# ATA Translation Support Tools Forum

Welcome to ATA's Translation Support Tools Forum. The Forum will open with a brief presentation by each participating translation support tool vendor on the strengths of their product line, couched in a common set of terms, so the audience can better absorb the information. The panel/Q&A session that follows will be moderated by Alan Melby, who chairs ATA's Translation & Computers Committee.

The information provided is a compilation of questionnaire responses from translation software vendors and/or representatives that compares product features and capabilities. Each Forum participant was asked to provide the following information:

A. Provide a brief description of your translation tool product line and how to find out more about it (e.g., company contact information and ATA exhibit booth number, hospitality room, training sessions offered during in the conference). This description can be adapted from your existing literature, but must use the terminology from the attached "Eight Types of Translation Technology," which ATA's Translation & Computers Committee has been using as a benchmark at ATA conferences for several years.

B. Referring to the "Eight Types" handout, specify which features, functions, modules, etc. of your product line correspond to each of the following eight categories. Don't worry if some of the eight items are left blank; perhaps no one will have features listed in all eight categories.
   1) infrastructure
   2) term candidate extraction; terminology research
   3) (automatic) terminology lookup (manual lookup is useful too)
   4) terminology consistency check and non-allowed terminology check
   5) segmentation, alignment, and indexing
   6) translation memory lookup (any-size segment); machine translation
   7) missing segment detection; format checks; grammar check
   8) translation workflow and billing management

C. Briefly state the strengths of your product line, again using the terminology from the "Eight Types" handout.

The following is a list of Forum participants:

*John Cartus, of Equality Translation Services, will also be present to introduce*
*his newly-developed translation productivity add-in for Microsoft Word.*

# ATA Translation Support Tools Forum
### *Atril—Déjà Vu*

## A. Brief Product Line Description

Atril is proud to unveil its new flagship translation management and productivity product—Déjà Vu X—at the ATA 2002. Déjà Vu X comes in two packages: a Professional Edition for the freelance translator, with even more enhancements to the productivity and quality assurance tools that have given Déjà Vu its outstanding reputation in the freelance segment of the translation industry; and a Corporate Edition for translation agencies and other corporate clients that contains a number of additional management and security capabilities as well as the optional server component with full TCP/IP access to translation memories and terminology databases, allowing for real-time communication and database-sharing of remote translation teams.

Atril is represented at the ATA Exhibition at booth 218. Pre-conference training will be provided on Wednesday, November 6, at the conference hotel, and Déjà Vu X will be officially presented to the public on Friday, November 8, at 10 AM. For more information, please see www.atril.com.

## B. Eight Types of Translation Technology

### 1. Infrastructure

We like to claim that Déjà Vu X is the most integrated and customizable translation technology solution available. While some other participants of this forum may not completely agree with our assessment, there are valid reasons for this statement:

- All activities within Déjà Vu X—including the creation and maintenance of a translation memory, terminology database, and SGML/XML filter; alignment procedures; and the actual translation and language management work—are accessed and exercised from the same completely customizable interface.
- All file formats are displayed in the same tabular view, and records in the translation memories and terminology databases are 100% compatible across file formats, even with inner-segment formatting.
- All translatable text from an unlimited number of files and supported formats can be organized into a single project in which the actual translation is performed as if it were only one file.
- All textual information, including the project files themselves, is stored in industry-standard database formats, allowing for complete SQL access and nearly unlimited filtering and sorting capabilities.
- The translation memories, terminology databases, and, of course, the translation projects themselves are completely multilingual.
- Terminology processing is not a parallel procedure, but is directly integrated through assemble processes, i.e., processes where translation is automatically generated and inserted.
- The server component of the Corporate Edition will allow for remote TCP/IP access to translation memories and terminology databases.

### 2. Term-level before translation: Term candidate extraction and terminology research

Term candidate extraction in Déjà Vu X is done by creating an index of all terms and phrases used in the translation project. The extracted terms and phrases will be displayed according to their number of occurrences, giving users a good indication of what terms and phrases are relevant for their project. This index is called the lexicon. Once users have decided which terms are relevant, they can translate those terms or prepare them for translation and delete the rest. The resulting glossary will be the primary database used in look-up and assemble processes during the translation.

Déjà Vu X's terminology databases—which, unlike the lexicon, are typically not project-specific—follow a complex and completely configurable database concept that allows for as many attributes with as many categories as users need to properly define their terminology. In fact, the database concept that Déjà Vu X uses for its terminology management not only allows for the traditional multilingual translation relation between terms, but also monolingual relationships such as synonyms or antonyms.

**3. Term-level during translation: Automatic terminology look-up**
Within the unified interface of Déjà Vu X, the user has the choice to either display the relevant databases and glossaries—the translation memories, terminology databases, and the lexicon—in one pane or two, separating translation memory matches from terminology database and lexicon records. All of the records are displayed in order of their relevance as determined by their level of fuzziness (i.e., level of similarity) and various other factors, including subject, client, age, language group, etc. Each of the displayed records can be accessed and entered into the translation with a single keystroke.

What makes Déjà Vu X truly unique in the aspect of automatic term processing during translation is that it not only displays and gives access to relevant terms, but it also offers the possibility of entering them automatically during translation. We call this process the assemble process. It takes advantage of the fact that, while complete segment repetition may be scarce in many types of projects, repetition of smaller fragments is much more common. If the search feature in the translation memories does not return a good enough candidate, the assemble process will examine the associated databases more closely, taking relevant fragments or sentences with a similar structure to put together translation from material embedded in other segments, and automatically insert them in the translation.

**4. Term-level after translation: Terminology consistency check**
During Déjà Vu X's automated post-translation terminology check, the program verifies whether any term or fragment located in any of the associated databases is not translated or translated differently in the project, and notifies the user of such findings by highlighting the terms in question. The same procedure is also implemented for numbers and any embedded code markers.

Spell checkers are automatically provided for 13 languages, and a link to the corresponding spellchecker in Microsoft Word allows users to take advantage of that if it's installed.

**5. Segment-level before translation:**
**New text segmentation, previous source-target text alignment, and indexing**
Common segmentation rules—such as ends of sentences or paragraphs—are provided by default; they are, however, completely user-definable, including those for languages that use a different set of sentence delimiters, such as Chinese or Japanese. If appropriate, sentence delimitation can also be completely turned off. Alignment—that is, the matching up of source and target files to build up translation memories—is offered in two different models within Déjà Vu X.

The most basic model executes a mere sentence segmentation in source and target, and allows the user to fix possible misalignments.

The advanced alignment model applies an "intelligent" module that will make user-definable linguistic decisions in its matching of source and target sentences, and will "memorize" misalignments so it can avoid them in the future. This model allows for multi-file, multi-format (e.g., from FrameMaker to HTML), and multilingual alignment projects, for on-the-fly realignment, and for defining non-alignable sections within source or target text(s).

Indexing is one of the keys to the way that Déjà Vu X processes texts. Because all text is stored within databases, even within the translation project itself, everything is indexed, allowing the user to sort segments for any word, phrase, or attribute and display them in any order. The applications of this are manifold. Just consider the quality control benefits: the translator, editor, or project manager can take a project consisting of hundreds of files, sort for one source or target word, and compare the different translations.

## 6. Segment-level during translation: Translation memory look-up and machine translation

Communication with the associated translation memories works on various levels and stages during the translation of the project. Pre-translation is the process of batch leveraging the content of the associated translation memories against newly imported text. This process is especially helpful when preparing translation projects for others or when processing texts with a similar content in the translation memories. Déjà Vu X will mark each match as either perfect or fuzzy, along with its degree of fuzziness, thus informing the user of how to proceed with the translation of each of the segments. Déjà Vu X performs a similar process during the translation process itself. It automatically searches the translation memories for the translation of each currently selected segment, and inserts that if its level of fuzziness is acceptable.

While these processes are similar for most computer-assisted translation tools, Déjà Vu X adds a new level to this automatic database look-up by using a technique called "example-based machine translation." If DVX finds a fuzzy match within one of the translation memories, it will attempt to "repair" that match by exchanging differing terms or phrases, which in many cases turns a fuzzy into a perfect match. Concordance searches—i.e., the search for the translation of a specific term or phrase within a segment inside the translation memories—are as easy as selecting the term or phrase in question and pressing a key combination to start the search process. While the first stage of this process will return only perfect matches if there are any, the second stage, called the Power Scan, will continue the search to also include fuzzy matches. Even in very large databases of several hundred thousand records, each of these processes is performed with virtually no lag time.

## 7. Segment-level after translation: Missing segment detection and format and grammar checks

It is practically impossible to miss segments for translation in Déjà Vu X. If it does encounter any non-translated segment or any segment with a discrepancy in the formatting, Déjà Vu X will refuse to export the file in question and prompt the user to first fix the problem. While it completely preserves the original format, Déjà Vu X's formatting philosophy is not to let it come in the way of translating. Any coding or formatting information outside of segments is stored within the project file but completely hidden from the user. Any coding or formatting information within translation segments is encoded into a read-only numeric code that can either be automatically copied from source to target or can be copied with single keystrokes. If any code is missing or added, Déjà Vu X will prompt the user to fix that problem and refuse to export the translated file otherwise. While Déjà Vu X allows the viewing and changing of coding information "behind the code," it is typically not necessary to do that. Once a translation segment is entered into one of the translation memories, the numeric codes become mere placeholders for new numeric codes, thus enabling the complete cross-file-format and cross-formatting use of translation memory content as well as the highest possible re-usability of third-party database content, including TMX.

## 8. Translation workflow and billing management

Déjà Vu X has a host of project management and workflow features, including:

- security features that allow the tracking of each user's activity and the setup of individual security profiles;
- the generation of small, security-enabled, bilingual projects—called "satellites"—that can be re-imported into the main multi-language project upon completion;

- the distribution of smaller subsets of databases that contain only those sentences and terms that are relevant to the project, ensuring that some of the most valuable assets—the translation memories and terminology databases—are not distributed too freely;
- the locking of specific sentences or sections of a project to prevent translators from working on portions assigned to other colleagues; or
- preventing certain segments from being sent to the databases.

Billing is made easier through Déjà Vu X's ability to analyze projects by counting words and characters per file or per project, generating an overview of the project's internal repetition, and finding out how many and what kind of matches there will be in the associated translation memories.

## C. Strengths of Product Line

Déjà Vu X is the most powerful and customizable computer-assisted translation (CAT) system available today. Combining state-of-the-art translation memory (TM) technology with EBMT (example-based machine translation) techniques, Déjà Vu X provides an unmatched breakthrough in productivity and consistency. Déjà Vu X goes a step (some users say "many steps") beyond traditional TM tools. While other systems only display exact and fuzzy matches, Déjà Vu X intelligently uses translation memories, terminology databases, and the project-specific lexicon to increase the quality of fuzzy matches by working with smaller segments and words. For many fuzzy matches, Déjà Vu X will thus produce a perfect translation, in the translator's own style. However, Déjà Vu X is not just a TM tool. It is a full-featured, integrated translation environment with many additional translation and project management features that radically increase productivity and consistency. Whatever file formats users work with, Déjà Vu X presents a uniform interface, displaying only translatable text and strictly protecting any coding information. Despite its complexity, even inexperienced users will find Déjà Vu X easy to get started with because of the host of wizards that guide them through all major processes. Some of Déjà Vu X's other unique features include:

- Assemble—During this process, Déjà Vu X examines the associated databases more closely than in its traditional look-up or pre-translate processes, taking relevant fragments or sentences with a similar structure to put together a translation from material that is embedded in other sentences.
- Integrated environment—Every task within Déjà Vu X is performed from and within the same user interface, regardless of whether it is translating files of any of the many supported formats, managing the databases, or building an SGML/XML filter.
- Multiple file format support—Despite its wide variety of supported file formats, including such innovative ones as Adobe InDesign, GNU/gettext, subtitle files, Trados RTF or BIF files, or any ODBC-compliant database, Déjà Vu X can incorporate them all into a single project, allowing for the complete leverage of the content in the terminology and memory databases between the different formats.
- Batch processing—There is no limit to how many languages a project, translation memory, or terminology database can include; all languages within a project can be pre-translated, translated, imported, or exported simultaneously; there's no limit to the number of files and supported file formats within one project, and all of them can be processed simultaneously or on a file-by-file basis; and there's no limit to the number of users who can simultaneously access a project, a translation memory, or a terminology database.
- Terminology management—Déjà Vu X's terminology databases follow a complex and completely configurable database concept that allows for as many attributes with as many categories as users need to properly define their terminology. In fact, the database concept that Déjà Vu X uses for its terminology management not only allows for the traditional multilingual translation relation between terms, but also monolingual ones such as synonyms or antonyms.
- Database maintenance—All Déjà Vu X translation projects, translation memories, and terminology databases are completely multilingual files that are based on the industry-standard Jet database engine. This means that

there is virtually no possibility of losing unsaved work because Déjà Vu X automatically saves information as it is entered. There are a variety of ways to communicate with databases—including pre-defined tools as well as industry-standard SQL (Structured Query Language)—that makes it possible to filter records, effect batch updates, or perform mass changes with virtually no limitation.

- Project lexicon—An automatically generated project-specific index of words and phrases, displayed in order of frequency, makes it easy to identify important terms and expressions and eliminate non-relevant ones.
- Language support—DVX supports all of the languages currently supported in Windows 9x/ME/NT4/2000/XP, including bi-directional languages (Arabic and Hebrew) and East Asian double-byte languages as source and target.

# ATA Translation Support Tools Forum
## *MultiCorpora R&D Inc.—MultiTrans*

## A. Brief Product Line Description

MultiTrans™ is a corpus-based translation support solution and multilingual information gateway that has helped global organizations and language industry professionals to fully exploit their multilingual assets and dramatically improve translation and terminology management productivity and quality. MultiTrans is an integrated environment that provides productivity and quality gains to all of the participants in the multilingual information value chain, including writers, translators, terminologists, editors, reviewers and content consumers. The complete MultiTrans solution consists of an indexed full-text multilingual reference corpus, tools to build and search the corpus, terminology extraction technology, terminology management tools, an integrated translation workbench, and a collaborative multi-user infrastructure for sharing language resources in real-time. The integration of a full text multilingual corpus sets MultiTrans apart from other approaches to language management. The corpus is a body of previously translated written content, in an unlimited number of languages, containing the full text of all documents that are added to it. All text in the corpus is indexed, and therefore rapidly retrievable, at the word, expression, sentence and paragraph levels. Further, segments of interest are always displayed in the full text context of their original documents, providing style and usage guidance that improves translation quality. Since the MultiTrans architecture also provides comprehensive terminology management and fully leverages legacy translation memories, it provides a superset of traditional bi-text or translation memory systems. The MultiTrans approach results in higher re-use rates of previous translations, greater language professional productivity and superior translation quality. Also, these benefits can be realized for all types of content, not just repetitive technical manuals.

