents à haute température contribuent à une durabilité accrue et à un bon rapport qualité-prix des vêtements en tissus Flamesafe.
source		Master Text 7185

Italian   **durabilità generale**

Context		Le qualità superiori del finissaggio PROBAN, insieme alle caratteristiche di forza e resistenza alle abrasioni e agli strappi proprie dei tessuti e alla provata capacità a sopportare frequenti lavaggi ad alte temperature, favoriscono la durabilità generale e il vantaggioso rapporto qualità-prezzo degli indumenti prodotti con i tessuti Flamesafe.
source		Master Text 7185

❖ Record containing the text field "Encycl. Information." (allows to **provide encyclopedic information** on the term in question).

Example from the terminology database created for Baxter

Record No.   168
Subject Area(s)   Monosol
Client   Baxter
Encycl. Information   Manifestations of calcaemia include fatigability, muscle weakness, depression, anorexia, nausea, and constipation.

English   **calcaemia**

Source   Monosol description

German   **Kalziumgehalt des Blutes**

Source   Monosol description

❖ Record with the textual field "Ling. Information" (allows to **provide linguistic information** on the term in question).

Example from the terminology database created for New Holland

Record No.   1153
Subject Area(s)   Forage Harvesters
Client   NEW HOLLAND

English   **CAN system**

Source   Brochure New Holland 50135 - 10/95
Ling. Inf.   F CAN = Controller Area Network

French   **système CAN**

Source   Brochure New Holland 50135 - 10/95

Dutch   **CAN-systeem**

Source   Brochure New Holland 50135 - 10/95

❖ Record containing the textual field "Combinatorics" (allows to **indicate with what other term the highlight of the record in question may be combined**).

```
Record No.        3283
Client            Wizards of the Coast - Magic The Gathering
Subject area(s)   card
```

English artefact

> *Source*   ESB 4 (7)

Français   artefact

> *Source*   ESB 4 (7)
> *Combinatorics*   animer un artefact

❖ Record including the text field "Derivates & Compounds" (allows to **indicate the derivative and compound names** for a term).

Example from the terminology database created for Pizza Hut

```
Record No.         147
Subject area(s)    Utensils
Client             PIZZA HUT
Usage Status       To be checked
```

French   caquelon

> *Source*   Manager's Manual
> *Derivates&Compounds*   mise en caquelon

English   pan

> *Source*   Manager's Manual

❖ Record containing the text field "Related term(s)" (allows to **create a link** from one record to another).

Example from a terminology created for Fortis

```
Record Nº       976
Subject         Economics
Client          Fortis
NB      > G-Cross Border Line
```

English   costs of transmission

> *Related Terms*   ☞costs of transmission of reporting
> *Source*   51 944

French   frais d'émission

> *Related Terms*   ☞ frais d'émission d'un reporting
> *Source*   51 944

Spanish   gastos de emisión

> *Related Terms*   ☞ gastos de emisión de un informe
> *Source*   51 944

❖ Record containing the text field "NB" (allows to **insert a note**):

Example from the terminology database created for Pizza Hut.

```
Record No.         153
Subject area(s)    Food safety
Client  PIZZA HUT
```

	Usage Status	To be checked	
English	**C.H.A.M.P.S.**		
	Term Category	Acronym	
	Source	Manager's Manual	
	Context	Success for Classic begins with C.H.A.M.P.S., our operating imperatives .	
	NB	C = Clean;H = Hospitable;A = Accurate;M = Maintained;P = Product;S = Speed	
French	**C.H.A.M.P.S.**		
	Term Category	Acronym	
	Source	Manager's Manual	
	Context	La réussite de la Classic Pizza commence par C.H.A.M.P.S., nos impératifs opérationnels.	

1.2.2.3.   Populating a database

In order to populate the various databases managed by the Eurologos Terminology department they:

- proceed to the terminological term extraction of former translations;

- use documentation supplied by the client;

- resort to encyclopedias, specialist dictionaries, and other terminology databases available online and on CD-ROM (Eurodicautom, Termium, etc.)

Terminological term-extraction

The Eurologos Terminology division regularly proceeds to the terminological term extraction of already translated documents.

To give an example, in the following pages you may find extracts from Lanier manuals (in English, French, German, Dutch, Spanish and Italian) from where multilingual terminology was extracted.

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INDICE

Terms, once extracted from brochures, can be integrated into the terminology databases with the help of MultiTerm'95 software.

Term extraction particularly has the following results:

➢ *The creation of new entries*

Example (terminology record extracted from the terminology database "Lanier")

Record No. 62
Subject area(s)   copiers
Client   Lanier
Usage Status   To be checked

English   **2-page copying**
                   Source   Manuel 6425

French   **copie double page**
                   Source   Manuel 6425

Spanish   **copiado a dos hojas**
                   Source   Manuel 6425

German   **2-Kopien-Funktion**
                   Source   Manuel 6716/6718

Italian   **copia pagine contrapposte**
                   Source   Manuel 6425

➢ *Adding equivalents to already existing entries*

Example (record extracted from the terminology database "Pizza Hut")

Record No. 21
Subject Area(s)   Food safety
Client   PIZZA HUT
Usage Status To be checked

English   **cooking**
                   Source   HACCP

English   **doneness**
                   Source   HACCP

French   **cuisson**
                   Source   HACCP

Dutch   **koken**
                   Source   HACCP

➢ *Updating certain records*

Example (record extracted from the terminology database "New Holland")

[The English term "sensor" is now translated by "capteur" instead of "tâteur"]

Creation date   14.04.1996 - 14 :23 :49
Created by   super
Modification date   06.07.1998 - 11 :22 :03
Modified by super

Record N° 802
Subject Area(s)   Combine Harvesters, Balers
Client   NEW HOLLAND

English   **sensor**
                   Source   L Series (Breganze) - 1995 - Prod. Training Manuals

French   **capteur**
                   Source Brochure New Holland 71005 - 07/97

French   **tâteur**
                   Usage Status Old
                   Source   Glossaire client - EN-FR (II)

Other documentation used

Databases are also populated by means of documents supplied by the client.

To give an example, you will find in the following pages:

·   Extracts from different glossaries supplied by New Holland

·   Examples of lists of cards made available to Eurologos by Wizards of the Coast

Ford New Holland Glossaries   April 17, 1989

English	French	Category
Man-size access	Accès de taille humaine	Harvester
Equipment, Mounted	Accessoire monté	Tractors
Accessory, Dealer-Installed	Accessoire monté par le concessionaire	Tractors
Armrest	Accoudoir	Tractors
arms rests	accoudoirs	Tractors
Chain coupler	Accouplement à chaîne	Harvester
Coupler, chain	Accouplement à chaîne	Harvester
Coupling, Fluid	Accouplement hydraulique	Tractors
Quick-attach	Accouplement rapide	Combines
Snags	Accrocs	Harvester
Accumulator, Hydraulic	Accumulateur hydraulique	Tractors
Build-up	Accumulation	Tractors
nickel alloy steel	acier en nickel	Tractors
Steel, heavy-gauge	Acier robuste	Combines
Acre	Acre (O,4 ha)	Tractors
Stacking	action d'empiler ou d'entasser	Balers
clamping	action de blocage	ExLoader
Scissor action	Action de coupe en ciseaux	Harvester
gear action	action des engrenages	Ex-Loader
Positive action (floor chains)	action efficace ou positive (des chaînes de fond)	Balers
Chain-driven	Actionné par une chaîne	Balers
Joint venture or licensed	activités en participation ou	SSLoader

operations	sous licence	
Third line kit	Adapteur de commande	SSLoader
Additive	Additif; agent	Tractors
Air intake	Admission d'air	Tractors
Intake	Admission d'air	Tractors
Aeration	Aération	Tractors
Display	Affichage	Tractors

Ford New Holland Glossaries   March 5, 1989

English	German	Identifier
Bale surface	Ballenoberfläche	Balers
Bale volume	Ballendurchmesser/Ballengröße	Balers
Bale weight	Ballengewicht	Balers
Bale, hay	Ballen, Heu-	Balers
Bale, silage	Ballen, Silage-	Balers
Bale, straw	Ballen, Stroh	Balers
Bale-shape indicator	Ballenform-Anzeiger	Balers
Baler	Ballenpresse	Balers
Baler drive components	Antriebsorgane d. Presse	Balers
Baler output	Ausstoß	Balers
Baler, rectangular	Hochdruckpresse	Balers
Baler, twine-tie	Ballenpresse mit Garnbindung	Balers
Bales	Strohballen	Balers
Baling	Pressen	Balers
Baling capacity	Bergekapazität/Preßleistung	Balers
Baling cycle	Preßvorgang (Preßzyklus)	Balers
Baling density	Ballendichte	Balers
Baling, continuous	Pressen, kontinuierliches	Balers
Baling, grass	Pressen von Gras	Balers
Baling, hay	Pressen von Heu	Balers
Baling, rectangular	Pressen von Rechteckballen	Balers
Baling, silage	Pressen von Silage	Balers
Bank, knife	Reihe, Messer-	Balers
Bar, feeder	Zubringer, Zugführungsschiene	Balers
Bar, feeder tine	Zinkenträger	Balers
Bar, tine	Träger, Zinken-	Balers
Bearing cone and cup	Innen- und Außenlager	Balers
Bearing cup and cone assembly	Lager, Innenring und Außenring	Balers
Bearing, journal	Kreuzgelenk	Balers
Bearing, sealed roller	Rollenlager abgedichtetes, wartungsfreies	Balers

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Ford New Holland Glossaries   March 4, 1989

English	Spanish	Identifier
Air blast	Chorro de aire	Combines
Air Cleaner	Filtro de aire	Tractors
Air cleaner restriction indicator light	Luz indicadora de restricción del filtro de aire	Tractors
Air cleaner type	Tipo de purificador de aire	Tractors
Air Cleaner, Dry	Depurador de aire de tipo seco	Tractors
Air Cleaner, Oil Bath	Depurador de aire en baño de aceite	Tractors
Air Cleaner, Paper	Depurador de aire con elemento de papel	Tractors
Air conditioning	Acondicionador de aire	Combines
Air Cooled	Enfriado de aire	Tractors
Air filter	Filtro de aire	Combines
Air flow	Corriente de aire	Combines
Air inlet cleaning fan	Ventilador de limpieza con entrada de aire	Combines
Air intake	Toma de aire	Combines
Air intake	Entrada de aire	Harvesters
Air intake	Toma de aire	Tractors
Air pressure	Presión de aire	Tractors
Air restriction	Restricción de aire	Tractors
Air spring system	Sistema de amortiguamiento neumático	Balers
Air spring tensioning system	Sistema tensor de amortiguamiento neumático	Balers
Air-to-air	De aire a aire	Tractors
Air-to-liquid	De aire a liquido	Tractors
Airflow	Flujo de aire	Combines
Alarm clear key	Tecla de cancelación de alarmas	Balers
Alcohol	Alcohol	Tractors
Alignment	Alineación	Combines
Alignment	Alineación	Tractors
All-crop	Todo tipo de cultivos	Balers
Alternative actuation button	Botón de control alternativo	Tractors
Alternator	Alternador	Tractors

(List of WOTC cards)

Acidic Sliver	Slivoïde acide
Amok	Amok
Awakening	Eveil
Bandage	Bandage
Bottomless Pit	Abîme sans fond
Brush with Death	Frôler la mort
Bullwhip	Nerf de boeuf
Burgeoning	Bourgeonnement
Calming Licid	Litique calmant
Cannibalize	Cannibalisation
Carnassid	Carnasside
Change of Heart	Changement d'avis
Cloud Spirit	Esprit des nuages
Constant Mist	Brumes persistantes
Contemplation	Contemplation
Contempt	Mépris
Conviction	Conviction
Convulsing Licid	Litique convulsivant
Corrupting Licid	Litique corrupteur
Craven Giant	Géant poltroon
Cristalline Sliver	Slivoïde cristallin
Crossbow Ambush	Embuscade d'arbalétriers
Crovax the Cursed	Crovax le maudit
Dauthi Trapper	Trappeur dauthi
Death Stroke	Botte
Dream Hall	Salle du rêve
Dream Prowler	Rôdeur des rêves
Duct Crawler	Rampe-conduit

(List of WOTC cards)

LISTE DES CARTES Urza's Saga (Anglais - Français)	LISTE DES CARTES Urza's Saga (Anglais - Français)
Absolute Law	Loi Suprême
Abundance	Abondance
Abyssal Horror	Horreur des Abysses
Academy Researchers	Chercheurs de l'Académie
Acidic Soil	Terre Acide
Acridian	Acridien
Albino Troll	Troll Albinos
Anaconda	Anaconda
Angelic Chorus	Chœur Angélique

LISTE DES CARTES Urza's Saga (Anglais - Français)	LISTE DES CARTES Urza's Saga (Anglais - Français)
Annul	Cassation
	Antagonisme
Arc Lightning	Arc Electrique
Arcane Laboratory	Laboratoire Esothérique
Argothian Elder	Vieux Sage Argothien
Argothian Enchantress	Enchanteresse Argothienne
Argothian Swine	Cochon Sauvage d'Argoth
Argothian Wurm	Guivre Argothienne
Back to Basics	Retour aux Notions de Base
Barrin, Master Wizard	Barrin, maître sorcier
Barrin's Codex	Codex de Barrin
Blanchwood Armor	Armure de Boisblanc
Blanchwood Treefolk	Sylvins de Boisblanc
Blasted Landscape	Paysage Désolé
Blood Vassal	Vassal de Sang
Bog Raiders	Pillard des Marécages
Brand	Marquage au Fer

1.2.2.4.   Database management

Eliminating duplications:

We must first note that MultiTerm'95 software displays a warning on the screen every time the user enters an already existing term into the database. This is to avoid the creation of duplications (the following screenshot is an extract from the terminological database "Lanier").
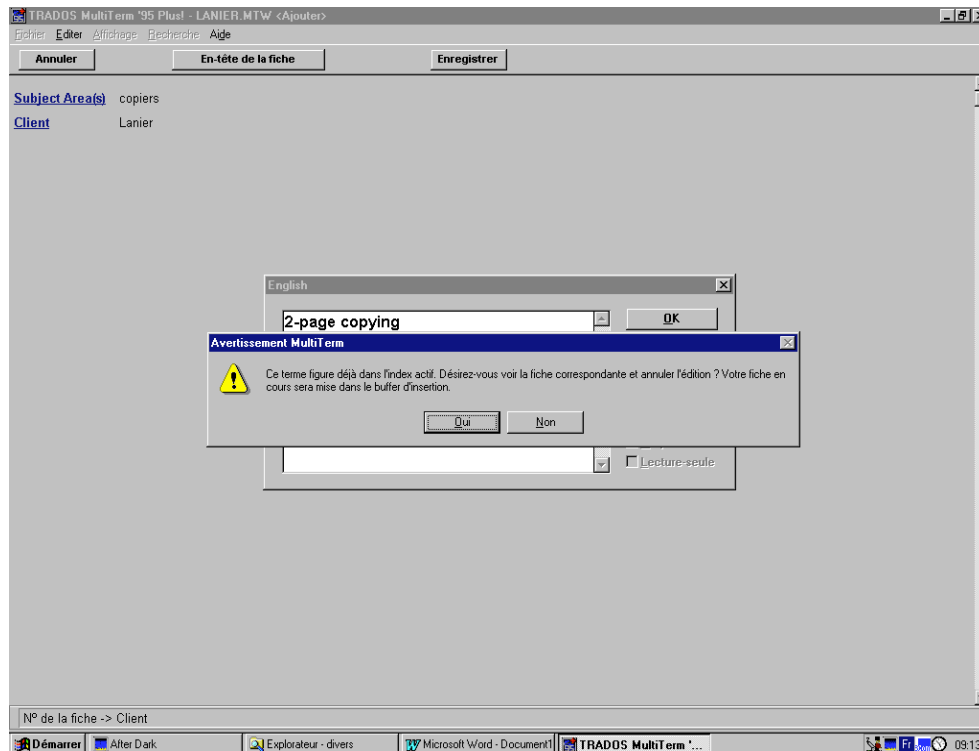
Of course it sometimes happens that there is a need to deliberately create two records for a single term. Given that MultiTerm'95 is "concept-oriented", which is to say that for each terminology record there is only one corresponding concept, a term with more than one meaning will be encoded in the database as the focus of several terminology records.

Example

In the terminology database created for New Holland, the term "grille" appears twice:

- In a first record where it signifies an instrument of separation
- In a second record where it means a sieve

▪ First record

Record No.	1236
Subject Area(s)	Combine Harvesters
Client	NEW HOLLAND

French **grille**
Source TX 68-66-65-64-62 (S.95) - Training Manual

English **gate**
Context a neutral safety switch and lock is fitted in the gate that separates the two directions
Source TX 68-66-65-64-62 (S.95) - Training Manual

German **Kulisse**
Usage Status Validated
Source TX 68-66-65-64-62 (S.95) - Training Manual

| Spanish | **puerta** | |
| | *Source* | TX 68-66-65-64-62 (S.95) - Training Manual |

| Italian | **tacca** | |
| | *Source* | TX 68-66-65-64-62 (S.95) - Training Manual |

▪ Second record

Record No.	14
Subject Area(s)	Combine Harvesters, Grinder-mixers
Client	NEW HOLLAND
Definition	[CLEANING SHOE > Sieve] Device covering the full width of a larger side of the cleaning shoe, containing either a number of fixed or some adjustable openings, through which the wind from the cleaning fan (fanning mill) can flow upwards and the grain pass downwards.

| French | **grille** | |
| | *Source* | TC 54, 56 & AL 59 (S.96) - Training manual |

| French | **tamis** | |
| | *Source* | TC 54, 56 & AL 59 (S.96) - Training manual |

English	**sieve**	
	Encycl. Inf.	Fixed in the cleaning shoe, the sieve moves permanently back and forth.
	Source	TC 54, 56 & AL 59 (S.96) - Training manual

English	**screen**	
	Encycl. Information	When rotating, the hammers on the rotor pass very close to the inside of the screen, forcing the material to be ground through it.
	Source	FNH: Grinder-Mixer Glossary WP/English - 4/7/89

| Dutch | **zeef** | |
| | *Source* | FNH Glossary - EN-NL - March 1989 |

| German | **Filter** | |
| | *Source* | Glossaire client - EN-DE |

German	**Sieb**	
	Usage Status	Validated
	Source	TC 54, 56 & AL 59 (S.96) - Training manual

| Spanish | **filtro** | |
| | *Source* | Glossaire client - EN-ES |

| Spanish | **criba** | |
| | *Source* | TC 54, 56 & AL 59 (S.96) - Training manual |

| Spanish | **tamiz** | |
| | *Source* | TC 54, 56 & AL 59 (S.96) - Training manual |

| Italian | **crivello** | |
| | *Source* | FNH Glossary - EN-IT |

| Italian | **sistema crivellante** | |
| | *Source* | TC 54, 56 & AL 59 (S.96) - Training manual |

| Portuguese | **ciranda** | |
| | *Source* | FNH Glossary - EN-PT - April 1989 |

Remark: If there still is a duplication recorded in the database, MultiTerm has a function that allows any existing duplication to be eliminated.

In the "New Holland" database, for example, the French entry "garde-fou" appears on two distinct terminology records whereas the concept it represents is the same.

