

NOTE TO USERS

This reproduction is the best copy available.

UMI[®]



uOttawa

L'Université canadienne
Canada's university

**FACULTÉ DES ÉTUDES SUPÉRIEURES
ET POSTDOCTORALES**



**FACULTY OF GRADUATE AND
POSTDOCTORAL STUDIES**

Baris Bilgen

AUTEUR DE LA THÈSE / AUTHOR OF THESIS

M.A. (Translation)

GRADE / DEGREE

School of Translation and Interpretation

FACULTE, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

Investigating Terminology Management for Conference Interpreters

TITRE DE LA THÈSE / TITLE OF THESIS

E. Marshman

DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

A. Brisset

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

A. Francoeur

L. Bowker

Gary W. Slater

Le Doyen de la Faculté des études supérieures et postdoctorales / Dean of the Faculty of Graduate and Postdoctoral Studies

Investigating Terminology Management for Conference Interpreters

by
Baris Bilgen

School of Translation and Interpretation
University of Ottawa

Under the co-supervision of
Elizabeth Marshman, PhD
&
Annie Brisset, PhD
School of Translation and Interpretation

Thesis submitted to
the Faculty of Graduate and Postdoctoral Studies
of the University of Ottawa
in partial fulfillment of
the requirements for the degree of MA (Translation Studies)

© Baris Bilgen, Ottawa, ON, Canada, 2009



Library and Archives
Canada

Published Heritage
Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et
Archives Canada

Direction du
Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence
ISBN: 978-0-494-58204-6
Our file Notre référence
ISBN: 978-0-494-58204-6

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

ACKNOWLEDGMENTS

First of all, I would like to thank my thesis supervisors Elizabeth Marshman and Annie Brisset for their sincere, prompt, encouraging and productive feedback. They have inspired and made possible the initiation and the completion of this thesis project.

I am grateful to the members of the Canadian Association of Conference Interpreters (CACI)/AIIC Canada who generously accepted to participate in the survey included within this study. Special thanks to former CACI president Josette Stéphan, and her successor Taous Selhi for their help in reaching the members of the association and distributing the survey.

Endless thanks to my family and friends for their invaluable support. To my family, I owe my identity. To my friends, I owe my sanity. My gratitude to *The Thesis Club* (aka. *le fameux five*) cannot be expressed in words. Thanks to all my friends, colleagues, and professors at the School of Translation and Interpretation for their guidance and company, and for making me feel welcome starting from the first minute. It has been a wonderful experience.

Last but not least, thanks to my professors at the School of Applied Languages at Bilkent University for encouraging me and supporting me throughout my studies.

Finally, thanks to everything and everyone I encountered along the way leading to this very moment.

Teşekkürler! Thank you! Merci!

ABSTRACT

Despite recent developments in translation technologies, most existing software programs are designed primarily to cater to the needs of language professionals such as translators and terminologists, while conference interpreters are neglected as a user group with a distinct work profile. Hence, *this thesis investigates terminology management in the context of interpreting.*

A review of literature on interpreting and terminology is complemented by a survey conducted among professional interpreters, in order to identify their terminology management needs and practices and evaluate their experience using computers. Generic guidelines based on survey data are suggested for developing a terminology tool for interpreters, and are implemented in a basic demonstration of the use of database management software (DBMS) in this context.

RÉSUMÉ

Malgré l'avancée récente des technologies de la traduction, la plupart des logiciels sont conçus pour répondre aux besoins de langagiers comme les traducteurs et les terminologues. En revanche, les interprètes de conférence, qui forment un groupe d'utilisateurs au profil distinct, ont été négligés. *Cette thèse a donc pour objet d'étudier la gestion terminologique dans le contexte spécifique de l'interprétation.*

Dans cette étude, l'analyse bibliographique des domaines de l'interprétation et de la terminologie est suivie d'une enquête conduite auprès d'interprètes en exercice. Le but était d'identifier leurs besoins ainsi que leurs pratiques en matière de terminologie et d'évaluer aussi l'usage qu'ils font de l'ordinateur. Les résultats de cette enquête ont permis d'établir des principes généraux pour la conception ultérieure d'un outil informatique de gestion terminologique à leur intention. En application de ces principes, une démonstration préliminaire d'un système de gestion de bases de données (SGBD) est proposée.

TABLE OF CONTENTS

LIST OF TABLES	vii
LIST OF FIGURES.....	viii
INTRODUCTION.....	1
Background Information and Motivation for Research	2
Objectives.....	6
Methodological Approach.....	7
Scope and Limitations	9
Outline.....	11
CHAPTER 1 Background Information and Theoretical Framework	13
1.1. Conference Interpreting	13
1.1.1. History.....	13
1.1.2. The Workflow	15
1.1.2.1. Preparation	16
1.1.2.2. Performance	18
1.2. Terminology.....	21
1.2.1. Fundamentals of Terminology	22
1.2.2. Terminology Management Tools	28
1.2.2.1. Commercial Terminology Management Tools	28
1.2.2.2. Terminology Management Tools for Interpreters.....	31
1.3. Terminology Management in the Context of Interpreting	34
1.3.1. Preparation	35
1.3.2. Performance	38
1.3.3. Literature on Terminology Management for Interpreters	39
CHAPTER 2 Methodology	41
2.1. Survey Design	42
2.1.1. Survey Method.....	42
2.1.2. Choice of Question Types	44
2.1.3. Transforming Objectives into Questions	45
2.2. Respondents	48
2.2.1. Choosing Sample Population	48
2.2.2. Contacting Potential Respondents.....	50
2.3. Analyzing the Data.....	51
2.4. Using Database Management Software for Terminology Management.....	52
CHAPTER 3 Survey Results and Synthesis	55
3.1. Response Rate and Respondent Profile.....	55
3.2. Analysis of Responses.....	57
3.2.1. Storage of Terminological Information	58
3.2.2. Retrieval of Terminological Information	60
3.2.3. Attitude towards Computer Use and Experience with Terminology Tools	64
3.3. Synthesis: Guidelines for Terminology Management Tools for Interpreters	68

3.3.1. Accommodation of Bilingual and Multilingual Terminology	69
3.3.2. Accommodation of Various Term Types.....	70
3.3.3. Sample Term Record Template	70
3.3.4. Input and Output Formats	71
3.3.5. Fast Searching	72
3.3.6. User-friendliness and Cost	72
CHAPTER 4 Sample Terminology Database	74
4.1. Tables	75
4.2. Queries	79
4.3. Reports	81
4.4. Forms.....	83
CONCLUSION	91
Assessment of the Survey	92
Assessment of the Database	94
Suggestions for Further Research	97
Concluding Remarks	98
REFERENCES.....	100
APPENDIX A - Survey and Accompanying Documents	104
APPENDIX B - Survey Result Summary	115
APPENDIX C - Ethics Approval Notice	129
APPENDIX D - Sample Term Records	132

LIST OF TABLES

Table 1 – Response overview	56
Table 2 - Terminological information stored	59
Table 3 - Retrieval summary	60
Table 4 - Retrieval of information from each field	62
Table 5 - Evaluation of experience with terminology management tools.....	65
Table 6 – Four respondents’ evaluations of experience with terminology management tools	67
Table 7 - Priority term record fields for storage and retrieval	70
Table 8 - Overview of information retrieval at each stage in an interpreter’s workflow.	72

LIST OF FIGURES

Figure 1 - Term record example.....	26
Figure 2 – Interplex	32
Figure 3 – InterpretBank: Conference mode.....	34
Figure 4 - InterpretBank: Enter mode	33
Figure 5 - Selective consultation.....	63
Figure 6 - Search example.....	79
Figure 7 - Search example (2).....	81
Figure 8 - Glossary format (En-Fr)	83
Figure 9 - Print format (Fr-En).....	83
Figure 10 - Main form.....	84
Figure 11 - Basic form	85
Figure 12 - Advanced form	86
Figure 13 - Term types	87
Figure 14 - Subject fields	87
Figure 15 - Search form	89

INTRODUCTION

Simultaneous interpreting appeared on the international scene with the trials of Nazi war criminals after World War II, also known as the Nuremberg Trials (Gaiba 1998). Within the context of globalization, with the emergence of international institutions and organizations, and with increasing mobility, it is now an indispensable aspect of communication in activities such as international conferences, meetings, and parliament sessions. With the increasing availability of technical facilities and with increasing time-constraints, simultaneous interpreting — in which the speech and the interpretation take place simultaneously with the help of audio equipment — is becoming more and more popular. It often replaces consecutive interpreting, for which no special equipment is required but in which the speech and the interpretation have to take place in turn, consequently requiring more time.

Interpreters are called to work in meetings and conferences on a variety of subjects, some of which can involve very technical and specific language use. Conditions of the profession do not allow interpreters to specialize in a single field, yet they have to provide a fairly efficient interpretation regardless of the subject. Therefore, they need to be able to conduct rapid preparatory searches on subjects and identify terminology with which they are not entirely familiar. Then, they can develop their terminological knowledge before they start working (i.e. interpreting) on the subject, and store terminological information so that they can consult it as they interpret. In order to be able to use the information according to their needs, interpreters need to be able to store and organize terminological information on a variety of subjects easily and quickly.

Awareness of the potential computers represent for terminology management for conference interpreters dates as far back as 1987 (Gile 1987). Yet, despite significant development in the field of translation technologies, it seems that conference interpreters are missing out on the full potential usefulness of computers. One reason for this that has been mentioned by researchers is the relatively small market segment interpreters represent compared to translators, resulting in software developers not targeting their specific needs (Gile 1987: 167; Moser-Mercer 1992: 507). Another is interpreters' individual preference for conventional methods of terminology management (e.g. glossaries, notepads, etc.) over the use of existing computer applications (Kalina 2007: 118). In an age of fierce competition, where time-efficiency is one of the most important priorities, no profession has the luxury of ignoring the potential and advantages of technology. Moreover, the fact that the demand for a terminology management application for interpreters has not been met yet does not mean that it will not or cannot be. On the contrary, it is a good reason to continue to point to the demand with solid argumentative and empirical support. Hence, *the focus of this thesis is investigating terminology management for interpreters* with an emphasis on these users' needs and expectations.

Background Information and Motivation for Research

As mentioned above, despite the development of numerous computer-aided translation (CAT) tools and the proliferation of their use among translators, interpreters have yet to fully benefit from the possibilities offered by the use of computers in their profession, especially in the field of terminology management.

Existing terminology management software is designed primarily to cater to the needs of translators and terminologists. A classical bilingual terminological model includes terms and their equivalents, sources, grammatical labels, contextual information, subject fields, and other supporting information designed to suit the purposes of long-term use by users such as a translator or team of translators (Dubuc 2002: 82, 83). Gathering and entering the required information demands a significant investment of time, which interpreters do not have. I have personally observed many training interpreters who are at first enthusiastic about the idea of computerized terminology management, but who turn their heads away in disappointment once they see how much time, effort and money is needed to get started with such software. Today, with the acceleration of text production, even translators are starting to feel the need to be able to create and use term banks in a faster and easier way. The notion of a disposable corpus, defined as a “corpus that has been collected for the purpose of translating a particular source text or a group of related texts” (Bowker forthcoming), is becoming part of an alternative approach to doing exhaustive preparatory work when the life span of the product does not justify a large investment of time and effort in preparation. Instead of time-consuming, (relatively) exhaustive preparation as a long-term investment, as is the focus of many projects in the field of terminology, interpreters are driven by the nature and conditions of their work to prefer ad hoc preparation which requires less time and proves useful in the translation of a specific text or group of texts. As interpreters are asked to work in meetings or conferences which can address an unlimited variety of topics, it is difficult for them to spend time on exhaustive and detailed terminological preparation on every subject. Consequently, the increasing need

for time-efficiency leads to a need for a terminology management system designed in consultation with this specific potential user group and founded on the principles of user-friendliness and time-saving.

Studies (Gile 1987; Moser-Mercer 1992) have pointed to the potential and the need for a terminology management system specifically designed and constructed to meet particular needs of interpreters, prioritizing easy and quick input and output considering the time constraint involved in the nature of interpreters' work, and providing search options specific to interpreters' needs. Nonetheless, our research shows that a system that can adequately meet these needs has still not been developed.

One of the most popular terminology management methods used by interpreters is based on using specially prepared glossaries (Jones 2002: 8). However, such glossaries usually include term equivalents only, and they do not offer advanced search facilities to enable the user to look for precise results (e.g. searching according to subject field, searching for acronyms/abbreviations within a subject field, etc.). This is because they are generally either on paper, or stored in word processors or spreadsheets which have limited search functions. Moreover, without a ready-to-use, specially designed terminology database structure, the inconsistency in the organization of terminological data turns the accumulation of information into a disadvantage, a burden rather than an asset, as the specific information an interpreter needs may be lost in a mass of other data. Existing terminology tools may be considered efficient for structural consistency, but in terms of meeting interpreters' needs, the aforementioned fact that they are designed for translators and terminologists, and thus for storing and accessing the product of a

different kind of terminology research in a different type of situation, comes into play once again.

In the course of this research, only two terminology management programs developed with interpreters as the target user group were found:¹ *Interplex*,² developed by Peter Sand and Eric Hartner; and *InterpretBank*,³ developed by Claudio Fantinuoli. Their features will be explored and explained in more detail in Chapter 1 (Section 1.2.2.2). In an initial evaluation, these programs show few remarkable differences from terminology management systems developed for translators. While *Interplex* offers the possibility of arranging glossaries according to subject and searching within several glossaries, and although both prioritize easy and quick input and output, they still lack the possibility and the flexibility of defining specific search queries and obtaining results in specific formats.

Austermühl presents “terminology management using a database management system” as an alternative to using specific terminology management tools (2001: 105-106). He lists as advantages of this choice the variety of features, flexibility, fast search and easy input: characteristics that seem to reflect interpreters’ needs. Availability and affordability can be added to this list, since for example the database management system (DBMS)⁴ Microsoft Access, part of the Microsoft Professional Office Suite, is more widely accessible than specialized terminology management software programs. The disadvantages mentioned by Austermühl include confusing, irrelevant features and the

¹ In March 2009, shortly before the thesis was submitted, an article by Rodriguez and Schnell (2009) was published in *Language Update*. This article explores the issue of terminology within the context of interpreting, and mentions two additional terminology tools developed specifically for interpreters (*Lookup* and *TermDB*).

² <http://www.fourwillows.com/interplex> (May 11, 2009)

³ http://www.fc-translations.de/download_de.html (May 11, 2009)

⁴ The acronym DBMS is used throughout this thesis to refer to ‘Database Management System’ or ‘Database Management Software’.

lack of automaticity in translation-specific features. Nonetheless, many of these disadvantages could be overcome if there were a pre-established, ready-to-use database structure and pre-defined queries providing precise searching options. A model database could serve to guide users to the most pertinent features, therefore enabling them to take full advantage of the flexibility of the software.

The current situation, i.e. the lack of a system designed specifically for conference interpreters and the clear differences between the way these users work and the work methods of the translators and terminologists for whom most tools are designed, indicates that there is a user group whose needs are not entirely satisfied. Although the development of a terminology management software program is outside the scope of this study, using a generic DBMS to design a sample database presents a promising opportunity to demonstrate the potential to develop a tool for these users.

Objectives

The main objective of this study is to identify the needs of conference interpreters regarding terminology management tools, with the purpose of identifying the specific areas in which their expectations and needs regarding terminology management and terminology tools differ from the accepted views of terminology in a translation context, and determine whether (and if so, in what ways) these differences necessitate a special terminology management system design.

The principles and priorities for the design of such a system must be established to ensure that it includes features serving interpreters' needs, such as easy and quick input and output and adapted output options, including search queries defined according to context-specific needs.

A sample Microsoft Access database was created in order to provide a basic demonstration of how these findings can be put into practice. The sample database, which is a practical by-product of the findings of this study, aims to demonstrate how the user group's needs may define the features of software. Although software development is not in question within this study, the sample database presents the potential for gathering further feedback from users on its effectiveness in order to improve its features. The database can be shared with interpreters and may, in later projects, form the basis for gathering more focused feedback on the features that best meet their needs.

Methodological Approach

The guidelines for the design of the proposed terminology database were inferred from the synthesis of a literature review and an anonymous online survey.

The literature review was based on two fundamental domains within translation studies: terminology on one hand, and interpreting on the other. Research on interpreting provided insight into the entire process of interpreting, thus leading to a better understanding of the profession and the professional, and the specific components of the interpretation task. Research on terminology, on the other hand, served to establish fundamentals of conventional terminology management and terminology database structuring. At this point, the contradictions between fundamentals of terminology management theory and some more recent approaches to terminology management, where translators tend to go “against the strict principles put forth in the terminology literature” (Bowker forthcoming) were key points explored in the analysis. A brief review of some available terminology tools was included. Furthermore, previous studies on terminology management for interpreters were examined from a critical point of view

so as to identify issues requiring further development and to assess the progress achieved since their publication.

As an empirical complement to research on interpreting for the purpose of reaching a better understanding of the profession and the professional — especially regarding interpreters' use of and needs and expectations from terminology management systems — an anonymous online survey was conducted among members of the Canadian Association of Conference Interpreters (CACI)/AICC Canada to find out about their current terminology management strategies and their needs and expectations from terminology management systems.

The survey gathered information about interpreters' professional status (e.g. years in the profession, translation and interpretation workload, affiliation) to evaluate their status as practising interpreters; current terminological and technological practices (e.g. frequency and nature of terminological research, use of computers), to evaluate their needs and preferences; and previous experience with terminology tools, to evaluate their opinions about existing tools.

Due to the user-oriented nature of the study, conducting a survey among the potential users of a terminology management tool developed for conference interpreters (and, more specifically, the potential users of the model term base to be developed within this study) provides the best and most current insight into the potential use of such tools, and expectations from them. A comparison of these survey results and the literature review were then used to reach a conceptual synthesis on the subject of user needs, on which the practical suggestions of this study are based.

Finally, after laying out the principles for the design, a sample Microsoft Access database was created to demonstrate how these findings can be put into practice. This database can be made available on the computers in the interpreting lab at the University of Ottawa and/or through the CERTT (Collection of Electronic Resources in Translation Technologies) website,⁵ so that those interested will have a ready, easily accessible sample database template to use. Eventually, thanks to the flexible nature of DBMS, the sample database may be enhanced further in the light of feedback from users, and may ultimately help interpreters save time, work more efficiently, and accumulate and share useful information more easily.

Scope and Limitations

The scope of this study covers the investigation of how interpreters currently store terminology, the principles for a terminology management system specifically designed for these users, and a demonstration of conceptual findings through the creation of a basic model database.

The main limitations of this study stem from the empirical aspect. Due to the limitations of a master's thesis and the difficulties in conducting an exhaustive, large-scale survey, the survey involved within this study is indicative rather than conclusive.

Working on a technology-related topic in an age when both the production and the consumption of information occur at an incredible rate imposes two major considerations. One is that the constant acceleration of information flow and the emergence of new contexts require continuous questioning of existing knowledge. In this case, this means that in the course of this study, several points were observed where the

⁵ <http://www.certt.ca> (May 9, 2009)

current situation in practice contradicts established theoretical norms of related domains within translation studies, especially terminology. The other is that the discussions and suggestions presented within this study are inevitably subject to the limitations of the resources (especially technological resources) available today. Nevertheless, those are the rules of the game, and there is no alternative for the accumulation and improvement of knowledge. With the development of new tools, the practices in the field are likely to evolve gradually, and the model database in which the principles are reflected will certainly need to be updated regularly as technologies advance. However, the findings of the dominant conceptual part of the study (i.e. interpreters' current practices and needs; priorities for the design of a specific terminology management system) will presumably stand the test of time and the fundamental idea will stay sound, even if the presentation changes.

For the development of a basic model to put the conceptual findings of the study into practice, Microsoft Access was chosen due to reasons of accessibility/availability and user-friendliness. It must not be forgotten that the sample database is an indicative example. Its features are subject to the limitations of basic Microsoft Access functions. Ideally, the design and development of special terminology management software for conference interpreters would be the result of the collaboration of a number of terminologists, conference interpreters, and software developers, who would no doubt be in a position to add functions not available in this approach. However, software development is outside the scope of this study. Nevertheless, it is most certainly desirable that this contribution bring the issue to software developers' attention and

reaffirm the importance of user involvement and feedback during and after software development.

Testing the proposed database is not included within the scope of this thesis. A thorough and realistic evaluation would require finding interpreters who would volunteer to test the database in their professional interpreting work. Training groups would have to be scheduled, and users would need a period of time when they would be able to test the database as they work, in order first to become familiar with it, then to gather and input a sufficient quantity of data to test the tool, and finally to use the tool in a variety of situations. The time limitations for a master's thesis unfortunately do not accommodate such an elaborate and lengthy process.

It must be also noted that the interface of the sample database is in English, and its working languages are English and French in the examples provided in this study. However, as the goal is to present the basic structure and features, the model could be used with other language pairs, and the interface could be translated into any other language. Moreover, the database could be expanded to add additional languages in a multilingual base.

Outline

This study is organized into four chapters:

Chapter 1 consists of the literature review, including literature on terminology and on interpreting – the two fundamental domains within translation studies that will make up the foundation of the conceptual framework of this study. An assessment of previous studies concerning computerized terminology management for interpreters, as

well as an overview of the few existing software products developed for interpreters, are presented so as to identify the points that this project aims to investigate further.

Chapter 2 presents the methodology followed in designing, administering and analyzing the survey, and in creating the sample terminology database in Microsoft Access.