## For more information, visit or contact MultiCorpora:
ATA Booth # 111; www.multicorpora.com; Tel.: +1 819.778.7070

## B. Eight Types of Translation Technology

### 1. Infrastructure
MultiTrans provides a flexible and integrated language management infrastructure. It has a robust, scalable and open architecture that easily integrates into heterogeneous, distributed environments.

### Scalable, Open Architecture
MultiTrans is built on an industrial strength database and has unlimited scalability. It can easily build and exploit corpora containing many thousands of documents and hundreds of millions of words – while maintaining very rapid response rates. MultiTrans also maintains high performance while easily managing terminology banks containing millions of multilingual terms. MultiTrans' open architecture and support for industry standards such as XML and TMX enables the seamless interaction of MultiTrans with a wide variety of complementary systems, including: content management, workflow, project management, and machine translation systems. MultiTrans also fully leverages existing terminology banks, lexicons, dictionaries and translation memory files in a wide range of formats.

### Real-Time Collaboration Along the Language Management Value Chain
MultiTrans provides an n-tier and web-based environment that enables, over a network or the Internet, several users to search, share, view and update the same corpus or terminology repository in real-time – the moment a user adds a term or enhances a corpus, these new language management assets can instantly be accessed and used by other language professionals, including distributed team members, freelancers and other external service providers.

**Tight integration with a wide variety of editing environments**
Full MS-WORD, WordPerfect, HTML, and PowerPoint integration provides familiar, easy-to-use and full-featured editing environments for translation. An open architecture allows easy integration with other editing environments of choice.

**Broad language Support**
MultiTrans performs all operations between any UNICODE languages. UNICODE-compliance combined with a configurable, statistical approach to language management allows MultiTrans to support a very broad range of languages.

**2. Term Candidate Extraction; Terminology Research**
**Automated Terminology Extraction and Full-Text Reference Corpora**
MultiTrans greatly streamlines the terminology extraction and research process, allowing quality terminology repositories to be built more quickly, reducing terminology management costs while improving new translation (and monolingual) content quality and consistency. Powerful terminology extraction capabilities are included in the MultiTrans corpus-builder module. During the indexing and alignment process, the corpus-builder also extracts all of the recurring words and multi-word expressions and provides statistics on the frequency of occurrence of those elements. It extracts terms for all of the languages contained in the corpus. MultiTrans perform all of the corpus-building operations at a rate of up to six million words per hour. From the candidate term lists, MultiTrans provides a simple point and click environment that allows users to rapidly review, approve and capture new terms. Direct navigation to all of the occurrences of the term in the full text of the original documents that are contained in the corpus is also provided. By providing context, the corpus acts as an extensive "by-example" dictionary, usage and style reference for terms and expressions.

Purely statistical extraction algorithms adapt to any language. User-defined "exclude lists" reduce terminology extraction noise by eliminating specified expressions from consideration. The extracted candidate term list also indicates which terms already exist in term bases and a filter can be activated to display only new terms for consideration.

**Real-Time Terminology Capture and Sharing**
In addition to automated candidate term extraction from legacy documents, MultiTrans supports "on-the-fly" capture of candidate terms and their multilingual translations from any component of the integrated MultiTrans environment for terminology management and translation activities. A single point-and-click operation captures a new candidate term and inserts it into a terminology repository. This process also automatically fills in source, context, created-by, and created-date fields in the terminology file. This simple, on-the-fly process results in more terms being captured and made immediately available to the entire team, improving productivity and quality along the entire multilingual content value chain.

**Automated Terminology Research**
The optional MultiTrans terminology auto-generation module includes advanced algorithms that analyze the terminology extraction from the source language of the corpus and compare it to the entire indexed multilingual corpus to identify and retrieve the corresponding translations. The system then displays a list of possible translations per expression, and a terminologist or a translator may validate the suggestions. This unique corpus-based approach enables users to quickly leverage the information contained in their multilingual documentation into large and specialized terminology databases. This proven technology provides fast, scalable performance.

### 3. Automatic Terminology Lookup
**Automated and Optimized Multilingual Search and Comparison**
MultiTrans proactively identifies, using easy-to-understand color-coding, all terms in a source document that are contained in the open term bases. Users can manually look-up a term and its preferred translation with a single click from within the integrated editing environment. Another click incorporates the translation into the target language document. MultiTrans also offers a pre-translation mode that automatically compares the entire source document to the open term bases and retrieves and inserts the preferred translations into the target document.

Unique in the industry, MultiTrans also deploys a sophisticated search and matching algorithm to automatically compare the entire new source document to all of the open corpora and term bases and proposes the set of matches that maximizes the suggested reuse of previous translation work. It does this by considering full sentence matches (exact and fuzzy), terminology matches, and expression matches for all possible combinations of words. In a few seconds, this automated process executes thousands of individual searches of both the term bases and the full-text multilingual corpora and recommends the best combination of results for review and acceptance. As always, the full original usage and style context of the matched expressions and their equivalent translations are only one mouse click away. Reviewing and inserting the suggested translations is then a simple point-and-click operation. MultiTrans' unique combination of automation, full-text context and user-control enables users to achieve much higher productivity levels while improving translation quality.

### 4. Terminology Consistency Check and Non-Allowed Terminology Check
MultiTrans' word and expression extraction technology is also a useful quality control tool for rapidly reviewing the consistency of terminology usage in source and/or target language documents. MultiTrans extracts a list, in order of frequency of occurrence, of all terms in a newly translated document. It graphically indicates which terms in the list are approved terms from the term base and which are new terms that might require some scrutiny. This graphical presentation, allows users to spot inconsistencies and errors at a glance. MultiTrans identifies the use of non-allowed terms by automatically comparing new documents to term bases that contain non-allowed terms.

### 5. Segmentation, Alignment, Indexing
The MultiTrans corpus-builder automatically aligns legacy translated document pairs based on user-defined file naming nomenclature rules. It then automatically imports, indexes and aligns the full text – rendering it ready for immediate use by language professionals. Besides previous in-house translation projects, any additional sources of translated text can also be easily added to a corpus, including published web content.

Statistical alignment algorithms, similar to those used in most translation memory systems, align the multilingual text. By providing an integrated translation environment where users can easily spot alignment problems within the full-text of the original documents and correct them "on-the-fly", MultiTrans eliminates the tedious step of manually validating and completing the alignment process that plagues traditional translation memory systems.

MultiTrans' full-text indexing approach allows segments of any length to be rapidly searched and retrieved, either manually or through one of the automated text matching processes within the integrated translation workbench environment. Segments may be whole paragraphs, sentences, sub-sentence expressions of two or more words, or individual words. Fuzzy segment matching is also provided. MultiTrans can also include existing translation memory files in a fully indexed corpus where sub-segments of any length can be exploited. All searching is extremely rapid, unlike the manual concordance search capabilities in most traditional translation memory systems. MultiTrans' full-text multilingual indexing enables segments of any length and

their multilingual translations to be identified and viewed in the context of their entire original documents. This easy access to full context multilingual examples of the usage of previously translated terms and expressions improves productivity and quality.

## 6. Translation Memory Look-up; Machine Translation

Since MultiTrans is a superset of traditional translation memory and bi-text systems, it offers a wider variety of look-up types. These look-ups can be executed individually or, more commonly, using a single automated and optimized multilingual search and comparison process that combines all search methods into one user action. Previously created translation memory databases or bi-texts can be exploited in a number of ways: automatic look-up and insertion of exact-match whole segments (i.e. automatic pre-translation); fuzzy matching of whole segments; and exact matching of sub-segments of any length. As an output of the translation process, MultiTrans also produces translation memory bi-texts in industry-standard TMX format.

MultiTrans also makes it possible to exploit any other sources of previously translated content through the multilingual full text corpus builder. Any number of corpora can be searched manually for a specific expression or an entire new source document can be automatically compared to the open corpora, highlighting matches of segments of any length. A simple point and click environment navigates the user to all full-text occurrences of any specific text string and incorporates the suggested translations in to the new target document.

### Automated and Optimized Multilingual Search and Comparison

MultiTrans also provides a capability to perform all of the types of look-ups in one combined process. Deploying a sophisticated search and comparison algorithm, MultiTrans automatically compares an entire new source document to all of the open corpora and terminology bases and proposes the set of matches that maximizes the suggested reuse of previous translation work. It does this by considering full sentence matches (exact and fuzzy), terminology matches, and expression matches for all possible combinations of words. In a few seconds, this automated process executes thousands of individual searches and recommends the best combination of results. As always, the full original usage and style context of the matched expressions and their equivalent translations are provided. Reviewing and inserting the suggested translations is then a simple point-and-click operation.

MultiTrans' unique combination of automation and user-control enables users to achieve higher productivity levels through the faster and more complete exploitation of language resources. Translation quality also increases because users can make more informed decisions about which translations to use, based on the contextual information provided.

## 7. Missing Segment Detection; Format Checks; Grammar Check

Since the MultiTrans translation support workstation is deployed as embedded functionality with WORD, WordPerfect and other popular word processing and publishing environments, it inherits all of the comprehensive native spell-checking and grammar-checking capabilities of those systems. Also, document formatting is preserved since MultiTrans substitutes text only, without affecting images, margins, line spacing, paragraph formatting, etc. The problem of missing segments in source documents is avoided completely with MultiTrans since it works from the source document, substituting translated segments to evolve the document into the target language version. Until the target is completed, un-translated segments remain in the source language throughout the process and are easily identified with highlighting cues. MultiTrans also provides Doublevue™, a split screen editing environment that compares the source and target language versions side-by-side so users can easily compare the before and after translation versions of the formatted document.

**8. Translation Workflow and Billing Management**

MultiTrans includes a sophisticated project analysis engine that determines the amount of repetition within a new source document and the amount of text that can be translated from existing corpora and terminology bases. This enables users to develop accurate project time estimates and streamline the quotation process. Better project estimates result in more accurate cost projections for new projects and more effective translation resources deployment plans. MultiTrans supports workflow, project management, and billing functionality through possible integration with popular 3rd party systems or home-grown client solutions.

**C. Strengths of Product Line**

MultiTrans main product strengths stem from its unique combination of a full-text multilingual corpus, a flexible terminology base, and a multi-user architecture that supports collaboration along the entire language management value chain. This comprehensive language management infrastructure allows users to rapidly create and share massive repositories of legacy multilingual content from which previous translations of any segment length can be easily re-used. Full-text context provides style, meaning and usage guidance that improve translation and terminology management quality. The result is 35% to 70% gains in translation and terminology management productivity for all types of content – even highly descriptive narratives where traditional translation memory technology has limited impact.

# ATA Translation Support Tools Forum
### *SDL International — SDLX Translation Suite*

## A. Brief Product Line Description

The Desktop Products division of SDL International (London Stock Exchange: 'SDL') focuses exclusively in creating customer solutions based on a full range of globalization productivity tools and process consulting. SDL Desktop Product's clients include global corporations, software publishers, translators and localization service providers worldwide. More information can be found at http://www.sdlproducts.com.

SDL Desktop Products has the most vast product line available today, with highly-efficient Translation Memory tools and robust Quality Assurance tools for everything from Windows to websites and software.
SDL Desktop Products will also be offering a FREE pre-conference training session for all those interested in learning more about how to work with SDLX Translation Suite and SDLinsight, a new and popular translation tool that makes translating software files as easy as translating in an excel spreadsheet. You can also visit us for live demonstrations every hour on the hour at booths 214 and 216 – see you there!

## B. Eight Types of Translation Technology

### 1. Infrastructure
### General architecture
SDLX has been written with a view to supporting the latest technologies and standards. Most of the functionality of SDLX is available through COM (Component Object Model) interfaces, allowing developers to include SDLX functionality in their own applications. The Translation Memory and Terminology databases are based on standard RDBMS models that provide stability and scalability. Using these standards allows the deployment of the system over any type of network such as LAN, WAN, VPN etc. Using TCP/IP as the network protocol allows deployment of functionality over Intranet/Internet. SDLX supports the latest TMX V1.4a standard for exchange of Translation Memories with other applications.

The object model approach that SDL has taken in developing SDLX will allow the application to grow with and adopt emerging technologies. For large-scale systems, it is possible to distribute the application across multiple servers to enable load balancing. Adoption of Microsoft technologies also allows support for a .NET environment, including the deployment of web services.

### Filtering
Filters in SDLX are "plug-and-play". This means that new filters can be developed at any time (and by anyone!) and plugged in to the application without waiting for a new build. A filter API allows third-party developers to create new filters for SDLX. This makes SDLX an ideal choice for anyone who has proprietary file formats. The plug-and-play architecture also makes it easier for SDL to customize existing filters for use by clients.

### Document creation
SDLX Translation Suite comes with two ways to create and manage multilingual project files – the choice of which to use depends on whether you are preparing one or multiple files at a time.

The first way is via the Right-Click Translation Feature – that allows a new user to create a single file in SDLX within 3 clicks of a mouse button simply by right-clicking on the file you wish to translate.

The second way is via a simple but robust Project Wizard, in which you can choose multiple file types at once, multiple languages, and browse to the folder that contains the files you wish to translate. The Project Wizard will then automatically create your SDLX files and place them within folders named after the languages you choose.

**Document management**

Translation documents are maintained in a file structure that reflects the original source files. This makes it much easier to keep track of the documents that are being translated. Once the documents have been created, one or more Translation Memories can be leveraged against the documents in batch mode using the "SDL Apply" module. In addition, online file types can be "glued" together to create one or more translation files instead of a thousand or more – this leads to a much more streamlined and efficient project management process.

**2. Term Candidate Extraction; Terminology Research**

Currently, it is possible to identify terminology "on-the-fly" in SDLX and dynamically add a term to the terminology database. This term can then be subsequently used in a later translation. By allowing the dynamic update of terminology, better translation consistency can be achieved. When the terminology database is deployed on a network and made available to multiple translators, this quality increase can be very significant.

