

The Canadian Translation Industry Technology Roadmap (2003–2007)



Industry Canada Industrie Canada



National Research Council Canada Conseil national de recherches Canada

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INTRODUCTION

In recent years, a series of related measures have been taken to stimulate the Canadian language industry. One such measure was the establishment of a Language Industry Technology Roadmap (TRM), an undertaking whose goal is to identify future directions for technology relevant to the industry and propose actions to meet future challenges. The roadmap is supported by Industry Canada and the National Research Council of Canada, and the Roadmap Committee members are drawn from industrial, university and government institutions across Canada. The four classes of technology concerned cover content management, speech processing, translation, and language training. This document summarizes the first phase report on the translation subsector.

A second measure was the creation in the autumn of 2003 of AILIA (Association de l'industrie de la langue/Language Industry Association), whose central role is to promote the Canadian Language Industry. AILIA provides a common voice for an industry which has often been regarded as fragmented, and conducts a range of activities aimed at raising the profile of the industry both within Canada and abroad, developing strategies and markets for language products and services, and encouraging innovation and R&D. Work related to the TRM now falls under the auspices of AILIA.

THE TECHNOLOGY ROADMAP (TRM) PROCESS

- ❖ Establish statements of the purpose and goals of the TRM (2003-2004)
- ❖ Define the scope of the translation Industry TRM. This includes key technologies and research (2003-2004)
- ❖ Specify translation technology market drivers and their targets (2003-2004)
- ❖ Define the needs of the Canadian translation industry and its customers (2004-2005)
- ❖ Recommend to AILIA translation technology research and development support strategies (2004-2005)
- ❖ Define the skills and knowledge required by the industry's future work force in order to develop and implement the new technologies (2004-2005)
- ❖ Implement AILIA's translation technology research and development support strategies (2004-2007)
- ❖ Promote skill and knowledge development of Canada's future work force through business incentives and academic financial support (2004-2007)

TRANSLATION OVERVIEW

The translation sector includes the following fields of activity:

Translation	interpretation	localization
translation revision	<i>spoken language translation</i>	<i>web sites, software, documentation, etc.</i>
<i>verification, correction</i>	terminology	language technology
translation management	<i>specialized domain vocabulary</i>	<i>R&D, production of computational tools</i>
<i>project coordination</i>	audiovisual translation	technical and professional writing
translator training	<i>dubbing, subtitling of film, TV</i>	<i>collaboration with translators</i>
	post-editing	
	<i>machine translation revision</i>	

TRANSLATION TECHNOLOGY

Computational support for the translation sector takes the form of various resources and tools. Frequently used resources include term banks, Web translation portals, and monolingual, bilingual and multilingual corpora.

Computational tools used in the translation sector perform or assist with the following tasks:

speech recognition	translation alignment	localization tools
document analysis and diagnosis	bilingual concordancers	machine translation
terminology management	translation memory	computer aided translation
term extraction from text	controlled language checking/editing	translation project management

TECHNOLOGY AND THE TRANSLATION MARKET

Several factors have contributed to a marked growth in demand for translation services in recent years:

- ❖ Adoption of more, and more complex products, leading to increased quantities of documentation
- ❖ Creation of new types of text, notably on the World Wide Web and as components of technological products (menus, help files, messages, etc.)
- ❖ International trade and finance, globalization of markets, and the accompanying requirement to provide product literature and other documents in multiple languages
- ❖ Increased travel, in the form of tourism, business trips and conferences, affects the interpretation market
- ❖ Mobility of people, increasing demand for translation and interpretation
- ❖ The expansion of new technologies, applications and processes affecting terminology in particular
- ❖ Shorter deadlines resulting from desire to ship multiple language product versions simultaneously, and from frequent updates to Web documents.

Translators are therefore subject to two conflicting pressures: to produce results quickly, while maintaining high quality. This is causing them to turn to translation technology for assistance. A survey¹ of translator job advertisements in Canada shows 60.5% requiring some computer literacy and 18.3% requiring knowledge of specialized translation tools; the annual growth trend of this last figure is close to 100%.