Chapter 3 presents the analysis of survey results, to highlight points of contrast in terminology practice in the context of interpreting, and to identify interpreters' specific needs. This analysis constitutes a basis for the description of the guidelines for a terminology management system designed for interpreters.

Chapter 4 focuses on the practical implementation of the synthesis of the literature review and survey data. It presents the development and the outcome of the sample Microsoft Access terminology database in order to demonstrate how the guidelines established in Chapter 3 can be put into practice.

Finally, the conclusion includes an overall assessment of the study, the results of the survey, and the proposed database, as well as suggestions for future research.

CHAPTER 1

Background Information and Theoretical Framework

An overview of literature on conference interpreting and terminology – the two fields of research which make up the theoretical framework of this study – will be presented in this chapter. Literature on interpreting will be reviewed with a focus on the history of the profession and the workflow of an interpreter in section 1.1. In section 1.2, the review of terminology literature will be presented to establish the fundamentals of the field which will guide this study. This section will also include a brief overview of some terminology management tools. The last section (1.3) will suggest a synthesis of the review of literature on both fields and discuss terminology management within the context of interpreting.

1.1. Conference Interpreting

This section will present the field of conference interpreting and some of its history in sub-section 1.1.1, and then a typical workflow for the activity of conference interpreting in sub-section 1.1.2.

1.1.1. History

The first recorded appearance of the concept of conference interpreting, as we know it now, dates back to the early 1920s, when languages other than French started to appear as diplomatic languages in verbal communication. Interpretation first appeared in two main forms: whispered interpretation, in which interpreters sit or stand close to listeners and whisper the interpretation to them; and consecutive interpretation, in which speakers deliver their speeches in full or in part, and interpreters then take the floor to present the

interpretation. Since it was an emerging concept, the first interpreters were not professionals but bilingual or multilingual officials. It was not until 1941 that the first school of interpretation started training professional interpreters in Geneva, providing training on whispered and consecutive interpretation (Gaiba 1998: 27, 28).

Today, whispered and consecutive interpretation are less preferred methods, since they have significant disadvantages compared to simultaneous interpretation, in which the interpretation takes place at the same time as the speech and transmitted to the audience via audio equipment. In whispered interpretation, the interpreter's voice can be disturbing for the audience or even for the speaker. The number of listeners is limited because interpreters have to stay close to them and keep their voice at a minimum level. The major drawback of consecutive interpretation is that the time communication takes is multiplied by the number of working languages. Simultaneous interpretation, on the other hand, makes it possible to have interpretation towards each working language take place at the same time as the original speech. Any number of listeners can listen to the interpretation, and the voice of the interpreter does not cause disturbance thanks to the use of sound-insulated booths and audio equipment.

After its successful implementation in the Nuremberg Trials, the use of simultaneous interpretation in international organizations began to spread, starting with the League of Nations (today's United Nations), and schools with the specific objective of training professional interpreters began to be set up throughout the world. Today, the UN employs interpreters in its six official languages (Arabic, Chinese, English, French,

Russian, and Spanish),⁶ and institutions of the European Union employ interpreters in its official languages (Bulgarian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovene, Spanish, and Swedish) (EEC Council 2007). Moreover, freelance interpreters work in all kinds of bilingual or multilingual diplomatic or business meetings and conferences in many language combinations. In Canada, the largest employer of interpreters is the Government of Canada, which provides interpretation services in its official languages, English and French. Schools of interpretation train professional interpreters all over the world. The most recent Directory of Interpretation Schools from AIIC (Association internationale des interprètes de conférence) listed 178 schools worldwide in 2004 (AIIC Training Committee 2005).

This brief overview of history indicates the current position of conference interpreting: an indispensable aspect of communication between societies speaking different languages. The following section will lay out the workflow of the interpreter who is the key to this communication.

1.1.2. The Workflow

Interpreters' job starts from the moment they are hired to provide interpreting services in a conference, a meeting, a forum, or other environment at which they will be *the* communication channel between parties who do not have a common language. For practical reasons, the word *conference* will be used as a generic reference to this kind of

⁶ http://www.un.org/Depts/DGACM/faq_languages.htm (April 27, 2009)

context.⁷ The interpreter's job usually also continues on after the conference is finished, and ends only once all kinds of work related to the conference, such as storing and organizing documentation and terminology acquired throughout the conference, is completed. We will look at the workflow in two stages: *preparation*, from hiring to the moment the conference starts; and *performance*, which includes the entire period of time the conference is going on and the period afterwards, while the interpreter is doing work related to it.

1.1.2.1. Preparation

Once interpreters are hired to work at a conference, they must familiarize themselves with the subject matter, since it is their duty to “provide an exact and faithful reproduction of the original speech” (Jones 2002: 4). Interpreters have to take the message that has been presented in the source language and communicate this message for the target language audience without overlooking the slightest detail. This is not possible unless they have at least a basic understanding of the fundamental concepts related to the subject field, and have full command of the specialized terminology on the subject. As a conference can focus on almost any subject, this places significant demands on the interpreter. Regardless of the level of training or experience, due to the unlimited variety of subject fields on which an interpreter can be asked to work and the high speed of information flow in this age, interpreters always have to do some preparatory work, at least to make sure their knowledge is up-to-date.

⁷ There are different types of interpreting, usually labelled by the context in which they take place: conference interpreting, court interpreting, social or community interpreting, etc. What is common to all types of interpretation is that the communication is always of a specialized nature (judicial, medical, etc.). This means that interpreters always need a high level of documentary and terminological preparation. Therefore, the discussions of hypotheses within this study are potentially applicable to other types of interpreting as well, other than conference interpreting – which is the main focus of this study.

Seleskovitch and Lederer (2002: 368, 369) point out two essential aspects of preparation: documentary preparation and terminological preparation. Documentary preparation involves gathering documents related to the subject field from sources such as the Internet and the press, as well as documentation specific to the conference that may be provided to the interpreter by the client and/or speaker(s). This work serves to improve interpreters' conceptual knowledge and understanding, and to familiarize them with the linguistic and situational contexts in which specialized terminology is used. Interpreters need to be informed about the fundamental concepts, practices, recent developments and trends in the subject field. According to Seleskovitch and Lederer (ibid.), without this type of preparation, interpretation would be reduced to simple transcoding and the result would be quite mediocre. For example, an interpreter working on a medical subject obviously is not expected to have the level of expertise necessary to diagnose a patient or to perform surgery, but must have a grasp of the fundamental concepts and procedures involved. The same is true in all specialized fields. Seleskovitch and Lederer write (2001: 241):

Il faut découvrir dans chaque sujet traité les principes généraux (très généraux) qui le régissent et permettent de comprendre la marche opératoire des choses, sans jamais (...) prétendre opérer soi-même.

How the results of documentary research are assessed and processed by interpreters is a potential subject of inquiry. However, this study focuses mainly on terminology rather than documentation, and the nature and results of terminological preparation done by interpreters.

Interpreters' terminological preparation involves two main tasks. The first involves scanning documentation – i.e. documentation provided to the interpreter that is specific to a conference, or supporting thematic documentation gathered from other sources – for useful terminological information. Depending on interpreters' individual preferences, this terminological information may include terms, information on their usage, contexts in which they are used, phraseology, etc. The second involves storing and organizing this data in a way that will ultimately facilitate the retrieval of relevant information in an efficient manner which suits the individual interpreter's working context. Having correct and current terminology to consult can help to ensure consistency, precision and idiomaticity in a specialized subject field.

In brief, neither terminological preparation and knowledge nor documentary preparation and conceptual knowledge alone are sufficient for a successful interpretation. Jones (2002: 81) argues that:

The interpreter, rather than attempting to provide a slavish copy of the original, must create in a new medium – the target language – the discourse that will have the same effect on their audience as the speaker's words have on those who understand the source language.

To achieve this, both documentary and terminological preparation are indispensable complements to the interpreter's skills and abilities.

1.1.2.2. Performance

Gaiba (1998: 28) explains the invention of simultaneous interpretation as cited below, and the fundamental idea has remained the same since that time:

Simultaneous interpretation was invented to work like this: through a system of electrical transmission, communication occurs through a wired system of microphones and headphones. Interpreters hear the original speech through headphones and translate it into the language to which they are assigned. By means of a selector switch, listeners can choose one of the various language channels, in order to hear either the original speech or the interpreted version of their preference.

Simply put, during the performance – i.e. the conference – this is how simultaneous interpretation generally takes place: two interpreters sit in a sound-insulated booth, listen as speakers speak into a microphone, and take turns interpreting simultaneously into microphones which then convey their voice to the audience, who can listen to the interpretation using their headsets. When one of the interpreters in the booth is interpreting, the other usually continues to follow the speech, and may assist the active interpreter by taking notes (e.g. noting down figures, names, titles, and other important items), looking up terminology or other supporting information, and so on. If interpretation is provided into multiple languages, pairs of interpreters for each language work in parallel, and listeners are able to select among the languages of interpretation.

As part of their performance, besides the obvious tasks of interpreting and assisting the active interpreter, interpreters also do conference-specific work inside or outside the booth, sometimes even after the conference itself is over. It is highly probable that they will acquire new documentation and terminology throughout a conference, which (despite the variety of subjects on which they may be required to work) is

potentially useful for future work. Thus, they must organize and store new documentation and terminology not only as they prepare before the conference, but also during or after the conference. With the possibility of working at many conferences on various subject fields within a limited amount of time, they need to be able to do this as quickly as possible.

In addition to the rather factual explanation of interpreters' performance presented above, researchers have also attempted to explain the process of interpreting per se, i.e. what goes on in interpreters' minds as they interpret, which tends to be a more conceptual and abstract topic of inquiry. Such studies range from the famous "théorie du sens" by Seleskovitch and Lederer, which can be traced back to the early 1960s (Seleskovitch 1962), to more recent studies employing methods such as psycholinguistic (Frauenfelder and Schriefers 1997) and cognitive (Pöchhacker 2005) analysis to explain the process. This is a tremendously complex field of research, and it is outside the scope of this study, which is focused rather on exploring a specific practical issue, i.e. terminology management, within the context of interpreting.

Many researchers (e.g. Pöchhacker 2003: 10; Schäffner 2004: 1; Gile 2004: 12) have identified the instantaneity of the performance as the distinguishing quality of simultaneous interpreting, compared to any other activity of interlingual transfer. In the end, it is this intense time pressure that defines everything related to interpreting: the training of interpreters, their preparation for and performance in conferences, interpreting research and potential development of software products designed for interpreters and their specific needs.

1.2. Terminology

Terminology is a polysemous term with at least two senses. In the first, the terminology of a field is “the set of special words belonging to a science, an art, an author, or a social entity” – i.e. terms (Pavel and Nolet 2001: xvii). In the second sense, terminology understood as a field of study is “the language discipline dedicated to the scientific study of the concepts and terms used in specialized languages” (ibid.). This section will outline the fundamentals of terminology work, focusing on rather practical issues such as term identification and designing and creating terminology records. This practical aspect of the field of terminology is also referred to as *terminography*. L’Homme (2004: 16) makes the distinction between *terminology* and *terminography* (or, more precisely, between the corresponding French terms *terminologie* and *terminographie*):

La terminographie regroupe les diverses activités d'acquisition, de compilation et de gestion des termes. La terminologie se penche sur les questions fondamentales que soulève l'étude des termes et propose un cadre conceptuel pour les appréhender.

In addition, the role computers have recently come to play in this work will also be examined, through a discussion of a number of terminology management tools and their functions. It is worth noting here that the term *terminotics* (or, in French, *terminotique*) has been used to designate computer use for all terminology-related activities (ibid: 17).

1.2.1. Fundamentals of Terminology

The most obvious focus of terminology is terms. However, according to classical terminology theory, which dates back to the 1930s with Eugen Wüster's work, the priority is actually concepts: mental representations rather than their linguistic forms (L'Homme 2004: 24, 25). This means that traditional terminology aims first to identify concepts that are pertinent to specialized language, and then to identify the terms which refer to these concepts. It follows that classical terminology theory espouses an onomasiological approach (going from concept to linguistic form) (ibid: 26). It is this approach which is behind one of the most central principles of classical terminology: the single-concept principle, which refers to term-concept monosemy (Pavel and Nolet 2001: 22). In other words, "all of the terms that designate a concept are in a monosemous relationship with this concept in a specialized language: each one designates only this concept" (ISO/FDIS 704 cited in ibid: 21, 22). Terminological definitions play a significant role in implementing the single-concept principle, by concisely defining and delimiting the concept a term denotes (ibid: 23).

Though fundamental in traditional terminology, term-concept monosemy has been contested and recognized as highly idealized in recent terminology literature. As mentioned by L'Homme (2004: 23), classical terminology theory has been criticized by a number of scholars as proposing models which do not always accurately reflect authentic situations and practices. Alternative and more recent approaches to terminology include the "lexico-semantic" approach preferred by L'Homme (ibid: 24); Gaudin's (1993) approach focusing on the social aspects of terminology ("la socioterminologie"); Cabré's (1998/1999) communicative approach ("théorie communicative de la terminologie");

Bourigault and Slodzian's (1999) textual terminology; and Temmerman's (2000) sociocognitive model.

This study will take into account L'Homme's lexico-semantic approach (which is explained later in this section), complemented by the classical concept-based approach mostly reflected in Pavel and Nolet's work (2001). Nevertheless, the priority in this study will be placed squarely on terminography rather than terminology theory, on outlining the characteristics of interpreters' terminology management practices, rather than ascribing to a specific school of terminology.

L'Homme (2004: 46, 47) presents the basic layout of terminography divided into 7 main steps: building a specialized corpus, extracting terms, gathering supporting information, analyzing, storing, organizing and managing terminological information.⁸ There are, without a doubt, differences in how different groups of language professionals (e.g. translators, terminologists, interpreters) handle each of these major steps, and these contrasting aspects of terminography will be explored in more detail in a further section that highlights interpreters' distinctive profile (Section 1.3).

The first step in doing terminology research is building a specialized corpus, which might be monolingual, bilingual or multilingual depending on the nature of terminography being done. The language professional doing terminography might have to gather the corpus, or it might be provided (in whole or in part) by the client, the employer, or another source. Regardless of the source, the corpus should consist of

⁸ Although this specific layout is taken from L'Homme (2004), it represents a widely accepted way of doing terminography, which is also reflected in a more or less similar way in Dubuc (2002) and Pavel and Nolet (2001).

documentation that is: 1) representative of the subject field, 2) relevant to the specific context in which it is going to be used, 3) reliable – both in terms of content and language use – and 4) up-to-date (Pavel and Nolet 2001: 35). For bilingual or multilingual terminology, one might work with comparable or aligned corpora. Comparable corpora consist of documents in two or more languages with certain common traits such as subject field, text genre, and purpose. Aligned corpora consist of original-language documents and their translations (or, in rarer cases, documents written in parallel) which are usually aligned at the sentence level (L’Homme 2004: 131).

The corpus is then scanned for terms. This process is usually referred to as term extraction. Classical terminology theory suggests that term extraction should be performed in original-language sources (Pavel and Nolet 2001: 41), to ensure the authenticity of the terms identified. Whether automatic or manual, the purpose of term extraction is the identification of terminological units, i.e. terms, which may be single- or multi-word units, symbols, formulas, acronyms, initialisms, official titles, etc. (ibid: 18).

Detailed analysis of the corpus follows term extraction. The purpose is to identify relevant terminological information that will be organized and stored for further consultation. Besides the terms themselves, information such as contexts, phraseology, and examples might be gathered. Observations about the term and when and how it is used may also be made. Finally, all of this terminological information must be stored and organized, generally in the form of term records. The long-term management of terminological information entails updating and improving term records over time.

Dubuc (2002: 81) defines a terminology record as follows:

La fiche terminologique est un document qui contient, sous une forme facilement accessible et repérable, des renseignements permettant d'identifier un terme, associé à un contenu notionnel suffisant, dans un domaine donné et dûment attesté par une source digne de foi.

He suggests a term record structure which includes the following categories of information:

- The entry (i.e. the term itself, as well as synonyms and/or variants if applicable) in base form (e.g. the singular form for nouns, the infinitive for verbs);
- The source, in the form of a complete bibliographical reference;
- Grammatical labels, such as part of speech and gender;
- Usage and semantic labels, such as geographic or temporal usage and register;
- A context (i.e. an excerpt from the source), to indicate how the term is employed in an authentic situation, or a definition in the case of an item taken from a lexicographical or terminological resource;
- Field(s) in which the term is used, i.e. the subject field(s) and sub-field(s);
- The author and date, to indicate who created the term record, and when; and
- Access keys, i.e. keywords that can be used when searching for a term record.

In a bilingual or multilingual record, every category except the last three – fields, author and date, and access keys – is repeated for each language (ibid: 85). Dubuc (ibid: 8) also underlines the importance of establishing interlingual equivalence when working with bi- or multi-lingual terminology (cf. *crochet terminologique*), which is a critical step especially for translators and interpreters, whose main concern is interlingual transfer.

Figure 1 below, taken from Pavel and Nolet's *Handbook of Terminology* (2001), provides an example of a complete term record in a format similar to Dubuc's (2002) model. As we can observe, not all the suggested fields have to be used for every term, and their use may depend on the purposes and nature of terminography.

SUBJECT FIELDS	
SCH	Nuclear Physics
EN	accelerator*f particle accelerator**OFFICIALLY APPROVED atom smasher**SEE RECORD
DEF*	A device for imparting kinetic energy to charged particles. In general, the energy added is greater than 0.1 MeV.*c
CONT*	... the high energies needed by charged particles to penetrate the nuclei of atoms are produced by machines popularly called atom smashers but more correctly particle accelerators.*f
OBS*	particle accelerator: term officially approved by the Canadian Committee for the Standardization of Nuclear Terminology.*g
FR	accélérateur*c,h*MASC accélérateur de particules*a,e,j*MASC, OFFICIALLY APPROVED
DEF*	Machine permettant de communiquer de l'énergie à des ions ou à des particules élémentaires, généralement en vue d'explorer les structures de la matière.*h
CONT*	Seules les particules stables, possédant une charge électrique peuvent être accélérées : ce sont l'électron et le positron, le proton et l'antiproton ainsi que les ions stables. [...] Les progrès de la physique ont entraîné la construction d'accélérateurs atteignant des énergies de plus en plus élevées. Ces énergies sont mesurées en électronvolts. [...] On peut distinguer trois grandes classes d'accélérateurs : les accélérateurs électrostatiques, linéaires et circulaires.*h
OBS*	accélérateur de particules : terme uniformisé par le Comité canadien de normalisation de la terminologie nucléaire.*g
CODED SOURCES	
a*CAN.GAZ.-II*1993*127*8*1636; c*ISO-921*1972***--; e*DOC-L-15*1980***19; f*BROCH*1962***1545; g*7LCX*1980; h*LAROG*1982*1**49; j*CHENE*1961***70	

Figure 1 - Term record example (Pavel and Nolet 2001: 49)

L'Homme (2004: 241), in her more recent work that nevertheless refers back to the fundamental work of Sager (1990), suggests a slightly changed, somewhat more flexible approach in the categorization of terminological information, within the framework of the lexico-semantic approach. Rather than specifying term record fields and the type of information to be included in each field, she presents the fundamental structure for organizing and storing terminological information. This approach leaves more initiative to language professionals doing terminography, gives them more flexibility in adapting term records to their specific purposes, and is therefore more easily compatible with authentic situations. L'Homme (*ibid.*) outlines three main categories of information stored in term records: terminological data, i.e. data related to terms themselves; bibliographical data, i.e. data related to sources of information; and administrative data, such as the date and author. Terminological data, which makes up most of the content of a term record, has categories of its own:

- Conceptual or semantic data, such as the definition, relations with other concepts, domain, and illustrations;
- Linguistic data, i.e. terms, their variants and synonyms, and data relating to them, including grammatical information and usage labels;
- Pragmatic data, such as contexts, phraseology, etc.; and
- Data related to equivalents, i.e. information related to term equivalents in other languages (*ibid.* 242).

1.2.2. Terminology Management Tools

This section will present an overview of some commercial terminology management tools designed for terminologists and translators in sub-section 1.2.2.1, and then two terminology management tools specifically designed for interpreters in sub-section 1.2.2.2.

1.2.2.1. Commercial Terminology Management Tools

Terminology management tools can be stand-alone tools, or may be integrated within a translation environment, i.e. a software package designed for translators offering several functions such as a translation memory tool, a term extractor, and a terminology management tool. For example, MultiTerm is a terminology management tool that is available separately or as a part of the SDL Trados translation environment. The principal functions of terminology management tools are *storage* and *retrieval* of terminological information.⁹

Terminology management tools allow users to design and structure term records in which they can *store* terminological information. Largely based on a framework similar to that of a generic DBMS but designed to facilitate storing terminological information, they define structures for term records. Most, although not all, allow users to specify term record fields (i.e. include the fields they need, while omitting fields deemed unnecessary) and to set (i.e. restrict) the type and amount of information to be

⁹ Term extraction is also a widely used function found in terminology tools, but the focus of this study is the management of terminological information rather than how it is gathered. Some terminology tools also have other translation-specific functions that help to increase the automated portion of the translation work and reduce the workload of human translators, such as *active terminology recognition*.

entered in a field (e.g. to ensure consistency). Users can usually create optional or compulsory fields (i.e. specify which fields must be filled in, and which fields may or may not be filled in according to the user's initiative).