Functionality to support terminology candidate extraction is currently under development at SDL. Using our knowledge of machine translation techniques, we will be able to provide an intelligent extraction process that vastly reduces the number of redundant terms that are identified by other tools. This functionality will also be able to make use of existing bi-texts (either aligned documents or translation memories) in order to suggest a probable translation for the identified source term.

Terminology is managed through the SDL TermBase module. This module allows the definition of the TermBase structure as well as providing the facility to import and export lists of terms in a variety of formats. The terminology database in SDLX is concept-oriented. Concepts can be added, edited and changed through the SDL TermBase interface. SDL TermBase also allows complex filtering operations to allow non-applicable terms to be excluded from any terminology search (e.g. restricting a set of terms to a particular client or vertical market).

**3. Automatic Terminology Lookup**

As the translator works in the SDL Edit interface, terminology is automatically suggested to them from the currently open terminology database. As each source segment receives the focus, the preferred language target terms are displayed and a simple keyboard shortcut allows the terms to be placed in the translation. This functionality reduces the risk of spelling errors and also ensures that the correct terminology is used throughout a translation.

SDLX also supports querying existing bi-texts for terminology. It is possible to search the source or target text in a Translation Memory for a particular word or phrase. This "concordance" search will then return the source and target text for those segments that contain the requested search term. This allows the translator to see how terms have already been translated in the Translation Memory and again provides for better consistency in the translation.

**4. Terminology Consistency Check**

This functionality is currently under development for SDLX.

**5. Segmentation, Alignment, Indexing**
SDLX supports the creation and editing of specialized segmentation rules for each language. Using these rules, an alignment can be created from a previous translation that requires little or no work in order to create a valid bi-text document. The SDL Align module provides an easy-to-use interface where the source and target texts are lined up side-by-side. Alignment heuristics allow the automatic alignment of source and target texts. The translator need only correct the alignment when the automatic validation detects a problem. The correction will most likely be to join or split segments.

**6. Translation Memory Look-up; Machine Translation**
As mentioned before, Translation Memories can be applied to a document in a batch environment through the "SDL Apply" module. As the translator is working on a document, segments can be retrieved automatically from the Translation Memory and displayed to the user. This lookup not only includes identical segments from the Translation Memory but also includes "fuzzy matches" that are sufficiently similar to the source text. The fuzzy matching algorithm not only takes account of words but also includes penalties for case differences, punctuation and formatting. From the list of suggested matches, the translator can pick the most appropriate and use a simple keyboard shortcut to paste the translation in to the document.

Machine Translation functionality called AutoTrans is included with SDLX. AutoTrans is a great feature for gisting and language expansion testing purposes. The current language pairs include Portuguese, French, Italian, German and Spanish with Asian languages available within the next release. When configured, machine translations can be retrieved from the appropriate engine and used in the same way as a Translation Memory match. This means that machine translations can be applied in batch mode or interactively as the translator works on the document. AutoTrans also comes included with a Dictionary Manager, allowing the user to easily set up and change language rules, as well as import new terminology into the current dictionary to make the Machine Translation more consistent with specific projects.

**7. Missing Segment Detection; Format Checks; Grammar Check**
This functionality is currently under development for SDLX.

**8. Translation Workflow and Billing Management**
SDLX comes included with SDL Analyse, a module that allows you to load project files with existing Translation Memories and analyze those files to create a detailed spreadsheet on word counts, repetitions and the effectiveness of your Translation Memory on the files – it also creates a pre-project glossary file of repetitive terms throughout a project that can be translated first and subsequently used for consistency of translations. Translation workflow and billing management are optionally available in SDLWorkFlow, into which the core components of SDLX have been integrated. SDLWorkFlow is an online translation workflow management system. SDLWorkFlow will handle quotation, workflow management and subsequent invoicing or translation work through a simple browser interface. Translators who are using the SDLWorkFlow system have the option of either working on-line or downloading documents that can be edited in SDLX.

**C. Strengths of Product Line**

**1. OpenTag Approach to file segmentation – an eye on the future**
SDLX Translation Suite is the only tool on the market to adopt OpenTag, an industry standard for the extraction of translatable text from files (www.opentag.com). This means that SDLX will segment each file type the same exact way – this is important for a number of reasons and in a number of situations.

Imagine a situation where you or your clients decide to migrate from RTF to HTML while maintaining the same text in both source and target languages. As most other tools use different applications to process these different file types, there will be a loss of leveraging by migrating your existing files and existing Translation Memory to this new platform, as many products segment these file types in different ways. This leads to a much higher level of fuzzy matches and new text to translate even though the text has already been translated! As the technology industry evolves on an exponential scale, rest assured that a corporation's file types will do just the same.

With SDLX's early adoption of the OpenTag approach to file segmentation, you are assured a seamless migration of your Translation Memory from one file type to the next without the unnecessary costs of redoing work – after all, a Translation Memory tool supposed to save you money, not make you retranslate the same material over and over again.

## 2. The future of the SDL Desktop Product Line
SDL Desktop Products is part of a 12 year old, profitable, publicly traded company with $90 MM in turnover and 1100 people in 42 offices worldwide. It has the newest technology, fastest growing install base with a highly industrial strength support system and a reputation for rapid customer support.

The benefit of a company this size is that our product range has the ability to change as your clients change, to grow as you grow and to offer the most up to date enhancements with their products without the worry of wondering where your investment in products will be 5 or 10 years down the road. With a proven track record of success and an install base that has quadrupled in the past two years, you know that SDL Desktop Products will always be there - a comforting feeling when you're thinking about making an investment in localization productivity tools.

## 3. Product Support and Training – why pay for it when it is free?
At SDL Desktop Products, an investment in our products means that we make an investment in you. Each SDLX Professional user receives free product support and free online user training to get them up and running as soon as possible so that you take full advantage of the consistency and cost-savings that you should expect from a localization productivity tool. Further, with our Platinum Club Support, all point releases are free of charge - and you receive an automatic 20% discount on the cost of future upgrades. The underlying thought is that if you grow, we grow with you.

## 4. Support for TMX and Trados® Compatibility coupled with ease of use – freedom is finally here
SDLX Translation Suite combines the most up to date technology and emerging standards within the industry, including support for TMX V1.4a and Trados® compatibility. With SDLX Translation Suite, you can accept projects from your clients without the need to worry what tool they have – as you can export the Translation memory into TMX file format which your client can simply import into their tool. You can even import Trados® RTF files into SDLX for translation!

In addition, SDLX is very easy to use! We've developed a new feature called the "Right-Click Translate" feature. If you right-click on a file on your desktop, you can choose "Translate with SDLX" from the list of options – choose your source and target language and you're on your way to translating with a CAT tool in less than 3 Clicks! SDLX is well known in the industry as one of the easiest tools to begin using, so please visit our booth at 214 and 216 for your free copy of SDLX!

# ATA Translation Support Tools Forum
## *STAR-USA—Transit, TermStar, WebTerm*

**A. Brief Product Line Description**
1. Transit: Translation Memory System
2. TermStar: Terminology Management System (fully integrated into Transit and also stand-alone product)
3. WebTerm: Enterprise Terminology Communication System
4. Proactive: Globalization Management System (for the automation and integration of the entire translation process)

**B. Eight Types of Translation Technology**
1. Infrastructure: terminology database TermStar fully integrated in TM environment Transit
2. Term candidate extraction: monolingual term mining in TermStar
3. Automatic terminology lookup in TermStar
4. Terminology consistency check in TermStar
5. Alignment function and segmentation in Transit
6. TM lookup, Transit saves translations in the context.
7. Segment control and format check are features of Transit
8. Automatic workflow, project tracking and billing are part of Proactive (GMS)

## C. Strengths of Product Line

Transit is a very **fast and safe** Translation Memory Program due to its unique structure of file formats.
The **advantages** of this file format versus a normal database are:
- **Small file size:** In a file structured Translation Memory System like Transit, the working files as well as the TM itself are very small, as they only contain plain text and tags; projects rarely exceed 10 MB. Database TMs consist of binary formatting codes; projects can often reach sizes of 100s of MB. Electronic communication is only an acceptable option with small-sized projects.
- **High performance:** All steps of CAT are optimized: filtering of source files, import/segmentation/project analysis, batch leveraging, calling fuzzy matches. Database applications can become extremely slow if they exceed a certain number of records. However, TMs quickly achieve hundreds of thousands of records. This becomes unmanageable with desktop databases.
- **Safe structure:** In a file, structured TM data can be accessed at any time, even with other tools. TM data is not stored in a binary format as with databases. Both working files and translation memory files are open text formats with Transit, not binary. Therefore, both are extremely robust in terms of risk of file corruption. And even in the very unlikely case that a file should be corrupted (e.g. in case of a power failure), it can be opened with a Unicode text editor (such as Transit) to repair the corrupted text. This provides project management with more safety and reduces risks. From time to time, parts or even a whole database can become inaccessible, resulting in information loss. Who can afford to lose their linguistic assets?
- **TM batch leveraging:** In Transit, there is no need to import and leverage each individual file. Once the project parameters have been preset, it only takes one click to launch a whole series of processes without further human intervention. With database TM tools, many more steps are required before the first file can be processed.

Transit is a very **flexible** Translation Memory Program.
- Transit is a **multilingual** TM System. This means that only Transit allows the target language to become the source language if the company needs to switch languages or add a second source language.
- **Easy maintenance** of data, since the format of the TM is the same as the working format. The TM can be edited/corrected just like a normal translation. The sentences remain in their original order and context. This

supports **quality assurance** after the translation has been delivered. We all know what it's like receiving a poor translation. In Transit you can review the specific file in context and edit it accordingly, or simply delete bad data. To do the same thing in a database, TM would be a complex operation (if at all possible). Specific knowledge is needed to administer databases.

- **Simple quality assurance** during the translation process. This is possible because the context can be viewed for fuzzy matches. The TM data always remains in its original context. One important point for good translations is context information.
- **Maximum efficiency:** Due to its file format, priorities can be assigned to specific parts of the Transit TM by simply selecting the different folders in which the TM data is stored and assigning a specific priority ranking. This feature is indispensable if the operator needs to carry out as many matches as possible, but only one specific version of the same document should have top priority.
- **Simple file administration:** The TM can be managed with a standard file manager such as Windows Explorer.

Transit is completely **independent** of the original document format, due to its XML structure. Transit's working format is an XML file containing tags that form a superset of formatting features common to all DTP packages, resource formats and Markup Languages. Independent of the source file (Framemaker, Winword, Pagemaker etc.), Transit always creates an XML file with the same DTD.

- **Easy automation:** Transit TM consists of files with the same structure as the source documents, making integration in DMS or Workflow Systems no problem. All other STAR software tools have been designed to be fully compatible and allow seamless integration. As a result, Transit offers an ideal solution, particularly for customers from large companies processing large volumes.
- **Transit contains the most independent TM editor:** Tools with an independent editor usually have an "Excel" look about them, which largely stems from the fact that they are based on a database. Translators like to edit and navigate more freely, and have a WYSIWYG look and feel. This is what Transit offers.
- Translation-oriented, XML-based Translation Editor: **One** single environment **for all file formats/project types:**
  Because Transit can easily be adapted to nearly any file format, and as custom filters can easily be integrated (thanks to the open file format), all types of projects can be handled from within the same, familiar editing environment. As translators work day-in, day-out within the same environment - which is relatively lean (compared to DTP/WP editors) as it only includes features useful for translating - translators feel at ease and can therefore achieve much higher levels of productivity than when they have to change from one editor to another.

**The same editor is used to:**
- edit translatable files
- review translations
- edit translation memory data (whose file format matches the working files)
- perform alignment

Thus, whatever activity is involved in a translation project, the editing environment remains consistent. No conversions are involved. This leads to more productive users. They grow in confidence when using one environment and have no need to switch between different interfaces they have no detailed understanding of.

**Global loading** of all project files at once: project vs. file based editing (navigate, search/replace, and check the project as one virtual file):
Transit is **project-oriented** (vs. file oriented as with most other tools). The translation editor supports this by

allowing users to load all project files simultaneously into the editor. Web projects in particular consist of a large number of relatively small files.

This feature of Transit opens up a whole range of new possibilities:
- No open/save/close for each individual file, reducing the amount of time involved
- Search/replace throughout a whole project (vs. activating this 100s of times for each separate file)
- Spell checking, tag checking, etc. across the whole project
- Scrolling up and down across file boundaries: translation or other activities do not come to a halt at file boundaries

In this way, users' work takes on a completely new angle. They work on projects across the board (in terms of continuity, consistency) rather than process each file individually.

**Simple screen customization** to suit personal preference:
The editing environment can be configured in just about any way a user wishes: screen colors, sentence status colors, change mark colors, font types and sizes (without changing the format of the final exported document!), size and position of different windows, window contents, scroll bar position, etc.

**Tight integration** with terminology database through morphologic parser:
Unlike other tools that just use a fuzzy matching engine to display terms, Transit is equipped with a full blown morphologic parser which detects inflected forms of nouns and verbs and therefore provides better terminology matching and better terminology support during the translation.

**Navigation** is designed to match translator requirements:
Navigation within the editor is based on sentence status. If they so desire, translators can jump from one translatable sentence to the next, or from one sentence to be reviewed to the next, call up the fuzzy match engine automatically, and much more. These navigation features are over and above standard text editor navigation tools.

**Workflow support**
The Transit editor supports the typical workflow of a translation project within decentralized working conditions, i.e.:
- File preparation
- Send and receive projects
- Translation of the new text and fuzzy matches
- Multiple review stages
- Computer-aided QA
- File sign off

**Project control**
Transit keeps track of the different status of sentences and files and considers these when leveraging, etc. This enables users to keep a perfect overview of the project.

**Excellent performance** (working speed) even with a number of files:
The editor is designed to work with XML files or other files with tagged plain text, which are relatively small. The editor loads these files very quickly, saving files only takes a fraction of a second, and there is no long wait when scrolling up and down. This also applies to large projects with thousands of sentences.
Even on low specification computers, the performance of Transit is more than adequate. Products integrated

into third party editors often take up a lot of system resources and require the latest equipment, which are often not available at remote locations.

**Scalable solutions for different requirements**
Translation projects can vary considerably in size and complexity; from the one-page letter to the software localization project with thousands of types. Transit can handle all these, and has a particular forte for **large projects**. For small/medium size and/or non-complex projects, Transit Smart or Professional can be used standalone. For very large and/or complex projects, you can use project management, document management or workflow automation software to handle the document flow and control per se. Thanks to its open design and open interface (API), Transit can easily be integrated into such environments and be automated across the board. The open file formats for both working files and translation memory make it very easy for such project management environments to take full control of Transit.