The recently established Language Technology Research Centre represents an attempt by the Canadian government to provide the same type of support for language technology research and development that has long been enjoyed by Canada's competitors in the United States, Europe and Japan.

Some of the factors expected to affect uptake of translation technology are:

- ❖ A shortage of translators, with annual world translation market growth estimated at 15% - 25%, and supply of new translators meeting only approximately one third of the demand in conventional translation alone²; when the new localization market is taken into account, the situation is even more drastic.
- ❖ The time-to-market concerns noted above.
- ❖ Demand by employers for translator education to include a technological component, addressed both by universities and by professional translators' associations.
- ❖ Client education regarding the benefits of translation, content-management implications for translation cost and performance, and appropriate use of translation technology.

¹ Lynne Bowker (2004) "What does it take to work in the translation profession in Canada in the 21st century? Exploring a database of job advertisements" *Meta* 49(1).

² Canadian Translation Industry Sectoral Committee "Survey of the Canadian Translation Industry: Human Resources and Export Development Strategy" (1999). <http://www.uottawa.ca/associations/csict/strate.pdf>

- ❖ Translation technology implementation costs, arising from the necessity for source texts to be available in an appropriate electronic form, the purchase and maintenance of tools, and the time required for learning, maintenance and customization.
- ❖ The general economic context; the translation sector is particularly sensitive to economic downturns.
- ❖ Effect on translator income, one survey showing translators who use translation memory software to have an income some 17.5% higher than those who do not.³
- ❖ Outsourcing and competition from less expensive overseas translation providers.

The general tendency here is towards increased use of translation technology as a means of enhancing productivity, and in particular to mitigate the human resources shortage in this sector. Indeed, it is hard to imagine that additional training alone will be sufficient to close the gap between translator supply and demand in time to avoid a crisis.

By 2007, according to Allied Business Intelligence⁴, the size of the “human translation” market is forecast to be US\$11.5 billion, and machine translation US\$134 million. Software localization is expected to reach US\$3.4 billion, compared with US\$1.1 billion in 2001, while the strongest growth of all is forecast for the web site localization market, at US\$3.1 billion in 2007, up from just US\$499 million in 2001. This expansion is based on the assumption that Internet access and e-commerce will continue to increase. The small machine translation market is expected to be relatively stagnant, in the absence of any remarkable technical breakthroughs. Free online MT services are an additional factor here.

Another market segment with strong expected growth is technical documentation; only approximately 8% of such texts are currently translated, and the amount of this material requiring translation is growing at an annual rate of 25 - 30%⁵. Current and future needs for translation are greatest in the areas of business and finance, high technology, aerospace and healthcare⁶. Since technical and specialized documents are the most suitable for the application of translation technology, this factor is expected to produce increased demand for such tools. Moreover, as noted above, localization is the fastest growing sector of the translation market, and also the one that relies most heavily on translation technology.

Other factors likely to affect the translation market include the following:

- ❖ Multilingual web sites imply multilingual customer service, both in handling initial contacts and in providing after-sales service.
- ❖ Open-source software projects tend to incorporate localization efforts for a wider range of languages than proprietary software.
- ❖ The increasing scope of translation projects leads to collaboration between and consolidation of providers.
- ❖ Online translation applications and services are expected to partially replace desktop translation.
- ❖ Integration of diverse translation tools, either in a network context or as suites, is expected to become a major concern. Equally, integration of translation tools with content management systems will become increasingly important.

³ Ordre des traducteurs, terminologues et interprètes agréés du Québec, 2002.

⁴ Press releases “Consolidation Creating Better Equipped Solution Providers in Language Translation and Localization Market, Says Allied Business Intelligence Report” (September 12, 2002) and “Web Site Translation is Fastest Growing Segment of Worldwide Language Translation Industry, Says Allied Business Intelligence Report” (29 October, 2002), both referring to the report “Language Translation, Localization and Globalization: World Market Forecasts, Industry Drivers and eSolutions”.

⁵ Canadian Translation Industry Sectoral Committee, op. cit.