Term records are stored together in a term base (similar to the records in a conventional database in a generic DBMS). Users can create separate term bases according to their needs. This ultimately facilitates the retrieval of information for a specific purpose, e.g. from a specific subject field or for a specific client, and significantly reduces the retrieval of irrelevant term records from search results. It is also possible to merge multiple term bases or search within multiple term bases if needed, for example when working on a more general or interdisciplinary subject which might require terminology from several subject fields or sub-fields.

Retrieval functions of terminology management tools determine the ways in which terminology records that contain required information can be accessed. Most allow browsing records in a list. In searches, users can generally specify a term to search for using exact or fuzzy matching and/or wildcard searching. Fuzzy matching means searching for character strings that have a minimum number of characters that match, but a certain number of characters can be different from the search string (Bowker 2002: 79). A wildcard, such as an asterisk (*) or a question mark (?), can be used in a query to represent any combination of characters, or any single character, respectively (ibid.). The target of the query, or in other words where (e.g. in which term record field) the information is going to be sought, can usually also be specified. Users may then query a single term record field or multiple fields within a single term base or multiple term bases. These retrieval functions help users to get more accurate search results, and also

make it easier for them to retrieve records when they are not exactly sure of the term(s) or supporting information they are looking for.

The features and functions of commercial tools are designed primarily for terminologists, translators and technical writers. Even though some can be used as stand-alone tools, most of them are primarily conceived for use as an integrated part of a Translation Environment Tool (TEtT), and thus have features and functions designed for this kind of use. They generally require a significant financial investment for the user to get started with integrating them into the workflow,¹⁰ as well as an investment of time in training and/or learning the tool. As we will argue later, since these tools are not designed for interpreters, they will most likely not completely meet the needs of this user group. Since cost-effectiveness depends on how well such tools are adapted to users' needs, and interpreters' needs are different from those of other language professionals (as we will discuss in section 1.3), interpreters must carefully evaluate whether such tools provide the functions they need to work effectively before investing time and money in them.

¹⁰ e.g. MultiTerm: SDL Trados, €485, http://www.translationzone.com/en/shop/shop_main.asp;
LogiTerm: Terminotix, \$535,
<http://www.terminotix.com/index.asp?name=Professional&content=item&brand=2&item=12&lang=en>;
Synchroterm: Terminotix, \$1,800,
<http://www.terminotix.com/index.asp?name=SynchroTerm&content=item&brand=4&item=7&lang=en>
(Websites consulted on April 27, 2009)

1.2.2.2. Terminology Management Tools for Interpreters

Research has revealed surprisingly few terminology management tools specifically designed specifically for interpreters. They include *Interplex*,¹¹ designed by Peter Sand and programmed by Eric Hartner, and *InterpretBank*,¹² developed by Claudio Fantinuoli.

Interplex costs \$90 to download or \$100 in its CD-ROM version as of December 22, 2008 (Hartner 2008). A free demo version can be downloaded from the website;⁶ it has all the features of the program, and can be used for 30 days. *Interplex* allows the user to create bilingual or multilingual glossaries (i.e. bilingual or multilingual term lists), rather than comprehensive term records. The user can import from and export to word processors, spreadsheets and text documents. Search options include neutralized searching (i.e. searching in which accented characters and capital letters are not taken into account) and multiglossary search (i.e. searching within multiple glossaries in multiple languages of the user's choice). The program also allows the user to merge glossaries and select glossaries and languages for printing. Figure 2 displays the *Interplex* interface, showing the sample glossaries and sample entries which come with the demo version. The designer of the program, Peter Sand (2003) provides an overview of the program in his web article which appeared in the AIIC Webzine, and evaluates the program as “a very fast, easy-to-use tool which can help interpreters relegate to the past the heaps of paper on which they have scribbled their vocabulary lists.”

¹¹ <http://www.fourwillows.com/interplex> (May 11, 2009)

¹² http://www.fc-translations.de/download_de.html (May 11, 2009)

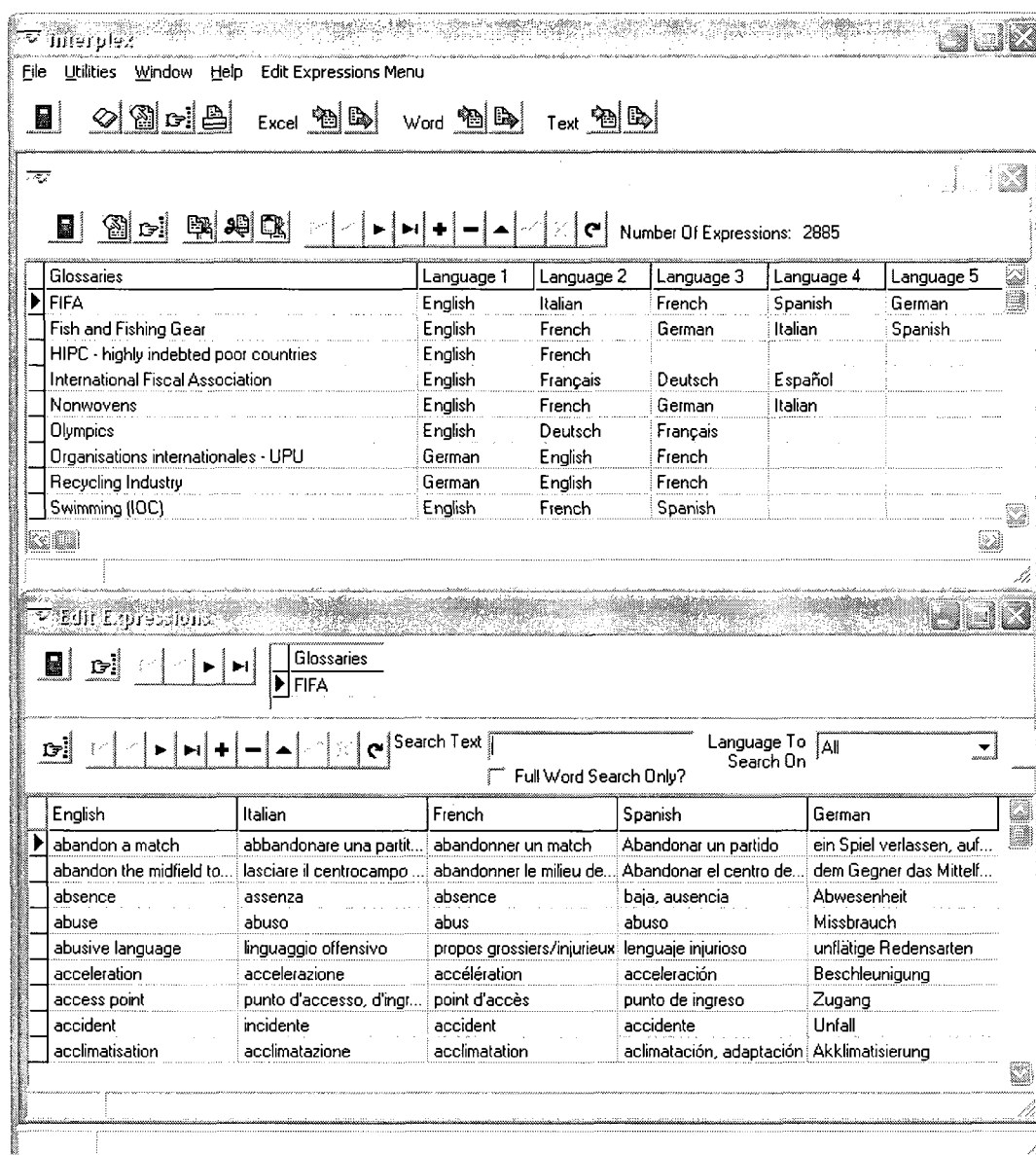


Figure 2 – Interplex

InterpretBank is free and available online for download.¹³ Its features are more basic than those of Interplex: it is basically an interface designed to facilitate the input and output of bilingual glossary data in a table format. Instead of working directly with a table in a word processor or a spreadsheet, the user can enter or search for information in bilingual glossaries using the *InterpretBank* interface, or import tables from word

¹³ http://www.fc-translations.de/download_de.html (May 11, 2009)

processors or spreadsheets to use with this program. *InterpretBank* has two working modes: *Conference Mode* and *Enter Mode*. *Conference Mode* is the search interface of the program. It displays the bilingual glossary and allows the user to do either a static search or a dynamic search. In a static search, the user types in the complete search string to be matched; a dynamic search involves predictive typing, in which the program conducts the search as the user is typing in the search string, evaluating potential matches as each character is entered. Thus, it saves time and also allows the retrieval of some partial matches where there is a match at the beginning of the term. *Enter Mode* can be used to enter the equivalents in both languages in the bilingual glossary. Figure 4 and Figure 3 display these two modes. The English-German glossary seen in Figure 4 is part of the sample glossary that comes with the program.

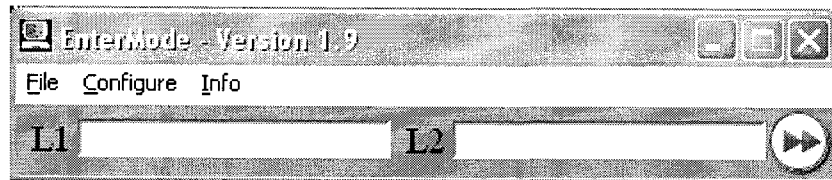


Figure 3 - InterpretBank: Enter mode

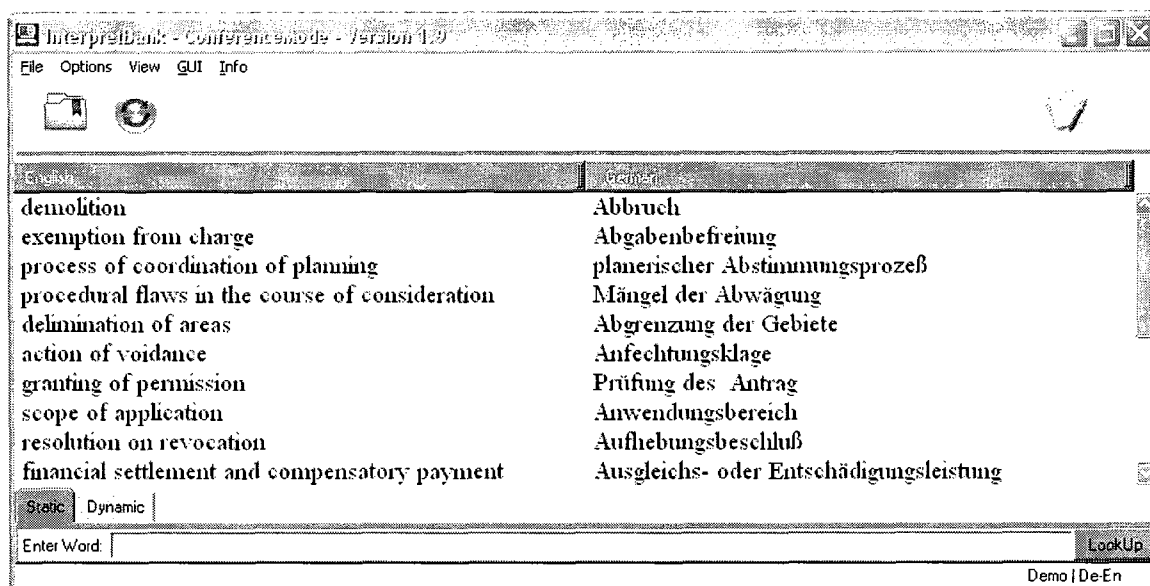


Figure 4 – InterpretBank: Conference mode

Based on this overview, it seems that existing commercial terminology tools for terminologists and translators may not be fully satisfactory for interpreters, especially because of the time and financial investment required, and tools for interpreters are fairly basic and more oriented towards creating and managing bilingual or multilingual glossaries rather than more comprehensive terminology records with supporting information.

The next section will aim to highlight the distinctive profile of interpreters regarding their terminology management practices and needs in light of a synthesis of interpreting and terminology literature.

1.3. Terminology Management in the Context of Interpreting

This section will assess terminology management within the context of conference interpreting, in the framework of the two main stages in the workflow of interpreters: preparation and performance. It will thus look at potential terminography done in each

stage and compare it to that done by terminologists and translators in order to highlight differences between these groups.

1.3.1. Preparation

First of all, terminologists might be interested in doing monolingual terminology work (Pavel and Nolet 2001: xviii), for example in terminology standardization. On the other hand, given the nature of their work, translators and interpreters are exclusively interested in bilingual or multilingual terminology, specifically for finding term equivalents.

Second, terminologists, unlike translators, often conduct thematic research “based on a vocabulary and language usage specific to” a certain domain (ibid: xvii). Translators almost always conduct terminological research to solve specific translation problems that they encounter as they translate: therefore they tend to carry out ad hoc research focusing primarily on these problems. At this point, since interpreters do not have the same luxury of being able to conduct terminological research as they work (i.e. during the performance stage), their research takes a hybrid approach. They must explore terminology in the documentation that they have, focusing on specific problems of interpretation (that is, of course, potential problems). They must also support this with thematic research that will help with terms that might not come up in the documentation, but can be relevant to the subject field they will be working on (and thus may occur in a speech to be interpreted, in a question and answer session and so on).

Another difference is the priority given to terminology rules and literature, for example in the case of considering the importance of termhood – i.e. whether a lexical unit is a term or not. Terminology rules have been established in order to guide the work

of terminologists to produce a product that can satisfy the needs of a wide range of users such as translators and technical writers (e.g. in the case of large terminology banks). However, some of these rules may not be as appropriate for terminology work by other language professionals. For example, L'Homme (2004: 54) describes the complexity of termhood by giving examples of different perceptions of what is and is not a term according to various groups such as translators and terminologists. In fact, it comes down to a point for translators, and also for interpreters, where the important thing is the usefulness of the information stored rather than whether it fits the rules and theory of conventional terminology. Thus, what a translator or interpreter considers to be a term for the purposes of storage on a term record is not limited to single- or multi-word units, symbols, formulas, acronyms, initialisms, official titles, etc. but can include any kind of word, expression, or even any proper noun that comes up frequently in a specific domain.

The emphasis placed on information useful for a specific task is something that translators and interpreters seem to have in common, but there might be other differences in the kind of information stored. For example, a translator using an integrated computer-aided translation tool might store information (such as inflected forms) to be consulted by the computer, not by the human translator (Kenny 1999: 74). This enables the computer to automatically recognize every form of a term that has been stored when the user runs an active terminology recognition function to compare the text that is being translated with the existing term base, and thus to find the matching equivalents stored for them. However, this is only valid for the translation of texts. The interpreter will only store information to be consulted by a human. The priority, as mentioned above, will be

recording any kind of useful information that could solve a specific interpretation problem, but without a specific need to take into account formal variation that is not likely to pose problems for human identification.

Moreover, terminology literature suggests that “definitions and contexts must, in fact, be kept to a minimum” for copyright, precision and consistency reasons (Pavel and Nolet 2001: 24). However, translators might prefer to consult multiple definitions or contexts in their records to find the solution that best fits the translation problem they encounter, and since they have more time to spend on translation problems as they translate than interpreters do, this does not pose as much of a problem for them. Interpreters would follow an approach closer to terminologists, since they will rarely have the time to go over multiple definitions, contexts, etc. to find the right one. In short, what interpreters need in the preparation stage is a tool that would help them to store the most concise information in the quickest and easiest way possible.

Basically, the main differences between translators’ and interpreters’ terminology practice and that of terminologists stem from the rules set out by conventional terminology literature regarding the structure and content of term records. Terminology literature puts forward certain rules and principles regarding the extraction, categorization, organization and storage of terms (ibid: xix). These rules are – and have to be – relatively more strictly followed by terminologists, because their ultimate goal is generally creating comprehensive term records for long-term use by a variety of users. Meanwhile, terminology work for interpreters is more focused on meeting their own personal, practical needs. Therefore, they are less concerned with following theoretical rules and principles that are usually applied in terminology than with finding solutions to

their specific interpreting problems of a terminological nature. Consequently, as mentioned above, they might store lexical units regardless of whether they fit a conventional definition of what a term is, and they might leave some fields in a term record empty – or not include that field in the term record template to begin with – as long as they do not need that information. Translators may share some of these different needs in their work, but not the intense time pressures involved in interpreting and the relatively short-term use of the data collected that is the result of the many subjects interpreters must deal with.

All of the points discussed above are indicators that interpreters' needs and practices are not identical to either terminologists' or translators'; rather interpreters constitute a distinct user group.

1.3.2. Performance

In the main performance stage, i.e. the entire duration of a conference, the interpreter's terminology work will consist primarily of retrieving the terminological information stored, and the nature of terminology work will be defined once again mainly by the time constraints. During performance, the interpreter must be able to use accurate and consistent terminology. Jones (2002: 86) emphasizes the importance of terminological consistency by warning of the possibility that a change of term may even mislead the audience to believe that the subject matter itself has changed. It must be noted that using accurate and consistent terminology is not limited to source and target language equivalents of terms. The interpreter must also be able to correctly use the right terms in the right context (Seleskovitch and Lederer 2002: 117).

To consult and retrieve the information that they need to solve terminological problems during interpretation, interpreters may consult a variety of resources, including online term banks, personal glossaries or personal computerized term records. Regardless of their choice of medium – print, electronic, online – the priority is the retrieval of precise information in the quickest way possible.

Moreover, both during the conference and afterwards, in follow-up work, easy and quick data input is at least as important as retrieval. This not only saves time at the preparation stage as mentioned above, but also allows information acquired throughout the conference to be stored as quickly and easily as possible, since it is potentially useful for future work either within the same conference or at a future date.

1.3.3. Literature on Terminology Management for Interpreters

The potential that computers present for speeding things up to save the interpreter valuable time was realized a fairly long time ago (Gile 1987). However, the precision required in the output of terminological information in particular requires a specifically designed term record structure and an interface which can offer adequate search and other output options, i.e. rapid and specific searching suitable to interpreters' working context.

A study conducted by Moser-Mercer (1992: 507) contests the assumption “that interpreters' needs are identical to those of translators and terminologists” and sets out to “survey how conference interpreters handle terminology documentation and document control and to offer some guidelines as to the interpretation-specific software tools for terminology and documentation management”. Some key findings of this study include the observation that most of the respondents were interested in exchanging

terminological information, and that they were open to using computers in their profession. This led Moser-Mercer to conclude that “software developers targeting the conference interpreting market must provide a tool that meets the specific needs of the interpreters and not just market translation tools” (ibid: 511). This study is unique, yet it dates back to 1992. Considering the incredible rate at which technology, computers and computer programs for language professionals have progressed over the last decade, an up-to-date study is certainly necessary to reach an understanding of interpreters’ current needs and practices regarding terminology management. The profession has evolved, technology has evolved, and the professionals’ use of technology has no doubt evolved.

CHAPTER 2

Methodology

The literature review in Chapter 1 presents several indications of how interpreters' practices and needs regarding terminology management differ from those of other language professionals. Since one of the objectives of this study was to suggest a practical solution to the lack of a terminology tool that can adequately meet the specific needs of conference interpreters, it was deemed best to complement the theoretical basis with an empirical component, i.e. a survey of professional interpreters. For the purpose and scope of this study, the priority was to contact a sample group which would ensure a certain participant profile that would be representative of qualified professional interpreters in Canada. A survey presents the opportunity to reach out to a specific sample group. The results of a survey conducted with a specific sample group, as opposed to the analysis of the contents of mailing lists, online message boards or discussion forums for example, provide relatively more qualified data, since the input in mailing lists, online message boards or discussion forums is relatively less controlled. Although it has its own drawbacks, such as respondents being motivated by the researcher as opposed to being self-motivated, the possibility of influencing the answers, reflecting the opinions of a limited group, for the reasons mentioned above, we chose to conduct a survey.

This chapter will provide details about the survey and its methodology;¹⁴ followed by an explanation of how the results were interpreted to evaluate the information about interpreters' current terminology practices and their experience with

¹⁴ The complete survey and accompanying documents (recruitment letter, letter of information) can be found in Appendix A.

and attitudes about terminology management tools. It will then discuss how these results were used to draft guidelines for a terminology tool designed for interpreters, and finally how these guidelines were implemented in a sample terminology database developed within a generic DBMS, namely Microsoft Access.

2.1. Survey Design

Designing and administering a survey involves choosing a pool of respondents and designing a survey methodology and survey instrument that are suited to these respondents. These tasks must overlap, but will be discussed separately here for readers' convenience.

2.1.1. Survey Method

As described in Newman & McNeil (1998), Bartel Sheehan & Grubbs Hoy (1999), and Gray & Guppy (2003), a number of methods of administering surveys are available. These include in-person interviews, telephone interviews, administration of questionnaires by mail, and online questionnaires. Each can be described according to a number of characteristics, including the flexibility of design, the proportion of potential respondents who are able to participate, the time required to administer a survey, the time required to complete it, the convenience of completing it, the cost of the process, the interpretation of responses that is required, and the anonymity of potential and actual respondents.