- First record

Record No.	755
Subject Area(s)	Combine Harvesters
Client	NEW HOLLAND
Definition	[Main courante] Pièce qui se développe en longueur, à hauteur d'appui, le long d'un escalier, et à laquelle on se tient avec la main.
Source	GDEL (1982)

French   **garde-fou**
         Source   Glossaire client - EN-FR

French   **main courante**
         Source   L Series (Breganze) (1995) - Prod. Training Manual

English   **hand rail**
         Source   L Series (Breganze) (1995) - Prod. Training Manual

English   **grab bar**
         Source   Brochure New Holland 70017 - 03/98

English   **handrail**
         Source   Glossaire client - EN-ES

German   **Griffstange**
         Usage Status   Validated
         Source   L Series (Breganze) (1995) - Prod. Training Manual

German   **Geländer**
         Source   Glossaire client - EN-DE

Spanish   **barandilla**
         Source   L Series (Breganze) (1995) - Prod. Training Manual

Spanish   **pasamanos**
         Source   Glossaire client - EN-ES

Italian   **corrimano**
         Source   L Series (Breganze) (1995) - Prod. Training Manual

- Second record

Record No.	8763
Subject Area(s)	Agricultural Machinery and Equipment
Client	NEW HOLLAND

French   **garde-fou**
         Source   Glossaire client - EN-FR

English   **guard rail**
         Source   Glossaire client - EN-FR

Spanish   **riel de protección**
         Source   Glossaire client - EN-ES

In such a case, it may be necessary to delete the duplication in order for the concept of "garde-fou" to only correspond to a single record.

In order to do this, MultiTerm'95 makes a function available, which allows the user to merge two records. The final record will then combine all the fields in the former records, by avoiding repetition of identical fields. Hence, in our example, merging the two records will have the following consequences:

⬧ As regards the administrative fields:

The final record will have include two areas: "Combine Harvesters" and "Agricultural Machinery and Equipment".

⬧ As regards index fields:

- The final record will have four English entries
- The final record will have three Spanish entries
- The entry "guarde fou" will not be repeated

⇨ *Result of this merge*

Record No.	755
Subject Area(s)	Combine Harvesters, Agricultural Machinery and Equipment
Client	NEW HOLLAND
Definition	[Main courante] Pièce qui se développe en longueur, à hauteur d'appui, le long d'un escalier, et à laquelle on se tient avec la main.
Source	GDEL (1982)

French   **garde-fou**
       Source   Glossaire client - EN-FR

French   **main courante**
       Source   L Series (Breganze) (1995) - Prod. Training Manual

English   **hand rail**
       Source   L Series (Breganze) (1995) - Prod. Training Manual

English   **grab bar**
       Source   Brochure New Holland 70017 - 03/98

English   **handrail**
       Source   Glossaire client - EN-ES

English   **guard rail**
       Source   Glossaire client - EN-FR

German   **Griffstange**
       Usage Status   Validated
       Source   L Series (Breganze) (1995) - Prod. Training Manual

German   **Geländer**
       Source   Glossaire client - EN-DE

Spanish   **barandilla**
       Source   L Series (Breganze) (1995) - Prod. Training Manual

Spanish   **pasamanos**
       Source   Glossaire client - EN-ES

Spanish   **riel de protección**
       Source   Glossaire client - EN-ES

Italian   **corrimano**
       Source   L Series (Breganze) (1995) - Prod. Training Manual

Research and filtering

It must also be stressed that the management of various databases is made easier by two functions provided by MultiTerm'95, i.e., search and filter functions. These functions, in fact, allow fast access to the terminology records that need modifying.

➢ *The search function*

The various search functions allow immediate access to the required information:

- Basic search: you only have to type the first letters of a term and MultiTerm'95 will instantly find the corresponding record.

- Global research: you only have to type the wildcard "*" (for a chain of characters) or "?" (for a letter) and MultiTerm'95 will show all the corresponding occurrences.

- Analogical search: you only have to type the "#" followed by a group of several words to find a complex entry containing all of these words.

Example (the following screenshot shows the result of a global search containing all the expressions beginning with the keyword in the "Wilo" terminology database)
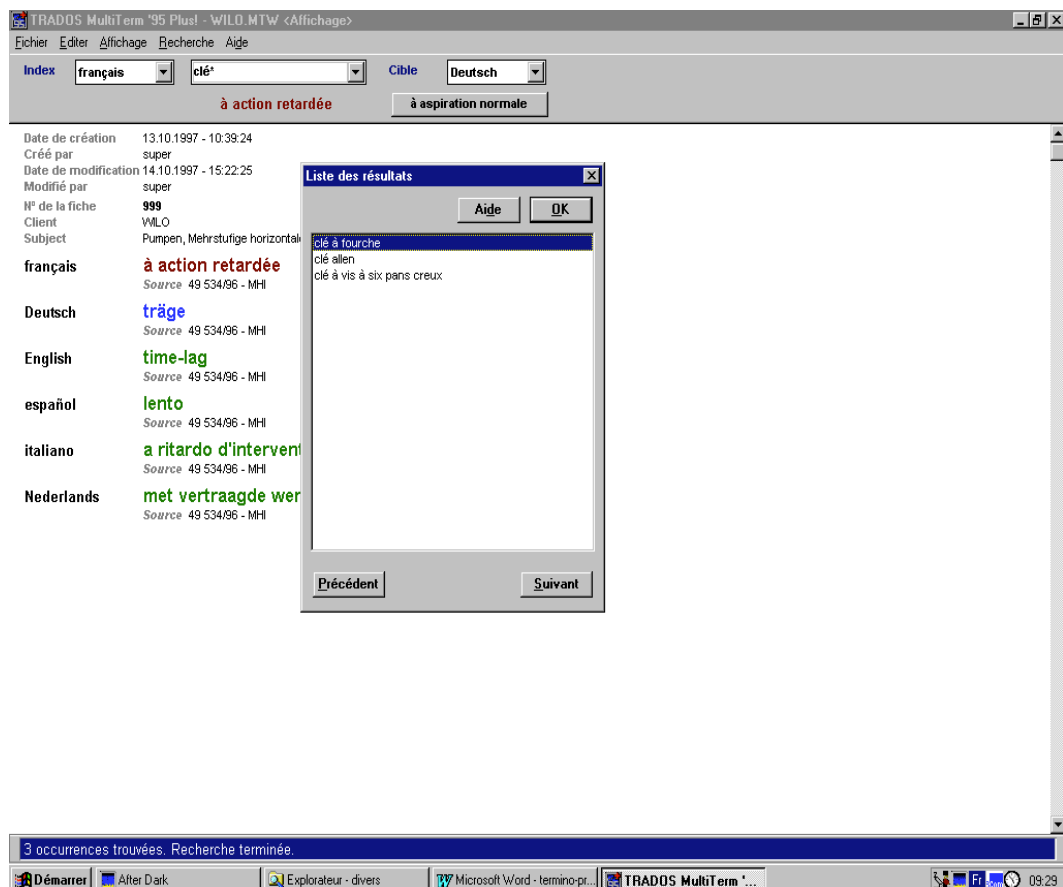
➢ *The filter function*

The filter function allows to define and combine criteria in order to be able to select certain data and to exclude others to meet specific terminology requirements, and this for work on the screen or for data export.

Therefore it is possible, for example, to only consult records that have been created on a particular day or by a particular person. Or even to access all records that deal with a particular subject. To this end you only have to determine the relevant criteria during the filter definition.

The following screenshot shows the various criteria that can be taken into account once the filter has been defined (the screenshot extracted from the "Lanier" terminology database):
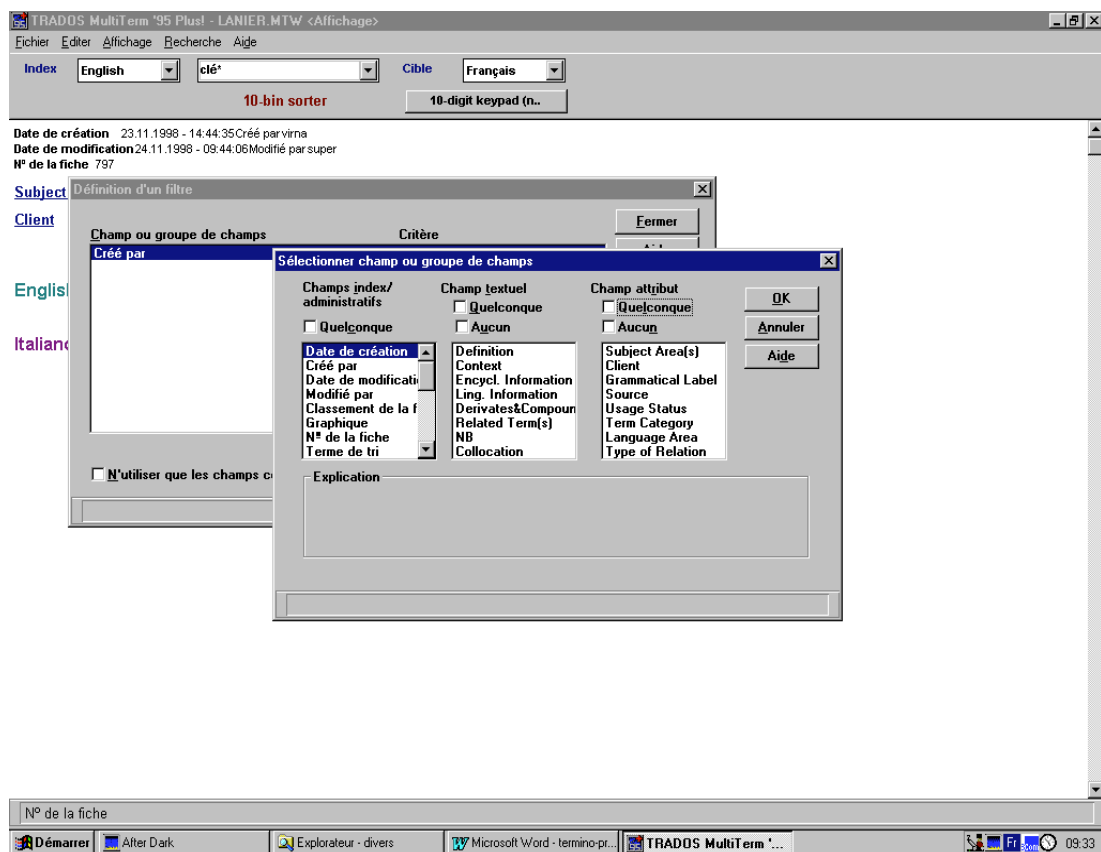
1.2.2.5. Running a database

Import

The import function of MultiTerm'95 allows data to be imported from other applications, such as a word processing document. It is thus possible to add records to the existing ones or to modify them. Naturally, the record to be imported must first be prepared, so that MultiTerm'95 can read it correctly.

The prerequisites for a successful import into a MultiTerm'95 database are as follows:

➢ The record to be imported must be in ANSI or ASCII format (respectively Windows and DOS default text formats).

➢ The hierarchical structure of the record that is to be imported must correspond to the existing structure in MultiTerm'95 so that new records can be presented in an identical structure to the existing records.

➢ The field names in the records to be imported must be exactly the same as those already existing in the MultiTerm'95 database.

➢ The network administrator must me the only person to open the database.

Export

The export function allows to export data from the database in ANSI or ASCII format. In this way, the database records take up less space, which is an advantage when one wants to save records or send them to a colleague. What is more, exported data can by opened by other applications, for example word processing software, where they may be edited or printed.

It is of course possible to export an entire database, but it is also possible to export sub-units of the database with a precise objective in mind. Thus, a filter function allows to indicate what records should be exported, for example to create terminology for a particular area or a certain translation project. Also, the definition of export allows to decide what fields from filtered records should or should not be exported. This gives users the possibility to create personalized dictionaries depending on their needs.

In addition, thanks to its export function, the data format can also be personalized and the record structure be prepared in such a way that they can be directly imported into another database, a terminological management system, or another application that is able to read the ANSI or ASCII files. There is therefore no technical restriction on carrying out terminology exchanges, in paper or electronic format.

DDE Interface

➢ *Principles*

Dynamic data exchange between two Windows applications is carried out by a standardized interface, offered by Windows. This is a transmission protocol, which sort of represents a vocabulary agreement thanks to which programs are able to communicate and that defines the protocol.

In a DDE conversation or dialog, there are two principals, the client who wishes to obtain the goods (here, the data) and the server able to supply the goods.

In DDE dialogs, MultiTerm'95 is always the server. This makes using the DDE interface simple, given that there is only one answering the questions and the other one replying. The result is that data can of course only be exchanged in one direction, towards the client.

➢ *DDE Interface between MultiTerm'95 and WinWord*

Typically, all the records that are registered in a MultiTerm'95 database and any associated fields can be requested and converted into Word, without MultiTerm'95 being visible.

Thus, the Winword menu can call up the following macros:

- MultiTerm Glossary

- MultiTerm Print

- MultiTerm Table

- Import Current Entry

- Import All Entries

Here is a presentation of the different macros:

▪ *MultiTerm Glossary*

This macro allows a monolingual glossary to be inserted made up of a keyword and its source in the form of a table, in the active WinWord document. Example (macro created on the "New Holland" terminology database).

3-point hitch	FNH Glossary - EN-PT – April 1989
3-point hitch	FNH Glossary - EN-PT – April 1989
3-point linkage	FNH Glossary - EN-PT – April 1989
3-point linkage	FNH Glossary - EN-PT – April 1989
3-point linkage cutterhead support frame	Brochure New Holland 72011 - 02/98
3-speed hydraulic variator transmission	FNH Glossary - EN-ES – March 1989
3-way hydraulic system	Brochure New Holland 72005 - 08/97
3-wire connector	Repair manual 675T/TA engines – April 1997
4HB header drive	FNH Glossary - EN-ES – March 1989
4WD	FNH Glossary - EN-PT – April 1989
4WD (four-wheel drive)	FNH Glossary - EN-ES – March 1989
4 HB header drive	FNH Glossary - EN-NL – March 1989
4 planet differential	FNH Glossary - EN-ES – March 1989
4 post roll over protective structure	Brochure New Holland 60006 - 06/97
4 speed transmission	Brochure New Holland 61019 - 09/96
4 stroke rotary feeder	FNH Glossary - EN-ES – March 1989
4 x 4 power reversing transmission	FNH Glossary - EN-ES – March 1989
4-bar loader	FNH Glossary - EN-ES – March 1989
4-bar loaders	FNH Glossary - EN-NL – March 1989

4-chain construction	Brochure New Holland 71005 - 07/97
4-cycle engine	FNH :Tractor Glossary WP/English - 5/25/89
4-cylinder engine power	FNH Glossary - EN-ES – March 1989
4-cylinder models	FNH Glossary - EN-PT – April 1989

- *MultiTerm Print*

  This macro allows to produce a full dictionary classified according to keywords with definition, translation and additional information. Example (macro created for the "Klopman" terminology database).

  cotton knitted polo shirt *(Context)* For the last five years personnel involved in processing and manufacturing has been wearing coats, trousers and coveralls made from Klopman's Indestructible with coordinating traditional 100% cotton knitted polo shirts. *(source)* Excellence 11 job no. 7138 *(Français)* **polo en maille 100% coton** *(Grammatical Label)* *masc. n.* *(Context)* Depuis cinq ans, le personnel de PepsiCo chargé du traitement et de la fabrication porte des vestes, des pantalons et des combinaisons de travail fabriqués dans le tissu Indestructible de Klopman. Les polos coordonnés sont en maille 100 % coton traditionnelle. *(source)* Excellence 11 job n° 7138

  abrasion *(Context)* Despite Vektron 4003's EN accreditation, Delphy carried out a further series of rigorous tests for filament degradation through laundering and abrasion, static dissipation and overall wearer acceptability. *(source)* Excellence 11 job no. 7138 *(Français)* **usure** *(Grammatical Label)* *fem. n.* *(Context)* Malgré l'accréditation EN du tissu Vektron 4003, la société Delphy a procédé à plusieurs séries de tests rigoureux destinés à étudier la dégradation de la fibre lors du blanchissage et de l'usure, la déperdition statique et l'acceptabilité générale du tissu pour le porteur. *(source)* Excellence 11 job n° 7138

  advanced fabric construction technology *(Context)* The stretch is achieved by utilizing advanced fabric construction technology, eliminating the use of elastomeric fibers that have limitations in certain working conditions. *(source)* Excellence 11 job no. 7138 *(Français)* **technologies de pointe en matière de fabrication de tissus** *(Context)* La qualité stretch est atteinte en ayant recours aux technologies de pointe en matière de fabrication de tissus qui permettent d'éliminer l'élastane susceptible de présenter des restrictions dans certaines conditions de travail. *(source)* Excellence 11 job n° 7138

  after-glow *(Context)* There is no heat shrinkage, when the flame is removed the fabric self-extinguishes with no smoldering or after-glow. *(source)* Master Text 7185 *(Italiano)* **postluminescenze** *(Grammatical Label)* *fem. pl. n.* *(Context)* Il materiale non è termoretraibile, quando la fiamma viene allontanata il tessuto non presenta bruciature o postluminescenze. *(source)* Master Text 7185 *(Français)* **incandescence résiduelle** *(Grammatical Label)* *fem. n.* *(Context)* Le tissu ne se rétrécit pas sous l'effet de la chaleur ou lorsque la flamme est retirée, il est auto-extinguible ; il n'y a ni feu couvant ni incandescence résiduelle. *(source)* Master Text 7185

- *MultiTerm Table*

  This macro allows to insert a two-column table, the first column containing the sorting term and the second one the translation (note: it is also possible to insert a third column in order to indicate the synonyms of the sorting term). Example (macro created from the "Wizards of the Coast" database).

5-color deck	jeu 5 couleurs
Abandon Hope	Abandon de l'espoir
Abbey Gargoyles	Gargouilles de l'abbaye
Abbey Matron	Mère abbesse

Abduction	Rapt
Abeyance	Suspens
Abjure	Abjuration
Abomination	Abomination
Aboroh	Aboroh
Abyssal Gatekeeper	Gardien de la porte des abysses
Abyssal Hunter	Chasseur des abysses
Abyssal Specter	Spectre des abysses
accelerate	Accélérer
accelerator	Accélérateur
Acidic Dagger	Dague acide
Acidic Sliver	Slivoïde Acide
activate a capacity	activer une capacité déclencher une capacité
activation cost	coût d'activation
Active player	joueur actif
Adarkar Sentinel	sentinelle adarkare
Adarkar Unicorn	Licorne adarkare
Adarkar Wastes	Landes d'Adarkar
add to the mix	ajouter au mix

- *Import Current Entry*

  This macro allows to import all information from the current record into a WinWord document.