**Terminology Management**
**TermStar and WebTerm:**
Advanced, **concept-oriented, multilingual terminology database** with a fixed set of standard fields and additional user-definable fields:
TermStar is the most complex application of its kind, making deliberate use of a fixed set of standard fields. Competing products – with freely definable database fields – can cause difficulties with incompatibility because each user creates different database structures. TermStar gets around this problem completely. Other products have shortcomings, because they are only bilingual, or only offer a very limited number of fields. As a result of the number of fields, their type and their object-oriented design hierarchy, TermStar can handle even the most complex terminology projects, without involving the standard user in its underlying complexity.

**Scalable system**
TermStar can be used with a variety of database engines: ranging from MS-Access for the freelance translator through to multi-site database servers (Oracle, Sybase, MS-SQL) for larger organizations. As a result it can support all typical uses of enterprise terminology:
- A central database on a powerful server using enterprise database engines (Oracle, etc.), with full company-wide access via TermStar, or with limited access via web browser for off-site users worldwide. The server can also reside on a Unix machine.
- Translators use subsets of the central terminology (typically only 2 languages) for use with their translation project (integrated with Transit translation editor).
- Translators can send back new terminology extracted from their "project databases" to be merged into the central database under the control of the central terminology manager.
 No other terminology product offers such wide scalability, focused on the typical, practical use of terminology.

**Multiple dictionaries** can be used simultaneously (shown as one virtual dictionary):
In many cases, it is useful to keep databases separate, in order to keep track of ownership for maintenance, etc. TermStar makes it possible to display a number of terminology databases at the same time. The databases appear on-screen as one virtual terminology list, even though in physical terms they remain separate. None of the competitors' products have this capability. Users have to merge dictionaries (often with poor merging features).

**User-specific layout:** The layout of the Terminology Manager can be configured in just about any way thinkable. Bilingual, multilingual, any combination of fonts, colors, selection and sequence of fields etc. Usually displays are adapted to the specific needs of each typical user:
- Terminology database manager

- Terminology experts
- Translator
- Authors, etc.

Each one of them should only see data relevant to their work, in order to be able to focus as much as possible on the task at hand. User-definable export/import interfaces with advanced Terminology Database (TDB) extract/merge features, allowing for simple **decentralized work** management. When working with decentralized resources, users are not only interested in sending extracts to external resources (under protection from illegal use [copyright]), they also want to collect new terminology from external resources created during the translation process. TermStar supports this decentralized work by providing sophisticated extraction and merging features. Merging is semi-automated (detection of repeats) and allows for efficient multiple language merges.

**Workflow Automation**
**Proactive:**
The modern work reality of a translation project manager is characterized by the following conditions:
- Short deadlines
- Cost pressures
- Shorter turnaround times total project control
However, the processing of translation projects generates an administrative overhead.
- File handling
- Billing
- TM-Management
Consequently, automation is necessary and desirable!

**Proactive is a Globalization Management System that automates**:
- Production processes
- Business process management
- Customer-specific production cycles

The system consists of:
**Basic Administration**: Administration of languages and document types, terminology and TM
**Administration of resources:** Suppliers, availability and prices
**Project controlling:** Pricing, quoting, cost tracking, billing, and suppliers' payment
**Project Management:** Order control, assignment of resources, communication with customers and suppliers, reporting
**Customer's interface:** Web-based portal, order confirmation, order history, project status
**Supplier's interface:** Web based and Win32, data transfer, orders and deadlines

**Implementing a Globalization Management System means:**
- Faster project workflow
- Cost reduction
- Optimal use of resources
- Highly effective project control
- Permanent quality control

**Significant cost savings can be guaranteed for the following projects:**
- A large number of files (or continuous flow of small documents)
- Translation into multiple languages
- Short project turnaround
- Multi-task jobs (translation, controlling, DTP, terminology, etc.)

**Examples of ideal applications:**
- Hotline systems
- Technical notes, product specifications
- Multilingual websites
- CMS/DMS integration

The entire STAR portfolio is perfectly integrated and covers the complete translation workflow for technical documentation, catalog literature as well as software interfaces and websites.

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Tom Twiddy, Director, Sales and Marketing

STAR-USA is exhibiting at Booth 211.

STAR-USA is providing a FREE Transit XV Training Session at the ATA Conference on Wednesday, November 6 from 2 – 5 p.m. in the Piedmont Room. This session will highlight new innovations and improved features of Transit XV, STAR's leading translation memory product. The session is available to all registered conference attendees.

- For those who attend this FREE session and complete an evaluation form, they will be eligible to win a free copy of Transit Smart XV.
- In addition, STAR-USA is offering a 25% discount on Transit Smart XV to all ATA conference attendees from October 28 thru November 15.

**A. Brief Product Line Description**

TermSeek's premier product is Translator's Intuition. Translator's Intuition is a complete translation environment in one software package. Rather than a suite of tools TermSeek has built its software to handle terminology management, translation memory, word processing, quality analysis, and consistency checking in one simple to use software package. The company developed the software around the following principles.

1. Never have the computer do anything unless it can do it BETTER and FASTER than a human. (Faster is not enough, it has to improve quality as well.)
2. Marry the technology with the human. Have the computer do what it does best and let the human do what they do best.
3. Keep it simple. (Complicated software is useless.)
4. Adapt the software to work with the human; don't try to adapt the human to work with the software.

As a result of following these principles Translator's Intuition is on average doubling the output of translators. It takes usually no more than one hour of training to begin using the software. It is increasing the quality of translations beyond what a human translator can do without the software or any other software. TermSeek has also built a translation memory alignment tool called AlignRight to create translation memories from existing translations.

**Contact Information    (ATA Booth 300)**

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**B. Eight Types of Translation Technology**

**1. Infrastructure**

Translator's Intuition has integrated all translation tools and functions into a single software package. It includes document creation, import and exporting from multiple file formats, terminology management, and translation memory. The basic file format is proprietary. It includes word processing and database technology in a single file format and user interface. It allows for multilingual text to be handled in a single file. It has a built-in word processor with the same functionality and basic layout as you would find in Microsoft Word or WordPerfect. It has no embedded codes showing on the screen. The database functionality is hidden in the background, so the translator feels like they are working in a pure word processor. The database capabilities allow a user to find any word, phrase, idiom, expression, partial sentence, sentence, or entire paragraph in context. Even searches of several gigabytes return all occurrences in less than a second.

✔ All translation tools integrated into one software package.
✔ Terminology management.
✔ Translation memory.
✔ Word processing similar to MS Word and Word Perfect.

- ✔ Import and export filters.
- ✔ Consistency checking.
- ✔ No embedded codes.
- ✔ Abel to search for words, phrases, sentences and paragraphs.

## 2. Term-level before translation: Term candidate extraction and terminology research.

The basic file format for dictionaries and glossaries is the same as for translation documents and translation memories. This allows us to build a glossary or dictionary very quickly. A list of terms and phrases can be imported into the translation view and by selecting each term the memory view will display all occurrence of the term in-context. The translator need only Grab-n-Drop the appropriate translations into the target translation box. This allows the researcher or translator to see how actual translations have translated any single term or phrase. Recently a researcher in Vietnamese thought they had a very comprehensive list of possible translations for the word "administer" with 8 different appropriate translations. When he searched actual translations for the contextual usage he found there were actually 28 appropriate translations. His glossary was greatly enhanced.

- ✔ Professional translation dictionaries available.
- ✔ Able to research term usage in context for building custom dictionaries.

## 3. Term-level during translation: Automatic terminology lookup.

Translator's Intuition automatically reduces multiple dictionaries down to only the words in the current sentence or paragraph being translated instead of looking up terms one word at a time. The dictionaries are displayed in the bookshelf window inside the software where the translator is translating. Since the dictionaries are integrated into the software, the translator only has to do to initiate the automatic lookup is move to the next translation segment. The translator can do this by hitting the F9 key or moving the cursor manually.

- ✔ Automatic look-up of all the words in the translation segment.
- ✔ Reduces multiple dictionaries simultaneously.
- ✔ Edit and append personal glossaries on the fly.
- ✔ Terminology look-up integrated into the software.

## 4. Term-level after translation: Terminology consistency check and non-allowed terminology check.

Translator's Intuition allows a user to find all inconsistent translations of any word, phrase, expression, partial sentence, sentence, or paragraph. This is a user-driven function which will take the user to each occurrence of each inconsistency. The function also allows for conjugation of terms and plural forms so you don't receive false hits of inconsistency.

- ✔ Finds user defined inconsistencies quickly and easily.
- ✔ Allows the user to decide appropriateness of inconsistencies.
- ✔ Allows for conjugation and plural forms.

## 5. Segment-level before translation: New text segmentation, previous source-target text alignment, and indexing.

TermSeek has developed a translation memory alignment tool called **AlignRight** to build translation memory files from pre-existing translations. Since the basic translation segment in Translator's Intuition is the paragraph the tool does not need to break up paragraphs into sentences prior to alignment. This makes creating translation memories much easier and faster. Although we keep the translation segment as a paragraph, the software allows users to break paragraphs on the fly into sentences if they wish. Each word is actually indexed in the database

and our search engine extracts any word, phrase, partial sentence, whole sentence and even the whole paragraph for exact and natural language matching.

- ✔ AlignRight – Translation memory alignment tool.
- ✔ Align translation segments at the paragraph level.
- ✔ Indexes every word in context for fast retrieval.

**6. Segment-level during translation: Translation memory look-up and machine translation.**
Translator's Intuition employs no machine translation as this goes against our basic philosophy for developing translation tools to help translators. Look-up of translation memory is different in Translator's Intuition than any other products. The method for look-up is called **Selected Search**. All a translator has to do to see equivalent in-context translations of any word, phrase, expression, partial sentence, sentence or paragraph is select the source text. The search engine immediately provides in the memory view all occurrences of whatever was selected. Most systems maintain translation memory at the sentence level and use a search engine to find equivalent sentences or fuzzy matches of these sentences. The problem is that sentences tend to proliferate. Unless you have a large number of repeat sentences the software leaves you on your own to translate the next sentence. Words and phrases are far more redundant. Translator's Intuition allows you to find appropriate translations in context for words, phrases, expressions, idioms, and even partial sentences that tend to be more redundant. This allows you to re-use and leverage more of your existing translations. This software provides translation memory even when the new document to be translated is unrelated to existing translation memories.

- ✔ Memory look-up initiated by Selected Search.
- ✔ Memory look-up of words, phrases, sentences and paragraphs.
- ✔ Exact match retrieval of memory
- ✔ Natural language match retrieval (allows for conjugation and word forms).
- ✔ Largest exact match retrieval.

**7. Segment-level after translation: Missing segment detection and format and grammar checks.**
Consistency checking as described above in point 4 allows a user to find inconsistent occurrences of any phrase, sentence, or expression in the translation. Also since the software keeps the source text and target translation next to each other in the same document as you translate omissions and insertions are easily detected. The software employs an automatic paragraph level format feature and allows the user to edit the character level format as they translate. Format of the source text is maintained within the software while translating and is easily applied to the target translation. Translator's Intuition employs spell checking and will employ multilingual grammar checking in future versions.

- ✔ Consistency checking allows for any segment size.
- ✔ Allows for conjugated word forms.
- ✔ Allows for plural and singular word forms.

**8. Translation workflow and billing management.**
New to Translator's Intuition is its statistical module. The software provides word counts for new words and repeat sentences leveraged from translation memory to aid in billing. Translator's Intuition also has a team translation function that allows multiple translators to work on the same translation document at the same time. To facilitate this process the software automatically updates the translation memory in real-time allowing other translators to leverage the work as it is translated. The software also allows the users to attach electronic yellow sticky notes to each paragraph to communicate with other translators and reviewers during the project. Under

the translation or memory documents properties a user can input the title, author, translator, the subject, an abstract and any comments about the document.

- ✔ Statistical reporting for word counts.
- ✔ Word counts include new words and words in repeat sentences.
- ✔ Team translation function allows for multiple translators to work on the same document simultaneously.
- ✔ The internal translation memory is updated in real-time to allow a team of translators to maintain consistent word and sentence usage during translation.
- ✔ Electronic yellow sticky notes can be added to each paragraph for translation teams to document changes and differences of opinion.
- ✔ Document tracking information can be kept in the document properties summary dialog box.

## C. Strengths of Product Line
- ✔ On average it increases translation speed by as much as 100%.
- ✔ Easy to use.
- ✔ Up and running after 1 hour of training.
- ✔ Provides translation memory down to the word and phrase level not just sentences.
- ✔ Provides relevant re-usable translation memory even between unrelated documents.
- ✔ Builds custom dictionaries for every paragraph on the fly. (No need to look up words one at a time in a separate database.)
- ✔ Team translation capability allows for multiple translator's to work on the same project simultaneously over a network.
- ✔ The software works for the translator, not the other way around.
- ✔ No embedded codes to deal with.
- ✔ No separate databases to maintain.
- ✔ Simple word processor like user interface.
- ✔ One software package to learn not a suit of tools.
- ✔ YOU CAN LEASE THE SOFTWARE STARTING AT $17.00 PER MONTH. (Pay for it as you work, while it helps you make more money.)

## A. Brief Product Line Description

**LogiTerm is:**
**One search tool for three databases**
LogiTerm is a search tool built around full-text indexing, handling a very large range of data types: terminology, bitexts and document archives. For all searches, it compensates for variant spellings and plurals. You can also adjust the scope of your search and easily switch among the databases and search for the same term. Search results are presented in order of relevance.

**Terminology**
With LogiTerm, you keep your terminology records in word-processing documents. This open approach, with few restrictions, gives you ample room to design and organize your records as you wish.

**Bitexts**
LogiTerm quickly creates aligned versions of existing translations and allows you to query them. LogiTerm allows you to convert bitexts to the leading translation memory formats and back again.

**Term extraction and pretranslation**
LogiTerm extracts candidate terms from new texts. Once you have created your terminology records for the candidate terms, LogiTerm applies them and any other applicable records to the new texts, producing partially translated documents.