In-person interviews, for example, require a significant time investment on the part of both investigator and respondent, at a fixed time and place (Newman & McNeil 1998: 28). This format may be inconvenient, and makes maintaining anonymity of the

respondent difficult. Moreover, administering a questionnaire in an interview also generally requires more interpretation of respondents' answers by the investigator. The latter point can also be made for telephone interviews, which also require a time investment by both respondent and investigator, and involve a need to obtain contact information for potential respondents and the investigator's knowledge of which potential participant is responding, thereby compromising respondents' anonymity. Mailed paper questionnaires also generally require that contact information for potential respondents be obtained and thus reduce the anonymity of the pool of participants (even if the individual questionnaires, once returned, are not identified by respondent). They also require an investment in materials and mailing costs, although the interpretation of results may be facilitated by offering respondents closed-ended questions with less opportunity to vary from the proposed answers. The convenience of participating in the survey may be greater than that of an in-person or telephone survey as respondents may complete the survey at their convenience, but they are nevertheless required to make the effort to return the survey, and the investigator must generally then enter the data received into a database or other tool for analysis.

As observed by Bartel Sheehan and Grubbs Hoy (1999), online questionnaires may avoid or resolve some of these issues. They offer great flexibility of design, including availability of question types such as closed-ended questions with little possibility of variation in responses (which facilitates analysis) and the option to allow respondents to skip questions that do not apply to them automatically. They do not require significant investment of time from the investigator (as once the questionnaire has been designed it can be completed by any number of respondents), and responses are

automatically entered into a database in electronic form. Responses can be submitted at the respondent's convenience, and provided the questionnaire is brief and well-designed can require little time investment by the respondent. Invitations to participate can be distributed by e-mail (if desired, using an intermediary such as a mailing list or association, so that the investigator does not need to have access to contact information for potential respondents), and respondents can remain completely anonymous. While online questionnaires do require that respondents both have access to the Internet and e-mail and be comfortable enough with these tools to use them, these are generally not considered to be limiting factors in the workplace today, and are certainly not rare skills for practicing interpreters. Moreover, online survey interfaces such as Survey Monkey (www.surveymonkey.com), which is available in a free version or by subscription and stores questionnaires and responses in password-protected accounts with optional SSL security to protect data during transfer, allow responses to be tallied automatically and displayed using a number of filters and other features that facilitate analysis and comparison of responses.

For these reasons, an anonymous online survey using Survey Monkey was chosen as the approach for this project. In order to guarantee respondents' anonymity, no personal information or IP addresses were recorded.

2.1.2. Choice of Question Types

In choosing the question types, we wanted to ensure consistency in responses and to facilitate analysis and identification of trends and patterns represented by the data that indicate interpreters' current practices, needs and experience concerning terminology management. Moreover, we wanted the surveys to be as quick and easy to answer as

possible, to minimize inconvenience to respondents and to maximize response and completion rates for the surveys. For this reason, we chose to use mostly multiple choice questions. Some allowed users to choose a single answer, while others allowed multiple selections. Questions asking about multiple variables were presented in a matrix format, i.e. in the form of tables, asking the respondents to check the boxes that applied.

In formulating the questions and answers, the objective was to follow a neutral approach in order to ensure that respondents' answers were not biased by the form of the questions. In addition, wherever a possibility that the answer might be different from the choices available was identified, space was provided for respondents to enter their own answers or additional comments. The questionnaire also included two open-ended questions. The first asked respondents if they knew of any terminology management systems that are designed or marketed specifically for interpreters, and if they did, which one(s). The second, which was the final question, provided space for the respondents to add any further comments, suggestions or contributions they wished to make. Compared to questions which present choices to respondents, open-ended questions or additional notes are likely to require more time and effort on the part of respondents to answer, and to present more inter-respondent variation, and thus are more difficult for the investigator to analyze. However, this data was deemed essential to avoid the possibility of overlooking potentially useful and valid feedback from respondents.

2.1.3. Transforming Objectives into Questions

The survey was introduced by a brief note explaining its nature and its role within this study. Questions concentrated on three major points of inquiry, which reflect the main research questions guiding this study:

- 1) What are interpreters' current terminology management practices?
- 2) What are interpreters' needs and expectations from terminology management tools?
- 3) Are interpreters' needs and expectations from terminology tools being met? If not, what aspects pose problems or lead to frustrations?

Following the introductory note, the first set of questions aimed to obtain some information on the professional profile of the respondents, mainly focusing on their level of experience and the proportion of interpreting within their workload. The aim was to establish that respondents were practising interpreters with a certain amount of experience and professional status, to ensure that the survey gave an accurate picture of how *real* interpreters feel. The second set of questions focused on interpreters' current terminology management practices. The aim was to establish the nature of terminology work carried out and methods used by interpreters. This section included questions asking the respondents to indicate specifically what kind of information they store in terminology records, in order to identify the term record fields that would be most useful for storing the information they use. The term record fields suggested were taken from the literature review (see Chapter 1, section 1.2.1), and specifically from Dubuc (2002: 82, 83), and included source/target language equivalents, source (bibliographical information), grammatical information, usage notes (geographic, semantic, sociolinguistic, temporal, frequency, etc.), context, subject field, synonyms/variants, definition and phraseology/collocates.¹⁵ In order to reflect L'Homme's (2004) more flexible approach (also mentioned in Chapter 1, section 1.2.1) to suit individual and

¹⁵ In their recently published article, Rodriguez and Schnell (2009: 26) also mention that interpreters note the pronunciation. Although it was not a field mentioned by the interpreters who responded to our survey, and was not included in the sample terminology database, it is certainly possible to include a term record field to note down, or even to record pronunciations of terms.

authentic needs, the question also provided an “Other” field where respondents could enter fields of their choice other than those suggested. The question also asked respondents to rate every field according to its importance. This information was elicited in order to identify priorities according to users, and to identify the most and least critical information for inclusion on records.

The next series of questions, which addressed terminology retrieval practices, aimed to provide an understanding of the functions that interpreters need to retrieve terminological information from their records. They asked respondents specifically *what kind* of terminological information they use, *how* they access it and *when*, in order to identify priorities for display and searching options. Respondents were asked to specify *what kind* of terminological information – i.e. which term record fields – they choose to consult. To find out *when* this information is retrieved, the question also asked respondents to specify whether they access this information before, during and/or after a conference. To evaluate *how* retrieval takes place, respondents indicated whether they search for information manually (by browsing) or using automatic functions such as searches, and whether they display this information on-screen or print it out.

The questions asking about interpreters’ attitudes towards the use of computers in the booth aimed to establish the potential for developing a product for use inside (i.e. during interpreting and/or while a colleague is interpreting) and/or outside the booth (i.e. during preparatory and follow-up work), to evaluate where such a product is more likely to be used.

Last but not least, the section on respondents’ experience with terminology management tools aimed to reveal if they had previously used terminology management

tools, and if so what characteristics or features did or did not satisfy them. The question presented the following criteria (inspired by the literature review described in Chapter 1) for the respondents to evaluate their experience with tools: price, accessibility/availability, user-friendliness, time required to learn how to use the tools, time required to input data, flexibility of term base structures, availability of output formats to suit their needs, ease of designing output formats, and time required to generate output. Respondents were asked to state whether they were “very satisfied”, “somewhat satisfied”, “neither satisfied nor dissatisfied”, “somewhat dissatisfied” or “very dissatisfied”. Respondents were also given an “unable to evaluate” option, in case they did not have or were not able to express an opinion about one or more of the criteria. This question also provided space for respondents to add a note to indicate any other characteristics that had or had not satisfied them.

2.2. Respondents

This section will explain in detail how the sample respondent group was selected (section 2.2.1), and how they were contacted for the purpose of distributing the survey (section 2.2.2).

2.2.1. Choosing Sample Population

For the purposes of the survey administered within this study, professional interpreters constituted the target group that was best able to provide insight to interpreters’ practices, needs and expectations regarding terminology management. The two major organizations that bring together professional interpreters in Canada are the Translation Bureau and the

Canada branch of AIIC (Association Internationale des Interprètes de Conférence), which is also known as CACI (Canadian Association of Conference Interpreters).

The Translation Bureau is the largest employer of translators and interpreters in Canada, with around 1,800 employees – 1,200 of whom are translators, interpreters, terminologists and localization specialists (BTB 2009). The total number of interpreters who work for the Translation Bureau, including staff interpreters and freelancers, is over two hundred (AIIC n.d.). However, choosing the Translation Bureau as a sample would limit the interpreters' profile to those working for the Canadian government. The CACI, on the other hand, represents a wider variety of interpreters, i.e. those working for the government and freelance interpreters working also for other organizations and institutions. In recruiting members, CACI follows the regulations of its international parent organization, AIIC, that aim to “maintain the goal of admitting only competent professional interpreters” and put “the emphasis on performance in real-life settings” (AIIC 2007). An interpreter has to fulfil 150 days of work following AIIC's rules and regulations, and have at least three active senior members as sponsors in order to become a member of the association (ibid.). The CACI currently has 120 members (AIIC 2009).

Another factor in favour of CACI as a sample population is its close relationship with the School of Translation and Interpretation (STI) at the University of Ottawa, which offers the only conference interpreting training program in the country.¹⁶

We believe strongly that ensuring representativity is more important than maximizing sample size. Considering the scope of a master's thesis, we considered 15 to 20 responses to be ideal for this kind of study, and thus considered that CACI offered a

¹⁶ Members of CACI teach regularly and take part in the diploma exams as jury members, and they have also taken part in curriculum development. Special sessions are organized jointly with STI and CACI to introduce future graduates to the various aspects of the profession.

reasonable pool to sample.¹⁷ Considering the response rates observed in several recent studies on computer use within the field of translation, ranging from 21 to 35% (Fulford & Granell-Zafra 2005; McInnis & Takla 2005; Dillon & Fraser 2006; ATIO 2007), we felt that the pool of 120 AIIC interpreters was sufficient to obtain a reasonable number of responses. We thus reached the conclusion that CACI represents the community of interpreters that is the most appropriate for this study, for reasons of both availability and representativity.

2.2.2. Contacting Potential Respondents

As the first step to contacting respondents, the President of CACI in 2008, Josette Stéphan, was contacted about the possibility of a survey and was informed about this thesis project, in order to make sure that she would be willing to participate in the project by forwarding an invitation to complete the survey to CACI members. She, and later Taous Selhi, who took over the presidency in 2009, expressed interest in the project and a willingness to invite CACI members to participate. Once this interest was established, and once the ethical approval was received from the University of Ottawa Research Ethics Board in January 2009,¹⁸ an e-mail invitation including a link to the online survey was sent to Taous Selhi, who forwarded it to potential respondents through CACI's mailing list. The e-mail also included a letter of information and a recruitment text informing potential respondents about the details of the study and the nature of their participation.¹⁹ Those who chose to participate completed an anonymous online survey at their convenience before the date of collection of data (March 6, 2009, approximately 3

¹⁷ Detailed information on survey results such as the exact number of responses and rate of response is included in Chapter 3 – Survey Results and Synthesis.

¹⁸ See Appendix C – Ethics Approval Notice.

¹⁹ As mentioned above, copies of these documents can be consulted in Appendix A.

weeks after the invitation was distributed). The survey was completed by each respondent in a single session which took approximately 10 to 15 minutes.²⁰

2.3. Analyzing the Data

The responses to terminology-related questions were analyzed in three groups:

1. Questions on the storage of terminological information (questions 5, 6, 7, 8 and 9),
2. Questions on the retrieval of terminological information (questions 10, 11, 12 and 13), and
3. Questions on respondents' attitudes towards computer use and their experience with terminology management software (questions 14, 15, 16, 17 and 18).

The survey results, together with the reviewed literature on terminology and interpreting, were synthesized to draft practical guidelines for the development of terminology management tools for interpreters. These guidelines focus on establishing the priorities for functions and features of potential tools designed to satisfy specific needs of interpreters, regarding storage and retrieval of information; and highlighting the most important criteria defining users' experience with such tools.

Responses to multiple-choice questions (whether single answer or multiple answer) helped identify interpreters' priorities in terminology management. In particular, answers to questions 8 to 13 had a direct influence on the design of the sample database developed within the course of this study, since these questions specifically concerned

²⁰ This average excludes the timing of respondents whose sessions were obviously interrupted, i.e. whose response times ranged from an hour to several hours. This likely indicates that these respondents left the session open as they carried out other activities before completing and submitting their answers.

terminological information stored and consulted by interpreters. Open-ended questions or additional comments entered by respondents were evaluated individually. Most of the matrix questions were evaluated by taking into consideration the average values. Nevertheless, matrix questions with a particularly small number of respondents required an examination of individual responses, since the sample size was too small to indicate trends or reveal patterns.²¹

By giving interpreters the chance to express their opinions and comment on their experience on terminology management and tools, we were able to draw guidelines for the design of a tool that adequately integrates the features and functions interpreters need. The guidelines are not only put forward to inform the development of a potential terminology tool for interpreters, but are also used within this study for the design of the suggested sample terminology database created using Microsoft Access.

2.4. Using Database Management Software for Terminology Management

As mentioned in the Introduction, Austermühl (2001: 105-106) points out “terminology management using a database management system” as an alternative to using specific terminology management tools and talks about its advantages (e.g. variety of features, flexibility, fast search and easy input) and disadvantages (e.g. confusing, irrelevant features, the lack of automaticity in translation-specific features). Considering the advantages of availability and affordability in addition to the advantages mentioned by Austermühl, using a DBMS might present an efficient terminology management alternative for interpreters. There are even open source free database management

²¹ For example, question 18, which asked respondents to rate their experience with terminology tools, only received 4 applicable responses.

software programs available for users to download, install and use at no cost.²² The pre-established, ready-to-use database structure and pre-defined queries providing precise searching options that come with the sample database designed within this study are intended to guide users to the most pertinent features, therefore enabling them to take advantage of the flexibility of the software, while eliminating irrelevant and confusing functions – a major drawback mentioned by Austerhöhl (ibid.).

Microsoft Access offers, in addition to the possibility of specifying custom term record fields, the possibility of customizing the properties of the fields, so that the user can define each field as it might be useful for either input or output of data. Possibilities include specifying the amount and type of data that can be entered in each field, making filling in the fields mandatory or optional, and specifying which fields are going to be consulted for a specific search query, which fields are going to be displayed in the output, etc. The user can also import data from other environments such as web pages, spreadsheets, word processor documents or other databases. For querying the database, the user can use the *Find* function to search within a single field, or create specific queries that include various fields and search criteria. Queries can be created and saved in the database for specific types of complex searches which interpreters need to do frequently (e.g. queries by subject field, alphabetized lists of source-target language term pairs, etc.), to save users the trouble of defining search queries every time. Microsoft Access's printing function is relatively faster and easier to use compared to *Base* in Open Office. On the strength of these features, Microsoft Access was chosen to demonstrate the model database. Steps in the development of the database, as well as functions and

²² The database management tool *Base*, for example, which is part of *OpenOffice*, has almost exactly the same functions and interface as MS Access. (See <http://www.openoffice.org> for more information.)

features of the end product, will be explained in further detail and illustrated by screenshots in Chapter 4.

This sample database is not only a basic practical demonstration of the guidelines put to use; it also demonstrates the promising potential in using such software for terminology management for interpreters. Moreover, this project as a whole highlights the significance of consulting the potential user group throughout the process of finding solutions to their problems.

CHAPTER 3

Survey Results and Synthesis

This chapter will present the results of the survey.²³ In section 3.1, the response rate and respondents' professional profile will be summarized. Section 3.2 will present the analysis of responses in three sub-sections evaluating answers to questions on the storage of terminological information (3.2.1), the retrieval of terminological information (3.2.2) and interpreters' attitudes towards computer use and their experience with terminology management software (3.2.3). In Section 3.3, guidelines will be drawn for terminology tools designed for interpreters, in light of the priorities identified from the responses of interpreters participating in the survey.

3.1. Response Rate and Respondent Profile

Out of 120 CACI members, 29 started the survey, and 26 completed it. Taking into consideration the 26 submitted responses, the overall response rate was approximately 22%. Since responding to individual questions was voluntary, not all questions were answered by every respondent. Furthermore, some questions (13, 15 and 18) were only applicable for respondents who had given a specific answer on a previous question. Thus the number of responses for each question varied. The results were analyzed and interpreted accordingly, and all percentages mentioned were calculated based on the number of applicable responses for the relevant question.²⁴ Table 1 shows question types and the number of applicable responses for each question.

²³ See Appendix B for a complete summary of survey results.

²⁴ Percentages are approximate values due to small sample size.

Q. No.	Asking about...	Q. Type	No. of applicable responses
1	Professional profile	MC/SA	29
2		MC/SA	29
3		MC/SA	28
4		MC/SA	28
5	Storage of terminological information	MC/MA	27
6		MC/SA	27
7		MC/MA	27
8		MC/MA	27
9		Matrix	27
10	Retrieval of terminological information	Matrix	26
11		Matrix	26
12		Matrix	24
13*	Retrieval of information from selected term record fields	Matrix	17
14	Attitude towards computer use	MC/SA	26
15*	Purposes for which computers are used in the booth	MC/MA	13
16	Experience with terminology management tools	MC/SA	26
17		OE	12
18*	Rating of experience with terminology management tools	Matrix	4
19	Additional comments	OE	11

MC/SA: Multiple choice, single answer

MC/MA: Multiple choice, multiple answer**

OE: Open-ended

*Question's applicability dependent on respondent's answer to another question

**Percentages for responses will not add up to 100%.

Table 1 – Response overview

Answers to the first set of questions provide information on the respondents' professional profile. Of all respondents, 41% are full-time interpreters, followed by 31% who translate and interpret full-time, 14% who are part-time interpreters and 14% who are retired interpreters. Almost all respondents (93%) have 10 years or more of professional experience as interpreters. The remaining 7% of respondents (2 respondents

out of 29) have 5 to 9 years of experience, leaving none (0%) in the first choice of range provided (0 to 4 years). This affirms that survey reflects the views of experienced professional interpreters. The observation that most of the respondents started their careers as interpreters at least 10 years ago also leads one to assume that their terminology management practices are shaped in a more conventional way, and their attitude towards computers might be somewhat hesitant, as their training is likely to have reflected more traditional approaches and they might have had less formal training with computers for interpreting, which may lead to lower comfort levels.

In describing the proportion of the tasks of translation and interpretation in their workload, 61% percent of the respondents indicated interpreting as their main professional activity, and 36% said they do not do any translation work at all. Only one respondent (4%) said that his or her workload is almost equally divided between translating and interpreting.

From the information above, the basic professional profile of the respondent can be established: he or she is an interpreter with a high level of experience, affiliated primarily with CACI (AIIC Canada), whose professional activities are mainly or exclusively interpreting-related. This professional profile provides a solid basis to rely on when making suggestions about Canadian interpreters' practices and needs, and about terminology tools that aim to suit these practices and needs.

3.2. Analysis of Responses

The analysis is carried out in three sub-sections that analyze responses related to the storage of terminological information, the retrieval of terminological information, and interpreters' attitudes towards computer use and their experience with terminology tools.

3.2.1. Storage of Terminological Information

The majority of respondents work with multilingual (59%) or bilingual (56%) terminology, whereas only one respondent (4%) has indicated that he or she works with monolingual terminology. A strong majority of interpreters (85%) have indicated that they always or almost always systematically record terminological information before a conference. It is interesting to see that the most popular choice of medium for the storage of data is paper (85%), followed by word processors and/or spreadsheets on a computer (70%). Only one respondent reported using specialized terminology management software, and another single respondent reported using database management software.

For the kind of terminological units stored, all respondents (100%) indicated that they store regular terms, i.e. full forms of single- or multi-word conventional terminological units. The second most popular choices are acronyms/abbreviations and names of governmental and organizational bodies (both 93%), followed by proper nouns and titles (both 74%).

The question asking respondents to rate the kind of information they store from 0 to 10 according to importance was one of the most crucial ones since it determines the priorities for term record fields within a term record structure designed for interpreters. In order of importance, based on the average rating indicated by responses, the fields interpreters reported using to store terminological information are as follows:

Term Record Field	Average Rating of Importance (Out of 10)
Source/Target language equivalents	9.38
Subject field	8.38
Context	7.46
Synonyms/variants	6.92
Definition	5.83
Phraseology/Collocates	4.72
Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	2.78
Source (bibliographical)	2.65
Grammatical information	2.19
Other (Specified by one respondent: recent articles, scientific journals, reading material)	2.00

Table 2 - Terminological information stored

It can be observed that term record fields such as grammatical information, source and usage notes received remarkably low ratings, although they are fields which are mentioned in terminology literature and included in conventional term records. The fact that these fields were consistently rated relatively unimportant by respondents supports the hypothesis that interpreters have different priorities than set forth in terminology literature and terminography guidelines (e.g. Pavel & Nolet 2001), as discussed in Section 1.3.

Although the focus is to present preliminary suggestions based on the average ratings shown in the table above, there are also remarkable variations among individual responses. This means that not all users' responses are in line with the average values. For example, as many respondents marked phraseology/collocates an eight as a zero, and it ended up with the average rating of 4.72. Although this study does not aim to go into a detailed examination of individual responses for every question, it acknowledges the importance of this type of variation, especially since it emphasizes the importance of

flexibility and the possibility to customize input structures, so that users can structure their terminology records in a way that suits their individual needs and practices.

3.2.2. Retrieval of Terminological Information

The first observation that can be made about the retrieval of terminological information, whether it is in the form of displaying (on screen or print-outs), searching (automatically or manually) or consulting information stored in term records, is that retrieving data before a conference, as opposed to during or after a conference, is the most popular practice among respondents. The only case where retrieval during a conference is the most popular is consulting selected information from term records. Table 3 shows how and when interpreters retrieve terminological information.