  Example (macro created from the "Pizza Hut" terminology database)

  ```
  **
  <Date de création>09.11.1998 - 17:26:57
  <Créé par>alex
  <Date de modification>18.11.1998 - 17:36:50
  <Modifié par>super
  <Classement de la fiche>1
  <Graphique>
  <Nº de la fiche>45
  <Subject Area(s)>Food safety
  <Client>PIZZA HUT
  <Usage Status>To be checked
  <English>calibrated thermometer
  <Source>HACCP
  <Français>thermomètre gradué
  ```

```
<Grammatical Label>masc. n.
<Source>HACCP
<Nederlands>geijkte thermometer
<Grammatical Label>masc. n.
<Source>HACCP
```

- *Import All Entries*

  Following the example of the preceding macro, this macro allows to import all records from the database in the MultiTerm'95 format. Example (macro created from the "Wilo" terminology database – only the two first records imported are shown in the example)

```
**
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PART TWO

2.1.   AUTOMATIC TRANSLATION AND COMPUTER-ASSISTED TRANSLATION

In this chapter, we will initially be dealing with the concepts of automatic translation and computer-assisted translation. We will have to wait a little longer for the evolution of automatic translation throughout the next few decades before writing about the evolution of translation methods in favor of C.A.T., and notably about interactivity. Finally in a final section, we will focus more closely on the concept of Translator's Workbench and the various perspectives that the new technologies resulting from the automation of translation suggest.

2.1.1. Definition

- **Translation** is understood as an intellectual and cultural activity by which a text is read in one language and rewritten in another, taking account of all the relevant constraints, which depend on the type of text, the objectives and the socio-organization of the translation.

- In order to be able to more precisely help translators in their work, it seamed wise to resort to increasingly efficient IT techniques in order to be able to further facilitate the translation process. Therefore, when computers first made their appearance, **Automatic Translation** (A.T.) was envisioned. The basic concept was the following: as computers are capable of processing large quantities of information very quickly, why not use them for a task as time consuming as translation?

  In fact, as the development of IT proves to be efficient in the processing of digital data, we would be right in thinking that the same can apply to the processing of text data. This idea has for that matter proven to be very productive for the development of applications such as word processing or database management. As regards Automatic Translation, this task has indeed turned out to be more difficult, but nevertheless today we are seeing the appearance of commercial translation aid systems for, and this despite the various obstacles that needed to be overcome.

  The various difficulties encountered are essentially linked to the fact that the problem of translation differs totally from the problems resulting from digital calculations. Computers function perfectly when it comes to rapidly manipulating structured information if it is, however, possible to formalize the various manipulations. Yet natural language, based on the fact that it carries a compound sense, is very difficult to formalize. Translating effectively consists in understanding a text in one language and then rewriting it in another, and it is

precisely this complex process of "comprehension" that poses a problem during automatic translations.

To illustrate this point, you simply need to see the translation that has been carried out by a person, linguistically competent in the relevant languages, but completely ignorant of the specialist field at hand. Methods representing the significance are therefore today the object of much reflection.

- To be pointed out for that matter that the generic designation of "Automatic translation", can also be known as **Computer Assisted Translation** (C.A.T.). Certain "automatic translation" systems on the market today should therefore rather be classed under the heading "C.A.T", or to be even more precise, under the heading " H.C.A.T " (*Human* Computer Assisted Translation). A.T. systems as opposed to H.C.A.T. systems are systems that function with no intervention on the part of the translator or another person throughout the translation process[22].

  Finally, it must also be noted that H.C.A.T. can be understood in the broadest sense to mean all products aimed at helping translators in their work, which corresponds more precisely to the "TAT" designation. (Translation Aid Tools)[23].

2.1.2. History

Automatic Translation has been envisioned since the end of the Second World War when computers first made their appearance. As explained in the previous paragraph, the development of Automatic Translation has been a difficult one. Here we will outline in more detail the different social and economic and social conditions in which A.T has developed.

- **50s - 1966**

  Since the Second World War, A.T. has been envisioned for strategic ends. The army and intelligence services indeed showed an interest that cannot be ignored in this new possibility of translating texts in a fully automatic way. In the post-war context, military interest implied that English and Russian were the first languages processed within this new project. NASA, by buying Systran, by far the most efficient Automatic Translation system, has considerably developed its research and the first practical applications in the area.

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[22] Olivier André rightly commented on this subject saying that one should not confuse Automatic Translation software (TA) with Computer Assisted Translation (CAT), "there is an ambiguity that is often used by companies who put TA software on the market" (Point Com, April 1997).

[23] It must be noted that it is preferable to refer to OAT when dealing with more or less integrated systems or sub-systems available to translators to improve the quantity or quality of their work (OWIL, 1993).

Nevertheless, the beginnings of T.A. were difficult. IT like linguistics, were far from being developed. On the one hand, memories of the first computers were also limited and programming techniques were not very evolved. On the other hand, linguistic researchers did not realize the actual problems posed by an activity such as translation. It is therefore uniquely a question of structuralism, of which the study is unfortunately based on completed words and does not concern itself with the problems of meaning, which is exactly the problem that needs to be resolved in order to develop Automatic Translation.

All this resulted in the fact that the first A.T. research has failed. It has also been shown that obtaining a quality translation by means of a completely automated process is nothing but Utopia.

- **1966: the ALPAC Report**

In 1964, due to the considerable investments, which have been granted to research projects in Automatic Translation, the American authorities have decided to be specific on the progress of such projects. They asked the ALPAC committee (Automatic Language Processing Advisory Committee) to prepare an evaluation report on the progress made by A.T. researchers. This report drew the following conclusion: T.A research is not always cost-effective for the American State.

The ALPAC report therefore puts the lid on research into A.T. It also allows us to realize that A.T systems cannot be usefully developed without having recourse to linguistic know-how. We therefore notice that researchers choose different orientations in their work[24]. Batch processing systems, which use transfer, but which also, have a lexical orientation, start to appear (restriction of lexical freedom in the target language by the recognition of the lexical context). Furthermore, since the ALPAC report systems have also been based on modular architectures. We must independently develop analytical transfer and synthesis components, in order to facilitate parallel development and maintenance, but also with a view to their recycling.

- **1975 and onwards**

In order to face the ever increasing production of multilingual documents, in 1976 the European Community started to use the Systran A.T. System, which had in the meantime been bought up in the private sector by the Gachot Company in France. In addition, Eurologos has even represented Systran on the Belgian market for a few years.

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[24] The start of the 70s sees the launching of new projects, in North America, Europe and Japan. A review of all these projects is available in the reports by Varile and Zampolli (1992) devoted to A.T.

T.A. systems developed today operate according to the following transfer principle: the Automatic Translation process is carried out in three stages. The A.T. system first carries out a syntactic and semantic analysis of each of the phrases present in the source text. The analysis results are then presented by the system in the form of a grammatical tree. Finally, the representation thus obtained is transferred into the target language in order to be able to generate corresponding phrases in the queried language. This technology requires major multilingual dictionaries as well as an extensive set of expressions and rules.

2.1.3.   Principles and methods

2.1.3.1.   The current situation: towards CAT and corpora

- The traditional approach to Automatic Translation is an approach we call structuralist. This overall and macroscopic approach implies the creation of abstract formalizations of the linguistic systems of the two languages being processed and subsequently the establishment of a series of rules, which allows the translation from one language into another. Use therefore consists in finding the right rule, which is appropriate to a given context. This approach, based on types of behavior, has, however, the inconvenience of being fairly static and rigid as it requires an apprentice strategy to discover the rules behind the data.

- From then on a shift from the structuralist approach towards the so-called analogist approach may be observed[25]. In order to compensate for the difficulty of reformulating a text into another language, there is question of taking advantage of the translation data contained in the *bilingual corpus*[26] (corpus made up of text pairs of which one is the translation of the other). This new approach is based on existing translations, produced by human translators, and reused for the production of new translations. In other words, the idea is to use a body of texts with their translations (human and of guaranteed quality) as the knowledge basis for machine translation[27].

The translation process is thus as follows: taking a segment of the source text, searching the text database for a similar example and then using the translation of this example as a model for the desired translation. In the best of cases, if the example found is similar to the original entry, the translation is quite simply copied. On the other hand, if the example found differs somewhat, the user must step in. However, even in the latter case, existing texts can still supply fairly similar examples, which are likely to help the translator find an adequate translation.

The use of a bilingual corpus as a reference source in a CAT system therefore represents a sure advantage. The results gathered by this system are more reliable given that they

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[25]   Here we are referring to Example Based Machine Translation or even Memory Based Machine Translation, which was first proposed by Nagao (1984).

[26]   On this subject there is a very interesting article by P. Isabelle and S. Warwick-Amstrong entitled "Bilingual corpora, a new resource for translators" in *La Traductique*, by P. Bouillon and A. Clas (1993).

[27]   The approaches in which we are interested are designated in different ways: Example Based Machine Translation, Analogy Based Machine Translation, Memory Based Machine Translation or Case Based Machine Translation.

are based on actual translations, and not on the introspection of a linguist. The use of a corpus therefore allows to avoid the risk of generating incorrect translations, due to inadequate linguistic theories.

The success of assisted translation based on bilingual corpora is largely due to the fact that they only require passive knowledge. Logically this strategy should be less complex to create (compared to the active knowledge required by A.T. systems). Even more so as it is possible to save and manipulate almost unlimited text masses by computer. The growing importance of computers allows to foresee IT aids relying on the scanning of a good-sized corpora, thus giving translators quick access to vast bilingual corpora where their own translations will be saved as well as those of their colleagues.

Consequently, translation based on corpora allows to envisage:

➢ Operation of a *translation memory,*

➢ Creation in interactive mode.

2.1.3.2.   *Interactivity*

▪ **Characteristics:**

By *interactive translation* we mean the method by which processing is launched by users who must then step in when the machine invites them to do so. For example, the system consults users and asks them to choose between several solutions or to correct any possible errors (Translator's Workbench, a C.A.T. system developed by Trados, notably offers all the linguistic analogies that are stored in its memory; the user can then choose, modify, correct and update, etc.). In this way, users interact with the machine and can re-launch the process when they wish. This system naturally implies that users must not only know both languages processed, but also the translation system with which they interact.

The first ambition of C.A.H.T. (Computer-aided Human Translation) is therefore to improve the translators' working conditions. To do this, the idea is to automate, to the extent possible, the repetitive tasks of the translators' job so that they can dedicate more time to the most interesting area of their work. Also, unlike the aim of automatic translation, C.A.H.T. does not completely automate the translation process thereby replacing translators with a machine, but it is about trying to make their work easier.

As we have already mentioned in the first paragraph of this chapter, a very clear distinction must be made between C.A.T. (or C.A.H.T) and A.T.:

- On the one hand, the C.A.T. approach entails using bilingual corpora as resources. Translators keep the initiative of the translation process.

- On the other hand, automatic translation aims for complete automation of the translation process. Translators only step in, if need be, at the post-editing[28] stage in order to correct any possible errors arising from the machine's translation.

▪ **Why take an interactive approach?**

Today we all recognize the current automatic translation system's inability to ensure a high level of quality and reliability. Submitting a translation to a machine all too often requires considerable pre-editing[29] and/or a post-editing on the part of users.

The difficulties in conducting an automated translation research project are considerable. For the translation process relies on very diverse knowledge. In order to guarantee a quality translation, it is, in effect, imperative to master the grammar of the source language and the target language, and, furthermore, to ensure the stylistic level of the translated text. Consequently, even if we note significant progress in the field of linguistic theory (morphology, syntax), the process of understanding language still constitutes another major problem. Beyond the morphological and syntactic levels, semantics and pragmatics still remain very difficult to standardize.

Interactive translation can to an extent compensate for this gap. The interactive approach in fact, allows for human intervention not before or after the translation process but during it, i.e., at the very moment when the problem arises.

▪ **The advantages of interactive systems**

Among the advantages that are offered by interactive translation systems, we consider the most important to be the fact that users retain a certain control over the progress of the translation. Thanks to interactivity, translator and machine can

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[28] Post-editing includes operations linked to (OWIL, 1993):

- the correction of translation, lexical and terminological errors or those due to problems of syntactical ambiguity;

- the lexical choice, when the system leaves a part for the user to assess;

- the general revision, in the typical sense of this operation.

[29] Pre-editing consists, for example, in (OWIL, 1993):

- correcting spelling and/or syntactical errors in the source text;

- isolating segments that do not need to be translated;

- splitting up long and overly ornate phrases in order to make the analysis by the system simpler;

- possibly even simplifying a text that is far too complicated.

actively "collaborate" together. If, for example, users must step in to solve a lexical ambiguity, they only have to select from the different solutions the one they feel is the most appropriate. Human intelligence and the speed of the machine are thus simultaneously used to the full.

2.1.4. The translator's workstation

2.1.4.1. Presentation

Faced with the ever-increasing number of documents to be translated, it is impossible to wait for traditional automatic translation systems to be fully developed. The idea then is to take advantage of all the IT techniques that are likely to help translators in their work, and therefore to achieve improvements in quality and productivity.

In practical terms, the aim is to create a specific workstation for each translator in which a set of tools useful for translating would be integrated[30].

The T.W.S. should allow the following tasks to be performed:

⇒ To quickly search for a file (on hard drive or disk), which contains a characters string determined by the user (e.g., the "Search" function in Windows XP)

⇒ To compare two versions of the same document and to see the differences between the two versions in question (e.g., " Tools/Track changes" function in Word)

⇒ To check the spelling and grammar of a document (e.g., spelling and grammar checker in Word)

⇒ To consult terminological databases on the Internet

⇒ To consult terminological databases on CD-ROM

⇒ To manage personal glossaries (e.g., the multilingual terminology manager TRADOS MultiTerm)

⇒ To carry out text alignment (e.g., automatic alignment software TRADOS WinAlign)

⇒ To have access to assisted translation (e.g., the translation memory system TRADOS Translator's Workbench)

2.1.4.2. Software integration

[30] This concept consisting of harmoniously and efficiently integrating into a workstation a set of tools useful for the translator was notably one of the main subjects of the conference held at the University of Mons in 1991 (Clas et Safar, Actes du Colloque AUPELF, 1992).

In order to be able to perform all the tasks listed above, various software packages must be installed on the translator's workstation.

How does one integrate various software packages in a translation department?

To illustrate this, here is an example of how an internal assisted translation network could operate.

Before anything else the system requires a local network to be installed (setting up of a shared disk) where the administrator:

- extracts terms from old translations;
- populates and manages terminological databases;
- creates multilingual glossaries;
- carries out specific terminological research (use of lists and dictionaries);
- pre-translates documents.

Translators who are connected to the network can then benefit from everything the administrator has done, and can:

- consult entries in the terminological database;
- carry out the translation of their documents.

The tasks assigned to the administrator are, of course, flexible and generally depend on the administrator's position, the size of the company and their involvement. Obviously, any translator's workstation should include at least a word processor and a multilingual terminology manager. But users remain the only judge of the exact nature of the peripheral tasks that they wish to automate. One of the advantages of the concept of the translator's workstation is precisely that it can be adapted to each user.

It seems that the advantage of integrating the various translation aid software into the translator's workstation is incontestable. However, the high cost of installing such a network, represents a relatively major obstacle for a company. This is all the more true given that the need for these different software packages is not universally recognized, that the gain in productivity has not been proved on a large scale and that users must not only be translators but also terminographers and even computer experts.

Nevertheless, we must not forget that every terminology or translation aid system must be developed and it is on this very "development" that its reliability and profitability depends.

Example of translation aid tools

Retranslation is a more common activity than you might have thought, and it is always difficult to find a text that has already been translated. Searching for the document can, in effect, take longer than the retranslation itself.
In order to compensate for this retranslation "problem", several private companies have developed so-called translation memory systems. Among these systems, we can notably

mention TRANSLATION MANAGER/2 marketed by IBM, and TRANSLATOR'S WORKBENCH marketed by Trados.

These systems in fact archive the source text (which must therefore, be supplied electronically, or captured by OCR or keyboard) aligned with the corresponding target text. Thus, when a new text is to be translated, the system automatically searches in the text database (referred to as "translation memory") for a text fragment that is similar to each fragment of the new text to be translated, and if it exists, the system will offer the initial translation as the new translation. The translator can either accept or reject this offer or not and possibly step in to add modifications.

2.1.5. Perspectives

As regards automatic translation, given that high-quality A.T. systems do not seem to be appearing on the horizon, currently we have the right to ask ourselves what would be the use of an "average" quality system.

The answer to this question depends largely on the type of text we wish to submit to the automated translation process. Besides literary texts, in the broadest sense of the term (literature, poetry, advertisements, etc.), which only make up a very small part of all documents to be translated, there are a considerable number of documents of all kinds (reports, technical documentation, etc.) that must be translated.