**Product line** (All versions of LogiTerm are compatible with Windows 95, 98, ME, NT, XP, and 2000)**:**
**Freelance Version**
Bitext creation: one pair of documents at a time.
Indexing limits: 50,000 terminology records; 5,000 bitexts; 20,000 full-text documents
Acceptable document formats: Word, WordPerfect, HTML, Excel, PowerPoint, PDF
**Freelance Plus Version**
Everything in the Freelance Version, plus these linguistic functions:
- Term extraction, handling up to 600 kilobytes of text per file and 50 files at a time.
- Pretranslation of one file at a time. Limit of 150 kilobytes of deformatted text.

**Professional Version (Coming soon)**
Everything in the Freelance Plus Version, with expanded indexing: 500,000 terminology records; 20 million words (bitext) and 20 million words (full-text documents).

**Corporate Version (network)**
Everything in the Freelance Plus Version, with more features and fewer limits.
- Networkable.
- No limit on database indexing.
- Create several bitexts at a time.
- Term extraction limited to 6 megabytes of deformatted text and 50 documents at a time.
- Create job glossaries.
- Pretranslate 20 documents at a time. Limit of 150 kilobytes of deformatted text per file.
- Filters for handling dozens of document formats.

**Web Version**
LogiTerm can run via your Internet or intranet site, enabling offsite employees and subcontractors to search your terminology, bitext and full-text databases.

**Minimum Configuration**
- Pentium 120 MHz
- 32 Mb RAM

Hard drive space: Freelance Version: 50 Mb; Corporate Version: 25 Mb on server and 25 Mb on each workstation

**Company Contact Information (ATA Booth 314)**

| | |
|---|---|
| Micheline M. Cloutier, President | http://www.terminotix.com/ |
| Suite 600, 240 Bank Street | termino@terminotix.com |
| Ottawa, Ontario | Telephone   613-233-8465, ext. 227 |
| CANADA K2P 1X4 | Fax           613-233-3995 |

**B. Eight-types of technology**

**1. Infrastructure**

LogiTerm fits into your current translation environment, requiring few, if any, changes in infrastructure. You continue to create and manage your documents as you always have. Your terminology database is comprised of any number of word-processing documents, each containing as many terminology records as you like. If your terminology record format complies with LogiTerm's uncomplicated syntax, search results are suitably displayed; if they aren't, LogiTerm still retrieves them, but you are one click away from viewing them. If you work with Microsoft Word, LogiTerm provides a toolbar for ensuring your records comply with the syntax. You will need Microsoft Word for LogiTerm to pretranslate your texts. LogiTerm does not require telecommunications software.

Term level

**2. Before translation: term candidate extraction and terminology research**

LogiTerm extracts terms from one or more texts to be translated. Lists of candidate terms are viewed and processed using your word-processor, and you can create terminology records directly from them. You can also use LogiTerm to query your existing terminology, bitext or full-text databases for exact or fuzzy matches of the candidate term and find inspiration for your translation equivalent.

**3. During translation: automatic and manual terminology lookup**

LogiTerm allows you to pre-translate a document automatically, or assists you as you translate manually. You can have LogiTerm automatically search for all instances of matches of source-language terms and replace them with the target-language equivalents in your terminology database. You can also have LogiTerm simply mark-up your source language text so that you can see which source-language terms are in your terminology database, and you can then use LogiTerm to consult these records as you do your translation. LogiTerm processes entire documents as a unit, so target-language terms are inserted and used consistently.

**4. After translation: terminology consistency check and non-allowed terminology check**

If you use LogiTerm to automatically determine candidate terms and replace them with target-language equivalents, all instances of the candidate terms are replaced, and consistency is thereby guaranteed. What is more, where your terminology records contain more than one possible replacement term, LogiTerm selects the most suitable one based on the priorities you define for the pretranslation. For these reasons, LogiTerm does not include a post-translation check. LogiTerm allows professional translators to manually introduce variety in their translations.

Segment level

## 5. Before translation: Segmentation, alignment, and indexing
LogiTerm includes an alignment tool for creating bitexts. LogiTerm allows you to convert bitexts to the leading translation memory formats and back again. You can also use LogiTerm to search through all your bitexts, of which every word is indexed. You can view search results in a grid format or in context, that is, in the bitext documents themselves.

## 6. During translation: Translation memory lookup (any-size segment); machine translation
LogiTerm is not translation-memory software. As such, it does not automatically compare new texts with the bitext or full-text databases (a soon-to-be-released sister product, called LogiTrans, will do this). It is also not machine-translation software. As a search tool, however, it enables you to quickly locate any-size segments of previously translated material, presenting them to you in order of relevance. In addition, your terminology records may contain very lengthy "terms" which are used for automatic replacement.

## 7. After translation: Missing segment detection; format checks; grammar check
LogiTerm does not check for missing segments, incorrect grammar or properly retained formatting. However, since revisers are increasingly using bitexts for their revising, they can readily detect omissions and incorrect dates or numbers, for example. If you use LogiTerm to pretranslate your texts, the formatting is retained.

## 8. Translation workflow and billing management
LogiTerm is not designed to be a workflow management tool. Even so, it lends itself well as a support tool for the workflow manager, who may wish to query the terminology, bitext or full-text databases for whatever reason. Also, the tasks of generating bitexts and updating indices can be scheduled for automatic operation.

## C. Strengths of Product Line
### A comprehensive search tool
With LogiTerm you can consult all your terminology records, bitexts and archives with a single search tool designed in a way to keep keystrokes and mouse clicks to a strict minimum.

### Very powerful search function
LogiTerm's search function is a marriage between power and meaningful results, yet is very easy to use.
- Fuzzy searches of the words in your search term in any order, for example, can retrieve partial or similar matches, as well as exact matches.
- Searches are insensitive to hyphens, case and common English spelling variations.
- LogiTerm displays the results with the most relevant information first.
- LogiTerm allows you to easily access source documents in their original format.

### Information from anywhere and everywhere
With LogiTerm, all your text-based documents are searched.

### Capable of searching through a variety of glossaries
LogiTerm's underlying, full-text indexing allows you to round out your own terminology files with glossaries from a variety of sources, but without having to "import" them.

### Useful for all translator types
LogiTerm helps you whether you type your own translations or dictate them. If you already use a translation memory manager, LogiTerm can help you exploit the memorized information even more.

**Convenience and ease for creating terminology records**
With LogiTerm, you use your word-processing software to create and organize your records in documents. Your learning curve is almost flat, for you use a tool with which you are already highly familiar.

**No restrictions on your terminology entries**
Your records can contain any number of forms of a term, as well as synonyms, acronyms, etc. With LogiTerm, you do not have to compromise your terminology content. You control the creation and evolution of your terminology.

**Bitexts**
With LogiTerm, it is easy to create and consult bilingual versions of translated documents. LogiTerm's bitext tool (or alignment tool) automatically matches the original and translated versions of a given text, even where a single sentence in one language is translated into two or more sentences in another, or where two or more source-language sentences are put into one target-language sentence. Its thoroughness and reliability are such that you do not have to check the output.

**For those who are short on time**
If you have no time to spare for preparing your terminology data, you can index it where and as it is, and immediately query it. While this is not the best approach, it still works. Later, when you have the time, you can organize it properly. Your data does not need to be in impeccable shape for you to exploit it.

**Quick file deformatting feature**
LogiTerm comes with a document deformatting tool which can be very useful for meeting a variety of needs.

**Better support for your suppliers**
LogiTerm allows you to provide better support for your suppliers, as you can give them:
- A glossary of only those terms that are relevant for the job at hand.
- A pretranslated version of texts to be translated, in which are highlighted the terms that exist in your terminology database.
- Bitexts that are relevant to the text to be translated.
- All or some of your terminology database, in an encrypted format, with no possibility of unauthorized reproduction.
- Future Internet access to your databases.

**Pretranslate your new texts**
LogiTerm can apply terminology in your database to new texts, replacing source-language terms with suitable equivalents. LogiTerm provides a variety of means allowing you to indicate which equivalents are to be given priority.

**User comments**
User feedback typically includes "ease of use," "easy to learn," "LogiTerm easily fits into my way of doing my work," and "I like what LogiTerm does for me."

*The Language Technology Centre—Part I: LTC Organiser*

## A. Brief Product Line Description

LTC Organiser is an innovative Enterprise Management System (EMS) supporting all management tasks in the language industry. Supplier, Client, Quotation, Project Management, Report and Finance modules are integrated in ONE environment to reduce management time and costs by at least 50%. This flexible and user-friendly system features local or web-based (24/7) integration of multilingual projects. From the initial quotation stage through to final invoicing, all essential steps are automated as far as possible, offering numerous options and flexibility in setting up different project structures and workflows. LTC-O is dedicated to companies and individuals wishing to streamline and improve their information flow and gain an edge in a fast-paced competitive environment.

## PRODUCT LINE:

| LTC Organiser Features | LTC Organiser Freelance | LTC Organiser Agency | LTC Organiser Corporate | LTC Organiser Web Solution |
|---|---|---|---|---|
| Supplier | | ✔ | ✔ | ✔ |
| Client | ✔ | ✔ | ✔ | ✔ |
| Quote Management | ✔ | ✔ | ✔ | ✔ |
| Project Management | ✔ | ✔ | ✔ | ✔ |
| Finance Management | ✔ | ✔ | ✔ | ✔ |
| Report Management | ✔ | ✔ | ✔ | ✔ |
| Scheduler | | ✔ | ✔ | ✔ |
| Contact | ✔ | ✔ | ✔ | ✔ |
| Security Management | | | ✔ | ✔ |
| Software Management | | ✔ | ✔ | ✔ |
| MS Access Database | ✔ | ✔ | ✔ | ✔ |
| MS SQL Server Database | | | ✔ | ✔ |
| Trados Interface | ✔ | ✔ | ✔ | ✔ |
| Design Module | Optional | Optional | Optional | Optional |
| Supplier Web Form | | | Optional | Optional |
| Client Web Form | | | Optional | Optional |
| Automatic word count | ✔ | ✔ | ✔ | ✔ |
| Unlimited Entries | ✔ | ✔ | ✔ | ✔ |

- The **Freelance** edition is specifically designed for independent translators: the system automates all project, finance and other management tasks. At a very modest price, everyone can afford it!
- The **Agency** edition is ideal for small to medium-sized translation offices or translators collaborating together. Available on an MS Access database, it gives access to all the modules of LTC Organiser. An unlimited number of licenses can be networked.

- The **Corporate** edition is aimed at larger scale operations. It offers the same functionality as the Agency version but also includes an MS SQL database option, access to the LTC Organiser web interface thus allowing clients and suppliers direct access to their own records (24/7), and providing access to up-to-date information.
- The **Web Solution** has all the features of the Corporate version and enables project management from distributed sites. Project managers, executives and sales managers can access all business data relevant to their tasks and for example respectively deadlines, productivity and quotes.

## HOW TO FIND MORE ABOUT IT:

| ATA Conference 2002 | Booth Number 320 | |
|---|---|---|
| **Contact Details** | By Post: | The Language Technology Centre<br>5-7 Kingston Hill<br>Kingston upon Thames<br>Surrey, KT2 7PW<br>United Kingdom |
| | By Phone: | +44 (0) 20 8549 2359<br>+44 (0) 20 8549 6267<br>(For product marketing, sales or support enquiries) |
| | By Fax: | +44 (0) 20 8974 6994 |
| | By Email: | info@langtech.co.uk |
| **Website** | http://www.langtech.co.uk (our website)<br>http://www.multilingual.com/ltDetail/ | |
| **Magazines** | MultiLingual Computing and Technology<br>Language International | |
| **Periodic News Releases** | http://www.langtech.co.uk<br>MultiLingual Computing and Technology ("Product Watch and Industry Outlook section") | |
| **Conferences** | ASLIB Conference 2002 (London, Europe)<br>Language and the Media 2002 (Berlin, Europe) | |
| **Demonstration CD** | By ordering at<br>http://www.langtech.co.uk | |
| **Live Web Demonstration** | By booking at<br>http://www.langtech.co.uk | |

By leaving your business cards we will be more than happy to come back to you for further information.

## B. Eight Types of Translation Technology

### 1. Infrastructure
**Document creation / Directory management**
LTC Organiser's file management feature enables automatic directory creation, which is integrated into the working environment. The system creates directory trees according to the project structure.
**Telecommunications**

**Networking:**
Available on a LAN (Local Area Network) and/or WAN (Wide Area Network):
LAN: cf. Corporate Edition
WAN: means database access for Project Management purposes from distributed sites. Executives can check productivity and generate statistics. Sales managers can prepare quotes on-the-fly. Project managers can access information relevant to their work. LTC Organiser is accessible to anyone travelling, working from home… Everyone can work simultaneously 24/7.

**The use of the file synchronization function allows the users to share files and documents with remote colleagues. They can upload/download documents to the Web Server to make them available to everybody.**

**Internet:**
LTC Organiser supports two web forms (Client /Supplier) which allow clients and suppliers access to the company's website, register themselves, update their records, and upload and download files (quotation request for example). Clients can request quotes and status information on projects in progress; suppliers can view current and future tasks and submit progress reports. Companies with several offices are in a position to share the same LTC Organiser database and co-ordinate work from different time zones, locations and currencies.
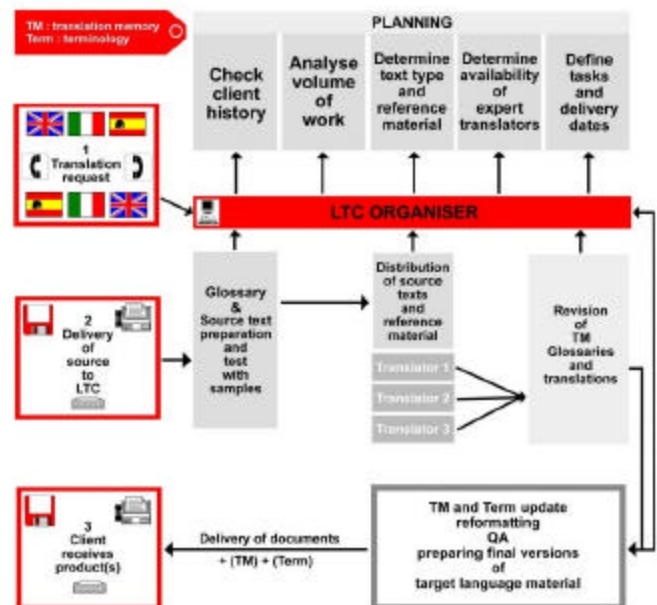
**Email:**
LTC Organiser is integrated with the users' email system so that email and files, as well as quotes, invoices or purchase orders can be sent and received in the most efficient manner from within the LTC Organiser environment.