	<i>Before</i>	<i>During</i>	<i>After</i>	<i>Response Count</i>
Display				26
On screen display	78% (18)	48% (11)	44% (10)	23
Printouts	73% (19)	69% (18)	27% (7)	26
Search				26
Manual searching, sorting, filtering	92% (22)	54% (13)	38% (9)	24
Automated searching, sorting, filtering	89% (16)	56% (10)	39% (7)	18
Consult				24
Consult all the information stored in term records	100% (18)	33% (6)	22% (4)	18
Consult selected information from term records	59% (10)	77% (13)	41% (7)	17

Table 3 - Retrieval summary

The comparison of the response count for on-screen display vs. print-outs indicates that print-outs are more popular overall. They are the most commonly consulted medium during conferences. On-screen display is relatively more common after conferences. We can say, then, that the typical profile involves an interpreter who

uses both on-screen display and print-outs for terminological preparation before a conference, consults print-outs during a conference, and may refer to on-screen display afterwards, possibly to update and/or revise existing information or to enter newly acquired information.

A comparison of whether respondents search, sort and filter terminological information manually or automatically at each stage indicates that the manual approach is more common overall. This, of course, goes together with the overall prevalence of print-outs which, obviously, do not offer automatic functions.

If they need to consult all the information stored in their terminology records, respondents tend to do so before conferences. During and after conferences, the more common approach is to consult selected information from term records. This can be explained by the time restrictions mentioned earlier in the literature review (especially in Section 1.3). We can say that interpreters tend to consult more detailed information at the preparation stage, but due to the time restrictions at the performance stage, they tend to filter the information in their records to consult essential information only.

Overall, in terms of displaying, searching and consulting data, the distribution of the number of respondents indicate that more interpreters use print-outs and manual searching, sorting and filtering as opposed to on-screen display and automated searching, sorting and filtering. This indicates that the respondents have a tendency to use more conventional methods of terminology management, e.g. the paper glossaries mentioned above.

Below is a list of term record fields sorted from the most consulted to the least, regardless of whether they are consulted before, during or after a conference. This list helps identify the overall priority of fields when interpreters are retrieving information.²⁵

	% of Respondents	Number of Respondents
Source/Target language equivalents	100%	17
Definition	88%	15
Context	82%	14
Synonyms/Variants	82%	14
Subject field	65%	11
Grammatical information	53%	9
Source	47%	8
Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	41%	7
Phraseology/Collocates	24%	4
TOTAL ²⁶		17

Table 4 - Retrieval of information from each field

The following chart (Figure 5 - Selective consultation, p. 63) shows the distribution of retrieval of information from each field throughout each stage, based on question 13, which received 17 responses in total. This information can help design output formats to display and/or consult relevant terminological information at each stage.

²⁵ See Section 3.3 for a comparison of “Table 2 - Terminological information stored” and “Table 4 - Retrieval of information from each field”.

²⁶ Responses were filtered to show only those from respondents who indicated that they consult selected information from term records.

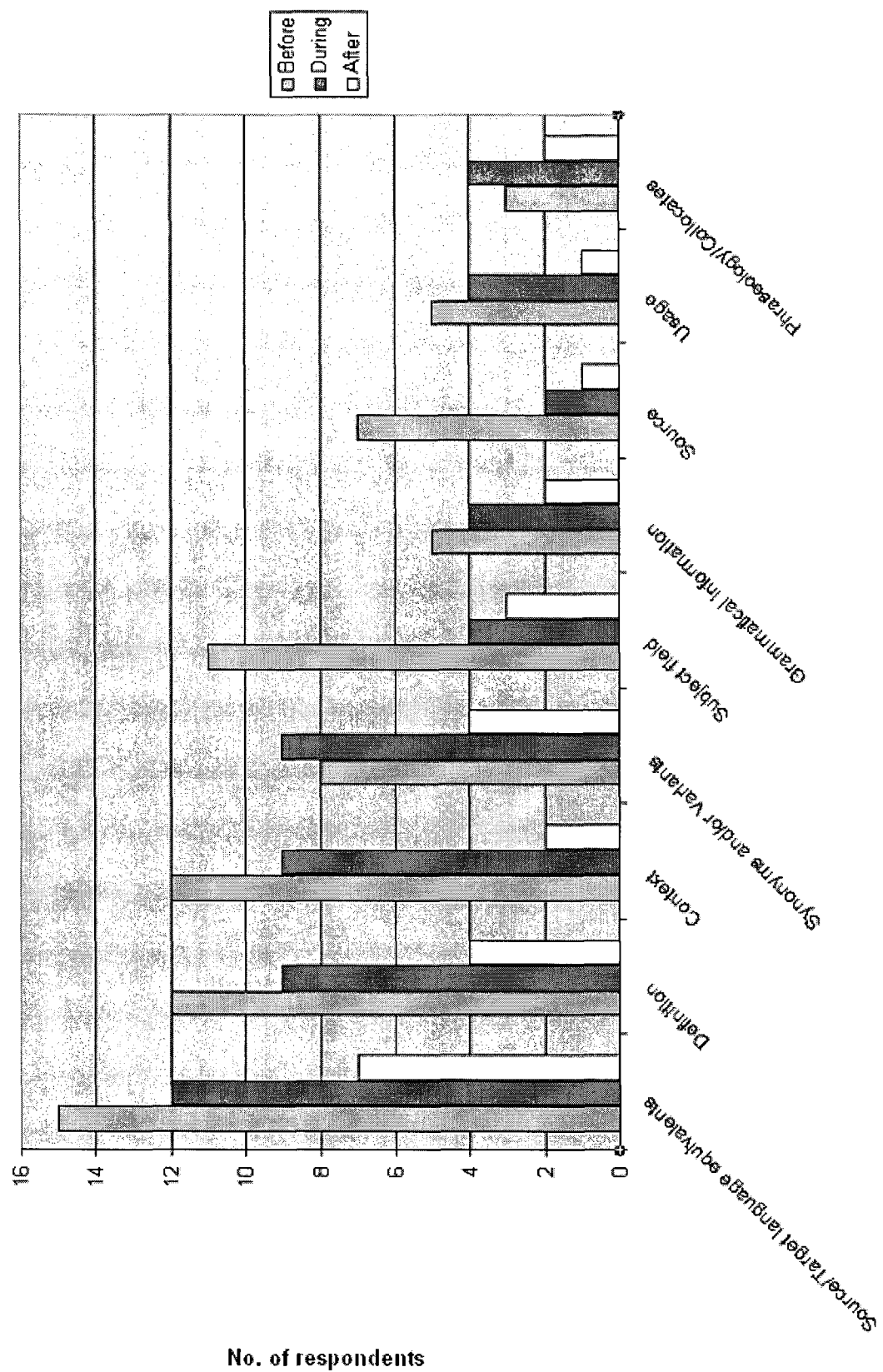


Figure 5 - Selective consultation

3.2.3. Attitude towards Computer Use and Experience with Terminology Tools

The percentage of respondents who oppose the use of computers inside the booth was quite low (15% – four respondents out of 26 who responded to question 14). Some comments made by these respondents focus on the possibility that a computer might be distracting for interpreters as well as members of the audience, since it might be heard over the microphone. Another reserve about the use of a laptop in the booth expressed by one of the respondents is limited space inside the booth. On the other hand, 85% of respondents have no objection to the use of computers inside the booth during a conference, with 50% using one themselves. One of the respondents within the 35% who have no objection but do not use a computer inside the booth has indicated that he/she is encouraged to use one due to its potential usefulness.

Responses to question 16, which asked respondents to indicate their experience with terminology management software, revealed that only 12% (3 out of 26) of respondents use or have used such software. Another 12% have looked into one or more products, but decided not to use them. A significant percentage of respondents (42%) have indicated that they have never been interested in such software. Respondents within the 35% who chose “other” submitted additional notes indicating that they have never used terminology management software for interpreting purposes. Thus, these results suggest that the majority of interpreters (a total of 77% in this sample) have never used terminology management software as part of their interpreting career. Moreover, none of the respondents named a terminology management system that is designed or marketed specifically for interpreters.

Since, as mentioned above, the percentage of interpreters who have experience with terminology management software is quite low, the number of applicable responses for the question asking them to evaluate their experience is only 4 – approximately 15% of all submitted responses. Table 5 shows, for each criterion, the average ratings out of 5 – ranging from “very satisfied” (5) to “very dissatisfied” (1), the midpoint corresponding to “neither satisfied nor dissatisfied” (3). Based on the average ratings, Table 5 below shows the criteria sorted from the most dissatisfying to the most satisfying. It should be noted that even respondents who had used terminology management software and chose to respond to this question were in some cases unable to evaluate their experience in terms of one or more of the criteria.

	Mean Rating (out of 5)
Price	2.75
Time required to learn how to use the tool	3.00
Time required to input data	3.00
User-friendliness	3.25
Time required to generate output	3.25
Availability of output formats to suit user needs	3.33
Ease of designing output formats	3.50
Flexibility of term base structures	3.67
Accessibility / Availability	3.67
OVERALL	3.26

Table 5 - Evaluation of experience with terminology management tools

Looking at interpreters’ evaluation of their experience with terminology management tools, the top three criteria indicate that time and money seem to be the least satisfactory qualities for the respondents. Even though the average rating did not reach the “somewhat satisfied” range (above 4.00) for any of the suggested criteria, accessibility/availability, flexibility and output formats are aspects of terminology management tools with which interpreters who participated in the survey have felt the highest level of satisfaction. The overall evaluation of terminology management tools

yields the average rating of 3.26 over 5, which falls under the “neither satisfied nor dissatisfied” range. This leads one to think that the experience of interpreters who participated in the survey with terminology tools have been mediocre at best.

Besides this overview of mean ratings, the small number of applicable responses for this question also led us to do an overview of individual responses, which revealed diverse opinions. The individuals’ responses to questions 7 (current terminology management practice), 16 (experience with terminology management tools) and 18 (opinions about terminology management tools) are shown in Table 6 below.²⁷

²⁷ In interpreting responses regarding the evaluation of experience with terminology tools, it should be noted that respondents did not indicate which specific tool they were rating. Within the purpose and scope of this study, our objective was to obtain an overall impression of respondents’ experience with terminology tools in general, rather than obtaining feedback on specific tools, and/or comparing specific tools. We expected more responses for this question to allow more easily for pooling data, but with four responses, we chose to go case-by-case. And in this situation, we would like to acknowledge that we could have done a more precise analysis by asking about specific tools, if we had foreseen a small number of responses.

	Respondent A²⁸	Respondent B	Respondent C	Respondent D
Current terminology management practice	Paper Word processor / spreadsheet Terminology management software	Paper Word processor / spreadsheet	Word processor / spreadsheet	Paper
Experience with terminology management tools	Currently uses tool(s)	Has used tool(s)	Has explored but does not use tool(s)	Has used tool(s)
Price	Very satisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Very dissatisfied
Accessibility / Availability	Very satisfied	Neither satisfied nor dissatisfied	Neither satisfied nor dissatisfied	Unable to evaluate
User-friendliness	Very satisfied	Very satisfied	Somewhat dissatisfied	Very dissatisfied
Time required to learn to use the tool	Somewhat satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Very dissatisfied
Time required to input data	Very satisfied	Unable to evaluate	Unable to evaluate	Very dissatisfied
Flexibility of term base structures	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Unable to evaluate
Availability of output formats to suit user needs	Very satisfied	Unable to evaluate	Somewhat dissatisfied	Neither satisfied nor dissatisfied
Ease of designing output formats	Unable to evaluate	Somewhat satisfied	Unable to evaluate	Neither satisfied nor dissatisfied
Time required to generate output	Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Very dissatisfied

Table 6 – Four respondents’ evaluations of experience with terminology management tools

One respondent (Respondent A) reported being very satisfied with the terminology tool he or she used, and continues to use it. Another (Respondent B), reported more mixed responses, and reports having used a terminology management tool in the past but not currently. A third (Respondent C) was overall relatively neutral in his or her responses; he or she has explored but nevertheless does not use tools. Finally, a fourth respondent (Respondent D) was neutral on some factors but very dissatisfied with others.

Overall, the analysis of these individual responses indicates a significant variation between individual interpreters’ satisfaction with various aspects of terminology

²⁸ The four anonymous respondents to this question have been assigned letters (A-D) for ease of reference. They are presented in order from most to least satisfied.

management tools. This reflects the necessity of a flexible tool that can accommodate variations of different natures such as user-specific variations (e.g. term base structures, output formats) or context-specific variations (e.g. displaying essential terminological information during a conference, or displaying detailed terminological information before a conference).

3.3. Synthesis: Guidelines for Terminology Management Tools for Interpreters

Survey data indicates that 85% of respondents are open to using computers, yet most of them do not have experience with terminology management software (no doubt for a variety of reasons, some of which have been mentioned in this survey). Therefore, it can be suggested that an appealing method of computerized terminology management for interpreters has the potential to allow these users to benefit from what technology has to offer in this field. This section will outline generic guidelines to establish a framework for a terminology tool of this kind, based on interpreters' priorities in terminology management identified through their survey responses. Following a summary list of the guidelines, each of them will be discussed separately.

These guidelines are followed within this study in the course of designing the sample database which is suggested as a basic demonstration of an alternative method of terminology management that presents a promising opportunity in meeting the needs of this specific user group (see Chapter 4). Furthermore, it would be fair to suggest that the same guidelines might prove efficient in the design and development of a specialized tool created for interpreters as its specific target user group. Therefore, it should be noted that they are not specific either to using DBMS, or to designing/creating a brand new tool

for interpreters, but generic so as to suggest a framework based on users' practices, needs and experiences.

A terminology management system developed for interpreters should:

1. Accommodate the creation and management of bilingual and multilingual terminology records;
2. Accommodate the storage and retrieval of a range of term types, such as proper nouns, official titles, and acronyms/abbreviations;
3. Include a sample term record template, which is easily customizable;
4. Provide input and output formats based on the users' varying priorities depending on the various contexts they might consult their terminology records;
5. Have fast searching functions;
6. Be easy to learn and use;
7. Be affordable and cost-effective.

3.3.1. Accommodation of Bilingual and Multilingual Terminology

The majority of interpreters participating in this study have indicated that they work with either bilingual or multilingual terminology. Therefore, a terminology tool designed for interpreters must be able to offer its users the possibility to create and manage terminology records in two or more languages. It should also offer an organization of terminology records in two or multiple languages that will allow users to select the languages they want to work with for every specific occasion.

3.3.2. Accommodation of Various Term Types

Another necessity concerning the storage of terminological information has to do with the various term types that an interpreter might store. A tool for interpreters should offer the possibility of organizing these term types to facilitate input and output of this kind of information, i.e. make it easier for users to specify the term type that they are entering, or that they want to retrieve. This allows an interpreter, for example, to retrieve a list of acronyms, or official titles, etc. within a subject field.

3.3.3. Sample Term Record Template

The term record fields interpreters most commonly use to store and retrieve terminological information can be identified from their responses to the relevant questions in the survey, and a sample template can be designed accordingly. Most importantly, this will save interpreters time and effort in organizing terminological information using DBMS. Based on interpreters' responses, the following table (Table 7) presents a comparison of term record fields that interpreters find important for storing terminological information, and those that they consult the most.

Storage		Retrieval	
	Mean Use Rating (Out of 10)		% of Respondents
Source/Target language equivalents	9.38	Source/Target language equivalents	100%
Subject field	8.38	Definition	81%
Context	7.46	Context	81%
Synonyms/variants	6.92	Synonyms/Variants	67%
Definition	5.83	Subject field	62%
Phraseology/Collocates	4.72	Grammatical information	52%
Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	2.78	Source	43%
Source (bibliographical)	2.65	Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	43%
Grammatical information	2.19	Phraseology/Collocates	24%
Other	2.00		

Table 7 - Priority term record fields for storage and retrieval

Based on data provided by two questions – one in which interpreters rate the type of terminological information they store according to importance, and the other in which interpreters indicate term record fields they consult at each stage within their workflow – it can be observed that the top five, which have a mean rating of importance above 5.50 out of 10 or which are consulted by over 55% of respondents, are consistent. These fields can be included in the sample template to guide users and to provide them with a basic term record structure. The rest of the term record template should be flexible in terms of design, so that users can sort, modify, add or remove fields.

3.3.4. Input and Output Formats

In terms of retrieval of information from each field at each stage within the interpreter's workflow, Figure 5 in section 3.2.2 (p. 63) provides crucial information that can help design output formats – either for print-out or for on-screen display – to suit the various contexts in which an interpreter consults terminological information. The availability of these formats will save interpreters time and effort in retrieving the precise information they need at the particular stage within their workflow – before, during and after a conference. The following table (Table 8) presents an overview of the most consulted fields at each stage. The identification of priority fields at each stage within the workflow of an interpreter can help design input and output formats to suit their needs before, during and after a conference.

	Before	During	After
1	SL/TL Equivalents	SL/TL Equivalents	SL/TL Equivalents
2	Definition	Definition	Definition
3	Context	Synonyms/Variants	Synonyms/Variants
4	Subject field	Context	Subject field
5	Synonyms/Variants	Subject field	Phraseology/Collocates
6	Source	Phraseology/Collocates	Context
7	Usage	Grammatical information	Grammatical information
8	Grammatical information	Usage	Usage
9	Phraseology/Collocates	Source	Source

Table 8 - Overview of information retrieval at each stage in an interpreter's workflow

3.3.5. Fast Searching

As mentioned in section 3.2.2, the survey data on retrieval of terminological information also indicates that more interpreters consult their records before a conference, and that those who consult their records during a conference do so mostly in breaks or as their colleague interprets. Although 54% of respondents indicated that they use their computer as they interpret, it can be suggested that the instantaneity of searching, though undoubtedly desirable, is not critical. This is just to affirm that the lack in generic DBMS of a predictive typing function, such as that included in InterpretBank described in Chapter 1, section 1.2.2.2, does not necessarily constitute an obstacle to using that alternative. Of course, using DBMS aside, an efficient and fast searching function would certainly be valuable in a novel tool designed for interpreters, especially for quick information retrieval in the booth.

3.3.6. User-friendliness and Cost

Last but not least, a terminology tool for interpreters must be easy to learn and use, and not constitute a financial burden for the interpreter, since the time and money invested in such software seem to be aspects of terminology tools with which users have expressed the lowest degree of satisfaction. This, together with all of the points mentioned above,

points once again to the promising potential in using generic DBMS for this purpose, especially with the preparatory work – such as designing a term record template and essential input and output formats – already done.

CHAPTER 4

Sample Terminology Database

This chapter will explain the design and functioning of the sample terminology database using Microsoft Access based on the analysis of data gathered from the survey, and the guidelines drawn from this analysis in Section 3.3.

A database in MS Access is structured around “objects” – tables, queries, forms, reports, pages, macros and modules.²⁹ Information is stored centrally, in tables, and once only. It can be presented through different interfaces through the use of the aforementioned objects, but if data is changed in any of them, it will apply to the table, and thus to all other interfaces. Therefore, data can be accessed, displayed and modified in multiple formats without the difficulties of having to update multiple files or change data in several places.³⁰

This chapter will present the structure of the tables first, since they are the main framework of the database. Second, queries underlying the search functions, and the reports that offer customized layouts for print-outs will be explained. Finally, the forms which constitute the main interface of the database will be presented.

In order to be able to demonstrate and test the sample database, term records were created based on survey data to reflect a variety of information that interpreters reported storing and using.³¹ These sample term records include two acronyms, two regular terms, and two official titles with three terms from the *law* subject field, one from *government*,

²⁹ Pages and modules are not used in the sample terminology database. A macro in MS Access is a command that initiates a sequence of actions in the database. The only macro which was used in the search form will be explained in Section 4.2.

³⁰ Whether in tables, queries or forms, any change made in the records' contents are automatically saved in MS Access. While this implies a potential risk of changing or losing information by mistake, it is also an efficient safe-guard in ensuring that intended modifications are saved and work is not lost.

³¹ See Appendix D – Sample Term Records.

and two from *electronics*. Some records are complete with all fields filled in, and some include term equivalents only, in an attempt to be representative of the way interpreters might work.

4.1. Tables

Tables in a database are used to store information for a specific purpose. They provide a structured and consistent framework for the storage of categorized information for each entry. The difference of tables in a relational DBMS from tables in a word processor is that several tables can be created to store information that is useful for different purposes or in different contexts, and the database can connect information from these tables using fields that contain common information. One advantage of this approach is that it enables users to store repeated information only once, and to re-use it multiple times. This facilitates and speeds up the process of entering information, and ensures structural consistency, which ultimately also results in faster and easier updating.

As discussed in section 1.2.1, the fundamental structure of a terminology database is shaped around a *term record template*, i.e. the structure which defines the organization of terminological information stored in a record, specifying the number and type of term record fields and the properties of their contents, e.g. type, format or amount of data to be entered. Hence, the first step in designing the sample terminology database was creating the main table called “*Term Record Template*”, which serves to provide a flexible sample term record template in line with Guideline number 3, discussed in section 3.3.3. The sample term record template includes the top five most stored and consulted term record fields according to the survey respondents (see Table 7 – p.70): source/target language equivalents, subject field, contexts, synonyms/variants, and

definitions. A grammatical gender field was included in the term record template to indicate the terms' grammatical genders in French. In addition, as most of the respondents to the survey indicated that they store various kinds of terms, including acronyms, official titles (see Sections 3.2.1 and 3.3.2), a "Term type" field was added in which users can specify the type of the term for which they are creating a record (e.g. full forms of single- or multi-word terms, acronyms, titles, etc.). This also facilitates the sorting and retrieval of information when users are looking for specific types of terms. Administrative fields ("Author" and "Date") were also created. The date field automatically includes the date when the record is created, and the author field can be filled in by the user to indicate who created the record in case the content of the database is shared. Finally, a "Notes" field was created to provide users with the option to enter any kind of information they wish to store as additional notes, such as information on sources, or on the status of the record (e.g. complete / incomplete), etc.