Today, however, most of these texts can never be translated, desirable though this may be, due to the time and/or the cost it takes to translate, or even a shortage of qualified translators. These documents need not all be the subject of a high-quality translation, which would be much more costly compared to the value of the information extracted from them. It can however be useful to peruse the content of said documents, even if this is approximate, in order to assess their value, and to then possibly opt for a better translation, which can be obtained by revision or retranslation by a qualified translator.

Furthermore, there is also abundant written material, which must be translated, but for which volume, deadlines, repetitiveness, or specificity of subject matter represent considerable obstacles to a satisfactory and economically viable translation: these are, for example, laws and rules, patents, standardized documents such as weather forecasts and trend reports, use and maintenance manuals for industrial equipment or consumer goods, etc.

These types of texts make good candidates for Automatic or Assisted Translation, always followed, of course, by human revision, insofar as A.T./C.A.T. systems yield best results for texts written in a fairly controlled style, involving well-defined areas, and where the highest performance systems can only be financially justified in the case of a large volumes of work.

As regards the new approach to computerized translation technology, which consists of integrating systems into a complete working environment that is specific to the translator, there is no choice but to recognize that this represents an attractive

alternative. By actively associating the user with the machine throughout the translation process, CAT systems not only draw benefit from humans but also from machines.

Finally, CAT systems allow to take full advantage of the increasingly impressive memory and speed capacities of computers. Furthermore, as they are populated and managed by the users themselves they are in a position to ensure greater coherence as well as greater reliability. The appearance of this technique based on corpora emerges as the most important innovation since the introduction of indirect systems in the 1960s.

2.2. Assisted translation within the Eurologos Group

First and foremost, in this chapter we present the computer-assisted translation software marketed by Trados, i.e., Translator's Workbench. We will examine in particular the functions this software makes available to users in order to make the translation process easier. Finally, in part two, we will explain how the EUROLOGOS Group Terminology Department takes advantage of these different options in order to manage its translation memories.

2.2.1. Translator's Workbench

2.2.1.1. Goals

The first goal of the Translator's Workbench[31] system is to have access to what we call "translation memories" in order to boost productivity.

The efficiency of this system is well illustrated by the increasing lifespan of documents. Today, in effect, all electronic documents are updated several times. It is precisely in this that translation memory systems prove their full usefulness by giving users the option of recovering the old translation and using it as a reference for the update (the software in effect keeps track of each sub-unit of text already translated).

Result: not only do translations become more consistent, but what is more, translators can now concentrate more fully on the more "noble" part of their work.

2.2.1.2. Principal characteristics

⇒   The Translator's Workbench system offers users the option of creating and managing **multilingual translation memories** where source and target segments

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[31]   The description of the Translator's Workbench assisted translation system given below is based on documentation provided by Trados (user manual).

from old translations are stored (thanks to WinAlign, a *text alignment* software) so that they can be reused in new documents to be translated.

⇒ An extensive **concordance search** and **neural network** algorithm offers the user the option of finding terms, syntagmas and even whole sentences.

⇒ Translator's Workbench allows for **an active recognition of terminology**. Thanks to the integration of MultiTerm'95, it is possible to directly access terminological databases (Workbench displays terms with their translation in a window at the top of the screen).

⇒ It is possible to run terminological searches from the Translator's Workbench by carrying out searches of **bilingual contexts**.

⇒ All the system's **parameters** (for example, the percentage set to determine the concordance threshold) can be modified by the user.

⇒ The translation memory's **maintenance** function allows substitutions and/or modifications to the memory.

⇒ Translator's Workbench **works directly in the word processor**. It is possible, by the simple use of icons, to access all the Workbench's functions from the word processor. The user can therefore translate directly in the word processor, without it being necessary to import the text to be translated into the Translator's Workbench.

⇒ Once a translation is saved in the translation memory, it keeps the **same page layout**. For example, captions in italics in the translated text will remain in italics in the translation memory. It is therefore possible to create texts with quality page layout without having to convert the translations.

Below the following functions are discussed in greater depth:
- Translation memory
- Term recognition
- Bilingual contexts
- Linguistic concordance

▪ **Translation memory** (TM)

This is a database that stores all translations and their equivalents in the source language as the translator translates. The segments stored in the translation memory can then be reused as a base when a new translation is needed. The memory grows as the translator progresses through the text, and avoids retranslation of terms or sentences that have already been translated. The memory uses state-of-the-art technology so that analogical searches of its database offer instant access to the segments of the text that have already been translated.

Furthermore, it is possible to include supplementary information in a translation memory such as the name of the client for whom the translation was carried out.

▪ **Term recognition**

Translator's Workbench allows active recognition of terminology in the sense that it can work simultaneously with the multilingual terminology manager, MultiTerm'95. Thus, in the course of a pre-translation or an interactive translation, terms stored in the MultiTerm'95 database are automatically recognized and shown by the Translator's Workbench. The translator can then benefit from direct access to the translations of the terms in question.

· **Bilingual contexts**

In the course of a job, translators often find themselves faced with a sentence to translate and sure that they have already translated a part of this sentence before. In order to help translators, Translator's Workbench allows to search the translation memory for "parts" of sentences and not necessarily for full sentences. The translator can thus launch what we call a "bilingual contexts" search by simply entering the character string desired (see the following screenshot).
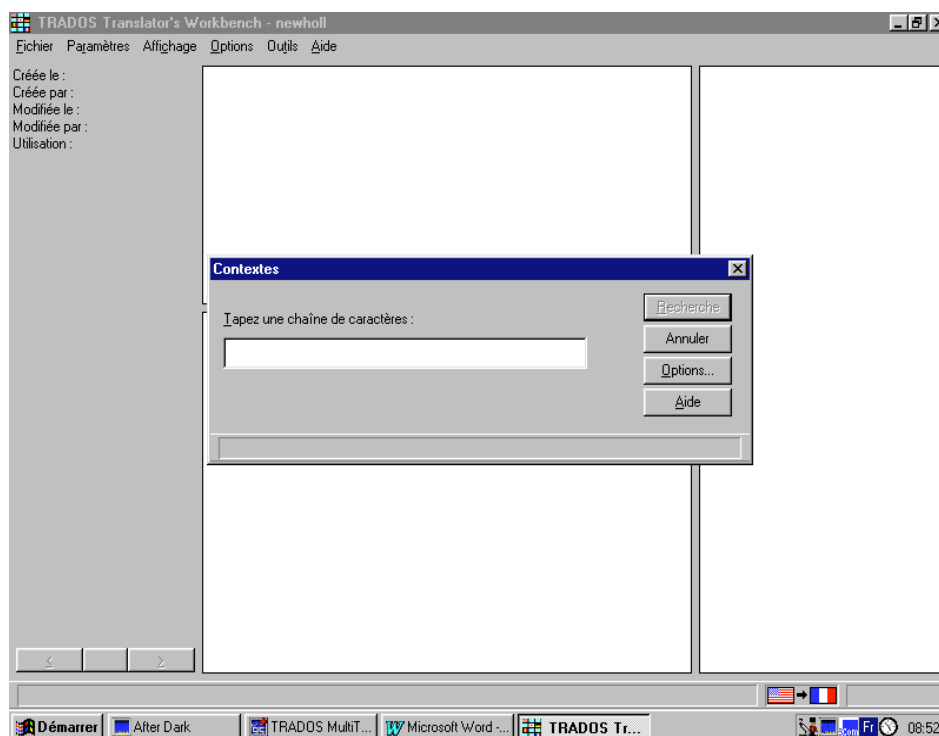
Example: here is the result of the bilingual contexts search for the character chain "Druckrohr" in the translation memory produced for the client Wilo (pump operation)
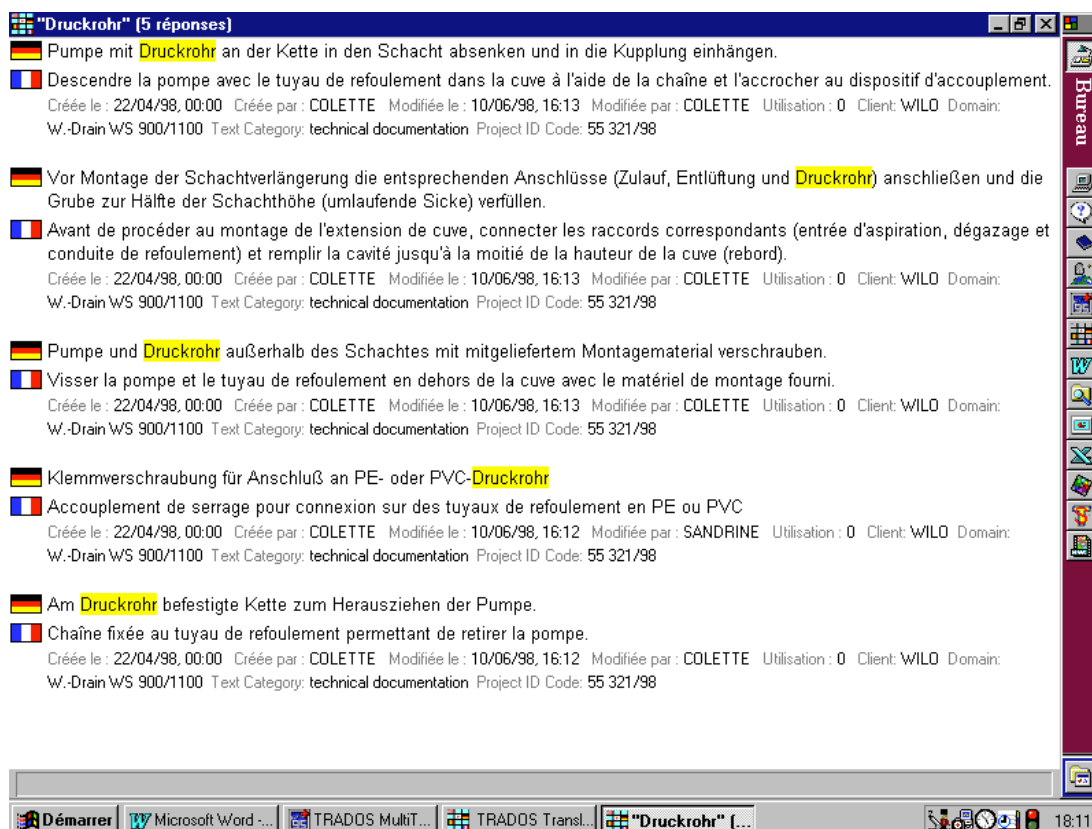
- **Linguistic concordance**

  Despite some differences, one sentence can have the same meaning as another. Having access to an old translation, even if it is not the perfect translation (100% concordance) of the text, which one wishes to translate, can therefore be of significant help to the translator.

  To this effect, Translator's Workbench (thanks to an integrated artificial neural network) allows the translator to run a concordance search[32]. Which means therefore, that even sentences that are only partly similar to those previously translated can be found and suggested by the program.

  The principle that makes this concordance search possible is the following: each new segment is the subject of similarity research in relation to segments already stored in the translation memory. If, in effect, an identical segment exists in TM, the system then selects the segment in question, which it classifies as the "best concordance" (100%).

  However, the interesting subtlety of the Translator's Workbench is that segments, which only have a certain degree of concordance with the segment being searched

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[32]

The concordance search is a technique allowing to find data, which only has a certain degree of similarity with the searched element.

for, are still suggested to the user by the system (we therefore speak of "fuzzy matching"). Furthermore, the Workbench highlights the few existing differences between the segment being translated and the one in the translation memory so that the user can insert the necessary corrections more easily.

In addition, it is possible for users to determine the concordance threshold below which they do not want the system to offer a translation solution.

Below is a screenshot representing concordance parameterization
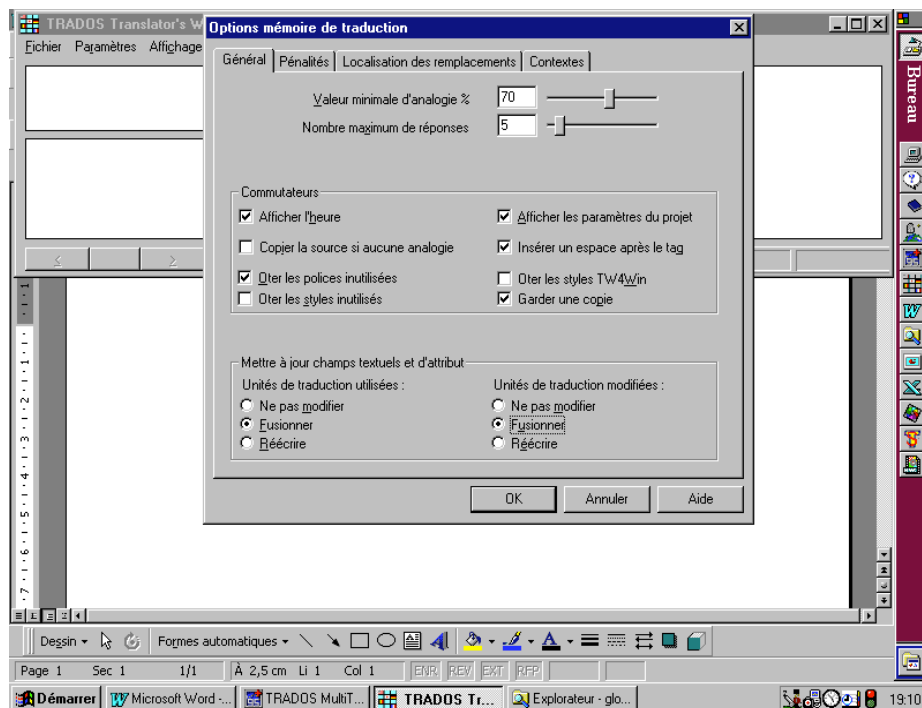
The Translator's Workbench thus allows to take best advantage of the repetitiveness of texts that is often characteristic of technical documentation. This repetitiveness can notably be explained by the fact that new versions of products (agricultural machinery, etc.) that companies launch on the market are very often "improved" versions of already existing products (better performance, additional options, etc.). And hence, contents of user manuals of these different products remain almost identical from one version to another. Studies have therefore shown that the repetition level from one text to another could be evaluated at around 70%, or even higher.

⇨ In summary, the Translator's Workbench allows very flexible access to translations, whether they are full sentences (translation memory), or "parts" of sentences (bilingual contexts search) or even terms (term recognition).

2.2.1.3.   Setting up a translation memory

The translation memory can be populated in two different ways:

⇒ From old translations (bilingual corpora). The result of aligning the source and target texts is then directly imported into the required translation memory (note that this alignment can be carried out thanks to WinAlign, the automatic text alignment program developed by Trados). A translation department can therefore import all of their translations carried out over the previous years (provided that these exist in electronic format) into a translation memory and use them as a reference source for future translations.

⇒ As the translator translates, Translator's Workbench will, in effect memorize every sentence the translator translates. In other words, one could say that the system "learns" to translate as the translation is effectively carried out. It checks if each sentence has been translated before and, if this is the case, it offers the matching translation.

One therefore has to remember that, contrary to what many people think, a translation memory that has just been created is empty. One must therefore populate it regularly before it will prove its efficiency.

2.2.2   Translation memories managed by the EUROLOGOS Group

The EUROLOGOS Group's terminology department currently manages translation memories for the clients New Holland and Wilo, who specialize in agricultural machinery and pump mechanisms respectively.

2.2.2.1.   Setting up the translation memory.

Preparatory phase: digitizing

Note: this first phase proves to be necessary when the old translations destined to populate the translation memories are not available in electronic format.

The initial stage consists therefore, in digitizing the paper versions of documents. This is in order to be able to align them and then to integrate them into the translation memory. Digitizing indeed appears to be the best alternative to encoding texts as it yields a quicker result.

Various documents (commercial brochures, etc.) have been digitalized with the help of Omnipage software on Macintosh and A4-format flat scanner.

Omnipage offers several options; the stages can either be grouped together or conversely broken up to give a more reliable result.

⇒ *Acquisition*

The slowest part of the process, it consists of transforming a paper image into a digital image.

⇒ *Defining area limits (manual or automatic)*

It is necessary to define the sections that can be recognized as text and to number them so that the final text will be organized. According to the paragraph layout, it is sometimes necessary to define the area limits manually as the software numbers vertically by column. However, much efficiency is lost, because this task can be automated by carrying out the OCR (Optical Character Recognition) directly.

⇒ *Optical Character Recognition (OCR)*

Omnipage transforms a visual image into a text file, so that it can be used by a word processor. Furthermore, a link can be created with Word to import directly.

Note: It is possible but very slow to run a spell check in parallel with the character recognition, Word is much more user-friendly and easier for this task.

⇒ *Software parameterization*

The choice of language is of the utmost importance for better character recognition. The software will thus take into account the typographic characteristics of each language (accents in French for example).

⇒ *Effectiveness and problems*

The quality of the original text is a very important factor in the quality of optical recognition. If a part of the text is not very clear, too faint or the font is too unusual or stylistic (italics with small font size, for example), OCR is not always possible or the result is unusable. In addition, a color background, for example, "confuses" the digitizing. For example, problems of characters not being recognized or being replaced by others can arise.

Example: L'Úvolution rapide du monde agricole se traduit entre autres par un rÚel besoin de tracteurs "compacts". Que leur demande-t-on? Tout simplement d'offrir Ó Úchelle rÚduite les performances des grands. Puissance modÚrÚe, consommation rÚduite et faible prix de revient n'enl_vent rien Ó la polyvalence de ces tracteurs.

As can be observed from the example given above, it is essential to carefully proofread the digitized text. To illustrate this we show a digitized text below and on the following page, the formatted and corrected version of the same text (this example is an extract from a commercial brochure of the client New Holland, specialist in agricultural equipment).

♦ Digitized text

The investment to deliver technology

INVESTING IN YOUR FUTURE

NEW HOLLAND HAS THE TECHNOLOGY TO CREATE ADVANCED PRODUCTS.

Looking to the future has always been New Holland's strength, utilizing vast experience to invest in products for the future. Series M is that future. The experience of New Holland has been built up over many years in the agricultural and industrial machinery business. Through customer surveys and focus groups New Holland has also gained from the experience of farmers and operators - experience that has been incorporated into products. The manufacturing plant has expanded "Inprocess" testing to check components before they are fitted to the tractor. The cab, for instance, undergoes a full, working simulation. This tests the electrical and electronic system.

Every engine undergoes a dynamometer test to check its performance. The advanced assembly of the transmissions and rear axle uses automatically controlled carriages, bringing the sub-assemblies together. Then delivering the finished assembly to a test position. The design, development and introduction of the Series M indicate New Holland's commitment to the agricultural industry. Series M embodies a substantial investment to create the products that our customers demand. Their technical innovations and powerful operation provide just that. The manufacturing facilities have been expanded for further advances in quality - even more evidence of New Holland's commitment to the agricultural industry.

The continuous production line turns engine blocks into completed engines ready to be tested.

The latest engineering techniques have been incorporated to provide a quality design.

The transmission and rear axle of the Series M are transported between assembly positions by automatic carriages.

Every engine undergoes a rigorous dynamometer test before being fitted to the tractor

The cab systems are checked before being fitted to the tractor. A test rig simulates the operation of the tractor in the factory

♦ Formatted and corrected text

The investment to deliver technology

INVESTING IN YOUR FUTURE

NEW HOLLAND HAS THE TECHNOLOGY TO CREATE ADVANCED PRODUCTS.

Looking to the future has always been New Holland's strength, utilizing vast experience to invest in products for the future. Series M is that future.
The experience of New Holland has been built up over many years in the agricultural and industrial machinery business. Through customer surveys and focus groups New Holland have also gained from the experience of farmers and operators - experience which has been incorporated into products. The manufacturing plant has expanded "Inprocess" testing to check components before they are fitted to the tractor. The cab, for instance, undergoes a full, working simulation. This tests the electrical and electronic system.
Every engine undergoes a dynamometer test to check its performance.
The advanced assembly of the transmissions and rear axle uses automatically controlled carriages, bringing the sub-assemblies together. Then delivering the finished assembly to a test position. The design, development and introduction of the Series M indicate New Holland's commitment to the agricultural industry. Series M embodies a substantial investment to create the products that our customers demand. Their technical innovations and powerful operation provide just that. The manufacturing facilities have been expanded for further advances in quality - even more evidence of New Holland's commitment to the agricultural industry.

The latest engineering techniques have been incorporated to provide a quality design.

The continuous production line turns engine blocks into completed engines ready to be tested.

The transmission and rear axle of the Series M are transported between assembly positions by automatic carriages.

Every engine under goes a rigorous dynamometer test before being fitted to the tractor

The cab systems are checked before being fitted to the tractor. A test rig simulates the operation of the tractor in the factory

File alignment and import

In order to compile a translation memory, it is first necessary to carry out an accurate alignment of the source and target texts. The result of the alignment can then be directly integrated into the translation aid software.

➢ *Alignment preparation and alignment itself*

Once the digital texts have been converted into PC format, they must be saved in RTF format so that they can be aligned by WinAlign. This supplementary software allows to create sentence pairs from the original text and its translation, and then to import them into a translation memory.

➢ *WinAlign software*

♦ How it works

The WinAlign principle is simple: the software shows the two texts to be aligned on the screen and makes different functions available to users, which allow automatic and/or manual alignment. The following functions can be carried out:
By clicking on a segment of the source or target text:

· *Commit*: Allows to connect source and target segments.
· *Commit All Alignment Units*: Allows to automatically align all segments.
· *Disconnect*: Allows to disconnect a source and target segment.
· *Properties*: Displays the characteristics of the selected segment.

♦ By clicking outside the text

· *Align Structure Level*: Confirms the hierarchical structure created by WinAlign.
· *Disconnect All Alignment Units:* Allows to eliminate all connections resulting from automatic alignment.

Below is the screenshot of an English-French alignment (extract from the New Holland brochure) where all the aligned units have been accepted:
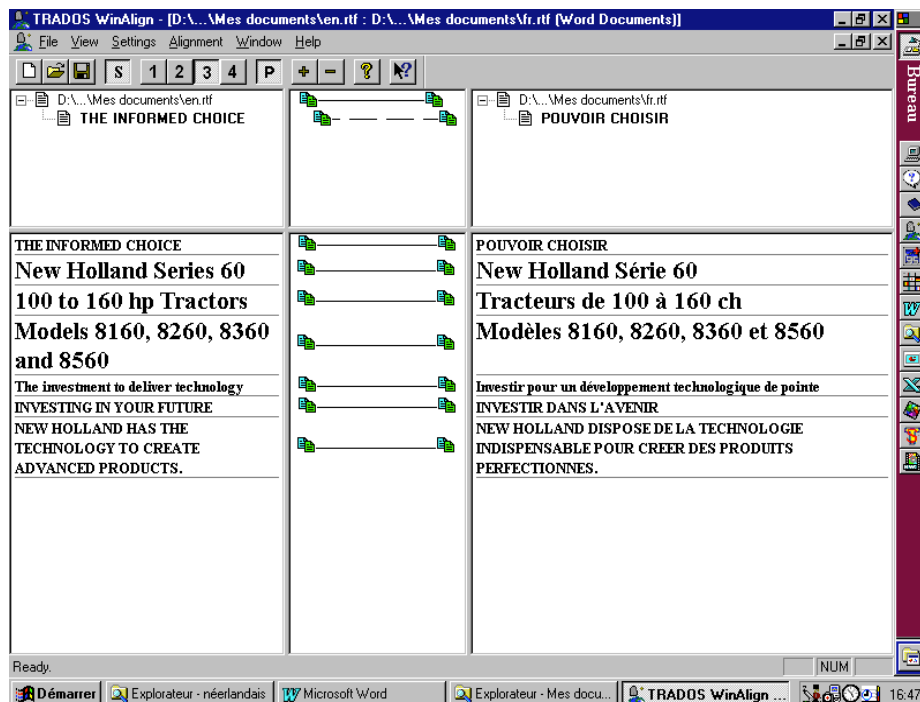
♦ Parameters

When aligning several texts, it is useful to consider several factors. Before starting an alignment project the text formatting, the number of figures contained in the text, and tags are to be taken into consideration. WinAlign notably allows to specify the degree of importance of each of these factors, according to the type of text being aligned:
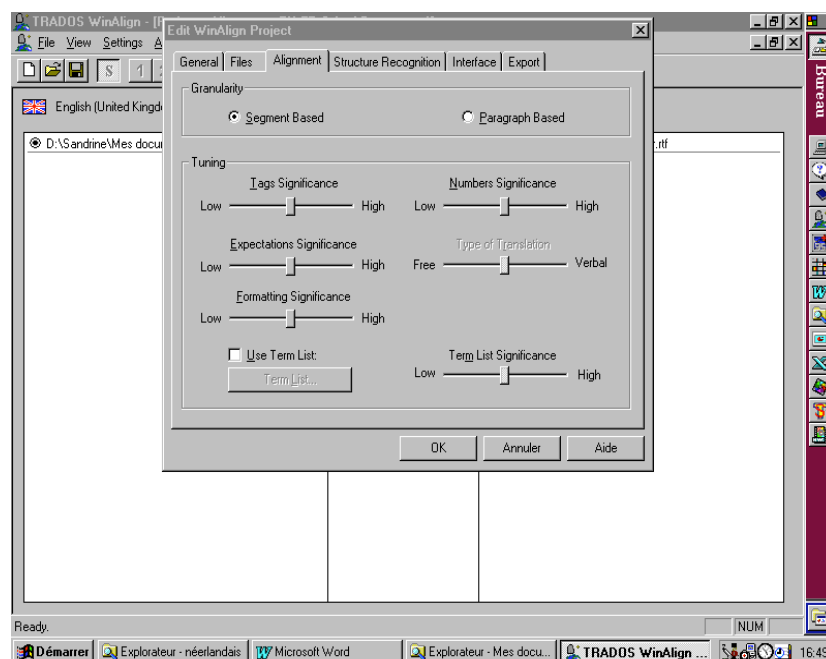
It is thus possible to:

- choose if the alignment is to be based on segments (Segment Based) or paragraphs (Paragraph Based). Note that the first option is the default one and that the second proves to be useful mainly in the alignment of Asian texts;

- decide whether or not to take tags into account;

- determine the degree of consideration for acronyms and abbreviations in the alignment. This parameter is not to be ignored as we consider that in general around 5% of technical documents are made up of acronyms or abbreviations;

- decide the importance of formatting during alignment. The use of identical fonts in the source and target texts is, for example, a criterion, which can hugely facilitate alignment.

- determine the consideration level of numbers during alignment;

- Define the type of translation, i.e., if the target text tends to be a literal translation or not. It is important to note whether the structure of the translated text shows a high degree of similarity to the structure of the source text, as is often the case for the majority of manuals and other relatively technical translations.

- integrate into WinAlign a file listing the nouns, which are usually present in the texts to be aligned and on which the software can rely when aligning new texts.

♦ Evaluation

During the alignment phase, errors are found particularly due to punctuation.

Indeed, WinAlign always considers that a period ". " concludes a sentence. However, it can happen that a period does not necessarily conclude a sentence, notably if it comes after a number, as is often the case in German. E.g., 12. Januar, der 12. Kammer, etc. Or if it placed after an abbreviation.

Despite these problems, there is no choice but to note that the automatic alignment run by WinAlign is relatively quick and that the possibility of carrying out manual modifications compensates, to a point, for the few errors that the software makes. In addition, WinAlign allows to improve the alignment results by proposing the realignment of the text if the segments are not correctly divided. What matters most of all, is to correctly determine project alignment criteria in order for this to work as well as possible.

- Example of an alignment unit (extract from a New Holland brochure)