**LTC Organiser in a typical translation environment**

**8. Translation Workflow and Billing Management – LTC Organiser Features**

**Supplier & Client Management Module:** provides quick and easy access to the client and supplier databases. The supplier database includes contact details, areas of expertise, fees, etc. It enables you to quickly identify & match the specialist expertise of a supplier (translator, interpreter, technical author, DTP specialist, teacher, etc.) with the requirements of a task for a specific client. This database also has search and sort facilities that enable you to update data (e.g. fees, skills, hours worked, deadlines).

**Quotation Module**: creates & manages all the client quotes. If a client submits a request via our Client web form, the quote is automatically created! Once the quotation is accepted, a simple click on the Create Project button will generate the project structure within the Project Management Module. Submitting a quote is now even quicker! Trados interface: allows you to import Workbench analyses directly into LTC Organiser.

**Project Management Module:** contains all data relating to a project, including instructions for suppliers, costs and delivery dates. Thanks to the Quick Wizard, you can instantly create projects, jobs and language tasks. The interactive Scheduler feature enables a project manager to monitor the progress of each stage of a task or each phase of a project, and to quickly identify any potential problem areas. If necessary, by simply dragging the mouse, the project manager can also adjust deadlines and reschedule the allocated tasks in order to achieve an optimal workflow. Moreover, files and directories for each job or project can be directly accessed from within LTC Organiser. A search facility also enables you to locate individual projects on the basis of certain search criteria (e.g. client, task, source language, target language).

**Report Module:** systematically converts information stored in the database to create instant management and financial summaries as well as statistical & graphical reports for project managers. By using Crystal Reports, this data can be easily retrieved and conveniently displayed in text reports, bar charts, or pie charts. Reports are generated with Adobe Acrobat and can be exported in the following file formats: .doc, Excel, HTML, .txt, .rtf, .rpt.

**Finance Module:** enables you to create, print, save, export and customise invoices, quotations, and purchase orders based on a price list already created via Price List Management. Payment of your clients and suppliers has never been easier! You can instantly check balances and outstanding payments, or even create realistic quotations whilst you are still on the phone to the client. When changing the currency or price list in a quotation, LTC Organiser even recalculates the quoted fee automatically.

**Design Module (optional):** enables you to customise the product to specifications that are unique to your company. In the Supplier, Client, Project, Contact, Price list, and Software management features, you now have a new page called **Perso** where you can add static controls, data controls and even visual basic scripts. You can, for example, add a new field to contain any information you wish, create a button to print reports, launch external applications such as MS Word, make updates and insert data into the database automatically, and much more…

**LTC Web Forms (optional):** Suppliers can register and update their personal details, download/upload their files, view tasks and enter the status of projects. Clients can request quotes, download/upload files and check the progress of projects simply by logging on to your website! Compatible with **SSL** encryption (Secure Socket Layer), LTC Organiser ensures fast and secure file transfer between Clients, Suppliers and Your Company.

## C. Strengths of Product Line
- ✓ All-in-one environment
- ✓ Drastically reduces cost and time management
- ✓ Increases productivity
- ✓ Streamlines the management workflow
- ✓ Ensures transparency at all levels
- ✓ Enables optimal use and deployment of human and technical resources
- ✓ Flexibility of the LTC Organiser
- ✓ Customisable
- ✓ User-friendly interface

And overall, LTC Organiser is the result of long and successful experience in the language industry.

## A. Brief Product Line Description
The above software system consists of web based helpdesk portal with multilingual capability. It is a software package that can be used as a one-stop shop for their multilingual help desk requirements.

The MHS consists of:
**An automation module** responsible for automatic workflow management, which routes trouble tickets first through a translation memory, then through a customised machine translation system, and an optional human post-editing service
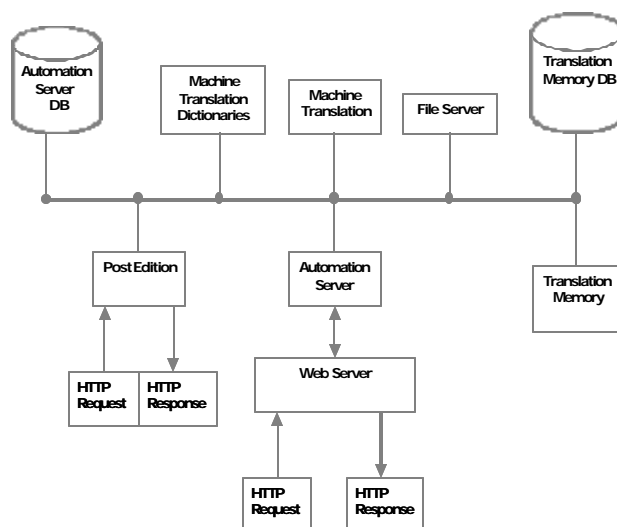**A translation memory** that is populated with the localised software and bilingual versions of online help, documentation, and frequently asked questions
**An interface to Systran** including a custom Systran dictionary that has been populated with the relevant key terms of the software.

Workflow: User of software X enters trouble ticket via software publisher's support portal. Automation server fetches routes trouble ticket through translation components. Request is displayed in support environment in the target language. Support engineer prepares solution which is automatically routed in the opposite language direction through the translation environment. User can view status/solution in the his/her language in the status/results environment of the portal.

## B. Eight Types of Translation Technology
**1. Infrastructure:** Web portal, automation server for workflow management
**2. Terminology research**: building custom dictionaries in the MT system
**3. Automatic terminology** lookup via MT system
**5. Segment-level before translation:** the LTC MHA has a text segmentation facility including TM lookup of 100% matches. Unmatched segments are routed to the MT system.
**6. Translation memory lookup:** LTC translation memory
**7. Missing segment detection**: system routes segments for which target language equivalents are not available in TM to MT system for raw translation.



## C. Strengths of Product Line
✓ Automated support environment for many web based multilingual application environments.
✓ Plugs in any MT system depending on customer preference and language combination
✓ High quality output due to customization in well defined domain
✓ Automatic handling of otherwise time consuming management of typically short and informal communication
✓ Output quality needs to be intelligible not publishable quality, therefore post-editing not needed for most trouble tickets and solutions.
✓ Style guidelines for authoring further improves output quality of target messages.
✓ Allows software publishers to run support centre from headquarters rather than training and paying many support engineers in the different countries or hiring multilingual support engineers centrally.

# ATA Translation Support Tools Forum
*TRADOS— TRADOS 5.5 Freelance, Service Provider Suite,*
*Corporate Translation Solution, and GXT*

## A. Brief Product Line Description
As the world's leading language technology provider, TRADOS is completely focused on providing integrated translation technology to our three major market segments:

- **Professional freelance translators**
- **Translation companies**
- **Global enterprises and government organizations**

TRADOS delivers translation memory, terminology management, and translation management software that helps translators be more productive, effective and profitable by shortening delivery times and improving translation consistency.

With more than 55,000 licenses representing the vast majority of the current translation technology market, TRADOS is the gold standard for professional translators, enterprise solutions providers and worldwide leaders such as Microsoft, Siemens, SAP, Volkswagen Audi Group, Oracle, Berlitz and Bowne Global Solutions.

**Find out more about TRADOS while at the ATA:** Visit us at Booths 217 & 219.
Please join us for the "TRADOS Night" technology demonstration reception from 5:30PM – 6:30PM, Thursday, November 7, in the Techwood Room in the Hyatt for hors d'oeuvres and software giveaways!
**Learn how TRADOS can meet your specific needs:**
- **Freelance Translators** – go to www.translationzone.com or call us at 888-4-TRADOS, ext. 2640.
- **Translation Companies** – write to us at info-us@trados.com, call us at 888-4-TRADOS, ext. 2640 or go to www.trados.com.
- **Companies and government organizations** – write to us at info-us@trados.com, call us at 888-4-TRADOS, ext. 2640 or go to www.trados.com.

## B. Eight Types of Translation Technology
The TRADOS product line of language technology is not only the most widely used, but also the broadest, including all types of translation technology as defined by the ATA's Translation & Computers Committee.

## 1. Infrastructure
TRADOS provides infrastructure software for the large multi-lingual enterprise that creates a customized, automated process for preparing their content for the global market.
**TRADOS GXT** automatically gathers a company's content for translation and distributes it to the translation service providers of their choice. It is the first Globalization Management System that manages all content across the enterprise, including Web sites, databases, and documents. GXT has three modules: Global Content Manager, Localization Manager, and Translator's Workbench.
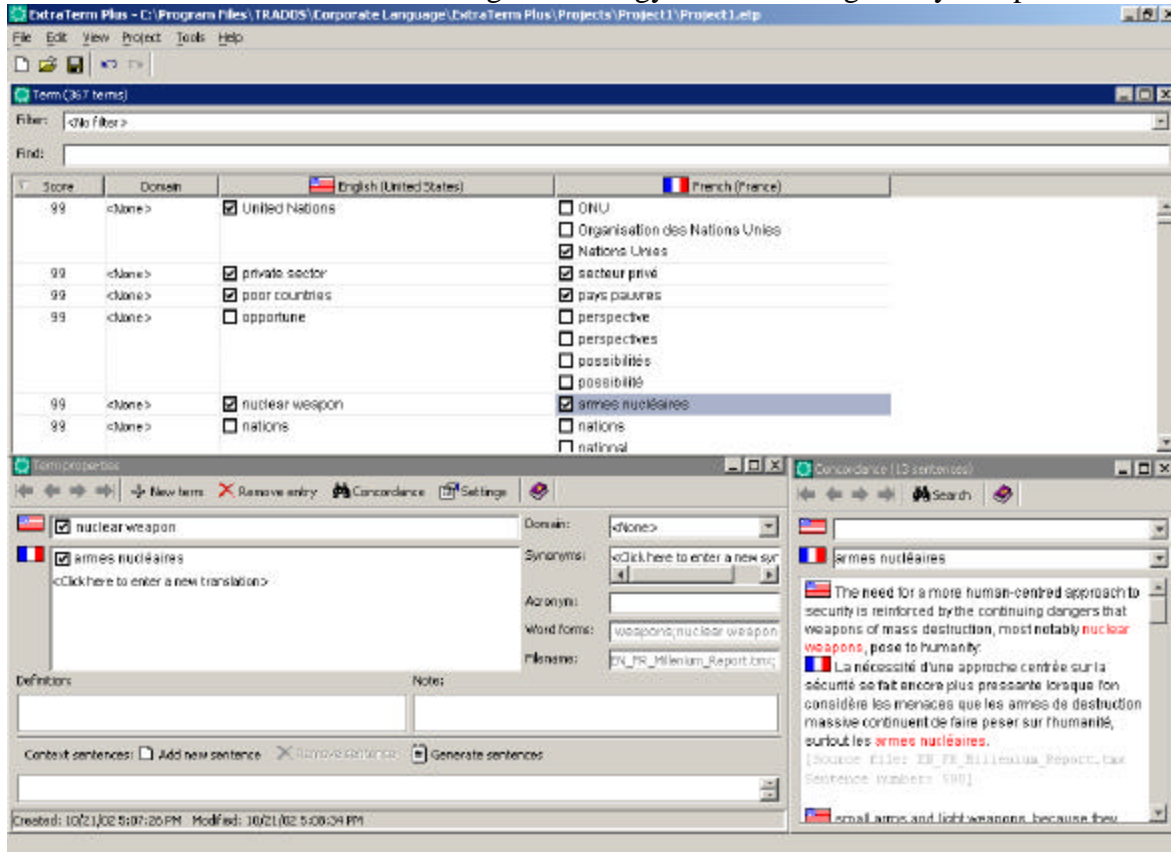
The **Global Content Manager** connects the enterprise's content repositories to the Localization Manager. It integrates with file systems, databases and content management systems, detecting changes in content automatically and retrieving it for translation. After translation, it returns localized content to the appropriate content repository. Once the Global Content Manger has identified and retrieved the content to be translated, it sends it to the Localization Manager.
The **Localization Manager** is the center for all localization projects, and manages the enterprise's translation memories and termbases, project workflows and translation vendors. It routes jobs to the appropriate translation teams and content reviewers and can also monitor project status and forecast costs. It packages content, appropriate translation memories, termbases, and other special instructions for the translators. Then the translation agency or translator downloads the package and translates it with Translator's Workbench.

**Translator's Workbench** is the industry-leading translation memory module in which the translation actually occurs (see Translation Technology Type 6). The translators translate only the new or changed content, using the translation memory to leverage old translations, and the termbase to translate key enterprise terminology (MultiTerm iX, Translation Technology Type 3).