A single main table to function as a term record template is sufficient for the management of bilingual terminology (see section 3.3.1 for the discussion of accommodation of bilingual and multilingual terminology). An additional benefit of this is that it facilitates importing existing resources such as spreadsheets or tables in other software. Considering the high percentage (70%) of respondents who said they store terminological data in word processors and/or spreadsheets, this presents a significant advantage in that interpreters can continue using their existing resources in a more advanced environment, and they can also export data from the database into spreadsheets or tables to share with others.³²

³² Importing and exporting data would be easiest with consistent term record structures, but adaptation is always possible even with different structures.

The template can easily be customized and users can add new fields or remove or modify the suggested fields. None of these fields were defined as “required”. This means that users are not required to complete their records immediately, and they can easily create and save records with initial information as a framework for term research and then complete them as information is gathered (or when time allows). Making a field required would ensure that essential fields are filled in upon creating a new record, yet it would limit the possibility of creating preliminary records and completing them later. Still, the flexibility of the software allows users to customize this option, i.e. make fields mandatory or optional according to their preferences.

Once the number and type of fields were selected, the amount and format of information to be stored was determined. Most fields in term records contain text, so Text fields were used in most cases. Since the Text data type in MS Access only allows up to 255 characters, the fields for definitions and contexts were defined as Memo fields, which allows longer text, so as to ensure that enough space is available for definitions and contexts. Term and synonyms/variants fields were limited to 100 characters of text. This limit was estimated to be sufficient considering the mean length of terms in English and French, which are the working languages of the database. Nevertheless, this feature, like others, is also customizable to accommodate the storage of longer or shorter terms.

The fields for subject field and term type are bound to include information which is common to several term records. As mentioned above, MS Access allows users to store information that recurs in more than one field, record or object in a separate table that can be called upon as required, rather than repeating information. Taking advantage of this function, two auxiliary tables (“*Subject fields*” and “*Term types*”) were created to

store the information to be entered in the corresponding fields in the term record. Thus, when users are entering information in these two fields in the main table (*Term Record Template*), they can pick their choice from the corresponding list. They can also edit the tables to add, remove or modify their content.³³

Even though queries offer more advanced searching functions, and forms and reports are used to create more user-friendly interfaces to store and retrieve information, it is also possible to use tables directly for storage and display/retrieval purposes. This can be done by simply opening the table in “Datasheet View”.³⁴ The table display can be customized to show/hide fields – e.g. to display or print only the fields a user needs for a specific task, to sort according to fields or to change the order of fields without modifying content. Resizing cells, columns and/or rows is also possible in the same way as in a table in a word processor or a spreadsheet. The find function (CTRL+F) can be used to search within a field or the entire table to look for matches in the whole field (e.g. an exact term), at the start of the field (e.g. the beginning of a term), or any part of the field (e.g. a part of a term in any position). Wildcard characters³⁵ can be used as well to allow for variations in form and/or partial matching. Finally, the table can be printed in its original or customized form.

The functions of a DBMS such as MS Access nevertheless go well beyond these basic display and searching features. Much of the value of using a DBMS lies in the more advanced features available for entering, displaying, searching and exporting information. These will be described in the next sections.

³³ The forms that facilitate access to these tables will be explained in Section 4.4.

³⁴ In MS Access, tables can be opened in ‘Datasheet View’ to access their content, or in ‘Design View’ to modify their structure and features.

³⁵ An asterisk (*) for any set of characters, and a question mark (?) for any single character.

4.2. Queries

MS Access offers advanced search functions structured within queries which can be defined, saved, and run multiple times without having to re-design. Queries can be designed to search within one or multiple fields for one or more criteria, and to specify which fields are to be displayed in search results and in what order.

The query that was created in the sample database allows searching for keywords within single or multiple fields. It should be noted that this query only allows the use of an AND operator among multiple fields. This means that if search strings are entered in multiple fields, the query will search for matches in all of those fields. For example, when we search for the keyword “transmission” within the English definition field, and the keyword “localisation” within the French synonyms field, the matching record is the following, where matches are found in both fields:

English Term GPS		French Term GPS	
Subj. field Electronics		Edit subject fields	
Term type Acronym		Edit term types	
Gr. Gender masc.s.			
English Context	The NAVSTAR Global Positioning System (GPS) is a constellation of twenty-four satellites in 12-hour orbits at an altitude of 20,183 km.	French Context	Le GPS est un système de géodésie spatiale permettant le positionnement d'un grand nombre de sites mondiaux en trois dimensions (latitude, longitude, altitude) ainsi que la mesure du temps.
English Synonyms Variants	global positioning system	French Synonyms Variants	système mondial de <u>localisation</u>
English Definition	A navigation system based on the <u>transmission</u> of signals from satellites provided and maintained by the United States of America and available to civil aviation users.	French Definition	Système de navigation basé sur la transmission de signaux à partir de satellites fournis et entretenus par les États-Unis d'Amérique et mis à la disposition de l'aviation civile.
			
Date: 20/04/2009	Author: Me	Notes:	

Figure 6 - Search example

This feature helps users look for specific records by specifying keywords in multiple fields, or for example specifying the term type AND the subject field to retrieve a specific list of terms. Nevertheless, it must be acknowledged that not having the option to use an OR operator among fields limits more generic searching capabilities. Still, the OR operator can be used when searching for a single search string in multiple fields, and this has to be built in the query for the specific fields in which that single search string is going to be sought. This feature was used for the term and synonyms/variants fields. Since synonyms and variants are stored separately from the preferred terms, the query was designed to search for matches within either of the fields when a keyword is entered for one of them. For example, when we search for the search string *digicam* in the English term field, even though the word *digicam* is stored in the English synonyms/variants field, our results display the corresponding record for *digital camera* (see Figure 7). In the same way, for example, if we searched for *appareil photo numérique* in the synonyms/variants field, the record would be retrieved even though that exact search string is stored in the term field.

English term: digital camera		French term: appareil photo numérique	
Sub-field: Electronics		Edit subject fields	
Term type: Regular		Edit term types	
Gr. Gender: masc. s.			
English Context	When digital cameras became common, a question many photographers asked was whether their film cameras could be converted to digital.		
French Context	Je fais mes prises de vue avec cet appareil photo numérique dans le cadre de mon travail de photographe pour sa maniabilité et sa qualité.		
English Synonyms Variants	digicam 		
French Synonyms Variants	appareil photographique numérique; APN		
English Definition	A photographic camera that uses a digital imaging chip to capture and record image data in digital form on an onboard memory block, removable memory card (subsequently uploaded to a computer), or directly connected computer.		
French Definition	Appareil-photo comportant une puce à imagerie numérique pour la saisie et l'enregistrement d'images sous forme numérique dans un bloc de mémoire intégré ou dans une carte de mémoire amovible (avec téléchargement ultérieur vers un ordinateur) ou par branchement direct sur un ordinateur.		
Date: 20/04/2009	Author: Me	Notes:	

Figure 7 - Search example (2)

This feature enables users to search for terms rapidly and easily within both fields, while still being able to benefit from the potential advantages of storing the preferred terms and their synonyms/variants in separate fields, such as being able to distinguish the preferred form of the term, or being able to store multiple synonyms/variants.

The search form interface which facilitates the use of the query and presents two options to display results (basic and advanced) will be explained in Section 4.4.

4.3. Reports

Reports can be used for designing various printout options with all or a selection of the fields in tables or queries (see section 3.3.4 for the discussion of input and output formats). Two report formats were created as samples: “*Glossary format*” and “*Print format*” – both with English-French and French-English versions.

Unlike tables, queries and forms which can be used both for input and output, reports are only usable for output. In other words, they cannot be used to edit or enter data. Furthermore, they do not offer search functions. Therefore, we can say that they are only useful for printouts, which nevertheless still seem to constitute a preferred medium among interpreters for consulting terminological information. Hence, reports also have the potential to act as a bridge between paper and electronic use. Interpreters can use the database to print bilingual glossaries, with which they are already familiar. As they get used to using the database, they might come to appreciate the ease of consulting data in less constrained formats with more interactive features, and eventually benefit more from the flexibility of the software to use the database in a way to suit their individual practices and needs.

The “*Glossary format*” is based on the idea of a bilingual glossary, which is a popular method of recording and consulting terminology among interpreters, as mentioned in literature (Jones 2002: 8; Kalina 2007: 118) and indicated in survey responses (Section 3.2.1), and displays term equivalents organized according to subject field (and sorted alphabetically within subject fields) (Figure 8). The “*Print format*” organizes the records according to subject fields and includes term equivalents, contexts and synonyms (Figure 9) (fields chosen based on the fields interpreters indicated consulting the most, as described in Table 7 – p. 70), and filtered further due to space limitations on paper, since, as mentioned above, reports are useful for printout only. Users can also design and create their own reports according to their own preferences.

Subject field	Electronics
English Term	French Term
GPS	GPS
digital camera	appareil photo numérique
Subject field	Government
English Term	French Term
HRSDC	RHDCC

Figure 8 - Glossary format (En-Fr)

Subject field Electronics					
French Term	English Term	French Context	English Context	French Synonyms/Variants	English Synonyms/Variants
GPS	GPS	Le GPS est un système de géodésie spatiale permettant le positionnement d'un grand nombre de sites mondiaux en trois dimensions (latitude, longitude, altitude) ainsi que la mesure du temps.	The NAVSTAR Global Positioning System (GPS) is a constellation of twenty-four satellites in 12-hour orbits at an altitude of 20,183 km.	système mondial de localisation	global positioning system
appareil photo numérique	digital camera	Je fais mes prises de vue avec cet appareil photo numérique dans le cadre de mon travail de photographe pour sa maniabilité et sa qualité.	When digital cameras became common, a question many photographers asked was whether their film cameras could be converted to digital.	appareil photographique numérique; APN	digicam

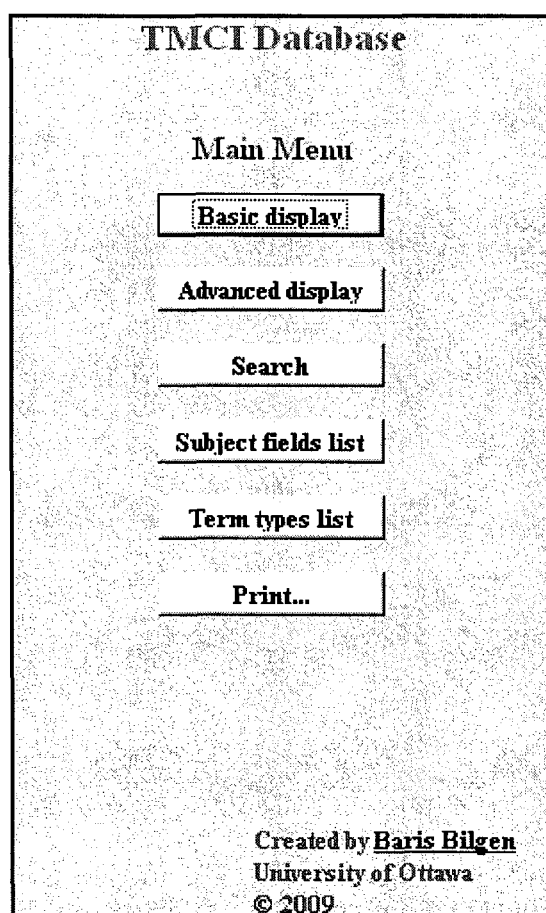
Figure 9 - Print format (Fr-En)

4.4. Forms

The interface consists of seven main forms that are designed to facilitate users' interaction with the database: *the main form*, which is the primary interface, i.e. the main menu of the database; the *basic form*, which displays basic terminological information, based on the idea of a bilingual glossary; the *advanced form*, which displays all terminological information stored in the database; the *search form*, which allows users to search by entering information in one or more of the fields; the *subject fields list form*, which allows users to customize the list of subject fields used in the database; the *term*

types list form, which allows users to customize the list of term types stored in the database; and the *print* form which provides access to the reports designed for print-out.

The *main form* was created in order to facilitate navigation within the database. With the help of this form, which is automatically displayed upon opening the database file, users can access features and functions of the database by clicking on the corresponding buttons on the form, instead of having to navigate through MS Access menus (see Figure 10 below).



The image shows a screenshot of a Microsoft Access form titled "TNCI Database". The form has a light gray background with a black border. At the top, the title "TNCI Database" is centered. Below the title, the text "Main Menu" is centered. Underneath "Main Menu", there are six buttons arranged vertically, each with a black border and white text: "Basic display", "Advanced display", "Search", "Subject fields list", "Term types list", and "Print...". At the bottom right of the form, the text "Created by Baris Bilgen" is displayed, followed by "University of Ottawa" and "© 2009" on separate lines.

Figure 10 - Main form

Figure 11 shows the *basic form* with two sample records, which (like the *glossary format* report) is also based on the idea of a bilingual glossary, and displays the fields for

term equivalents, subject field, term type, and grammatical gender. As mentioned before, none of the fields are required to be completed for a record to be created. Therefore, users can fill in whichever field(s) they wish in order to create a record, and then complete it at another time using either the basic or the advanced form (depending on the type(s) of information they want to enter). This interface might prove useful in contexts where interpreters are more concerned about being able to store or retrieve essential information quickly than about storing or retrieving extensive terminological information. The form also includes buttons marked with “ + / - ” under the term type and subject field columns, that take users to the forms where they can edit the subject field and term type lists.

English Term	Term type	Subject field	French Term	Gr. Gender
HRSDC	Acronym	Government	RHDCC	masc s
Act to Abolish the Amusement Surtax	Title	Law	Loi supprimant la surtaxe sur les divertissements	fém s

+/- +/-

Figure 11 - Basic form

The *advanced form* displays all the fields in the sample template in order of importance based on interpreters' priorities for storage identified through their responses to the relevant questions in the survey (See Table 7 – p. 70). As in the basic form, users can fill in the fields they want, and leave others blank temporarily (or permanently). They can use the buttons next to the subject field and term type drop-down menus in order to edit these lists.

Although primarily designed for input, the basic and advanced forms can also be used for editing and output, i.e. for on-screen display or for printing. The forms can be printed in the same way as they are displayed on screen. As in the tables, the find

function (CTRL+F) can be used to search for exact or partial matches within fields, with or without wildcards. In each display, an empty record (marked with an asterisk) allows for easy addition of new entries. (This record can be accessed by scrolling down to the end of the list in the basic form, or by simply clicking the button marked with an arrow and an asterisk at the bottom of the form window). Existing records can be modified directly in the display or deleted by clicking on the trash can icon at the bottom left corner of the advanced form, or on the delete button that appears next to each record in the basic form.

English Term precedent		French Term précédent	
Subject Field Law		Gr. Gender masc.s.	
Term Type Regular		Edit subject fields	
English Context As a condition precedent to cancellation of the permit.		French Context Le litige fut débattu en cour et un précédent jurisprudentiel fut établi lorsque les chefs gagnèrent leur cause.	
English Synonyms/Variants judicial precedent; authoritative case		French Synonyms/Variants précédent jurisprudentiel; arrêt qui fait jurisprudence	
English Definition A previous judicial decision considered as a source of law in a later case.		French Definition Soit une décision administrative, soit une décision juridictionnelle (précédent jurisprudentiel) qui peut avoir, selon les systèmes juridiques, valeur d'exemple, autorité de fait ou caractère obligatoire («stare decisis»).	
Date 20/04/2009		Author Me	
Notes			

Record: 1 of 6

Figure 12 - Advanced form

The advanced form functions in the same way as the basic form in terms of searching, printing and entering information. One difference between the two is that the advanced form displays all the information stored in the main table (“*Term Record Template*”). Another difference in this form’s display is that it does not display records

in a list, but rather one record per page. The record navigation bar at the bottom of the form window can be used to navigate through existing records and to create new records. Figure 12 (above) shows one of the sample records in the database displayed in the advanced form.³⁶

Users can customize the lists of choices for the subject fields and term types fields by using the *subject fields list* and *term types list* forms. These lists correspond to the lists of choices displayed in the drop-down menus for the corresponding fields. Users can add new choices, or delete or modify existing ones using these forms (see Figure 13 and Figure 14).

Term Types		
▶	Acronym	✕
	Regular	✕
	Title	✕
*		✕

Figure 13 - Term types

Subject Fields		
▶	Economy	✕
	Electronics	✕
	General	✕
	Government	✕
	Health	✕
	Law	✕
*		✕

Figure 14 - Subject fields

³⁶ The basic and advanced interfaces were designed in line with Guideline 4, discussed in section 3.3.4.

The *search form* (see Figure 15) was created to facilitate searching within the database by offering a more user-friendly interface for the query than the primary Access query interface. Users can enter search strings in a single field or in multiple fields to search within corresponding fields. As explained in Section 4.2, the query uses the AND operator when searching within multiple fields, i.e. will search for matches in every field where users enter keywords for searching, as opposed to searching for a match in one OR many fields. The search strings entered in term and/or synonyms/variants fields will be sought in either field, to facilitate searching for preferred or secondary versions of terms (also explained in Section 4.2). Search results can be displayed in a basic format by clicking on the “Search: Basic display” button, or in an advanced format by clicking on the “Search: Advanced display” button. These options were created in order to provide standardized basic and advanced displays, similar to the basic and advanced forms. To clear the text boxes for a new search, users can click on the “New Search (Clear Form)” button.³⁷

³⁷ The only macro used in the database was created for this button, in order to run a sequence to close and re-open the search form for a new search.

English term:		Search: Basic display
French term:		
Subject field:		
Term Type:		
Keyword in English context:		Search: Advanced display
Keyword in French context:		
Keyword for English variants/synonyms:		New Search (Clear Form)
Keyword for French variants/synonyms:		
Keyword for English definition:		
Keyword for French definiton:		

Figure 15 - Search form

Finally, the *print* form provides access to the reports that were designed for print-out, as explained in Section 4.3.

To sum up, the basic and advanced display options are based on the idea that the type and amount of information interpreters need to display, search and consult differs according to the situation (or the stage of interpreting work – before, during, or after a conference), as discussed in section 3.2.2 and also 3.3.4. They were created in order to provide two standardized ways to display term records. Hence, the basic option is aimed to provide users with the option to display the most essential information in a simplified format, for situations when time constraints are in effect, especially during conferences (see Table 3 – p. 60). The advanced option, on the other hand, provides the option to display all term record fields which survey respondents reported using the most, as discussed in section 3.2.1. This option is estimated to be the most useful for use before

conferences, which is the stage most survey respondents indicated consulting all information stored in term records (see Table 3 – p. 60). Both options can be used for storing, editing/updating, displaying, searching and consulting terminological information on screen, as well as for print-outs.

CONCLUSION

In line with our initial research questions and objectives, this study has reaffirmed the important role of terminology management within the workflow of conference interpreters, with 100% of the interpreters who participated in the survey saying that they systematically do terminological research.

The results of the survey confirmed the hypothesis that conventional methods still prevail over the use of computerized methods of terminology management among interpreters participating in the study. It was observed that respondents had no or little experience with terminology management software. Those who were among the minority of respondents with some experience with such software were most dissatisfied with the money and time they had to invest in them, and their overall experience was mediocre.

Interpreters' responses in the survey confirmed that their specific needs and practices can be better accommodated by an interpreting-specific tool. Respondents indicated that their priorities are different from those identified in terminology literature (e.g. Dubuc 2002, Pavel & Nolet 2001) in terms of terminological information stored, and the way in which term records are structured, as discussed in section 3.2.1. Their responses also showed that the way they retrieve terminological information is context-specific, and that there is also a significant variation among individual interpreters, as discussed in section 3.2.2. These factors led us to conclude that interpreters' terminology management needs can be better met by a tool which is *flexible* enough to accommodate individual preferences as well as context-specific variations, and which is *cost-effective*. First of all, existing terminology tools impose restrictions, for example on the type and organization of, and the methods of access to the information that is stored by the user.

However, flexibility is of utmost importance to interpreters due to the variation of their context-specific terminology management practices, and on their individual preferences regarding the storage, organization and retrieval of terminological information. Second, the priority of cost-effectiveness is evident due to the lack of advanced interpreting-specific software. Basic interpreting-specific tools (e.g. Interplex and InterpretBank, described in section 1.2.2.2), while offering free and easy-to-use interfaces for terminology management, do not seem to go much further than helping the creation and management of basic bilingual glossaries. Moreover, the cost of the more advanced commercial tools developed primarily for other language professionals (as explained in section 1.2.2.1) leads interpreters as a distinct user group to question whether it is worth investing time and money in a product that does not specifically target their professional profile. It can also be observed that most interpreters are open to using computers for interpreting purposes, and this means that they constitute a potential market for software developers.

The guidelines established in Section 3.3 were followed in the design of the sample terminology database using Microsoft Access. These guidelines constitute the generic framework not only for the suggestions within this study, but also potentially for software development for interpreters. The sample database is suggested as a basic demonstration of how these guidelines can be implemented and of the potential in using DBMS for terminology management for interpreters.