```
</TrU><TrU><Quality>100<CrU>WINALIGN
<CrD>18061998
<Att L=Client>New Holland
<Att L=Domain>Big Balers
<Att L=Text Category>Commercial Documentation
<Att L=Usage Status>Client-approved
<Txt L=Project ID Code>72005- 08/97
<Seg L=USE>These balers have been designed for the highest baling capacity and constructed
for years of dependable fieldwork.
```

```
<Seg L=FRE>Ces presses à balles ont été conçues pour atteindre une capacité optimale de
mise en balles et pour accomplir, pendant de longues années, un travail fiable sur le terrain.
</TrU>
```

Explanation

This segmentation unit was created on 18 June 1998 by the WinAlign alignment software. The structure is as follows:

- The attributive and textual fields allow to include descriptive information relative to the project.

- The source and target segments are contained in the last lines and are preceded by the identification of the language corresponding to each segment. In the example above, USE refers to English and FRE to French (France).

- The unit involves the project for the client New Holland and the field is that of big balers. The identification code (ID Code) of the project refers to the source of the aligned texts (in this case, the brochure 72005- 08/97).

➢ *Importing WinAlign text files into a translation memory*

After having exported the results from the WinAlign alignment as a text file, they are imported into the translation memory, by simply using the "import" command (File menu) taking care to define the following import options:

▪ The import mode offers two main options: "Small import file (no reorganization)" and "Large import file (with reorganization)". We have chosen the Large file (with reorganization– slow import), which is useful if a large file must be imported containing many translation units (at least 50 units). In slow import mode, Translator's Workbench reads and analyses all translation units of the import file and then merges them with the existing data.

▪ The "import" menu also allows to specify whether or not one wants to merge existing translation units during import. The program will then compare the imported translation unit with the existing translation unit, and if the two units contain identical source sentences but different target sentences, their attributive and text fields will be merged.

▪ Furthermore, it is possible to choose to ignore or to add to the active translation memory configuration all new text and attributive fields possibly present in the import file and which do not yet exist in the translation memory.

▪ One option allows to keep only the most recent translation units and to delete the old version. Thus, if a unit to be imported has the same source sentence as a unit in the translation memory and is newer than the translation memory unit, it will be imported and will replace the old unit.

The following diagram details the sequence of operations carried out by the software during an import according to the option selected (no change, merger or update). This

diagram is based on the diagram available in the WinAlign help (TU= translation unit and TM= translation memory).

```
                    ┌─────────────────────────────────┐
                    │  Reading of a new translation   │
                    │   unit from the import file     │
                    └─────────────────────────────────┘
                                   │
                                   ▼
                    ┌─────────────────────────────────┐   no    ┌──────────────────┐
                    │ Is the translation unit         │────────▶│ Reject the       │
                    │ receivable?                     │         │ translation unit │
                    └─────────────────────────────────┘         └──────────────────┘
                                   │
                                   ▼
                    ┌─────────────────────────────────┐   no    ┌──────────────────┐
                    │ Does the source segment of the  │────────▶│ Addition of      │
                    │ TU correspond to one or several │         │ translation unit │
                    │ TM segments?                    │         │ to the memory    │
                    └─────────────────────────────────┘         └──────────────────┘
                                   │
                                   ▼
                    ┌─────────────────────────────────┐
                    │ Compare TU to TM and search the │
                    │ best concordance                │
                    └─────────────────────────────────┘
```

No change   **Merger**   **Update**

```
┌──────────────┐   ┌─────────────────────────┐   ┌──────────────────────────┐
│  Reject TU   │   │ Compare the target      │   │ The target segment of    │
│              │   │ segment of the TU with  │   │ the TU replaces the      │
│              │   │ that of the TM with the │   │ target segment of the TM │
│              │   │ highest degree of       │   │ with the same attributes │
│              │   │ concordance             │   │                          │
└──────────────┘   └─────────────────────────┘   └──────────────────────────┘
                              │
                              ▼
                   ┌─────────────────────────┐   no    ┌──────────────────────┐
                   │ Is the target segment   │────────▶│ Addition of the TU   │
                   │ of the TU equivalent to │         │ target segment to    │
                   │ that of the TM?         │         │ the TM               │
                   └─────────────────────────┘         └──────────────────────┘
                              │ yes
                              ▼
                   ┌─────────────────────────┐
                   │ Do the attributes       │
                   │ correspond to those of  │
                   │ the TM?                 │
                   └─────────────────────────┘
```

yes   no

```
┌─────────────────────────────┐         ┌──────────────────────────────┐
│ The TU target segment       │         │ A new unit is created in the │
│ replaces that of the TM.    │         │ TM, which integrates the new │
│ Their attributive and text  │         │ attributes and the new       │
│ fields are merged.          │         │ target segment.              │
└─────────────────────────────┘         └──────────────────────────────┘
```

Configuration and parameterization of a C.A.H.T. project

It is at first important to configure the general parameters of the translation memory before defining the interactive translation project and the pre-translation. This second parameterization will be explained in the section on use.

➢ *General creation parameters*

During the creation of a new translation memory, it is necessary to specify the following elements:

- The target and source languages that will be used in the memory

- The name, copyright, and description of the TM

- The system fields; these are designed to store administrative information such as the creation date or the name of the person who created the translation unit. The following table shows all the available system fields:

Creation date	Shows the creation date of a TU.
Created by	Shows the name of the person who created the TU.
Modification date	Shows the date the TU was last modified
Modified by	Shows the name of the person who last modified the TU
Date of use	Shows the date a TU was last used.
Usage counter	Shows how often a TU is used.

To illustrate this, below is the screenshot of the creation of a TM:
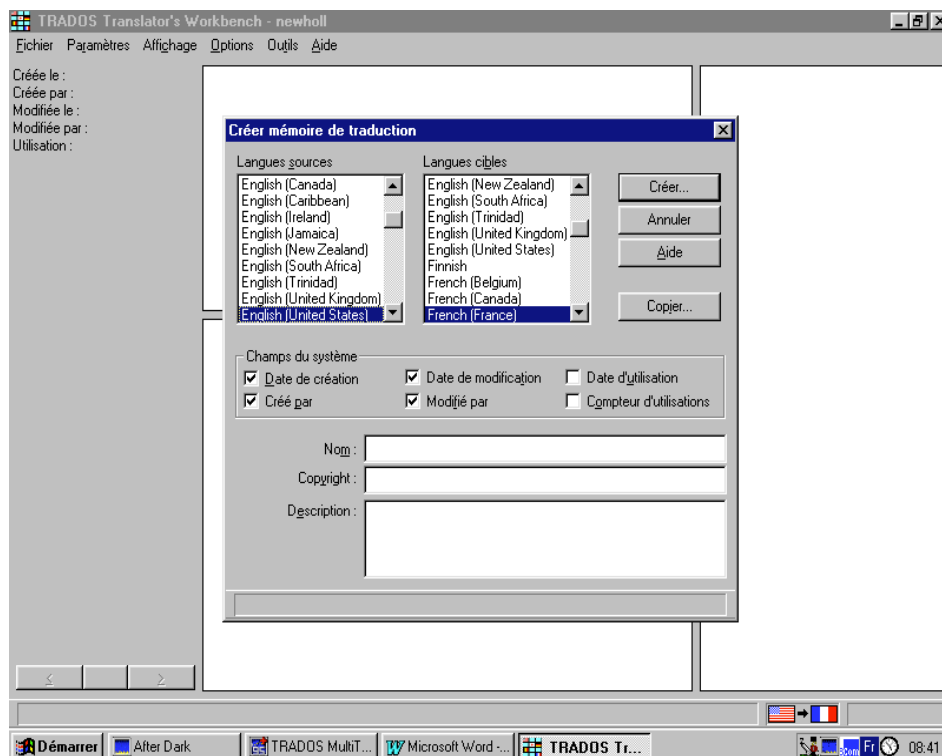
➢ *Properties*

A command allows the configuration of the active translation memory. It is therefore possible to determine:

▪ Text fields, attributive fields and attributive values:

- The *text fields* offer a certain flexibility in the sense that it is possible to define their content each time a new project is started. It is therefore preferable to insert into the textual fields information, which is liable to differ from one project to another (for example, the name of a translation project).

- Just as with the MultiTerm terminology manager, the *attributive fields* are made up of an attributive field and a list, which has been predefined by the user, containing values that are likely to be affected by this attribute. Information contained in the attributive fields is thus very useful in classifying translation units in the translation memory. To give an example, to the attribute "Usage Status", the following values could be attributed: "Client approved", "To be checked", "Recommended", etc.

In EUROLOGOS' linguistic services, translation projects contain the following information:
- Each document to be translated is identified by a code ("job" number);
- Clients and their special fields are listed.

▪ Non-translatable elements that must be automatically replaced during translation:

This function allows to choose whether Translator's Workbench should treat numbers, acronyms, and proper nouns as variables or as ordinary words. In other words, one must choose which elements will be automatically replaced by the Translator's Workbench. Also note that if the only element that is different in a new sentence is a variable, the program will indicate perfect concordance (100%).

Furthermore, Translator's Workbench can carry out what is known as a "replacement localization". Replaced elements will then not only be transferred into the target language but also "localized", in other words adapted to the target language (e.g., change of date format).

▪ Segmentation rules:

It is possible to define the rules for segmentation of source texts. These rules are notably based on end characters and lists of abbreviations.

During a pre-translation or an interactive translation, Translator's Workbench automatically searches to see if the active sentence exists in the translation memory. To do this, the system uses the punctuation, which allows it to identify the beginning and end of a sentence.

- ▪ Access rights: by setting up passwords it is possible to monitor various users' access to the translation memory.

Presentation of a translation unit

A source sentence is always stored with its translation. Additional information is added to these two sentences (attributive and text fields) and possibly administrative fields. This group is what we call a *translation unit*.

The text files created with the Workbench export function are made up of the following parts:
- File header or "RTF preamble"
- Translation units and the information relating to them

RTF preamble

This is what the RTF preamble of a Translator's Workbench text file normally looks like.

```
<RTF Preamble>

<StyleSheet>{\stylesheet {\s0 normal;}{\cs1\cf5\f1\sub\v tw4winTags;}{\cs15\b\f4\fs24\i
Test;}{\cs15\b\f5\fs24 Trados;}}

<FontTable>{\fonttbl {\f1\fmodern\fcharset0\fprq1 Courier New;}

{\f2\fswiss\fcharset0\fprq2 Arial;}

{\f3\fcharset0\fprq2 Bookman Old Style;}

{\f4\fcharset0\fprq2 Wide Latin;}

{\f5\fcharset0\fprq2 Century Gothic;}

{</RTF Preamble>}
```

⇨ The preamble always opens with the opening tag <RTF Preamble> and ends with the closing tag </RTF Preamble>. In this preamble, Translator's Workbench lists the fonts and character styles, which will be used in the construction of the translation memory.

Translation units

The following table shows the meaning of the different tags present in the export file:

<TrU>, </TrU>   Means that a translation unit starts/finishes at this point.

<CrD>	Indicates the creation date of this translation unit in the format DDMMYYYY.
<CrU>	Gives the identity of the person who created the translation unit.
<ChD>	Indicates that date on which the translation unit was last modified (format DDMMYYYY).
<ChU>	Provides the identity of the person who last modified the translation unit.
<UsD>	Indicates that date on which the translation unit was last used (format DDMMYYY).
<UsC>	Indicates how often the translation unit is used (corresponds to the system field "Usage counter").
<Att L=Attribute Field Label>	Indicates the name of the project attribute related to the translation unit.
<Txt L=Text Field Label>	Indicates the name of one of the translation unit's text fields.
<Seg L= Segment Language Label>	Contains the name of the language to which the following segment pertains. The lines beginning with the tag <Seg L> contain sentences and their equivalents in the target language.

The TU is made up of four data categories:

1. The sentence in the source language and its equivalent in the target language

2. System fields (administrative data)

3. Attributive fields (classification data)

4. Text fields (free textual data)

To illustrate this a translation unit below taken from the translation memory created for the client New Holland. The unit in question is then explained.

Example

```
</TrU>
<TrU>
<CrD>11061998, 00:00:00
<CrU>WINALIGN
<ChD>12061998, 12:03:55
<ChU>COLETTE
<UsC>1
<Att L=Domain>TF Elektra Combine
<Att L=Text Category>Commercial Documentation
<Att L=Usage Status>Client-approved
```