⁶ Canadian Translation Industry Sectoral Committee, op. cit.; Bowker, op. cit.

TRANSLATION TECHNOLOGY — PRODUCTS AND R&D

Canadian commercial translation technology includes:

- ❖ *Grand dictionnaire terminologique* (OQLF) English/French terminology bank
- ❖ *Termium* (Translation Bureau, Public Works and Government Services Canada) English / French / Spanish terminology bank
- ❖ *TransSearch* (RALI/Terminotix) on-line access to translation archives
- ❖ *Dictionary Generator* (BridgeTerm) term extraction tool
- ❖ *EDITerm* (EDIT Inc.) terminology management suite
- ❖ *LogiTerm* (Terminotix) terminology management suite
- ❖ *SynchroTerm* (BridgeTerm); term extraction tool
- ❖ *Aladin* (RALI/Terminotix) alignment tool, exporting to translation memory
- ❖ *Find* (Beetext) bilingual concordancer
- ❖ *LogiTrans* (Terminotix) translation memory with pretranslation
- ❖ *Babel-TRACK* (BabelFish) translation technology middleware
- ❖ *Flow* (Beetext) translation technology middleware
- ❖ *XLT* (Socatra) English/French web-based machine translation
- ❖ *Lingua Technologies Toolbox* (Lingua Technologies) various linguistic software components
- ❖ *MultiTrans* (MultiCorpora) various translation-oriented components
- ❖ *Promemoria* (BridgeTerm) collection of tools, Systran-compatible

Canadian research projects and prototypes include:

- ❖ *TransTalk* (RALI/CRIM) dictation system for translators
- ❖ *NoBabel* (KCSL) translator's workstation
- ❖ *TransCheck* (RALI) automatic translation error detection
- ❖ *TransType* (RALI) interactive machine translation with target-text prediction
- ❖ *Trampolino* (BridgeTerm) controlled English verification and translation.

Canadian institutions involved in translation technology R&D include⁷:

ALIS Technologies www.alis.com	BabelFish www.babelfish.com	Beetext www.beetext.com
BridgeTerm www.bridgeterm.com	CRIM (Centre de recherche informatique de Montréal) www.crim.ca	John Chandioux Consultants Inc. www.chandioux.com
KCSL Inc. www.kcsl.ca	Language Technologies Research Centre (LTRC) www.iit-iti.nrc-cnrc.gc.ca/locations-bureaux/gatineau_e.html	Lingua Technologies www.linguatechnologies.com
MultiCorpora R&D www.multicorpora.com	RALI (Recherche appliquée en linguistique informatique) www.rali.umontreal.ca	Socatra Inc. www.socatra.ca
Terminotix Inc. www.terminotix.com	Université du Québec en Outaouais www.uqo.ca	

⁷ Please bring to our attention any items in this category which have been omitted at communication@ailia.ca.

AILIA – THE LANGUAGE INDUSTRY ASSOCIATION

Canada, is considered a top supplier of language products and services but its market share is seriously challenged. Stakeholders in the field have therefore decided to act by doing all that is needed to give the sector a fresh start. The Association de l'industrie de la langue / Language Industry Association (AILIA) has been created to meet this challenge.⁸

Vision To make Canada a world leader in the language industry.

Mission To join forces and be the voice of the Canadian language industry.

BENEFITS OF JOINING AILIA FOR TRANSLATION ORGANIZATIONS AND PROFESSIONALS

Individuals and organizations active in the translation sector are invited to join AILIA. In addition to the general advantages resulting from membership of an association of language specialists, members may:

- ❖ receive a monthly market intelligence newsletter
- ❖ obtain news of trade missions, market studies and other information relevant to the translation industry
- ❖ inform other members of their products and services
- ❖ play a part in formulating plans and influencing policy and strategy with implications for translation
- ❖ participate in commercial and business development activities
- ❖ acquire business contacts via the AILIA web site and networking activities
- ❖ sponsor events.

Various classes of membership exist; information can be found at the AILIA web site: www.ailia.ca

⁸ <http://www.ailia.ca>