Assessment of the Survey

Administering the survey online proved to be a success, easily reaching the estimated response rate – based on response rates in similar recent studies (Dillon & Fraser 2004;

Fulford & Granell-Zafra 2005; McInnis & Takla 2005; ATIO 2007). This response rate provided representative data suitable for use within the scope and limitations of this study. The sample group CACI is representative of the interpreting community in Canada, yet a worldwide survey (e.g. a survey distributed through the international AIIC network) would certainly provide a global insight into the interpreting community.

Regarding certain questions in the survey for which applicability depended on a certain response to another question, an alternative method to filtering responses afterwards could have been restricting access to those questions using the skip logic function available in Survey Monkey. This would mean that only those respondents who responded in that certain way would see the questions that apply to them. This could have saved time both for respondents for which the question did not apply; and for investigators at the analysis stage since they would not have to filter responses.

Regarding question three (3), which asked about respondents' professional affiliation, the following should be noted as a minor error in adapting the survey to the Survey Monkey interface. Even though the question was initially designed as a multiple-choice multiple-answer question, it was defined as multiple-choice single-answer as it was being adapted to the Survey Monkey interface. This resulted in respondents not being able to choose multiple professional affiliations. Nevertheless, the question offered an additional field where respondents had the chance to indicate other affiliations, and some of them did indicate that they had multiple affiliations. This error was taken into consideration in the analysis. The question was part of the set of questions that aimed to gather initial information on the professional profile of respondents, as explained in Section 2.1, and thus was not crucial in establishing the guidelines (Section 3.3) or designing the sample database (Chapter 4) presented within this study.

Assessment of the Database

The first advantage of using the terminology database presented in Chapter 4 is its *cost*, especially compared to commercial terminology management software discussed in section 1.2.2.1. Assuming that the user has Microsoft Access on a computer, the database file can be distributed and shared at no cost. Considering the importance of financial costs in defining interpreters' experience with terminology management tools, this aspect constitutes a strong point in arguing in favour of the use of generic DBMS for terminology management for interpreters. It is also possible to adapt this database to open source software (e.g. the OpenOffice Suite), which would mean that there would be no financial cost involved with the use of the database whatsoever (Guideline 7, discussed in section 3.3.6).

In line with the guidelines established within this study, this tool can be used to work with bilingual and/or multilingual terminology (Guideline 1, discussed in section 3.3.1). The sample database was created only in bilingual format, with English and French as its working languages. It can be modified to work with any language pair, by editing the Microsoft Access objects – tables, queries, forms and reports. It can also be adapted to accommodate multilingual terminology, although this issue is not within the scope of this thesis which aims to provide a starting point showing the potential use of DBMS in this context. This would require some modification in the database structure, since a single main table where terminological information is stored would no longer suffice. Each language would require its own main table, i.e. term record template. Relations would then have to be defined between these tables so that, for example, term records for equivalents in each language are connected to each other.

This possibility also points to another strength for this tool: flexibility, which constitutes an advantage compared to both commercial terminology tools (discussed in section 1.2.2.1) and terminology tools for interpreters (discussed in section 1.2.2.2). Everything from structure to content and functions can be customized. The sample database also accommodates different term types, and allows users to organize terms accordingly (Guideline 2, discussed in section 3.3.2). The sample list of term types can be customized to suit the working context of any interpreter. The sample term record template includes the most frequently stored and consulted term record fields, and it is also easily customizable (Guideline 3, discussed in section 3.3.1). The sample database includes pre-designed input and output formats to suit different working contexts (Guideline 4, discussed in section 3.3.4). It is also possible to customize existing formats, or add new ones to suit individual needs. The possibility to work with more advanced terminological information is another advantage compared to other terminology tools for interpreters (discussed in section 1.2.2.2).

A long-term benefit of using a sample database with a consistent structure is that once information starts accumulating within the framework of a shared database structure, it can also be shared among users.

An important criterion for interpreters in defining their experience with such tools is the time required to learn how to use the tool and the ease of using it – in other words, user-friendliness. It is true that MS Access has functions that may not be highly relevant to interpreters and which might therefore be confusing for them. However, the sample terminology database aims to circumvent irrelevant functions and present users with the most relevant ones, and show them simpler ways of using and customizing the database to suit their needs. In doing so, the objective is to make it easier and faster for the users

to use this tool (Guideline 6, discussed in section 3.3.6). It should be noted, however, that even though the flexibility of the software allows customization, users have to be somewhat familiar with Microsoft Access to be able to adapt database objects such as term record templates, searches and forms to their individual preferences, to use with other language pairs, or to extend to a multilingual database.

One of the drawbacks of using DBMS for terminology management for interpreters, although not crucial, is the lack of a rapid search function, such as predictive typing, to facilitate and accelerate searching in the booth in the course of interpretation (Guideline 5, discussed in section 3.3.5).

Generic DBMS, and MS Access in this case, present promising potential with their flexibility and the possibility of customization. However, since such software is not designed specifically for this kind of use, the functions that are available are quite limited. Basically, they can be used for the storage, management and retrieval of terminological information, but they do not offer the possibility of integrating functions that can be useful in preceding stages in terminology research, such as automatic term extraction or integration with concordancers to automate the process of searching for contexts.³⁸ In other words, generic DBMS is useful *after* terminological information is gathered – for storage, organization and retrieval purposes.

It can be concluded that the basic demonstration of how DBMS can be used by interpreters for terminology management through the sample database indicates that such

³⁸ Although generic DBMS cannot be fully integrated with such functions, it still offers the potential to import the output of other tools. For example, a candidate term list generated by a term extractor can be imported into existing tables in a database as long as the term extractor provides output in table format; or the user can convert the candidate term list into a table. The user would also have to ensure that the content and formatting of the table is suitable for importing.

software suits *most* of the guidelines for terminology tools for interpreters established in Chapter 3, and its cost and flexibility in particular are factors that support this argument.

Suggestions for Further Research

The sample database suggested within this study was developed based on the analysis of responses given by interpreters participating in the survey, and on the generic guidelines established in the light of this analysis. It is presented as a basic demonstration of how DBMS provides an alternative method of terminology management that could be cost-effective and efficient for interpreters. The flexibility of the software leaves a lot of room for customization and enhancement of the database. The initial version suggested in this study can be tested in the future with a sample group of users (e.g. training interpreters) and modified in the light of their feedback in order to provide even more user-friendly and/or advanced features and functions.

As mentioned in the Introduction, software development is outside the scope of this study. However, the data gathered through the survey, the guidelines established in the light of this data, and some features and functions of DBMS that are useful for interpreters may provide a starting point for the development of interpreting-specific software. It should be acknowledged that the first concern in such an endeavour would be financial. In other words, developers would be questioning whether it is a profitable investment to target interpreters as a potential market. This study reaffirms that interpreters do feel the need to benefit from the potential offered by computer use in their domain, and that most of them are open to the idea. Yet, so far they have not been able to do so due to various reasons. There is no doubt that this domain could be explored further, both from the marketers' point of view (e.g. through a market survey), and from

the interpreters' point of view. With the technology that is available today, it is possible to go beyond the boundaries of existing terminology tools to create an interpreting-specific tool that could have a range of features from automatic recognition of term types to optical character recognition or speech recognition for easier and faster data input, for example.

As observed in the analysis of responses in the survey, computer use is still quite limited among interpreters, both in terms of the percentage of interpreters using computers for terminology management, and in terms of the functions for which they use it. Just as in any other field where technology has recently come to play an important role, this lack of experience can be dealt with through training, e.g. integrating training on terminology tools within documentation and terminology courses in interpreter training programs, or in the form of training seminars organized for interpreters. Of course, the issue of integrating technology in training programs has numerous challenges of its own, such as finding and training trainers, choosing the right tools and obtaining the necessary budget for an additional component, which have been discussed by Bowker and Marshman (2009).

Concluding Remarks

This study was inspired by the lack of up-to-date research on interpreting and terminology, specifically examining terminology within the context of interpreting. The initial objectives, which were investigating terminology management needs and practices of interpreters, comparing them to practices in translation-focused terminology, and suggesting practical solutions to suit interpreting-specific needs and practices, have been met thanks to the insight provided by professional interpreters participating in the survey

conducted within this study. The sample database presented within this study has the potential to be developed further to serve even more advanced purposes and to be shared among the interpreting community to allow and facilitate sharing and accumulation of information. The guidelines suggested in this study can be used as a starting point for the framework of any kind of terminology tool to be developed specifically for interpreters.

Just like the many doors that this project opened for us, which may lead to potential advances in the field of interpreting and terminology, a genuinely novel terminology tool designed for interpreters is likely to reveal many new paths to be explored. The major challenge above all is to keep up with the increasing pace of innovations, and ideally, to be part of them.

REFERENCES

- AIIC. (n.d.) 'Conference Interpretation Markets in Canada' <http://canada.aiic.net/ViewPage.cfm/page1627> (consulted on March 15, 2009)
- . (2009) 'Regional Facts & Figures' <http://canada.aiic.net/stats/figures/> (consulted on March 15, 2009)
- . (2007) 'CACL Guide for Applicants' <http://canada.aiic.net/ViewPage.cfm/article118.htm> (consulted on March 16, 2009)
- AIIC Training Committee. (2005) 'Conference Interpreter Training Programmes: 2005 Survey' http://www.aiic.net/ViewPage.cfm?page_id=372 (consulted on January 6, 2009)
- ATIO. (2007) '2007 Survey of Salaried Translators' http://www.atio.on.ca/Membership/Sal_Survey/Sal_Tran_Srvy_RsLts.asp (consulted on March 16, 2009)
- AUSTERMÜHL, Frank. (2001) 'Computer-assisted terminology management', *Electronic Tools for Translators*, Manchester: St. Jerome. pp. 102-123.
- BARTEL SHEEHAN, Kim & GRUBBS HOY, Mariea. (1999) 'Using E-mail To Survey Internet Users In The United States: Methodology And Assessment', *Journal of Computer-Mediated Communication*, vol. 4, no. 3, published online: June 23, 2006 <http://jcmc.indiana.edu/vol4/issue3/sheehan.html> (consulted on May 11, 2009)
- BOURIGAULT, Didier & SLODZIAN, Monique. (1999) 'Pour une terminologie textuelle', *Terminologies nouvelles*, vol. 19, pp. 29-32.
- BOWKER, Lynne. (forthcoming) 'Off the Record and On the Fly: Examining the Impact of Corpora on Terminographic Practice in the Context of Translation', *Corpus-Based Translation Studies: Research and Applications*, Ed. A. KRUGER and K. WALLMACH. Manchester: St. Jerome.
- . (2002) 'Terminology-Management Systems', *Computer-Aided Translation Technology: A Practical Introduction*, Ottawa: University of Ottawa Press. pp. 77-91.
- BOWKER, Lynne & MARSHMAN, Elizabeth. (2009) 'Better integration for better preparation: Bringing terminology and technology more fully into translator training using the CERTT approach', *Terminology*, vol. 15, no. 1, pp. 60-87.
- CABRÉ, Maria Teresa. (1998/1999) 'Do we Need an Autonomous Theory of Terminology?', *Terminology*, vol. 5, no. 1, pp. 5-19.

DILLON, Sarah & FRASER, Janet. (2006) 'Translators and TM: An investigation of translators' perceptions of translation memory adoption', *Machine Translation*, vol. 20, no. 2, pp. 67-79.

DUBUC, Robert. (2002) *Manuel pratique de terminologie*, 4^e édition, Quebec: Linguattech.

EEC Council. (2007) 'Regulation No 1 determining the languages to be used by the European Economic Community', enacted in 1958, last amended in 2007.

[http://eur-](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1958R0001:20070101:EN:PDF)

[lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1958R0001:20070101:EN:PDF](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1958R0001:20070101:EN:PDF) (consulted on April 27, 2009)

FRAUENFELDER, Ulrich H. & SCHRIEFERS, Herbert. (1997) 'A psycholinguistic perspective on Simultaneous Interpretation', *Interpreting*, vol. 2, no. 1, pp. 55-89.

FULFORD, Heather & GRANELL-ZAFRA, Joaquin. (2005) 'Translation and Technology: a Study of UK Freelance Translators', *Journal of Specialised Translation*, Issue 4, July 2005, pp. 2-17.

GAIBA, Francesca. (1998) *The Origins of Simultaneous Interpretation: The Nuremberg Trial*, Ottawa: University of Ottawa Press.

GAUDIN, François. (1993). *Pour une socioterminologie. Des problèmes sémantiques aux pratiques institutionnelles*, Rouen: Presses de l'Université de Rouen.

GILE, Daniel. (2004) 'Translation Research versus Interpreting Research: Kinship, Differences and Prospects for Partnership', *Translation Research and Interpreting Research: Traditions, Gaps and Synergies*, (ed. Schäffner) Clevedon, Buffalo, Toronto: Multilingual Matters. pp. 10-34.

---. (1987) 'La terminotique en interprétation de conférence: Un potentiel à exploiter', *Meta*, vol. 32, no. 2, pp. 164-9.

GRAY, George & GUPPY, Neil. (2003) *Successful Surveys: Research Methods and Practice*, (3rd Ed.) Scarborough: Thomson Nelson.

HARTNER, Eric. (2008) 'Re: Interplex Ordering' E-mail from Eric Hartner. December 22, 2008.

JONES, Roderick. (2002) *Conference Interpreting Explained*, (2nd ed.) Manchester: St. Jerome.

KALINA, Sylvia. (2007) 'Microphone Off – Application of the Process Model of Interpreting to the Classroom' *Kalbotyra*, vol. 57, no. 3, pp. 111-121.

KENNY, Dorothy. (1999) 'CAT Tools in an academic environment: What are they good for?' *Target*, vol. 11, no. 1, pp. 65-82.

L'HOMME, Marie Claude. (2004) *La Terminologie: principes et techniques*, Montréal: Les Presses de l'Université de Montréal.

MCINNIS, Nancy & TAKLA, Naha. (2005) 'ATIO - 2005 Survey of Independent Translators' http://www.atio.on.ca/Membership/Ind_Survey/Survey05_Intro.html (consulted on March 16, 2009)

MOSER-MERCER, Barbara. (1992) 'Banking on Terminology: Conference Interpreters in the Electronic Age', *Meta*, vol. 37, no. 3, pp. 507-22.

NEWMAN, Isadore & MCNEIL, Keith. (1998) *Conducting Survey Research in the Social Sciences*, Lanham: University Press of America.

PAVEL, Silvia & NOLET, Diane. (2001) *Handbook of Terminology/Précis de terminologie*, Ottawa: Minister of Public Works and Government Services Canada.

PÖCHHACKER, Franz. (2005) 'From Operation to Action: Process-Oriented in Interpreting Studies', *Meta*, vol. 50, no. 2, pp. 682-695.

---. (2003) *Introducing Interpreting Studies*, London & New York: Routledge.

RODRIGUEZ, Nadia & SCHNELL, Betina. (2009) 'A Look at Terminology Adapted to the Requirements of Interpretation', *Language Update*, vol. 6, pp. 21-27.

SAGER, Juan C. (1990) *A Practical Course in Terminology Processing*, Amsterdam/Philadelphia: John Benjamins.

SAND, Peter. (2003) 'Manage your terminology with Interplex', *AIIC Webzine*, December 2003. <http://www.aiic.net/ViewPage.cfm/page1321> (consulted on December 22, 2008)

SCHÄFFNER, Christina. (2004) 'Researching Translation and Interpreting', *Translation Research and Interpreting Research: Traditions, Gaps and Synergies*, (ed. Schäffner) Clevedon, Buffalo, Toronto: Multilingual Matters. pp. 1-9.

SELESKOVITCH, Danica. (1962) 'L'interprétation de conférence', *Babel*, vol. 8, no. 1, pp. 13-18.

SELESKOVITCH, Danica & LEDERER, Marianne. (2002) *Pédagogie Raisonnée de l'Interprétation*, Paris: Didier.

---. (2001) 'Apprendre à préparer un sujet technique', *Interpréter pour traduire*, Paris: Didier. pp. 229-241.

TEMMERMANN, Rita. (2000) *Towards New Ways of Terminological Description: The Sociocognitive Approach*, Amsterdam/Philadelphia: John Benjamins.

Translation Bureau (BTB) (2009) 'About Us – Who We Are'
<http://www.btb.gc.ca/btb.php?lang=eng&cont=822> (consulted on March 15, 2009)

APPENDIX A

Survey and Accompanying Documents

Baris Bilgen-Investigating Terminology Management for Conference

This survey is part of a master's thesis project with the working title "Investigating Terminology Management for Conference Interpreters". The objective is to reach an understanding of interpreters' terminology management practices; and to evaluate their needs, expectations and experience with terminology management and related tools. The project takes a user-oriented approach consulting the potential user group. The findings of the survey are expected to feed into the design of a term base template conceived with interpreters in mind.

Participation in the survey is voluntary and absolutely anonymous. No specific personal information will be collected, and the information collected in the survey will only be used within the scope of this thesis project, and not for any commercial or other purpose. It will take approximately 10 minutes to complete.

Thank you very much!

Baris Bilgen
School of Translation and Interpretation
University of Ottawa

The first set of questions will give us information about your professional profile.

1. I am a...

- ☐ full-time interpreter.
- ☐ full-time translator/interpreter.
- ☐ part-time interpreter.
- ☐ Other (please specify)

2. How many years of professional experience do you have as a conference interpreter?

- ☐ 0-4 years
- ☐ 5-9 years
- ☐ 10 years or more

3. What is/are your professional affiliation(s)?

- ☐ AIIC
- ☐ ATIO/OTTIAQ
- ☐ Government of Canada
- ☐ Other(s)

4. Please indicate the proportion of each task (translation and interpretation) in your overall workload.

- ☐ I do not do any translation work.
- ☐ I do more interpreting than translating.
- ☐ My workload is almost equally divided between translating and interpreting.
- ☐ I do more translating than interpreting.

Additional comments

The five (5) following questions will help us understand your basic terminology-related workload regarding storage of terminological data.

5. What type(s) of terminology do you work with?

- ☐ Monolingual
- ☐ Bilingual
- ☐ Multilingual

6. Do you systematically record terminology before a conference?

- ☐ Always or almost always
- ☐ Often
- ☐ Sometimes
- ☐ Not very often
- ☐ Never or almost never

7. Where do you store terminological data? (Choose all that apply.)

- ☐ Paper (glossaries, notebooks, etc.)
- ☐ Computer – Word Processors / Spreadsheets
- ☐ Computer – Database Management Software
- ☐ Computer – Terminology Management Software
- ☐ Other (please specify)

8. What kind of terminological units do you store? (Choose all that apply.)

- ☐ Terms
- ☐ Acronyms/abbreviations
- ☐ Proper nouns (people's names, toponyms, official titles, etc.)
- ☐ Program or project names, titles of Acts of Parliament or official reports, etc.
- ☐ Names of governmental or organizational bodies
- ☐ Other(s)

9. What kind of information do you store? (Rate from 1 to 10 according to importance with 1 as the least important and 10 as the most important, or 0 as irrelevant/not stored.)

	0	1	2	3	4	5	6	7	8	9	10
Source/Target Language equivalents	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Source (bibliographical)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Grammatical information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Context	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Subject field	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Synonyms/Variants	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Definition	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Phraseology/Collocates	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

(please specify)

The following tables will help us understand your basic terminology retrieval practices.

Please indicate how you retrieve terminological data in each stage (before a conference, during a conference, and after a conference) by checking the boxes which apply to you.

10. Display:

	Before	During	After
On-screen display	☐	☐	☐
Printouts	☐	☐	☐

Baris Bilgen-Investigating Terminology Management for Conference

11. Search:

	Before	During	After
Manual searching, sorting, filtering	☐	☐	☐
Automated searching, sorting, filtering	☐	☐	☐

12. Consult:

	Before	During	After
Consult all the information stored in term records	☐	☐	☐
Consult selected information from term records*	☐	☐	☐

13. *If you consult selected information from term records in a certain stage, please specify the fields you need to consult in each stage by checking the boxes which apply.

	Before	During	After
Source/Target language equivalents	☐	☐	☐
Source (bibliographical)	☐	☐	☐
Grammatical information	☐	☐	☐
Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	☐	☐	☐
Context	☐	☐	☐
Subject field	☐	☐	☐
Synonyms and/or Variants	☐	☐	☐
Definition	☐	☐	☐
Phraseology/Collocates	☐	☐	☐
Other(s)	☐	☐	☐

(please specify)

The two (2) following questions will give us an idea about your attitude towards the use of computers in the booth.

14. How do you feel about the use of computers in the booth?

- ☐ I have no objection, and I use one myself.
- ☐ I have no objection, but I do not use one myself.
- ☐ I prefer that computers not be used in the booth.
- ☐ I have no opinion.

Additional comments

15. If you use a computer in the booth; do you use it:

- | | |
|---|---|
| ☐ as you interpret | ☐ to look up terms/other information online |
| ☐ as your colleague interprets | ☐ to look up terms/other information in your documents, term bases, etc. |
| ☐ during breaks | ☐ to store acquired information and/or terms in your computer |
| ☐ at other moments | ☐ for other purposes |

If you have checked "at other moments" and/or "for other purposes", please specify:

The following questions will help us gather information about your experience with terminology management tools.

16. What is your experience with terminology management software?

- ☐ I use/have used terminology management software.
- ☐ I have never been interested in terminology management software.
- ☐ I have looked into some, but decided not to use them.
- ☐ Other

17. Do you know of any terminology management systems that are designed or marketed specifically for interpreters? If so, which ones?