```
<Txt L=Project ID Code>43029- 04/97
<Seg L=EN_US>The New Holland Discovery Cab features curved glass to provide a wide, panoramic
view.
<Seg L=FR_FR>La cabine Discovery de New Holland est équipée de vitres convexes offrant une vue
panoramique.
</TrU>
```

⇨   Explanation:

- This Translation Unit (TU) was created on 11 June 1998 by the automatic alignment software WinAlign.

- Colette modified it on 12 June 1998.

- The translation unit was created as part of a project for a client working in the agricultural sector, New Holland; as the whole memory is intended for this client and the memory does not distinguish between projects, the domain to which it is attributed is TF Elektra Combine, this is a clarification of its usage area (in this case, the type of agricultural machine for which the TU was created). The identification code (Code ID) of the project is 43029- 04/97; in other words, this translation unit was taken from the commercial brochure number 43029 published in April 1994.

- The "Text Category" attribute allows to add information on the type of text used, in this case commercial literature.

- The attribute "Usage Status" also allows to specify if the text has been validated by the client (which is effectively the case for this TU).

- The linguistic data, i.e., the source and target segments, are contained in the last lines and are preceded by the identification of the language corresponding to each segment. In the above example, EN_US corresponds to English (US) and FR_FR to French (France).

2.2.2.2.   *Translation memory management*

This part refers to tasks carried out by the memory administrator, who defines the parameters of projects and then carries out all the memory maintenance.

In order to do this, it is essential to carefully identify the needs from the beginning, to properly define the parameters and the segment definition areas, to always specify sources and to avoid errors as much as possible, which later will have repercussions for the entire project.

The range of management options offered by Translator's Workbench is very wide: search function, repetition elimination function, replace old units function, etc. However, one must keep in mind that the management of a large-scale project that is important to the company demands rigor otherwise it will not later be able to be fully used.

Indeed, memories will quickly grow and any unforeseen change (such as a change of a field name that was badly defined in the first place) implies that the memory manager has to export the memory to a word processor in RTF format in order to make the required changes to then import it as a new memory into the software.

It is even more essential to carefully define the starting framework of a translation memory as it has a commercial aim. It is therefore imperative that the memory be coherent and reliable for translators (no orthographical, syntactical or semantic errors).

As the different management options provided by the software are essential to any subsequent use, we show their main functions below.

➢ *Definition of initial parameters*

When creating a translation memory it is of the utmost importance to correctly parameterize it. In order to obtain a precise analysis of each translation unit, it is necessary to subject them to penalties.

One option notably allows to indicate how translation units with different formatting should be penalized:

▪ Formatting penalty

This involves source sentences of which the formatting differs from the corresponding source sentence in the translation memory. This penalty does not only apply to perfect equivalents, but also to concordances. It is possible to choose a value between 0% and 20% inclusive. The default is 1% formatting difference, as these differences are less important than linguistic differences.

Example

Supposing that the current source phrase is **The Series 56** *was designed with 4-wheel drive,* and that the translation memory contains a perfect equivalent from a linguistic point of view but of which the formatting is different (*The Series 56 was designed with 4-wheel drive).* The software will therefore recognize perfect concordance but will reduce the concordance value by 1% due to the difference in formatting.

▪ Non-matching attributes penalty

This involves translation units, which have different attribute fields to those selected. It is therefore possible to specify a penalty value for different attributes, between 0 and 20% inclusive. By default, it is 2%.

Example

If a single term must be translated differently according to the client, one would define two distinct client attributes during the creation of the translation units. The software thus creates two translation units for the same source sentence. If this source phrase appears in a new translation project, the software will find the two similar sentences in its memory. Only one, however, will posses the client attribute relevant to the project whereas the second unit will be penalized by 2%.

▪ Placeables difference penalty

This penalty is only relevant under the following conditions:

- The segment to be translated contains placeables (in most cases, tags)
- A match for the segment was found in the translation memory
- The tags in the target segment differ from those in the source segment of the translation unit of the corresponding TM

Given that the software is not able to automatically replace the tags in the new translation (it is impossible to correctly place them in the new translation), a penalty is added.

- Alignment penalty

This involves translation units, which have been created with the help of WinAlign. These units will be penalized by 3% until they have been checked by the translator. The penalty will be removed when "WinAlign" has been replaced by a new ID.

- Machine translation penalty

This involves translation units created with the help of A.T. systems. Due to a lack of reliability that remains important in automatic translation, Translator's Workbench will automatically apply a penalty of 15% to a perfect match.

By way of a summary, the following screenshot shows the different values of these penalties
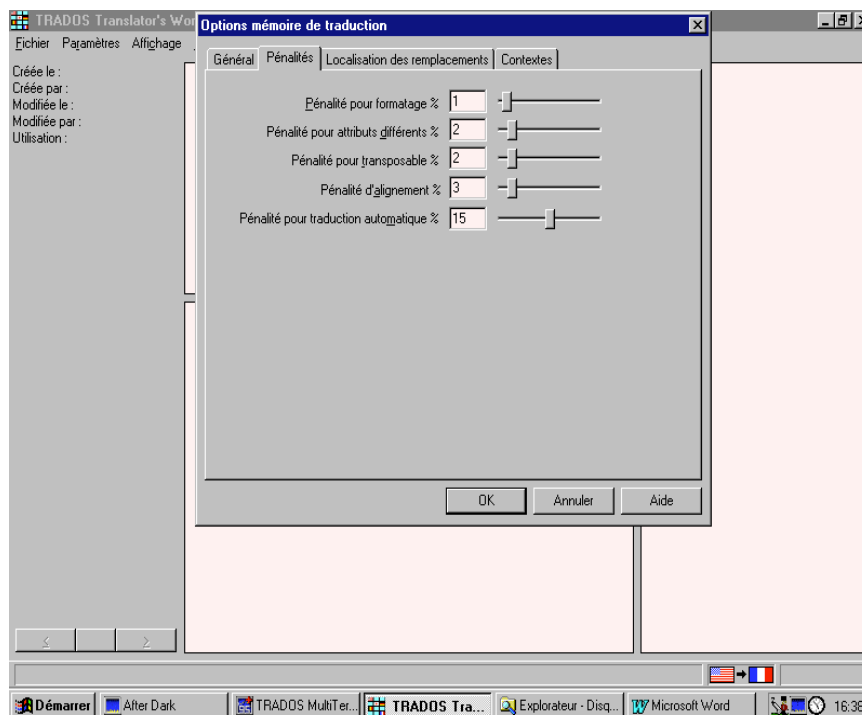
➢ *Subsequent modification of text and attribute fields*

After having worked for a certain amount of time on a translation memory, it can sometimes be useful to add or modify text or attribute fields. In order to do this, one only has to click, for example, on the name of the attribute field that one wants

to replace, and enter its new name. However, the order of elements in the different lists must always be maintained, if not the data in the database will be changed. If, despite this, one wants to change this order, it is necessary to export the entire database and re-import it into a new database. The same is true if it is necessary to make deletions (Translator's Workbench does not, in effect, allow to delete already defined elements).

➢ *Update function*

This function makes a comparison between translation units in a document and those in the translation memory. It allows to add new translations to the translation memory and to update the translation units already present in the memory.

➢ *Analysis function*

This function is very useful for estimating how long a translation project will take and its cost. On the one hand, it allows to determine the degree of concordance between a document and the data in the active translation memory. On the other hand, it statistically represents the repetitions that exist in a collection of texts. After analysis, all the values are recorded in a log-file, an example of which is given below (relating to a New Holland commercial brochure)

Start Translate: Wed Jul 01 09:22:05 1998

Translation Memory: D:\Programmes\TRADOS\memoiretrad\newholl.tmw

D:\NEWHOLL\BROCHCOM\NEWBROCHURES\81001\81001EN.RTF

Terms translated   87

	Segments	Words	Chars/Word	Placeables
Translated	83	528	5.59	0
Updated	0	0	0.00	0
Total	129	1,028	5.32	0

D:\NEWHOLL\BROCHCOM\NEWBROCHURES\81003\81003EN.RTF

Terms translated   50

	Segments	Words	Chars/Word	Placeables
Translated	24	238	5.13	0
Updated	0	0	0.00	0
Total	53	512	4.98	0

D:\NEWHOLL\BROCHCOM\NEWBROCHURES\81004\81004EN.RTF

Terms translated   28

	Segments	Words	Chars/Word	Placeables
Translated	30	391	4.97	0
Updated	0	0	0.00	0
Total	49	618	4.98	0

D:\NEWHOLL\BROCHCOM\NEWBROCHURES\81013\81013EN.RTF

Terms translated   574

	Segments	Words	Chars/Word	Placeables
Translated	46	114	5.98	0
Updated	0	0	0.00	0
Total	266	3,336	5.14	0

Translate Total

Terms translated   739

	Segments	Words	Chars/Word	Placeables
Translated	183	1,271	5.35	0
Updated	0	0	0.00	0
Total	497	5,494	5.14	0

Translate finished successfully! Wed Jul 01 09:24:32 1998

➢ *Correction of already translated segments*

If one wants to correct translations after their initial creation, it is essential that this be done in TM mode so that the corrections are recorded simultaneously in the translation memory and the document. For this, you simply need to:

- re-open the translation unit in TM mode;
- make the desired modifications to the target segment;
- insert the TU so that can be updated simultaneously in the translation memory and in the text.

Nevertheless, if one must make more exhaustive corrections (e.g., overall terminological modifications) to numerous sentences, it is preferable to correct the sentences in a single operation, using, for example, the find/replace function of the word processor (TM mode deactivated). Modifications are therefore only made to the document.

➢ *TM maintenance*

This function allows to radically modify the TM content at all levels without having to export or import the data. It is possible to:

- find and replace text in translation units;
- find and alter information in system fields;
- find and alter information in text and attribute fields.

For our C.A.H.T project for New Holland, we have notably redefined find and replace overall actions:

▪ Overall changes: we essentially indicate overall changes criteria on three levels: system fields, text fields and attribute fields, and source and/or target segments. The following screenshot shows these different levels with their respective specifications:

▪ Constraints: We used this command in order to limit the maintenance or export
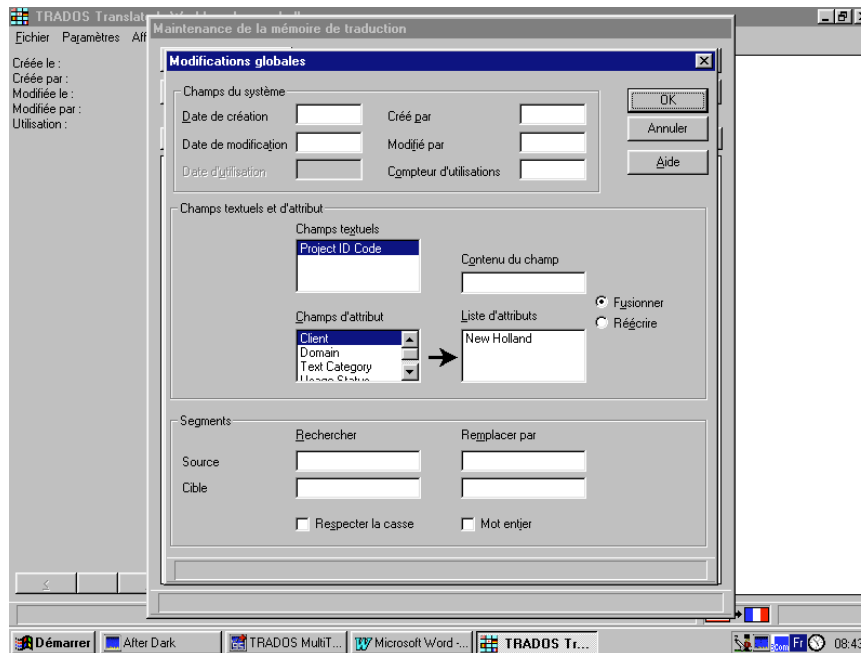
operations to a set of translation units.

During export or maintenance operations, it is possible to set restrictions at system field level in order to limit data processing affecting the whole memory:

- Maintenance: this list shows the different possible restrictions involving the processing of data in the translation memory. It contains the names of the language of segments and the system, attribute and text fields, which must be used in order to define the export or maintenance constraints.

- Export: this list contains the different restrictions involving the export of data from the translation memory. One can, for example, specify that only those translation units, which have been used at least twice, should be exported.

2.2.2.3.   Running translation memories

Before starting a project, it is necessary to take advantage of the source text in order to determine, with a high degree of precision, the gains in productivity and in this way use the memory according to the analysis carried out.

Shown below are the different analysis methods, which have allowed the estimation of time and costs of different projects.

Analysis prior to starting a project

➢ The issue of updates

As the C.A.T. projects conducted within EUROLOGOS are the subject of regularly updated documents, it seems wise to us to analyze the two successive versions of a particular document before starting any project. This is in order to compare and observe their level of equivalence or similarity.

In order to do this, one must:

- First analyze the old document in relation to the already existing translation memory. Translator's Workbench will then create a provisional memory with all the sentences of this first document

- Secondly analyze the new document, while being careful to select the memory resulting from the previous analysis. Translator's Workbench will then compare the second document not to the original TM, but to the temporary TM resulting from the first analysis, which contains all the source sentences from the first document. The results of this second analysis will then provide the differences between the two documents, thus allowing us to determine the extent of their differences.

➢ Analysis of the source text before translation

Analyzing the source text before translation with Translator's Workbench allows to best prepare its pre-translation.

Indeed, in the case of frequently used segments, it is especially important that their translation be consistent. Consequently, before carrying out the translation of documents, it can prove useful to know if these documents contain recurring segments and to translate them.

To this effect, Translator's Workbench offers a function allowing segments to be exported in a text format file. The program then creates a file containing translation units made up of frequently occurring source segments, which do not have an equivalent in the target language.

It then suffices to translate these sentences with the help of Translator's Workbench and to add them to the translation memory before launching the pre-translation.