## 2. Term-level before translation: Term candidate extraction and terminology research

Terminology extraction, provided by **ExtraTerm Plus**, enables terminologists, translators, and project managers to automate otherwise time-consuming terminology research and glossary compilation.
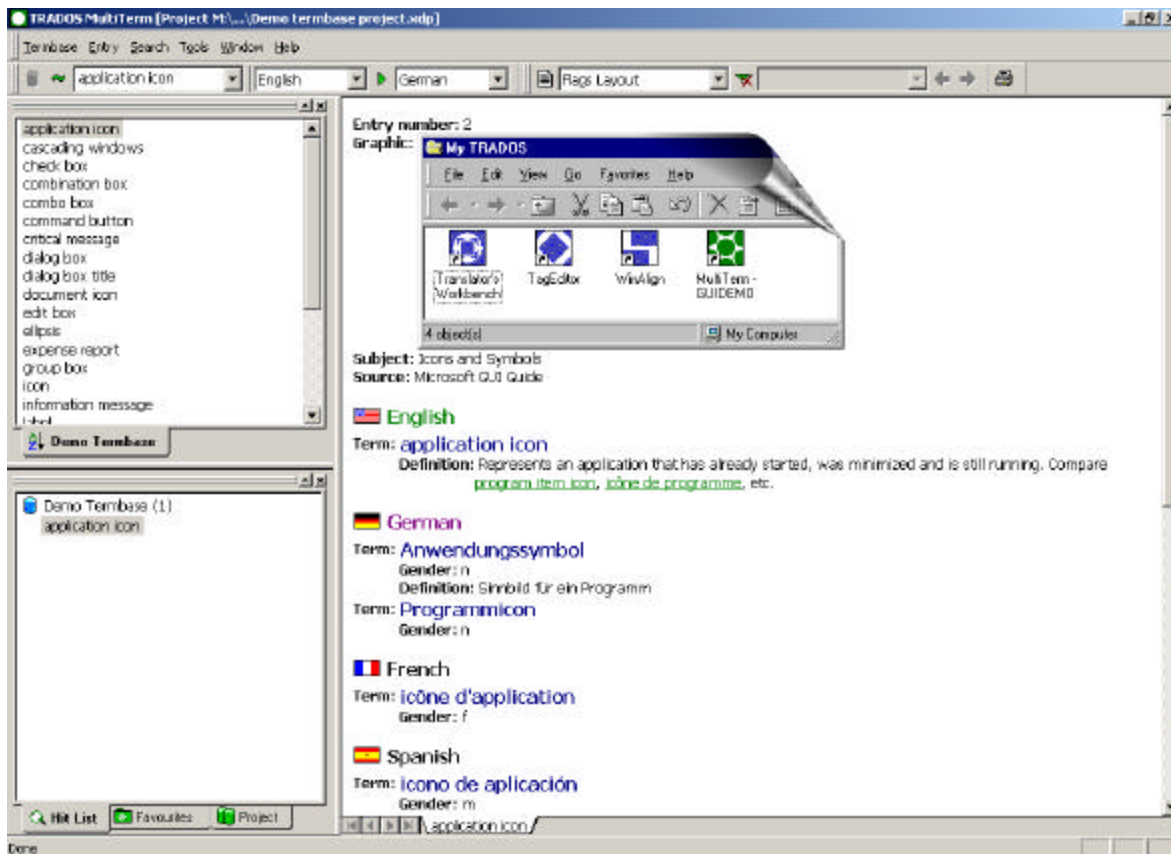


**ExtraTerm Plus** extracts term candidates and their probable translations and presents them in a list. In the interface you can quickly and easily validate terms and incorporate them into your MultiTerm termbases. The QA Project feature can be used to check terminology consistency in finished translation projects.
ExtraTerm Plus features the following functionalities, among others:

- Creation of monolingual and bilingual term candidate lists from a wide range of different file formats.
- Update of existing termbases by extracting new translations for terms already stored in MultiTerm.
- Automatic generation of context sentences in which the terms appear, and addition of definitions and notes.
- Export of extracted terms to MultiTerm, MultiTerm XML or a tab-delimited format.
- Quality analysis of translated documents by comparing the terms found in documents with those stored in the termbase.
- Sophisticated statistical reports of the terms used in translation projects, in relation to the termbase.
- Export of all suspect sentences whose terminology may not be correctly translated.

## 3. Term-level during translation: Automatic terminology look-up

**MultiTerm iX** is the cutting-edge terminology management solution for translators, translation companies, and terminologists and knowledge managers in any organization concerned with ensuring precise communication.

**MultiTerm iX Workstation** on the desktop allows the independent translator to do the following:

- Automatic terminology lookups during interactive translation with Translator's Workbench.
- Sophisticated terminology lookup functions even in multiple termbases at the same time.
- On-the-fly addition of new terminology to the termbase at the click of a button from within Microsoft Word.
- WYSIWYG printing of any entry (terminological record) from within MultiTerm.
- Creation of customizable dictionaries, glossaries and tables in Microsoft Word.
- Completely customizable viewing layouts, input models, filters, and termbase structures.
- Access to local termbases on the local hard drive.

**MultiTerm iX Workgroup**, for small teams of translators/terminologists, in addition to the above functionality also provides:

- Administrator module for management of up to 10 concurrent users, each with customizable access rights, viewing layouts and input models.
- Database backend using the free Microsoft SQL Server Desktop Engine for sharing termbases across a LAN.
- Viewing of terminology databases on the Internet via the MultiTerm Publish-and-View Online module, making lookups possible from anywhere in the word via a standard web browser.
- Extraterm Plus (see Translation Technology Types 2 or 4).

**MultiTerm iX Enterprise** is the ultimate in terminology management for large, distributed teams. In addition to all the above it provides:

- Unlimited user connections.
- Powerful database backend using Microsoft SQL Server 7 or 2000 for sharing termbases.
- Complete access and editing of termbases and full functionality even over a WAN and across domains via direct connections using the MultiTerm AnyWhere module.
- Viewing and editing of terminology databases on the Internet via MultiTerm Online Plus module, allowing not only lookup but editing of termbases from anywhere in the world via a standard web browser.

**4. Term-level after translation: Term consistency check and non-allowed terminology check**
TRADOS provides terminology check features in **ExtraTerm Plus** (Translation Technology Type 2).

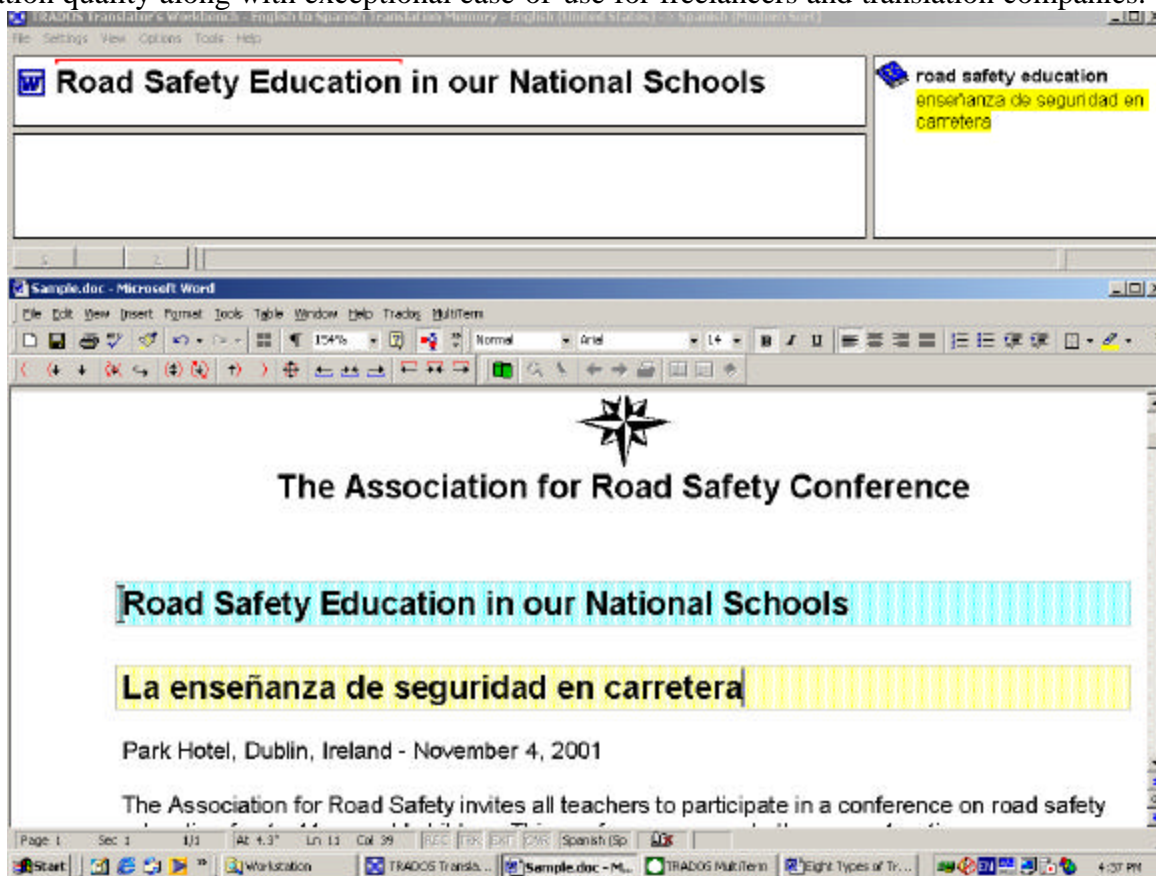**5. Segment-level before translation: Previous source-target alignment, new text segmentation**
With **WinAlign**, material previously translated without Translator's Workbench is easily aligned and leveraged (re-used). Using visual alignment technology, the source and target texts are automatically aligned and presented for verification, side-by-side, where the connections between the source and target segments are reviewed. The sentence pairs are then imported into a Translator's Workbench translation memory (Translation Technology Type 6) for re-use.
WinAlign provides the following features, among others:

- Highly accurate semi-automatic alignment.
- Visual, semi-WYSIWYG side-by-side display of aligned source and target text for rapid alignment validation.
- Text searching, text editing for on-the-fly revisions of previously translated text, and easy correction of incorrectly aligned sentences.
- The resulting translation memories (indexed bitexts) can be used for automatic bilingual terminology extraction (see ExtraTerm Plus, Translation Technology Type 2 and 4).

5.  **Segment-level during translation: Translation memory look-up (any-size segment) and machine translation**

**Translator's Workbench** is the industry-standard translation memory tool, providing increased productivity and translation quality along with exceptional ease-of-use for freelancers and translation companies.



**Workbench** features the unique advantages of integration with Microsoft's feature-rich word processor, Word. By leveraging (re-using) translations from the translation memory, translators translate only the new or changed

content, and use termbase(s) to translate key terminology via integration with MultiTerm iX (Translation Technology Type 3). Workbench can handle most any editable file format and any language supported by Windows.

The features of Workbench include the following, among others:

- Automatic segment (normally a sentence) lookup and leveraging from the translation memory, either in batches, or interactively within the document on a segment-by-segment basis.
- Automatic extraction of repetitive sentences within documents and across projects, to ensure their consistent translation before the start of the translation project.
- Manual sub-segment (word or phrase) lookup in more than one translation memory at a time.
- Support for multiple translations for the same source sentence.
- Networkability across LAN.
- Automatic conversion of dates, times, measurements into the target language format.
- Automatic substitution of dates, times, measurements, tags and other non-translatable elements, increasing the value of matches from the translation memory.
- Automatic terminology lookup via a connection to MultiTerm iX termbase during interactive translation.
- On-the-fly addition of terminology to the MultiTerm iX termbase during interactive translation.
- Integration with machine translation engines, such as Systran and Logos.
- Support for virtually all languages supported by Windows, including excellent support for Asian and bi-directional languages (Arabic, Hebrew).

Via Workbench's integration with Word, TRADOS **TagEditor**, and other TRADOS translation editors:

- Power and ease-of-use of Microsoft's familiar and feature-rich word processor, Word, with its spell checking, grammar checking and formatting features.
- Editors with WYSIWYG display for other file formats (PowerPoint, HTML).
- TagEditor, the specialized editor for tagged file formats (see also Translation Technology Type 7), with spell checking, keyboard shortcuts the same as in Word, and tag protection and verification features.
- Translation of virtually any type of editable file format, including web pages (HTML), SGML, XML, ASP, JSP, PowerPoint, Excel, all common DTP formats, executable and resource files and many more.

## 7. Segment level after translation: Missing segment detection and format and grammar checks

Through **Translator's Workbench**'s integration with Microsoft Word the following features are available when translating Word documents:

- All of Word's powerful grammar checking, spell checking and formatting features.

Translator's Workbench also integrates into TRADOS **TagEditor**, the translation editor for tagged file formats offering the following features:

- Industry-leading support for XML, as well as HTML, .ASP, JSP, SGML, FrameMaker, Interleaf, PageMaker and Quark.
- Word's spell checking features, also available from within TagEditor.
- Interactive verification of tagged file formats during translation, ensuring that the tags in the translation match the tags in the original.
- Post-translation tag verification reports, pinpointing the location of possible tagging errors.
- Verification of 'well-formed' XML against a Document Type Definition (DTD) reporting undeclared entities, mismatched root elements, and other violations of the XML standard.

## 8. Translation workflow and billing management

**TRADOS GXT** provides highly customizable workflows, routes jobs to translation service providers, monitors project status and forecasts and manages costs. Please see Translation Technology Type 1. Workbench of course also provides comprehensive word count and matching analyses (Technology Type 6).

## C. Strengths of Product Line

### I. Commitment and Experience

**Language technology is our only business**, and has been for nearly 20 years. We are 100% committed to providing technology to translators, translation service providers and their clients. Our product line is the **complete language technology solution** for every step in the globalization process:

- **TRADOS GXT:** the Globalization Management System for multi-national and multi-lingual enterprises
- **TRADOS Service Provider Suite:** the customizable translation solution for translation agencies
- **TRADOS 5.5 Freelance:** the powerful yet affordable package for the independent translator

**Dedicated technical support and training worldwide** where you need it:

- Two offices in the US alone, near Washington DC and San Francisco.
- Offices with support and training throughout Europe and Asia.

### II. Constant Innovation:

**With the largest customer base of any translation tool vendor**, we are **constantly driven to innovate:**

- Leading non-Western language support, including automatic terminology lookup for Asian languages as source, and the best support for Arabic on the market.
- Support for more file formats, including PowerPoint, Excel, executables (*.exe), .DLLs, resource files, HTML and rtf on-line help, SGML, XML, ASP, JSP, and the new Microsoft ASP.NET standard.
- X-Translate; move beyond translation memory! Translates revised or updated content by taking the translations directly from the previously translated content. New content is perfectly translated in context.

### III. Power with ease-of-use:

- The unique advantage of integration of Translator's Workbench and MultiTerm iX with Microsoft Word.
- The formatting, spell checking, usability and productivity features of Word.
- Translation of your Word document as normal in Word itself; no "conversion" or "import" is necessary.
- "What You See is What You Get" display for many other file formats (PowerPoint, HTML, Excel, etc.) allowing translators and editors to see the translations in context comfortably at any time.

### IV. The Most Powerful Terminology Management Solution:

- MultiTerm iX, with the flexibility, scalability and power of client/server technology to search multiple termbases simultaneously.
- Update of termbases from within Word on-the-fly during translation.
- Termbases that are completely customizable, accessible and editable from virtually anywhere in the world.
- ExtraTerm: with semi-automatic glossary compilation and terminology research, with post-translation terminology quality checking.

### V. Exceptional Support For Complex File Types:

**Unparalleled support for mark-up languages** and Desktop Publishing Formats:

- The specialized translation environment, TagEditor, with the best XML support in the industry.
- Multiple usability features in TagEditor such as Microsoft Word spell checker, tag-insertion toolbar and keyboard shortcuts that are the same as in Word.
- Simple, reliable conversion and translation of FrameMaker, Interleaf, PageMaker and Quark files.
- Secure translation in TagEditor, with multiple tag protection and verification features that ensure that the format of translated files is perfectly preserved.
- Support for more file types than any other translation tools vendor.