18. If applicable, how satisfied are you with the following characteristics of any terminology management tools you have explored/used?

	Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied	Unable to evaluate
Price	☐	☐	☐	☐	☐	☐
Accessibility/ Availability	☐	☐	☐	☐	☐	☐
User-friendliness	☐	☐	☐	☐	☐	☐
Time required to learn how to use the tool	☐	☐	☐	☐	☐	☐
Time required to input data	☐	☐	☐	☐	☐	☐
Flexibility of term base structures	☐	☐	☐	☐	☐	☐
Availability of output formats to suit my needs	☐	☐	☐	☐	☐	☐
Ease of designing output formats	☐	☐	☐	☐	☐	☐
Time required to generate output	☐	☐	☐	☐	☐	☐

Other (please specify)

19. Please add any further comments, suggestions, or contributions you wish to make.

Recruitment Text

Are your terminology management needs being met?

Are you a practicing conference interpreter? If so, we need your help!

We are conducting a research project as part of an M.A. thesis in Translation at the University of Ottawa School of Translation and Interpretation, to identify conference interpreters' specific needs regarding terminology management. We would like to invite you to participate in this study.

Q: Will it take long?

A: No – only about 15 minutes of your time.

Q: What do I have to do?

A: Answer a short online survey about terminology management.

Q: Do I have to give my name or contact details?

A: No – you can remain completely anonymous. The survey will not ask you for any information that could identify you, and IP addresses will not be tracked.

Q: What if I give the wrong answer for a question?

A: There is no wrong answer. We want to know about YOUR needs. It doesn't matter how anyone else responds. Just give us your honest opinion.

Q: What will the outcome of this project be?

A: We hope to achieve a better understanding of the terminology needs of conference interpreters, and to reveal the various ways they constitute a unique group of terminology tool users. This understanding will also help us to design a term base template designed specially to meet the needs of conference interpreters. (Whether or not you participate, you may ask for a copy of the template when it is done by sending an e-mail to the M.A. candidate Baris Bilgen (bbilg072@uottawa.ca).)

Formatted: Font color: Auto

Q: Where can I find out more?

A: You can contact researcher Mr. Baris Bilgen (bbilg072@uottawa.ca), research supervisor Professor Elizabeth Marshman (elizabeth.marshman@uottawa.ca), or research co-supervisor Professor Annie Brisset (annie.brisset@uottawa.ca) for more information.

Q: I'd like to participate – how do I start?

A: Just go to this address to access the online survey!

https://www.surveymonkey.com/s.aspx?sm=0JoJJoeAqlTvULT04_2f_2ftOO_3d_3d

Thank you for your time. YOU can make a difference in helping us to better understand and meet the terminology management needs of conference interpreters.



uOttawa

Université d'Ottawa

Faculté des arts

École de traduction et
d'interprétation

University of Ottawa

Faculty of Arts

School of Translation and
Interpretation

Letter of Information

Title of the study: Investigating Terminology Management for
Conference Interpreters

Investigators: Baris Bilgen (M.A. Candidate)
Dr. Elizabeth Marshman (Assistant Professor,
Research Supervisor)
Dr. Annie Brisset (Professor, Research Co-
Supervisor)

School of Translation and Interpretation
University of Ottawa
Ottawa, ON
(613) 562-5800 ext. 3079; ext 3177
bbilg072@uottawa.ca
elizabeth.marshman@uottawa.ca
annie.brisset@uottawa.ca

**Invitation to
Participate:**

You are invited to participate in the abovementioned research study conducted by Baris Bilgen as part of his M.A. thesis, co-supervised by Dr. Elizabeth Marshman and Dr. Annie Brisset.

**Purpose of
the Study:**

From this research we wish to learn about the needs of conference interpreters regarding terminology management, and whether existing tools meet their needs.

Participation:

If you wish to participate in this study, please complete and submit the anonymous online survey on Survey Monkey (see link below). By completing and returning this survey, you will also indicate your consent to participate in the study. The survey should take you approximately 15 minutes to complete and send.

https://www.surveymonkey.com/s.aspx?sm=0JoJJJeAqITvULT04_2t_2tOQ_3d_3d

Risks:

Since this study involves only the completion of a survey in which no personal information will be gathered and you are asked only to provide your personal opinions, participation in this survey involves no risk to you.

Benefits:

Thanks to your feedback, we will gain a better understanding of the needs of conference interpreters regarding terminology management. By better understanding their specific needs, we will be able to identify the ways in which they constitute a unique group of users of terminology management tools, and propose a term base template designed especially for this user group.

☎ 613 562 5719

☎ 613 562 5141

70 Laurier E.

Ottawa ON K1N 6N5 Canada

www.uOttawa.ca

Confidentiality: The information that you will share will remain strictly confidential and will be used solely for the purposes of this research. The only people who will have access to the research data are Mr. Bilgen, Dr. Marshman and Dr. Brisset. Your answers to open-ended questions may be used verbatim in presentations and publications but you will not be identified. Other results will be published in pooled (aggregate) format. In other words, only overviews of the data, and not individual surveys, will be published.

Anonymity: Anonymity is guaranteed since you are not being asked to provide your name or any personal information. Moreover, you will return the survey electronically by using the anonymous online tool Survey Monkey. (IP addresses will not be tracked.)

Data storage: The surveys will be kept in a password-protected account on the Survey Monkey server. Backup CD-ROMs will be kept in a locked office at the University of Ottawa. All data will be deleted and destroyed upon the completion of Mr. Bilgen's M.A. degree, expected in October 2009.

Voluntary Participation: You are under no obligation to participate. By completing and submitting the survey, you indicate your consent to participate in the study and to have the data you provide included in the analysis. If you choose to participate, you may refuse to answer any questions. If you change your mind about participating, you may simply choose not to answer any remaining questions on the survey, or not to submit the survey. If you do choose not to finish a survey but do submit it, the answers you did provide will still be included in the data.

Information about

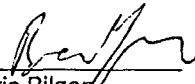
Results: The research findings (that is, a general overview but not individual surveys) will be made available to participants and other interested parties via the project website. Upon request, a copy of the term base template or the thesis itself will be sent to participants or other interested parties. You may request a copy by sending an e-mail to Baris Bilgen at the e-mail address mentioned above.

If you have any questions or require more information about the study itself, you may contact the researchers at the numbers or e-mail addresses mentioned above.

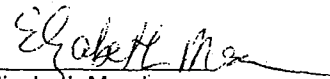
If you have any questions with regards to the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 159, Ottawa, ON K1N 6N5, tel.: (613) 562-5841 or ethics@uottawa.ca.

Please keep this form for your records.

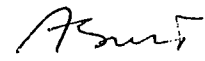
Thank you for your time and consideration.


Baris Bilgen

February 2, 2009
Date


Elizabeth Marshman

February 2, 2009
Date


Annie Brisset

February 3, 2009
Date

APPENDIX B

Survey Result Summary

Baris Bilgen-Investigating Terminology Management for Conference Interpreters

1. I am a...			
		Response Percent	Response Count
full-time interpreter.		41.4%	12
full-time translator/interpreter.		31.0%	9
part-time interpreter.		13.8%	4
Other (please specify)		13.8%	4
answered question			29
skipped question			0

2. How many years of professional experience do you have as a conference interpreter?			
		Response Percent	Response Count
0-4 years		0.0%	0
5-9 years		6.9%	2
10 years or more		93.1%	27
answered question			29
skipped question			0

3. What is/are your professional affiliation(s)?		Response Percent	Response Count
AIIC ATIO/OTTIAQ Government of Canada Other(s)		67.9%	19
		14.3%	4
		7.1%	2
		10.7%	3
answered question			28
skipped question			1

4. Please indicate the proportion of each task (translation and interpretation) in your overall workload.		Response Percent	Response Count
I do not do any translation work. I do more interpreting than translating. My workload is almost equally divided between translating and interpreting. I do more translating than interpreting.		35.7%	10
		60.7%	17
		3.6%	1
		0.0%	0
Additional comments			2
answered question			28
skipped question			1

5. What type(s) of terminology do you work with?		
	Response Percent	Response Count
Monolingual 	3.7%	1
Bilingual 	55.6%	15
Multilingual 	59.3%	16
answered question		27
skipped question		2

6. Do you systematically record terminology before a conference?		
	Response Percent	Response Count
Always or almost always 	85.2%	23
Often 	7.4%	2
Sometimes 	3.7%	1
Not very often 	3.7%	1
Never or almost never	0.0%	0
answered question		27
skipped question		2

7. Where do you store terminological data? (Choose all that apply.)			Response Percent	Response Count
Paper (glossaries, notebooks, etc.)			85.2%	23
Computer – Word Processors / Spreadsheets			70.4%	19
Computer – Database Management Software			3.7%	1
Computer – Terminology Management Software			3.7%	1
Other (please specify)			3.7%	1
answered question				27
skipped question				2

8. What kind of terminological units do you store? (Choose all that apply.)			Response Percent	Response Count
Terms			100.0%	27
Acronyms/abbreviations			92.6%	25
Proper nouns (people's names, toponyms, official titles, etc.)			74.1%	20
Program or project names, titles of Acts of Parliament or official reports, etc.			74.1%	20
Names of governmental or organizational bodies			92.6%	25
Other(s)			18.5%	5
answered question				27
skipped question				2

9. What kind of information do you store? (Rate from 1 to 10 according to importance with 1 as the least important and 10 as the most important, or 0 as irrelevant/not stored.)

	0	1	2	3	4	5	6	7	8	9	10	Rating Average	Response Count
Source/Target Language equivalents	0.0% (0)	3.8% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.8% (1)	0.0% (0)	3.8% (1)	3.8% (1)	84.6% (22)	9.38	26
Source (bibliographical)	35.0% (7)	25.0% (5)	10.0% (2)	0.0% (0)	5.0% (1)	0.0% (0)	5.0% (1)	10.0% (2)	0.0% (0)	0.0% (0)	10.0% (2)	2.65	20
Grammatical information	38.1% (8)	14.3% (3)	9.5% (2)	4.8% (1)	14.3% (3)	4.8% (1)	9.5% (2)	4.8% (1)	0.0% (0)	0.0% (0)	0.0% (0)	2.19	21
Usage (geographic, semantic, sociolinguistic, temporal, frequency etc.)	33.3% (6)	16.7% (3)	5.6% (1)	5.6% (1)	16.7% (3)	5.6% (1)	0.0% (0)	5.6% (1)	5.6% (1)	0.0% (0)	5.6% (1)	2.78	18
Context	0.0% (0)	0.0% (0)	4.2% (1)	4.2% (1)	12.5% (3)	12.5% (3)	0.0% (0)	4.2% (1)	12.5% (3)	16.7% (4)	33.3% (8)	7.46	24
Subject field	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	4.2% (1)	16.7% (4)	0.0% (0)	4.2% (1)	12.5% (3)	16.7% (4)	45.8% (11)	8.38	24
Synonyms/Variants	0.0% (0)	4.0% (1)	4.0% (1)	8.0% (2)	4.0% (1)	8.0% (2)	8.0% (2)	16.0% (4)	16.0% (4)	8.0% (2)	24.0% (6)	6.92	25
Definition	4.2% (1)	4.2% (1)	20.8% (5)	4.2% (1)	0.0% (0)	4.2% (1)	8.3% (2)	12.5% (3)	16.7% (4)	16.7% (4)	8.3% (2)	5.83	24
Phraseology/Collocates	27.8% (5)	5.6% (1)	5.6% (1)	5.6% (1)	0.0% (0)	5.6% (1)	5.6% (1)	0.0% (0)	27.8% (5)	11.1% (2)	5.6% (1)	4.72	18
Other	80.0% (4)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	20.0% (1)	2.00	5
											(please specify)		1
answered question													27

	skipped question	2
--	------------------	---

10. Display:				
	Before	During	After	Response Count
On-screen display	78.3% (18)	47.8% (11)	43.5% (10)	23
Printouts	73.1% (19)	69.2% (18)	26.9% (7)	26
			answered question	26
			skipped question	3

11. Search:				
	Before	During	After	Response Count
Manual searching, sorting, filtering	91.7% (22)	54.2% (13)	37.5% (9)	24
Automated searching, sorting, filtering	88.9% (16)	55.6% (10)	38.9% (7)	18
			answered question	26
			skipped question	3

12. Consult:				Response Count
	Before	During	After	
Consult all the information stored in term records	100.0% (11)	18.2% (2)	27.3% (3)	11
Consult selected information from term records*	58.8% (10)	76.5% (13)	41.2% (7)	17
			answered question	17
			skipped question	0

13. *If you consult selected information from term records in a certain stage, please specify the fields you need to consult in each stage by checking the boxes which apply.				Response Count
	Before	During	After	
Source/Target language equivalents	88.2% (15)	70.6% (12)	41.2% (7)	17
Source (bibliographical)	87.5% (7)	25.0% (2)	12.5% (1)	8
Grammatical information	55.6% (5)	44.4% (4)	22.2% (2)	9
Usage (geographic, semantic, sociolinguistic, temporal, frequency, etc.)	71.4% (5)	57.1% (4)	14.3% (1)	7
Context	85.7% (12)	64.3% (9)	14.3% (2)	14
Subject field	100.0% (11)	36.4% (4)	27.3% (3)	11
Synonyms and/or Variants	57.1% (8)	64.3% (9)	28.6% (4)	14
Definition	80.0% (12)	60.0% (9)	26.7% (4)	15
Phraseology/Collocates	75.0% (3)	100.0% (4)	50.0% (2)	4

Other(s)	0.0% (0)	0.0% (0)	0
		(please specify)	1
answered question			17
skipped question			0

14. How do you feel about the use of computers in the booth?			
I have no objection, and I use one myself.		Response Percent	Response Count
		47.1%	8
I have no objection, but I do not use one myself.		41.2%	7
I prefer that computers not be used in the booth.		11.8%	2
I have no opinion.		0.0%	0
Additional comments			3
answered question			17
skipped question			0

15. If you use a computer in the booth, do you use it:		Response Percent	Response Count
as you interpret		53.8%	7
as your colleague interprets		76.9%	10
during breaks		76.9%	10
at other moments		15.4%	2
to look up terms/other information online		92.3%	12
to look up terms/other information in your documents, term bases, etc.		92.3%	12
to store acquired information and/or terms in your computer		69.2%	9
for other purposes		23.1%	3
If you have checked "at other moments" and/or "for other purposes", please specify:			3
answered question			13
skipped question			0

15. If you use a computer in the booth, do you use it:		Response Percent	Response Count
as you interpret		53.8%	7
as your colleague interprets		76.9%	10
during breaks		76.9%	10
at other moments		15.4%	2
to look up terms/other information online		92.3%	12
to look up terms/other information in your documents, term bases, etc.		92.3%	12
to store acquired information and/or terms in your computer		69.2%	9
for other purposes		23.1%	3
If you have checked "at other moments" and/or "for other purposes", please specify:			3
answered question			13
skipped question			0

16. What is your experience with terminology management software?			Response Percent	Response Count
I use/have used terminology management software.			11.5%	3
I have never been interested in terminology management software.			42.3%	11
I have looked into some, but decided not to use them.			11.5%	3
Other			34.6%	9
			<i>answered question</i>	26
			<i>skipped question</i>	3

17. Do you know of any terminology management systems that are designed or marketed specifically for interpreters? If so, which ones?		Response Count
		12
		<i>answered question</i>
		12
		<i>skipped question</i>
		17

APPENDIX C

Ethics Approval Notice



Université d'Ottawa University of Ottawa

Service de subventions de recherche et déontologie Research Grants and Ethics Services

Ethics Approval Notice

Principal Investigator(s) / Supervisor:	Elizabeth Marshman (Co-supervisor) elizabeth.marshman@uottawa.ca Annie Brisset (Co-supervisor) abrisset@uottawa.ca
Co-Investigator(s):	Baris Bilgen bbilg072@uottawa.ca
File Number:	#11-08-12
Title of Research Project:	Investigating Terminology Management for Conference Interpreters
Type of Project:	Master's thesis
Department and Institution:	School of Translation and Interpretation
Research Ethics Board:	<u>Social Sciences and Humanities</u> Chair: Dr. Peter Beyer
Ethics Approval Date:	January 28, 2009
Expiry Date:	January 27, 2010
Documents Reviewed and Approved:	Protocol
Approval Granted:	Ia (Approval)
Special Conditions:	

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement and other applicable laws and regulations in Ontario, has examined and approved the application for ethical approval for the above named research project as of the Ethics Approval Date indicated above and subject to the conditions listed the section above entitled "Special Conditions".

During the course of the study the protocol may not be modified without prior written approval from the REB except when necessary to remove subjects from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the study (e.g. change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, information/consent documentation, and/or recruitment documentation, should be submitted to this office for approval using the "Modification to research project" form available at: http://www.rges.uottawa.ca/ethics/application_dwn.asp



Université d'Ottawa University of Ottawa

Service de subventions de recherche et déontologie Research Grants and Ethics Services

Please submit an annual status report to the Protocol Officer 4 weeks before the above-referenced expiry date to either close the file or request a renewal of ethics approval. This document can be found at: http://www.rges.uottawa.ca/ethics/application_dwn.asp

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5841 or by e-mail at ethics@uOttawa.ca.

Leslie-Anne Barber
Responsable de la déontologie en recherche
Pour le Président du CÉR en Sciences Sociales et Humanités
Peter Beyer

APPENDIX D

Sample Term Records

English Term precedent		French Term précédent	
Subject Field Law		Edit subject fields	
Term Type Regular		Edit term types	
English Context As a condition precedent to cancellation of the permit.		French Context Le litige fut débattu en cour et un précédent jurisprudentiel fut établi lorsque les chefs gagnèrent leur cause.	
English Synonyms/Variants Judicial precedent; authoritative case		French Synonyms/Variants précédent jurisprudentiel; arrêt qui fait jurisprudence	
English Definition A previous judicial decision considered as a source of law in a later case.		French Definition Soit une décision administrative, soit une décision juridictionnelle (précédent jurisprudentiel) qui peut avoir, selon les systèmes juridiques, valeur d'exemple, autorité de fait ou caractère obligatoire («stare decisis»).	
Date 20/04/2009		Author Me	
Notes			

Record: 1 of 6

English Term HRSDC		French Term RHDCC	
Subject Field Government		Edit subject fields	
Term Type Acronym		Edit term types	
English Context		French Context	
English Synonyms/Variants Department of Human Resources and Skills Development Canada		French Synonyms/Variants ministère des Ressources humaines et Développement des compétences	
English Definition		French Definition	
Date 20/04/2009		Author Me	
Notes			

Record: 2 of 6

English Term Act to Abolish the Amusement Surtax		French Term Loi supprimant la surtaxe sur les divertissements	
Subject Field Law		Edit subject fields	
Term Type Title		Edit term types	
Gr. Gender fém.s.			
English Context			
French Context			
English Synonyms/Variants			
French Synonyms/Variants			
English Definition			
French Definition			
			
Date 20/04/2009	Author Me	Notes	

Record: 3 of 6

English Term Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment		French Term Convention contre la torture et autres peines ou traitements cruels, inhumains ou dégradants	
Subject Field Law		Edit subject fields	
Term Type Title		Edit term types	
Gr. Gender fém.s.			
English Context			
French Context			
English Synonyms/Variants			
French Synonyms/Variants			
English Definition			
French Definition			
			
Date 20/04/2009	Author Me	Notes	

Record: 4 of 6

English Term		digital camera		French Term		appareil photo numérique	
		Subject Field		Electronics		Edit subject fields	
		Term Type		Regular		Edit term types	
				Gr. Gender		masc.s.	
English Context	When digital cameras became common, a question many photographers asked was whether their film cameras could be converted to digital.			French Context	Je fais mes prises de vue avec cet appareil photo numérique dans le cadre de mon travail de photographe pour sa maniabilité et sa qualité.		
English Synonyms/Variants	digicam			French Synonyms/Variants	appareil photographique numérique; APN		
English Definition	A photographic camera that uses a digital imaging chip to capture and record image data in digital form on an onboard memory block, removable memory card (subsequently uploaded to a computer), or directly connected computer.			French Definition	Appareil-photo comportant une puce à imagerie numérique pour la saisie et l'enregistrement d'images sous forme numérique dans un bloc de mémoire intégré ou dans une carte de mémoire amovible (avec téléchargement ultérieur vers un ordinateur) ou par branchement direct sur un ordinateur.		
Date		20/04/2009		Author		Me	
				Notes			

Record: 1 5 of 6

English Term		GPS		French Term		GPS	
		Subject Field		Electronics		Edit subject fields	
		Term Type		Acronym		Edit term types	
				Gr. Gender		masc.s.	
English Context	The NAVSTAR Global Positioning System (GPS) is a constellation of twenty-four satellites in 12-hour orbits at an altitude of 20,183 km.			French Context	Le GPS est un système de géodésie spatiale permettant le positionnement d'un grand nombre de sites mondiaux en trois dimensions (latitude, longitude, altitude) ainsi que la mesure du temps.		
English Synonyms/Variants	global positioning system			French Synonyms/Variants	système mondial de localisation		
English Definition	A navigation system based on the transmission of signals from satellites provided and maintained by the United States of America and available to civil aviation users.			French Definition	Système de navigation basé sur la transmission de signaux à partir de satellites fournis et entretenus par les États-Unis d'Amérique et mis à la disposition de l'aviation civile.		
Date		20/04/2009		Author		Me	
				Notes			

Record: 1 6 of 6