This method allows us to ensure that the frequently occurring segments already have a translation and that this remains consistent in the translated document or documents.

Furthermore, there is also an option that allows to create a text file made up of segments, which are not present in the translation memory used by the analysis; this means storing, in a text file, all the sentences of which the match value is inferior to that specified by the user. The benefit of this method is clear: the file created in this way can be translated in a completely traditional way while the software continues to pre-translate the part of the document, which has a degree of concordance with the TM.

➢ Option of filtering a translation memory

The use of this filter function seems particularly interesting. In effect, the Translator's Workbench allows to filter a translation memory according to very precise criteria in order to obtain a "reduced" TM, which meets the needs of a particular project.

One quickly sees the benefit of this method: many companies call upon independent translators who do not need the entire company's translation memory. On the contrary, they only need part of the memory corresponding precisely to the translation project on which they have to work.

Ideally the company should be able to analyze all the files, which must be entrusted to freelancers, following this analysis, create a specific translation memory project.

Operation methods

The Eurologos terminology department runs the translation memories that it manages by means of two processes:

➢ *Pre-translation*

The software's main tool, this function allows a text to be translated without the intervention of the user by comparing it to the translation memory. All the sentences, which have a higher level of concordance than the limit set by the user, are automatically translated.

Many translation companies entrust their translation assignments to independent translators who do not have such advanced tools as Translator's Workbench at their disposal. To compensate for this drawback, EUROLOGOS uses the pre-translation function.

This function allows to carry out the following tasks:

♦ Automatic pre-translation of all the segments of one or several Word or WordPerfect documents or tagged documents that have a certain level of concordance with regard to the active TM

♦ Replacement of terms known by their translation or insertion of these translations in the form of annotations for segments with no match in the TM

♦ Segmentation of the unknown sentences in the document in order to facilitate their translation without Translator's Workbench and their subsequent import into the TM

♦ If the document has been entirely or partly translated using the Translator's Workbench, then modified without the Workbench, it is possible that certain target sentences will be different from those in the TM. In this case, one can either opt for the updating of the document or the TM, or one can specify that changes should be ignored.

During the translation of files, the program keeps a running total of the number of terms and segments that have been translated. This data is displayed on the screen and recorded in a log file, which may be consulted after translation.

- Configuration:

  - It is possible to define the minimum match value of the segments to be translated. By specifying 100%, only segments for which there is a perfect concordance in the active translation memory will be translated. By indicating a lesser value, 95% for example, all segments of which the match value is greater than 95% will be translated. Segments with a match value below 95% will not be translated.

  - The *segment unknown phrases* option inserts delimiters not only at the beginning and end of translated segments, but in segments without matches in the translation memory. This option has been useful for us when translating documents without the help of Translator's Workbench, as it makes the import of new translations into the TM much easier. It is also very practical when combined with the *Translate terms* option.

    As can be seen from the following screenshot, it is also possible to specify the update of TU and the insertion of new terms.

EUROLOGOS Group.
GLOBAL and
MULTILINGUAL
SOLUTIONS
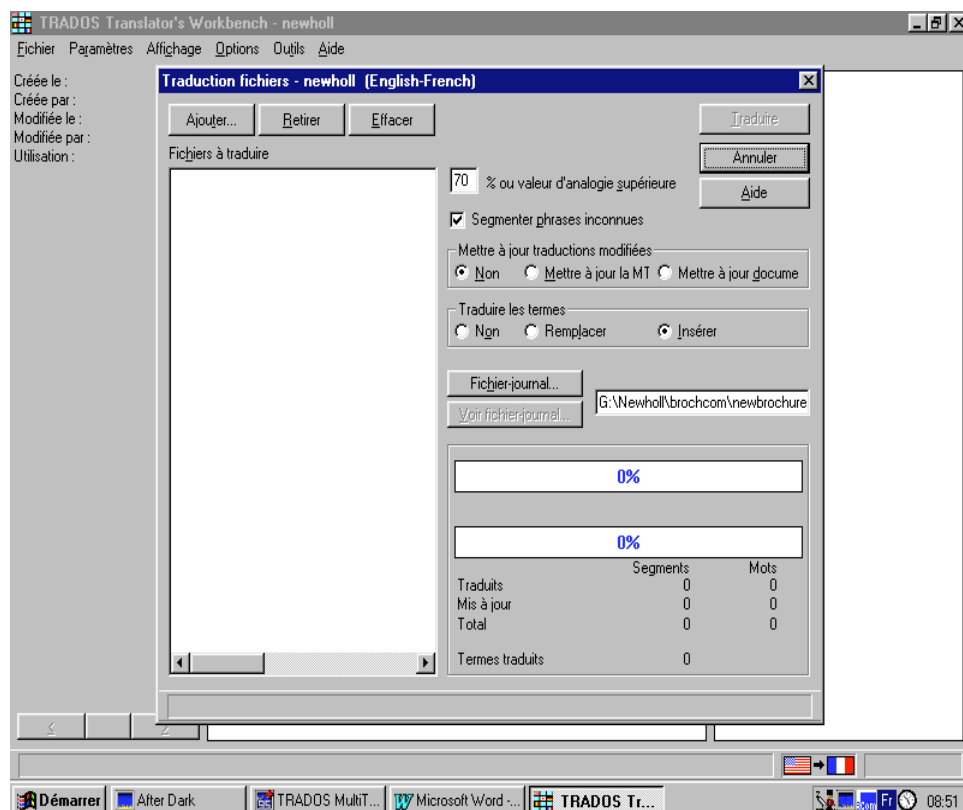
Note:

On this subject, we can stress the inclusion of a segmentation algorithm. During a translation, the software tries to mark the boundaries of the source sentences. Certain elements, such as those that appear in tables or enumerations, are not sentences in the grammatical sense of the word but will also be treated as "segments" by the program. The segmentation is essential in order to store and later recover similar texts and their translations. As the criteria, which define the end of a sentence, can vary according to the type of text, the user can configure the segmentation algorithm. Another important aspect as regards segmentation is the recognition of abbreviations by the program, with, in addition, the possibility for the translator to define his own list of abbreviations.

Many texts contain elements such as notes, index entries, or contents table entries, which should be treated as separate translation units. The program automatically recognizes such sub-sections and treats them as translation units. When a sentence contains a sub-section, the software searches the translation memory and inserts the translation of the sub-section and of the entire sentence.

-    The *Exclude paragraph* option allows to specify the name of the types of paragraph, which should be ignored by Translator's Workbench during the translation.
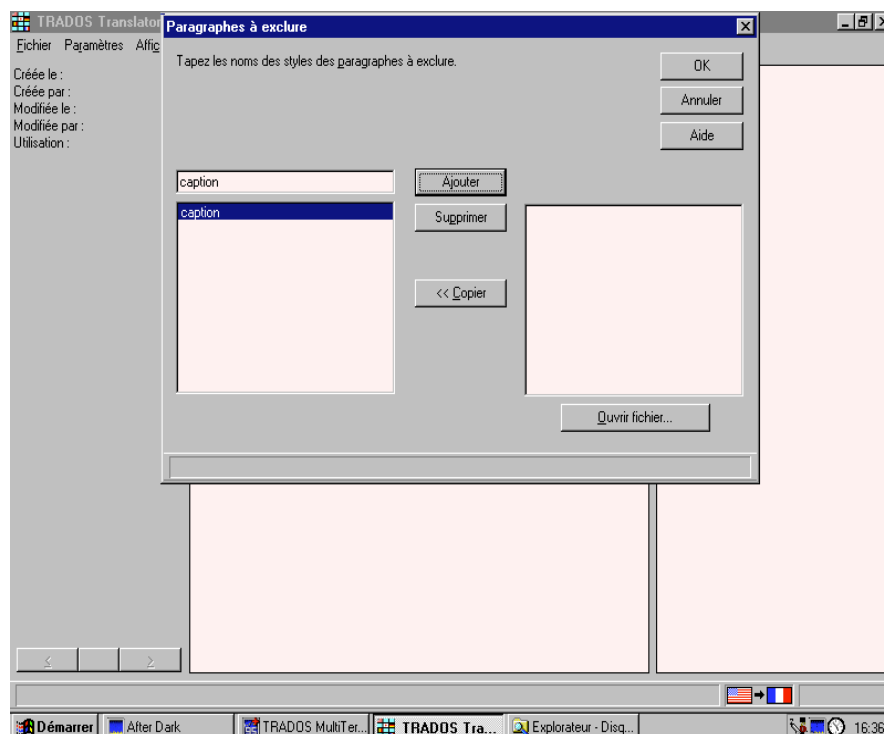
Explanation:

Not translating entire paragraphs can be useful, for example, in the case where paragraphs only contain program codes, examples or other texts not to

be translated. In the context of our C.A.H.T, project it is especially graphical indications necessary for updates that are excluded.

On opening a translation unit, Translator's Workbench therefore verifies the style name of the current paragraph and compares it with a list of paragraphs to be excluded.

If the current paragraph style is to be excluded, Translator's Workbench will avoid this paragraph and all paragraphs in the same style until it comes upon a paragraph of which the style name is not in the list. In order that Translator's Workbench can recognize part of the text that should not be translated, corresponding paragraphs should be formatted in styles uniquely named (e.g., caption).

- Translator's Workbench shows how the operation is progressing with two indicators, one for the file being worked on and the other for all files
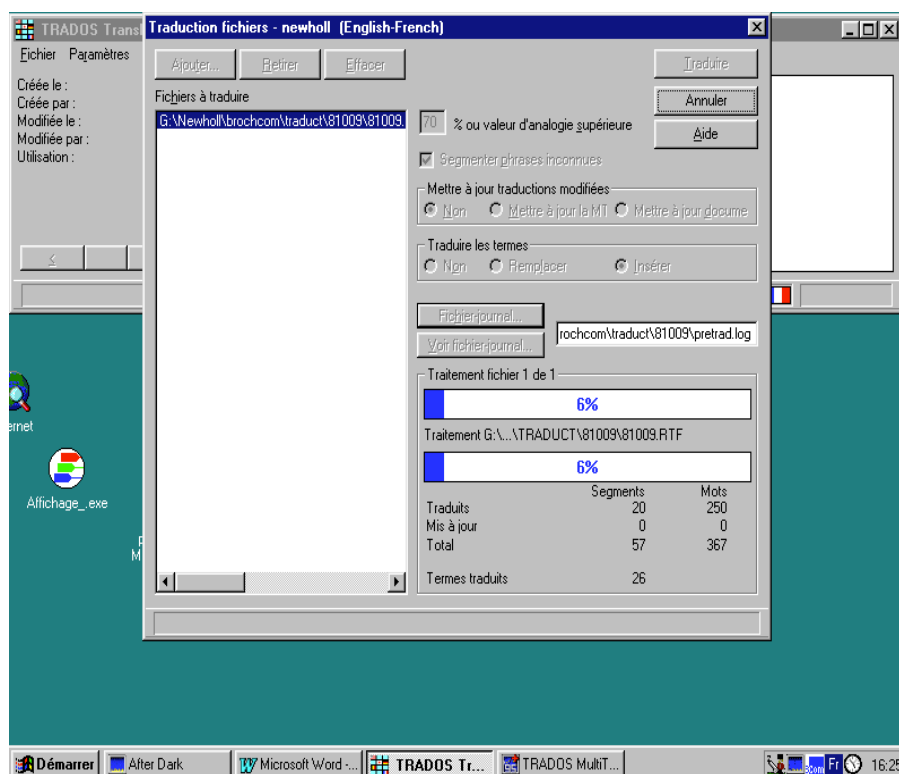
- Pre-translation result

To illustrate this part, we have included below the pre-translation of a commercial brochure for New Holland. This was created at the end of a project, after the integration of all former commercial brochures.

TX BROCHURE - REF. 81003 - S99 REWORK

Le modèle TX63 est propulsé par un moteur New Holland peu polluant, avec une puissance brute de 168 kW (226 ch). La Discovery Cab est le nec plus ultra en matière de confort et de contrôle de l'opérateur, et la vitre courbée offre une vue dégagée de la barre de coupe et de la surface d'alimentation de la récolte. Un inverseur d'alimentation hydraulique permet de dégager tout blocage rapidement et aisément. La TX63 possède une trémie d'une capacité de 7200 litres.

La TX64Plus est propulsée par un moteur New Holland turbochargé, qui offre une puissance brute de 183 kW (246 ch). A l'instar de tous les modèles TX, elle est équipée d'un batteur et d'un tire-paille de grand diamètre ainsi que du célèbre séparateur rotatif New Holland. Les moissonneuses-batteuses TX sont également à l'aise dans des récoltes telles que les céréales, le maïs, le colza, le soja, le riz, les tournesols, etc.

Le moteur peu polluant de la TX65Plus a une puissance brute de 195 kW (261 ch). Même les exploitants agricoles exigeants apprécieront la trémie d'une capacité de 8000 litres et les fonctions à la pointe du progrès telles que la Discovery Cab, le pivotement latéra1 de la barre de coupe, le réglage électrique du contre-batteur, etc.

Le modèle TX67 est doté d'une trémie d'une contenance de 8500 litres. Le moteur fournit une puissance brute de 202 kW (271 ch) et la moissonneuse-batteuse possède un changement de vitesse commandé à distance. La largeur hors tout n'est que de 3,30 mètres pour vous permettre de vous déplacer facilement d'un champ à l'autre.

La TX68Plus est dotée d'une énorme trémie d'une capacité de 9500 litres. La puissance est fournie par un moteur Iveco turbochargé 6 cylindres dont la puissance brute est de 243 kW (325 ch). La ligne des moissonneuses-batteuses TX présente de grandes tôles de protection qui permettent d'accéder rapidement et aisément à tous les principaux composants

La gamme de moissonneuses-batteuses TX consiste en 8 modèles dont les niveaux de puissance brute varient entre 154 et 243 kW (206 à 325 ch).

Le réglage avant de la barre de coupe, disponible de série sur le modèle TX67 et disponible en option sur les modèles TX66, TX68 et TX68Plus, optimalise l'angle de coupe pour une coupe propre et garantit un fonctionnement efficace du système de compensation de la barre de coupe.

Les freins à disque à double étrier vous assurent les performances de freinage nécessaires, même avec une moissonneuse-batteuse lourdement chargée. Les réductions finales robustes sur les modèles TX65Plus et sur tous les modèles à 6 secoueurs sont conçues pour les mauvais terrains. Elles fournissent une grande robustesse pour travailler avec des cueilleurs à maïs repliables à huit rangs

TX64Plus – New Holland 675 TA/VK
Puissance moteur brute (kW)
Lame à dentelures supérieures pour le fourrage vert.
Caractéristiques techniques

TX62/TX63
TX64Plus
TX65Plus
TX66
TX67
TX68
TX68Plus

Section barre de coupe
Arbre de prise de force
pour 4,57 m et au-dessus
Section convoyeur
Réglage barre de coupe
Section moteur
Moteur
Type
Puissance brute ISO TR 14396 (kW/ch)
Régime du moteur (tr/min)
Section transmission :
Blocage du différentiel
Section pneus
Pneus de traction

Pneus de direction

⇨ *How to read this text?*

The screenshot below shows the chosen color codes:

- The color blue designates source segments

- The color black is used when there is no analogy

- The color red indicates partial analogy

- The color green indicates perfect concordance

What is more, the concordance percentage precision is shown in a tag, for each segment (see the screenshot on the following page)
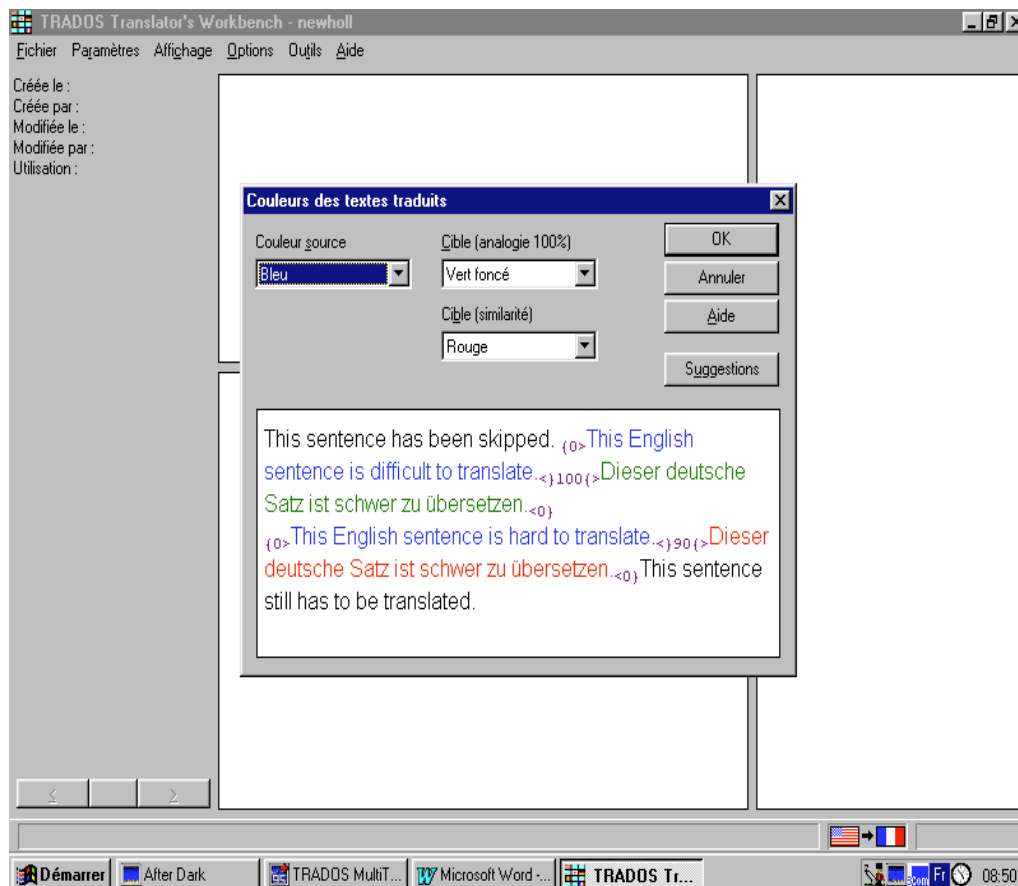
Once the translation is complete, one can consult the log-file, which contains statistics relative to translation (number of segments and words translated and updated, terms replaced or inserted, characters per word, transposable elements, etc.).

Here is one from a New Holland brochure

D:\NEWHOLL\BROCHCOM\NEWBROCHURES\TEMP\81003EN.RTF

Match Types	Segments	Words	Percent	Placeables
Repetitions	0	0	0	0
100%	17	134	26	0
95% - 99%	1	7	1	0

85% - 94%	1	8	1	0
75% - 84%	4	68	13	0
50% - 74%	1	21	4	0
No Match	29	274	55	0
Total	53	512	100	0
Chars/Wo	4.98	4.98		

⇨ One will notice therefore that 45% of the text presents concordance varying between **50%** and 100% with the translation memory that we have created.

➢ *Interactive translation*

The other translation method is interactive, created from the word processing (Word) and this in direct relation to the computer-assisted translation software, Translator's Workbench.

Indeed, the initial analysis sometimes indicates that certain commercial brochures are updated in which a part of the text must be modified. This often involves terminological modifications (e.g., "beveling" was formally rendered by "biseautage", but now the client refers to it as "détalonnage") or additional paragraphs.

It is therefore most worthwhile to use the interactive translation option offered by Translator's Workbench when the previous part of the brochure has already been included in the translation memory.

Besides, an interface with word processing allows to link up both programs. A menu bar entitled Trados Translator's Workbench (or TW4WIN) in Word allows to open segments one by one to request the translation.

Translator's Workbench will automatically insert an analogy or perfect equivalent into the target field of the word processing found in the Translator's Workbench translation memory.

After analyzing the source phrase, various possibilities will be offered (the examples that illustrate the three cases are extracts from the translation memory created for Wilo):

➔ Case 1

There is no analogy and the new text must be integrated into the database as a new translation unit.

This means that no similar phrase was found in the translation memory or that the concordance value is inferior to the minimum specified concordance value. In this case, an empty field is open, the translator must edit the translation but many functions allow this to be carried out much more quickly.

The screenshot presented on the following page shows 0% concordance.
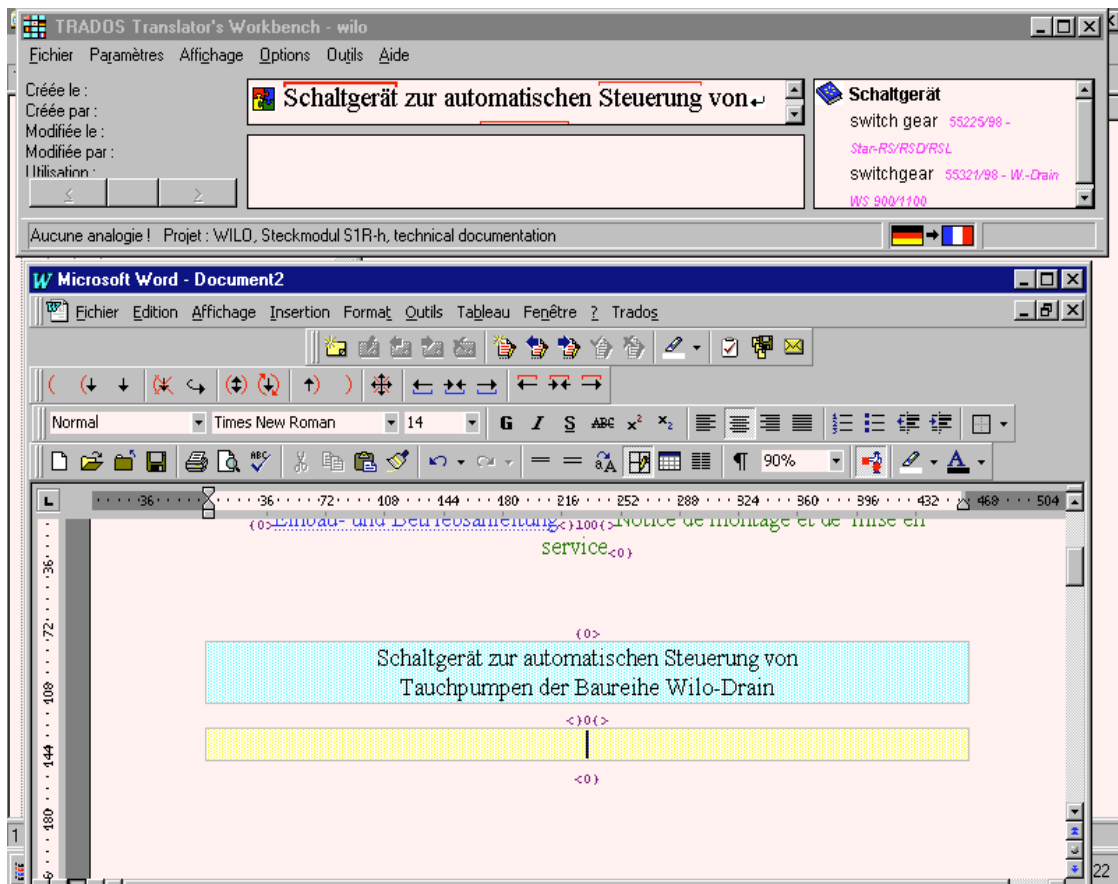
It is possible to *copy terminology* because the software highlights the known terms and shows the translation in the terminology window.