# ATA Translation Support Tools Forum
### *Dr. William O. Bergerson—Wordfast*

## A. Brief Product Line Description

The brief treatise which follows is intended to provide an overview of Wordfast and +Tools, couched in terms of the "Eight Types of Translation Technology" originally delineated by Prof. Alan K. Melby at the 1998 ATA Conference. Bracketed numbers (e.g., "[7]") refer to the eight types. Unlike other contributors to the present forum, the author has no commercial affiliation with these programs. The opinions expressed are solely his own based on personal experience with the software.

Wordfast and +Tools represent translation support tools focused primarily on – but by no means limited to – new text segmentation [5] and translation memory lookup [6]. Perhaps the most compelling reasons to give these tools a look include the facts that both programs:
1. are nominally priced (particularly in relation to the features provided);
2. function on Windows, Macintosh & Linux platforms (as templates in MS Word); and
3. can process a wide range of document types (e.g., all MS Office; pdf; and tagged files).

The brainchild of Yves Champollion (a collateral descendant of the man who deciphered the Rosetta Stone), Wordfast began as a programming challenge but has evolved into a full-fledged professional tool with features too numerous to adequately recount here. Instead, the reader is referred to the following for more detailed information (there is no formal representation of the program at the ATA Conference):

**Main Sites:**
(overview; program & manual downloads; registration; compatibility, etc.) www.champollion.net or geocities.com/wordfast (parallel sites)

**Discussion Group:**
groups.yahoo.com/group/wordfast (very active, unmoderated, open membership of >1800 users)

**Training:**
wizardtrans.free.fr (Click on "Learning Wordfast" – tutorial compiled by Sylvain Galibert)
"WfQuikRef.pdf" (See "Files" of above discussion group – from a workshop by W. Bergerson)

**Articles:**
www.muiderkring.com/en/news.html (Click on "Logos[1] Vision" – Gp. Newsletter, Vol. 1, #1)
www.language-international.com (Click on "Back Issue 13.5" – It's Free, but does it Work?)
www.lisa.org/archive_domain/newsletters/2002/2.1/champollion.html
accurapid.com/journal/toc.htm (Search for authors: Champollion; Gerasimov; Nogueira)

## B. Eight Types of Translation Technology

As mentioned above, the program is based on two MS Word templates: Wordfast and +Tools. Both generate new toolbars ( and , respectively); Wordfast also adds a drop-down menu and shortcut keys. Functionalities associated with each program are indicated in the text by [Wf] and [+T], respectively, followed by the "Tab/Button" sequence or icon for accessing the particular feature (e.g., Wf > Translation memory/Files/New TM).

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[1] The future of the joint venture between Y. Champollion and the Logos Group is uncertain as of this writing.

# 1. Infrastructure [1]

**Document Creation/Management System**
There is no separate need for document creation with Wordfast or +Tools, since both function within the MS Word application. The same even holds true when processing other file types, such as Powerpoint, Excel, Access or pdf: Although the file to be translated is opened in its native application, a new (blank) MS Word document is then created, from which environment source text is accessed and – upon validation by the user – returned as target text to the original application with retention of formatting. This general principle applies to markup text files as well, whereby tagging/untagging is handled separately by the +Tools application before/after translation, respectively.
As far as translation memory is concerned, Wordfast utilizes either tab-delimited text (TXT) or Unicode formats, and automatically generates the associated file based on user input. TMX, TMW, & EXP compliant TMs can be opened by the program as well, and +Tools provides for interconversion between Wordfast TMs and the Mneme TMs associated with the Logos Group. [Note: TM management per se is discussed below under "Before Translation – Segment Level: Indexing"]

**Terminology Database**
Wordfast has no terminology database of its own; however it provides means for linking to external dictionary applications. Refer to "Before Translation – Term Level: Terminology Research" below for details.

**Telecommunications (intranet/Internet, email, ftp, web browsing, etc.)**
Up to 20 users on a local area network can readily share the same translation memory by merely opening it on the network. The ability to share translation resources via email and ftp (peer-to-peer or client-server) is in beta testing [Wf > Setup/Share]

# 2. Before Translation – Term Level [2]

**Term Candidate Extraction**
Users can manually search existing Glossaries and TMs not only before, but also during and after translation with the following functions:

GLOSSARY LOOKUP checks for terms or phrases in all active glossaries, of which Wordfast supports up to two. Search results appear in a separate, pull-down style toolbar and show source and target term followed by an optional comment. A particularly convenient feature is the ability to add glossary terms on the fly by simply marking them and executing the appropriate keystrokes. (See also "After Translation – Term Level: Terminology Consistency Check" below.)

CONTEXT SEARCH will scan a background translation memory (BTM) if selected, the currently active translation memory (TM) and any sibling TMs present (i.e., those within the same folder as the active TM) for a specific word or phrase [Wf > Quality Check/ Terminology Recognition]. The search is performed within source segments by default, unless the selected expression is in the target segment.

CONCORDANCE SEARCH expands the context search to include documents other than TMs [Wf > Setup/Files/Set concordance folder]. While plain text files are preferred, most text-based formats (e.g., CSV, RTF, HTML) are acceptable.

**Terminology Research**

**DICTIONARY LOOKUP,** like those functions discussed in the preceding paragraph, is available before, during and after translation. This feature permits linking with external dictionaries (e.g., Collins™ On-line, Harrap's™ Shorter, Merriam Webster's™, Microsoft Encarta™, any web-based dictionary or database, etc.) for research into both individual terms and expressions. [Wf > Setup/Files/Select Dictionary]

## 5. Before Translation – Segment Level [5]

### Segmentation

By default, Wordfast segments documents during translation sessions on the basis of end-of-segment punctuation (ESP), such as periods and exclamation points. Prior to initiating a session, ESPs may be customized [Wf > Setup/Segs] and/or combined with certain pre-sets (e.g., number + ESP). Provision is also made for entering common abbreviations to prevent them from terminating segments prematurely. (During translation, inappropriate segmentation can generally be overridden with the "Expand" (  ) or "Shrink" (  ) commands, although paragraph marks, page breaks, tabulators etc. will always cause a segment to terminate). As an alternative to ESP, users may select segmentation at the paragraph level or – for rare languages with no punctuation – on the basis of MS Word's definition of a sentence.

Finally, segment delimiter style may be customized. (The default is "tw4winMark.")

### Alignment

Creation of translation memory from paired legacy documents is relegated to the +Tools program and consists of a three-step process [+T > +Align].
1.  Source & Target documents are placed in a pair of corresponding folders for **extraction**.
2.  Manual verification and **alignment** is performed on the file pair (or table) thus created.
3.  The new translation memory can now be **generated** (Note: defaults to Unicode).

### Indexing

Fundamental TM management functions include: Reorganize; Merge; and Reverse [Wf > Translation memory/Service]. "Reorganize" (primarily a re-indexing function) differs from "Compress," which can delete TUs based on specific logical criteria such as usage count, creation date, or attribute value [Wf > Translation memory/Compress].

Up to five freely definable "Attributes" may be assigned to a TM (e.g., User ID, Subject, Client)[Wf > Translation memory/TM Attributes]. Relative and absolute penalties can be applied to each attribute and its associated current value, respectively, as a means of flagging TUs from "outsourced" TMs. For example, a relative penalty of "8" applied to "User ID" lowers the "match value" of associated TUs by 8 percentage points to preclude a 100% match whenever User ID differs from the one currently in effect (presumably one's own). An absolute penalty of "5" assigned to TUs from translator "John Doe" has an analogous effect. The two types of penalties are cumulative, so values need to be chosen judiciously to prevent lowering match value below the (user-definable) "fuzzy" threshold.

Finally, the "TM Rules" function provides flexibility in determining which attributes will be associated with the TU stored to the TM in cases where discrepant attribute values are associated with TUs that are otherwise identical [Wf > Translation memory/TM Rules].

## 3. During Translation – Term Level [3]

**Automatic Terminology Lookup**

Terminology Recognition augments the manual search functions discussed earlier under "Term Candidate Extraction" by automating them during the translation process.

Individual terms from the glossaries are flagged if they exceed a minimum number of letters as stipulated by the user. [Wf > Quality Check/Terminology Recognition/Enable Terminology Recognition/Search Glossary]

Expressions in the TMs, on the other hand, must fall between the maximum and minimum number of "heavy" words specified by the user if they are to be flagged. Successful results are highlighted in the corresponding TU(s) in context. [Wf > Quality Check/Terminology Recognition/Enable Terminology Recognition/Search TM for expressions]

**Manual Terminology Lookup**

As mentioned earlier, Glossary, Context, Concordance and Dictionary searches can all be executed manually at any time.

## 6. During Translation – Segment Level [6]
**Translation Memory Lookup (Any Size Segment)**

**MEMORY** displays the contents of the relevant TU above the current segment. Beyond the TU with the highest degree of analogy, all of the top ten matches from the TM can be displayed using the "Alt+right (left)" keys.

Moreover, Wordfast can be instructed to first scan a read-only background translation memory (BTM) for exact matches before examining the currently active TM [Wf > Setup/Files/Select BTM].

If no exact or fuzzy matches are found in the TMs, expressions between X and X+n heavy words will be highlighted in the TU from which they originate, provided terminology recognition has been activated as described earlier.

**Machine Translation**

Any machine translation (MT) software that adds its own entry to the MS Word menu (e.g., Systran, PowerTranslator, Reverso, etc.) can be accessed by Wordfast [Wf > Setup/Share/Use Machine Translation] as part of a pre-translation process[2]. By default, MT will not be utilized unless no match has been found in local TMs. Even without machine translation, rendition of tediously repetitive documents is facilitated by the

"TranslateUntilNoMatch" feature ( ), which carries out automatic translation until TUs of less than 100% match value are encountered.

## 4. After Translation – Term Level [4]

**Terminology Consistency Check**

Wordfast supports two glossaries, the default format for which is tab-delimited text consisting of 2 or 3 columns (source term, target term, optional comment). Excel (XLS) and Multiterm (MTW) formats can be opened directly as well. Upper and lower case may be used, and wildcards are supported at the end of words. Source and target segments are checked against the glossaries in real-time if this option is selected [Wf > Quality

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[2] Note that pre-translation can be performed on multiple documents using either the currently active TM alone [Wf > Tools/Tools/Translate] or in conjunction with multiple (sibling) TMs [Wf > Tools/Tools/ Xtrans!]

Check/ General/Activate real-time QC]. Alternately, checking may be deferred until the document is "cleaned" [WF > Tools/ Tools/Clean-up].

**Non-Allowed Terminology Check**
Wordfast addresses this function via a so-called "Blacklist." Its structure and characteristics are nearly identical to those of glossaries, but only tab-delimited text files are supported. The same options are available with respect to real-time and deferred QC.

## 7. After Translation – Segment Level [7]

**Missing Segment Detection**
Again, Wordfast can perform real-time quality checks during translation [Wf > Quality Check/ General/ Activate real-time QC] and/or (on multiple files) prior to the clean-up process [WF > Tools/ Tools/Quality Check]. In either case, the user may stipulate a broad range of consistency checks in addition to automatic segment detection (e.g., identical untranslatables, tags and/or bookmarks in source and target segments).

**Format Checks**
Wordfast replicates formatting during translation sessions for the numerous application types mentioned earlier under "Infrastructure: Document Creation/Management System." Hence there is no call for further verification.

**Grammar Check**
Wordfast draws upon the corresponding feature of MS Word in the context of the "Quality Check" described above to perform this function and to check document spelling. (Target text is set to the appropriate language based on TM parameters.)

## 8. Translation Workflow and Billing Management [8]
A beta version of a separate template [milin.dot] to address these functions is available in the "Files" section at the discussion group referenced on the first page. (The author has yet to test this new release.) This rudimentary program will track various, multiple-file projects. It estimates duration on the basis of word count and average number of words translated per time unit; allows the user to set different rates for 100%, "fuzzy" and non-matches; and generates an MS Word invoice in table form from these figures. Provision is also made for recording client/agency name, email address and notes.

## C. Strengths of Product Line
- Incorporate most features related to all "Eight Types of Translation Technology"
- Capable of processing all MS Office file types, pdf and tagged files
- Compatible with legacy translation environments; Windows, Macintosh and Linux
- Economically priced in relation to other tools and range of features
- Ergonomically designed (e.g., text zoom, alternate source/target font colors)
- Open format allows users to add their own subroutines for further customization

**Table 1: "Eight Types of Translation Technology" – Wordfast and +Tools**

| Infrastructure [1] | |
|---|---|
| **Document Creation / Management** | Functionality contained within MS Word (VBA templates). Windows, Macintosh or Linux. Works w/pdf, tagged & all MS Office files. Supports tmx, tmw, txt & exp-based TMs |
| **Terminology Database** | NO, but can access external databases, (e.g., Logos Dictionary and Wordtheque) |
| **Telecommunications** | YES, up to 20 users can share TM by LAN, email, ftp (peer-to-peer or client-server) |

## Before Translation

| Term Level [2] | | Segment Level [5] | |
|---|---|---|---|
| **Term Candidate Extraction** | YES, Concordance & Context Searches | **Segmentation** | YES, by ESP, Paragraph or Sentence |
| **Terminology Research** | YES, link to external dictionaries & databases | **Alignment** | YES, of multiple files via +Tools |
| **Miscellaneous** | Can convert & use Logos' Mneme TMs | **Indexing** | YES, & TMs may have < 5 attributes w/penalties |

## During Translation

| Term Level [3] | | Segment Level [6] | |
|---|---|---|---|
| **Automatic Terminology Lookup** | YES, searches TMs for expressions | **Translation Memory Lookup** | YES, may include background, main and sibling TMs |
| **Manual Terminology Lookup** | YES, (external) Dictionaries; 2 (+1) Glossaries | **Machine Translation** | YES, link to any that add their own menu to MS Word |

## After Translation

| Term Level [4] | | Segment Level [7] | |
|---|---|---|---|
| **Terminology Consistency Check** | YES, against up to 2 Glossaries | **Missing Segment Detection** | YES, real-time QC (or during Clean-up) |
| **Non-Allowed Terminology Check** | YES, via Blacklist | **Format Checks** | NO, but replicated during translation |
| **Miscellaneous** | Multiple-file word count search/replace, etc. | **Grammar Check** | YES, via MS Word (includes Spelling) |

| Translation Workflow and Billing Management [8] | |
|---|---|
| **Translation Workflow** | YES, |
| **Billing Management** | Beta version of "milin.dot" posted to discussion group |