One could just as much use the *context research* function to copy known translations from parts of sentences. The more the translation memory fleshes out, the more efficient this function is and the greater gains in productivity.

Source elements frequently contain non-translatable elements such as graphics, fields, safeguards, etc., most of the time, these elements remain unchanged in the target text. The only possible modification will be their position in the target segment. Consequently, this type of element is said to be transposable and can be quickly inserted for it is tagged by the software. All formatting and moving functions remain those of the word processing, there are no learning problems.

➔ Case 2

Concordance is found to be 100% in the translation memory. This is an ideal situation; perfect concordance means that the translated phrase has already been

translated and that the proposed translation can be accepted as is. The concordance value is shown for each segment and the user can choose different colors to
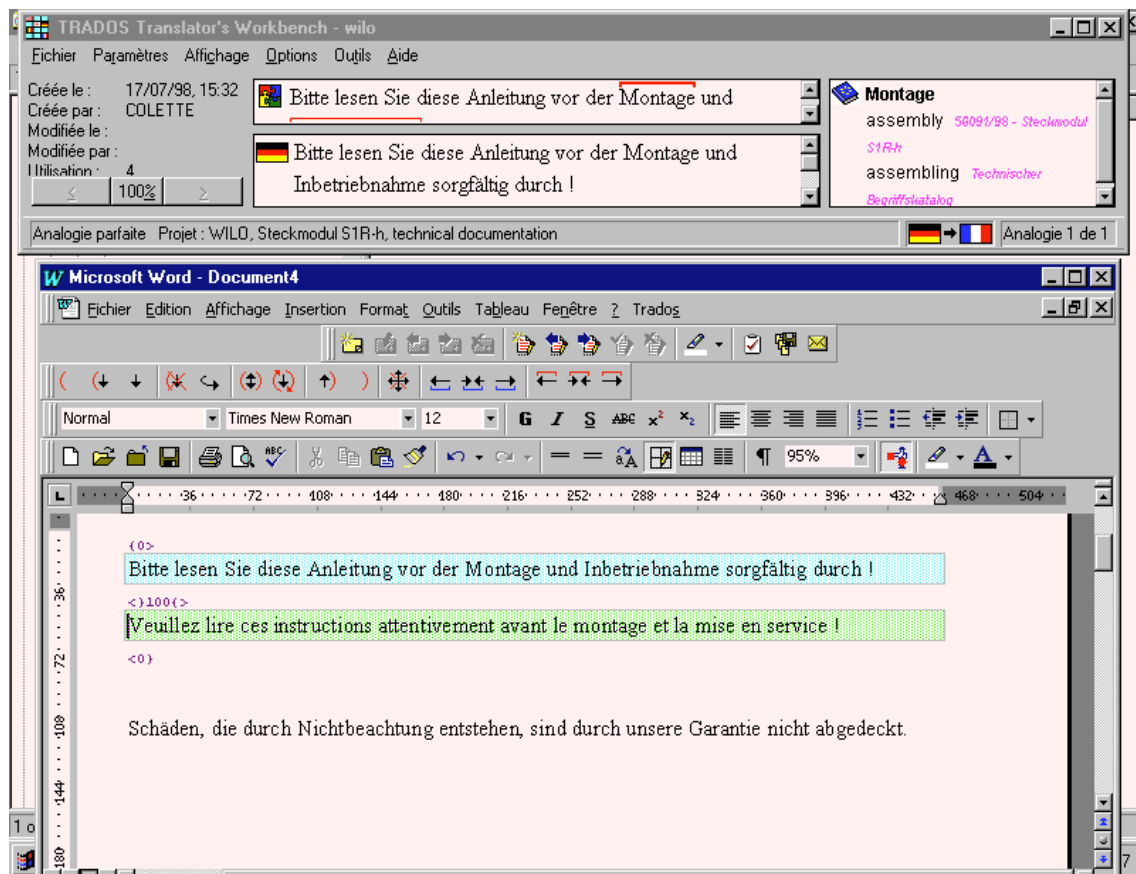
differentiate between degrees of concordance:

Note: If the only element, which differs from the new source phrase, is a number, or any other variable, it will be treated as a perfect concordance.

One must specify whether the software is to treat numbers, acronyms, proper nouns and other variable elements of the same type as variables or ordinary words

➔ Case 3

Concordance is inferior to 100% but there are similarities with the translation units in the database.
Translator's Workbench shows the new source phrases simultaneously in the source window and in the green source field of the word processor. It shows the source segment of the concordance found in the translation memory in its translation window and the translation, which corresponds to the yellow target field of the word processor.

In order to distinguish between the differences between the source phrase and the analogous phrase, different words are designated by different colors (yellow

identifies words that have been replaced in one part of the phrase, grey identifies words that have been added or deleted from the source phrase and blue indicates that a part of the phrase has been moved).
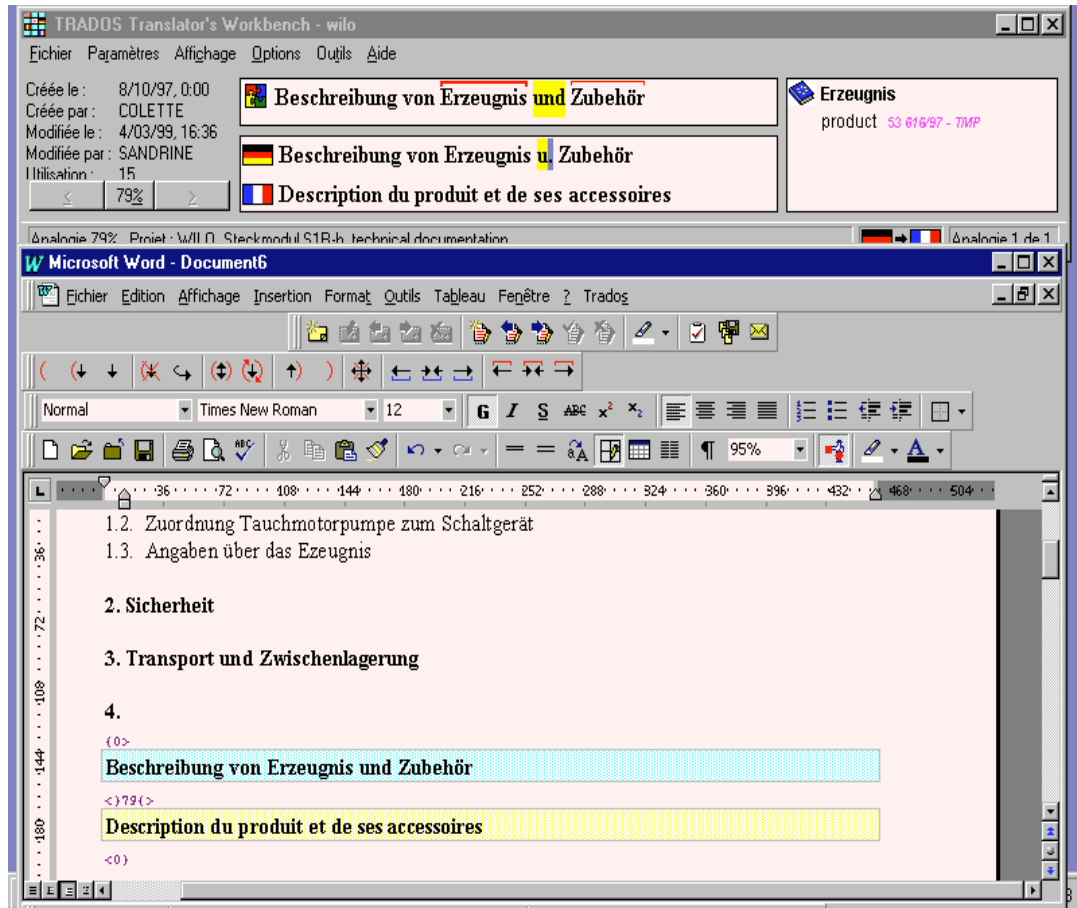
Throughout the translation, the system automatically offers the translator the closest correspondence for the statement to be translated. All differences between the translated module and the corresponding module to be translated are highlighted in a distinct color. The translator therefore obtains precise and instant information on where the automatic pre-translation should be modified to correspond with the source text.

After interaction: cleaning

Translator's Workbench retains source phrases in the form of masked text all the way through the translation. As soon as translators considers their translation definitive, the document can be "cleaned up", in other words, the masked text can be deleted.

It is, in addition, worthwhile to modify translations without the help of Translator's Workbench; for example, to check the spelling or introduce general changes, or to have your translation reread and corrected directly in the word processor. It would be,

without any doubt, necessary to pass on these modifications to the translation memory, as it was inactive during these operations.

This is precisely the role of the Cleanup function: it compares the definitive translation with all the segments of MT and suppresses all source sentences of the translated document.

We can decide, without using Translator's Workbench whether or not the modification brought to the document should be passed on to the translation memory. On the other hand, one can choose to update the document by means of data from the translation memory.

Furthermore, the program counts the number of segments that have been updated. This data is shown on the screen and is assigned a cleaning statistics log-file, which can be consulted after cleaning.

Here is the cleaning log-file from the preceding pre-translated brochure

Start Cleanup: Thu Jul 09 09:09:21 1998

Translation Memory: D:\Programmes\TRADOS\memoiretrad\newholl.tmw

D:\NEWHOLL\BROCHCOM\NEWBROCHURES\81003\81003FR.RTF

	Segments	Words	Chars/Word	Placeables
Cleaned	42	489	4.97	0
Updated	0	0	0.00	0
Total	50	504	4.97	0

Cleanup Total

	Segments	Words	Chars/Word	Placeables
Cleaned	42	489	4.97	0
Updated	0	0	0.00	0
Total	50	504	4.97	0

Cleanup finished successfully! Thu Jul 09 09:09:22 1998
===

It is then possible to open cleaned folders in the word processor, to record them in ordinary word processing format and to transmit them for printing or other operations.
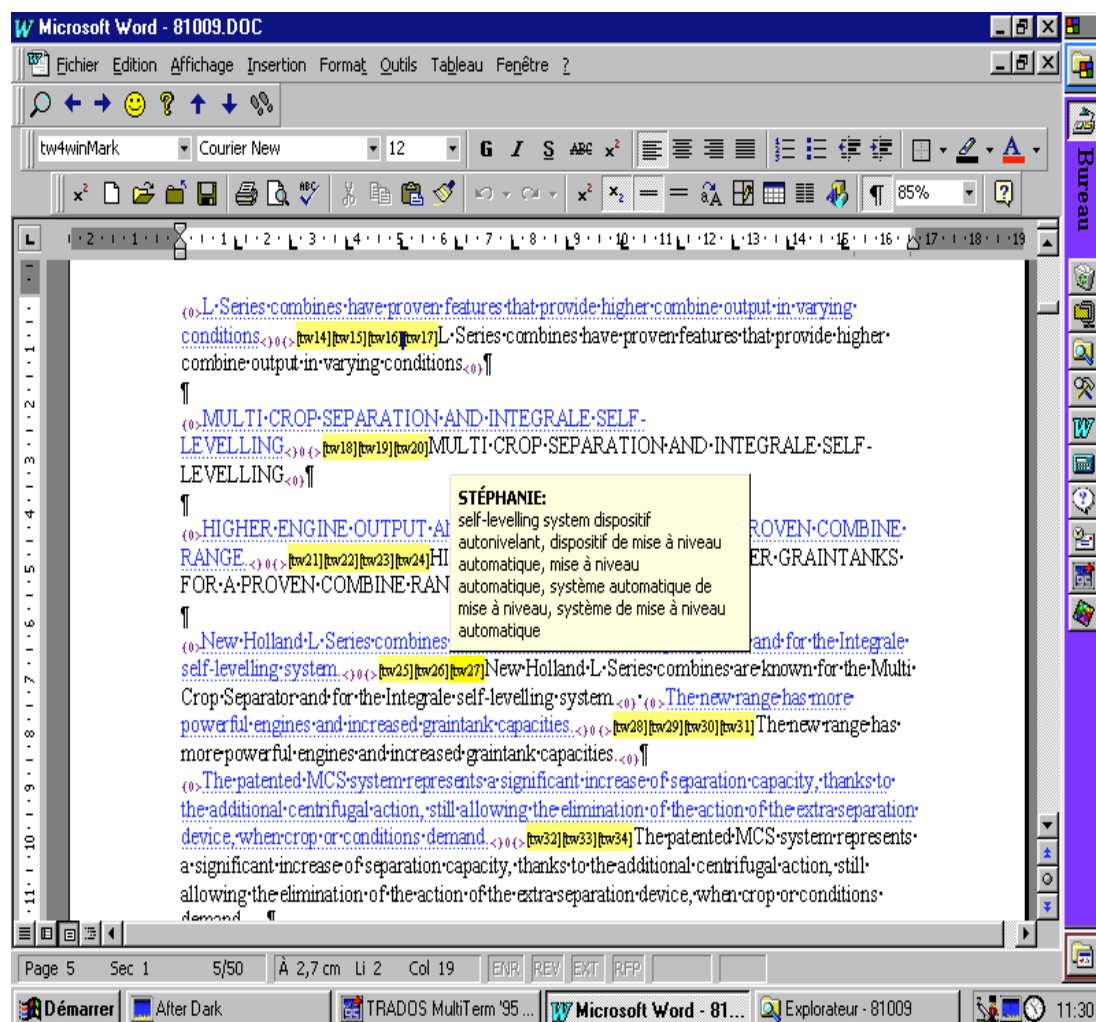
Terminological help

Parallel with translation memory software, the terminology software MultiTerm'95 is open with the help of a link with Workbench. Terms existing in the corresponding terminological database can thus be automatically inserted into the pre-translated document or given to the translator in a box during the interactive translation.

➢ *Automatic insertion of terms into the pre-translation*

Terminological suggestions are shown by yellow tags ([tw20] for example). By positioning itself simply on this tab with the help of a mouse, the system will show the translation it has found in MultiTerm. What is more, if we click on one of these tabs, a window will appear that lists all the terms similar to the database.

To illustrate this, the screenshot on the following page illustrates the insertion of terms in a pre-translation (the example is an extract from a New Holland commercial brochure).


> ➢ *Access to MultiTerm'95 from Translator's Workbench*

Translator's Workbench and its terminology module, MultiTerm'95, interact in many ways. The most important function of all is the active analogical recognition of terminology. *Analogical knowledge of terminology* is an essential characteristic of Translator's Workbench with which it compares the current source phrase with the data in MultiTerm'95.

Furthermore, the first known term, accompanied by its translation in the target language selected in MultiTerm'95, is shown on the Terminology window of Translator's Workbench. To see the other terms and their known translations, you just have to click on the Source window. Translator's Workbench thus shows the corresponding term with its translation(s) in the Terminology window.

The following screenshot is an extract from an interactive translation carried out on the basis of a document for Wilo.
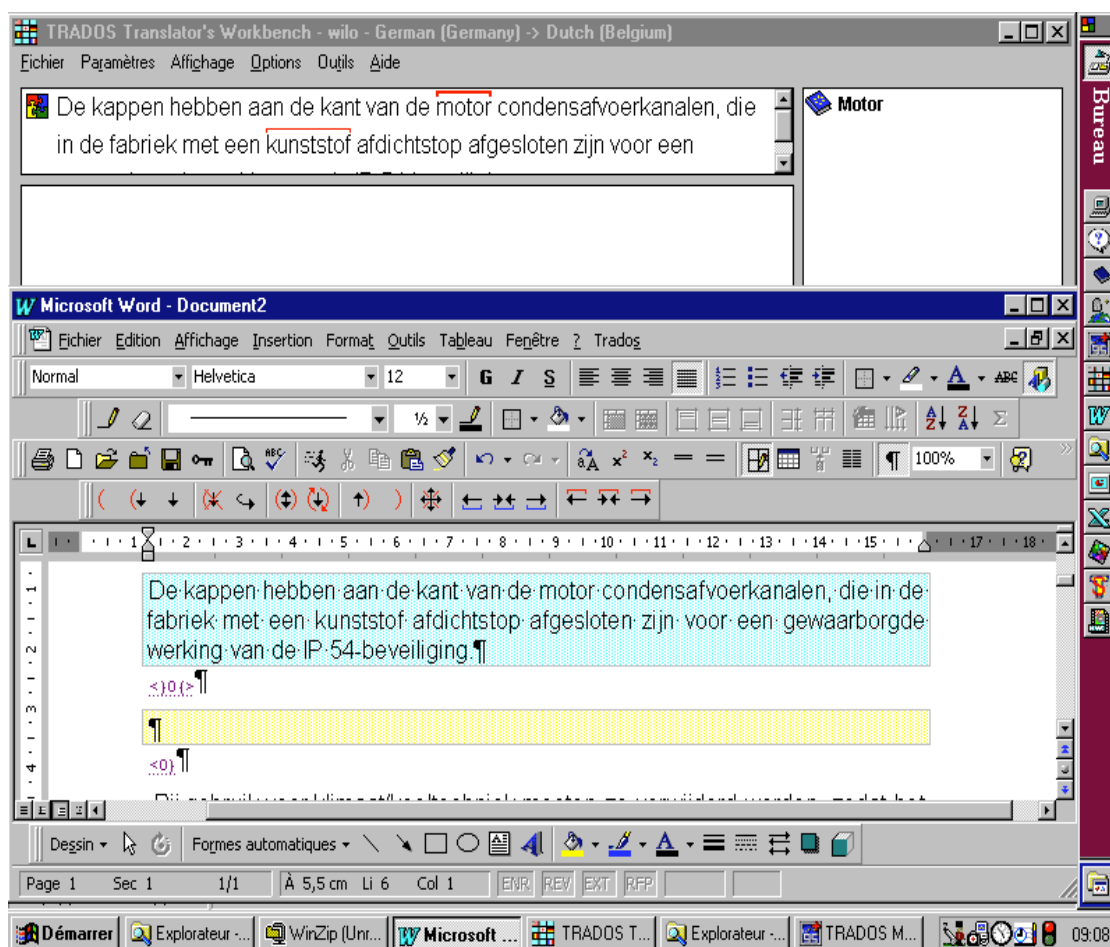
Display of a MultiTerm'95 entry

In its Terminology window, Translator's Workbench shows the term, its translation(s) and attributes (the gender, for example), which come to be associated with the term in the current entry.

Besides, the software offers the user two options for the execution of terminological research in MultiTerm'95:

Research in MultiTerm': To launch a simple search in MultiTerm'95 from the selected text. "Simple search" means that MultiTerm'95 launches a search through the index of the active source language selected in the MultiTerm'95 database – generally the same as that selected in the active MT—and shows the first matching entry for the searched term.

The MultiTerm'95 window shows the corresponding entry in a foreground. If the research in MultiTerm'95 proves to be fruitless, this is indicated by a message in the status bar ("Not found").

Analogical research inMultiTerm'95: To launch an analogical search in MultiTerm'95 from the selected text. If MultiTerm'95 finds similar or equivalent entries, it will show all the entries it finds in a results list in a foreground.

If the search is fruitless, this will be shown by a message in the status bar ("0 occurrences found").

Note: The integration of dictionaries such as Euterpe into the software is also provided in order to use MultiTerm'95 as a terminological aid during translations.

Below we show a screenshot of the electronic dictionary Euterpe that can be used as a support dictionary.
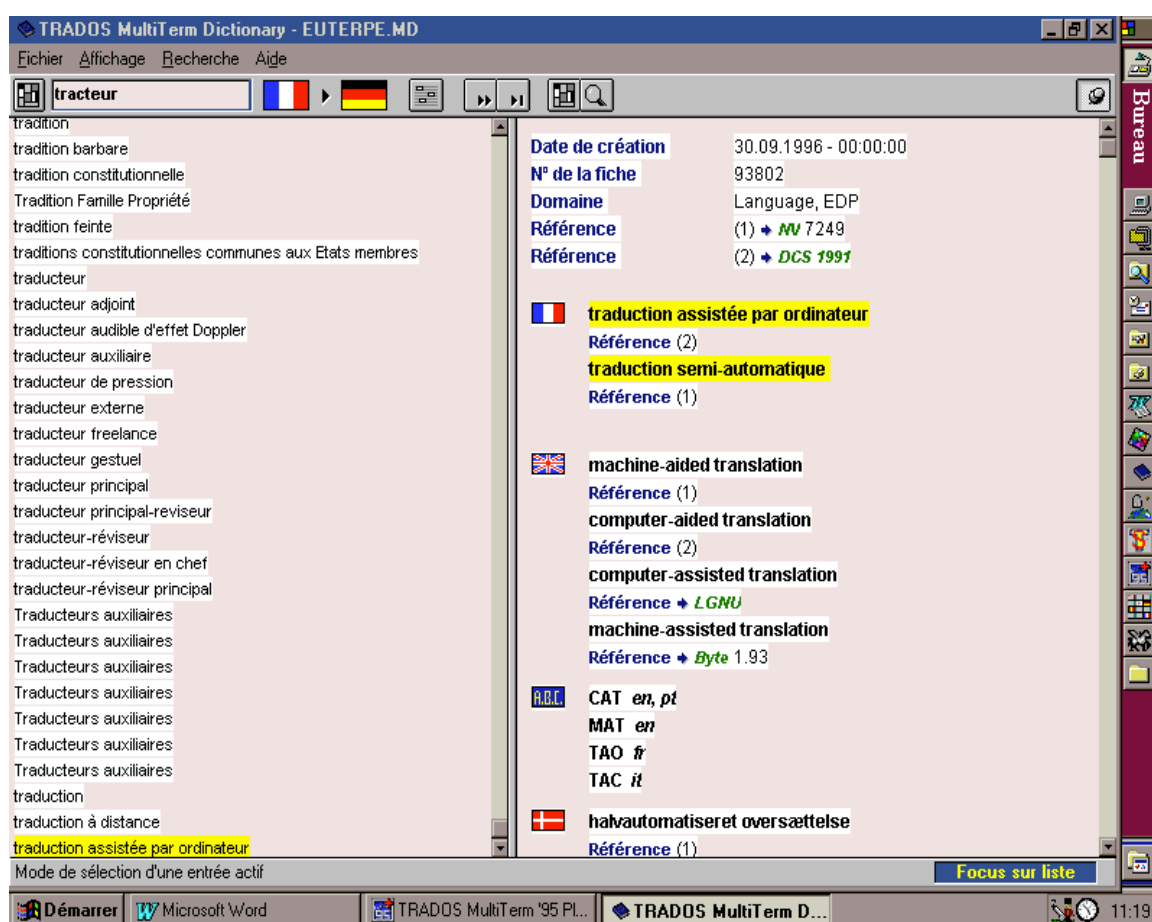
2.2.2.4.   Evaluation of tools used

After having optimally used the tools available to us to carry out our C.A.T. projects, we have defined the major characteristics.

The translation memory is not limited to a simple statistical database made up of phrases, it is also a collection of uses, endlessly enhanced with examples, and can be continuously enhanced by all.

It is this capacity to allow for teamwork and immediate general usage of its translations as well as its terminological research to re-use them that emerges from the use of this workstation.

Projects on which several translators work at the same time require a high level of coordination to assure the quality of the finished product.

Translator's Workbench renders this coordination automatic by allowing shared network access to translation memories.

The translator is helped by IT tools, by research and previous translations, by those of colleagues and the work of the terminographer, which is more and more precise thanks to IT techniques.

Interactivity is further developing within linguistic services as the translated elements are instantly stored in the translation memory; they are therefore immediately available for the translation of new elements or for the contextual research of other translators.

Besides, when the software has been used for a translation, the text's source phrases are placed in the form of hidden text immediately before the target phrases in the word processor. Consequently, the translator can make corrections, re-read or check the spelling of the translation without activating the specific software and launching complex operations. The update function of assisted translation software allows to automatically integrate corrections into the translation memory if an error is detected or if the terminological validations of the clients have changed.

For EUROLOGOS translators, the terminological databases are a means of quickly and easily accessing terminological data.

These tools are easy to handle, user-friendly and comprehensive.

The software effectively offers numerous options, which permanently assist the user. The task of those who create and manage these memories is considerably simplified.

The integration of all necessary tools (translation memories, alignment, terminological references and format converters) into a single workstation allows for flexibility and homogeneity of work, which is essential.

CONCLUSION

Without doubt, terminology, like assisted translation, requires substantial investment before it becomes profitable. Terminological databases and translation memory systems must be populated regularly, respectively with terms and translation units, in order to play an entirely beneficial role in the translation process.

EUROLOGOS is thus continually investing in order to allow for the constant update of IT equipment and for the follow-up of terminological and phraseological changes, which must be introduced and updated without delay.

It is generally recognized that once the work is complete, the results are there once and for all. Thus, one notices that if a company, equipped as it should be with translation-assisting tools knows how to select an appropriate client, terminology and C.A.T prove to be highly useful tools.

A considerable amount of time is saved, and the quality of work noticeably improves. On the one hand, databases bring undeniable terminological coherence and on the other hand translation memories free translators of repetitive work, allow them to concentrate on the most interesting, and doubtlessly the most difficult part, of their work.

EUROLOGOS' decision to assure the creation and management of databases as well as translation memories is therefore justified in every way. Computer Assisted Translation comes into its own when, for example, translating commercial brochures of which the technicity of terms used and the repeatability of content in the texts are evident.

Furthermore, it must be noted that EUROLOGOS' Terminology division knew how to make the necessary preparations to carry out such projects, for which it took the initiative in terms of terminology as well as in terms of C.A.T., and by equipping itself with the necessary software, i.e., MultiTerm'95, Translator's Workbench and WinAlign (respectively terminology software, C.A.T and text alignment software).

Few companies know how to invest in this area, due to the fear of substantial costs that the purchasing of IT equipment can bring about, investment in training often at a loss, staff often being (one must admit) opposed to the introduction of new technologies in a profession that relies on paper and pen. The unfamiliarity with this field and its slow introduction within companies makes EUROLOGOS still one of the rare cases with the means to evolve.

Due to the efforts agreed and the means generated by EUROLOGOS, it is therefore entirely logical that we are noticing encouraging results in statistics referring to pre-translation.

One can therefore conclude that despite certain methodical inaccuracies, which survive but are being improved (a better understanding of software options, a more thoughtful reflection of the preparations needed for memories and databases), the projects undertaken within the EUROLOGOS Terminology division fulfill, slowly but surely, their needs and ambitions.

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