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ASSET BUILDING by People with Disabilities







How Effective Is

Machine Translation of Legal Information?

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Pro Bono Net 2414 Lariat Lane Richland, WA 99352 509.396.7934 cjohnson@probono.net nline services offer instantaneous translation of text or website content. Before using translation software or "machine-translation" tools to assist limited-English-proficient (LEP) clients obtain meaningful access to the information, advocates should consider several factors.¹

Machine translation is the automatic translation of text from a source language into a target language without human intervention. Machine translation generally takes a dictionary approach to language and does not factor in culture or custom. Here we describe the role of a human translator, discuss when and how to use machine translation in conjunction with human translation, and review available machine-translation services.

Human Translation

A translator converts written material from one or more source languages into a target language. Translators must have excellent writing and analytical ability, knowledge of the vocabulary, context, and meaning of words in both languages, and ensure that the translated version of the text conveys with precision the idea and form of the original.

A description of interpreting and translating as an occupation notes that "[t]ranslating involves more than replacing a word with its equivalent in another language: sentences and ideas must be manipulated to flow with the same coherence as the source document so that the translation reads as though it originated in the target language." This characteristic distinguishes human from machine translation, and it is why human translation is usually the only option in the following circumstances:

¹Meaningful access is attained when a translation accurately communicates to a limited-English-proficient individual the programs and services of an organization or agency (see U.S. Department of Justice, Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 67 Fed. Reg. 41455, 41461 (June 18, 2002), http://bit.ly/bH3Jpe).

²U.S. Bureau of Labor Statistics, *Interpreters and Translators*, in Occupational Outlook Handbook, 2010–11 Edition (last modified Dec. 17, 2009), http://bit.ly/9BWpez.

- Nuanced vocabulary—documents where the source text or vocabulary is ambiguous or unclear. Documents that have text with nuanced meanings require the skills of a translator who understands the context and message behind the words. Legal terminology is nuanced vocabulary since concepts do not have the same meaning in all legal systems.
- Individualized documents—personalized letters and documents with concepts and specialized terms. A human translator knows the vocabulary and can convey the ideas and intent of the source text.
- Sufficient time—if the written text does not have to be translated immediately and no detriment to the client will result. Even if time is short, however, use machine translation only for individual words or small phrases, not as a replacement for professional translation.
- Official translations—to ensure accuracy when a certified or official translation of a document is necessary in a legal proceeding, government agency, or application process.³ Machine translation cannot ensure the precision required for translation of vital documents that affect a client's rights, benefits, or services.

Machine Translation

Unlike human translation, machine translation merely replaces a word with its target language equivalent, without considering context or meaning. Translated words without context do not maintain the idea or message of the original text.

Agencies that rely on machine translation alone to ensure that LEP individuals have meaningful access to document and website content should know that machine translation has "been found to

be unacceptably inaccurate."⁴ Before using machine translation for any text or a document, use the following suggestions to improve accuracy and efficiency:

- Most important, limit sentence length. Sentences of more than twenty-five words often become ambiguous and too complex for machine-translation tools to translate correctly. Keeping sentences to no more than twenty words or so will improve the quality of the output. However, machine translation is not very good at translating the names of legal documents because they include legal jargon that may not be part of another legal culture. Short phrases such as "motion for replevin," "petition for dissolution," or "request for restitution" still require human translation to be incorporated accurately into a document, website, or form.
- Avoid metaphors, jokes, slang, puns, idiomatic expressions, and regional or national expressions. Since these are often translated literally, they tend to lose their meaning. The literal translation of "break a leg," for example, will not make sense to the target reader.
- Avoid abbreviations, acronyms, and contractions, which might not have equivalents in different languages. Instead spell out the entire word. Machine-translation services do not always recognize abbreviations and may omit them from the translation. Instead of "Sr.," "Jr.," "DHS," or "SSI," use "senior," "junior," "department of human services," "supplemental security income."
- Use simple, direct sentences with basic grammatical construction. Ensure that the sentence structure is grammatically correct and do not omit words (e.g., "Make sure that you use grammatically correct sentence structure" rather than "Make sure you use grammatically correct sentence structure").

³See FED. R. CIV. P. 44(a)(2), http://bit.ly/9c4xpf.

⁴Federal Interagency Working Group on Limited English Proficiency, Top Tips from Responses to the Survey of Language Access Strategies Used by Federal Government Agencies (2008), http://bit.ly/chlup5.

- Avoid ambiguity. To produce a clear translation, minimize use of words and sentences that have multiple meanings (e.g., the word "right," which can mean "correct" or "opposite of left").
- Avoid compound verbs, which are often mistranslated.
- Use the international standard date format (YYYY-MM-DD) when writing dates, the format for which varies from country to country. Using the international standard format will help eliminate translation problems.
- Because some languages do not use the present participle verb form, use the infinitive form instead (e.g., "click here to select the icons and to view the images" rather than "click here for selecting the icons and viewing the images").
- Give the translator a list of words that should remain in the source language (e.g., proper names and titles and names of benefits and agencies).⁵

When to Use Machine Translation

While machine translation cannot replace human translation when quality and accuracy are crucial, it may be suitable for several forms of written content or to supply an initial translation that a human translator then reviews for accuracy and context. Take the following factors into account before relying solely on machine translation:

- Potential harm—the degree of potential harm caused by a poor translation must be balanced against the need for speed.
- Size of the target group—the larger the target audience, the greater the need for a human translator to review the

- material for meaning to that target community. A larger group triggers obligations under Title VI of the Civil Rights Act of 1964 to ensure meaningful access by translating vital documents and thus requires a systemic approach to implementing quality control in translations.⁷
- Importance of agency reputation or trust—because its results are not reliably accurate, using machine translation can signal to the target group that its needs are unimportant.
- Volume of material and degree of repetition—a large quantity of material, particularly if vocabulary and concepts are repeated, is ideal for machine translation because programs usually contain dictionaries that can be customized and updated as needed.
- Feasibility of human translation—if the volume of material is extremely large, time is short, and frequent updates will be necessary, human translation may be unrealistic.
- Possibility of "gisting"—the practice of using machine translation to get a rough idea of the source text content is called "gisting" (from "to get the gist of"); it can be effective and appropriate when an "official" translation is not needed and to determine if a human translation is necessary.
- Extent of dissemination required—when material must be translated from one into several other languages, machine translation can be an adjunct to human translators, creating drafts for human translators to edit instead of requiring them to start from scratch. Since machine translation automatically maintains consistency of terminology, it saves translators time. 8

⁵Hzhang, Babel Not: Machine Translation for the Technical Communicator, ProZ.com, March 26, 2008, http://bit.ly/ao8DgO.

⁶A good model policy that incorporates some of these considerations for the translation of website content, with a focus on providing meaningful access, was developed by the Texas Health and Human Services System (see Texas Health and Human Services System, Accessibility Procedures (n.d.), http://bit.ly/b1DEYG).

⁷Limited English Proficiency: A Federal Interagency Website, Questions and Answers, (n.d.), http://bit.ly/br044c (Q. When developing plans and guidance regarding translation of documents, how do we determine which documents must be translated?).

⁸Hzhang, *supra* note 5; Kirti Vashee, *The Continuing Evolution of Automated Translation Technology: RbMT vs. SMT*, PRoZ. com. Jan. 16, 2010. http://bit.lv/cW4USa.

Online Machine-Translation Services

Machine-translation tools, services, and software are available. Each has the inherent limitations described above but can be used to create drafts that human translators review and finalize. These services are often free and easy to use and allow agencies and programs to take the first step toward complying with their obligations under Title VI.

A trained translator who has expertise in both the source legal language and that of the target group should evaluate the output from machine-translation tools. If the translator determines that the machine output is not meaningful, then the material must be edited. Therefore, depending on the length and nature of the material, professional human translation from the outset may be more cost-effective than the two-step process required by machine translation.

Google Translate and Systran are examples of services that allow for quick statistical translations of text and sentences. Google Translate does a statistical analysis by searching for similar alreadytranslated sentences and then suggesting the most probable equivalent. It does not search for meaning or similarity of meaning. Some services focus on a specific language while others cover multiple languages. These are some of the available online translation services and their features:

■ Google Translate, http://translate. google.com, is a "statistical machine translation system, which means that it doesn't try to unpick or understand anything." "Rather it looks for similar sentences in already translated texts on the Internet. Google Translate is free and covers fifty-two languages.

- Systran, http://www.systransoft.com/, creates software that instantly translates text from and into fifty-two languages.
- Apertium, http://www.apertium.org, is a rule-based, open-source machine-translation engine that focuses mostly on Latin-based European languages.
- Babelfish, http://babelfish.yahoo.com/, is similar to Google Translate and is powered by Systran rule-based machine translation.
- Google Translator Toolkit, http://
 translate.google.com/toolkit/, allows
 human translators to work faster and
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 Word, OpenDocument Text, Rich Text,
 and Plain Text documents for translation. Alternatively the address of an
 individual Web page can be entered for
 translation of that page.
- POOTLE, http://translate.sourceforge. net/wiki/pootle/index, is a Web portal that allows online translation, collaborative translation, and volunteer contribution.
- Google Transliteration, http://www.google.com/transliterate/, allows translation of words into languages that use non-Roman alphabets. At this writing it supports twenty-two languages. It also has tools that can be added to websites; one such tool is Virtual Keyboard, an onscreen keyboard that allows LEP website users to type in any of over seventy-five languages by using their familiar keyboard layouts. Is

⁹See David Bellos, *I, Translator*, New York Times, Mar. 20, 2010, http://nyti.ms/dkEAeb.

¹⁰See Word2Word Language Resources, Machine Translation Software (n.d.), http://bit.ly/94n1Xa.

¹¹Bellos, supra note 9.

¹²Google Transliteration Labs, Google Transliteration (2009), http://bit.ly/96RsRZ. The languages are Amharic, Arabic, Bengali, Greek, Gujarati, Hebrew, Hindi, Kannada, Malayalam, Marathi, Nepali, Oriya, Persian, Punjabi, Russian, Sanskrit, Serbian, Sinhalese, Tamil, Telugu, Tigrinya, and Urdu.

¹³Google Code, AJAX Language API for Transliteration (2010), http://bit.ly/clcXTn; *id.*, AJAX Language API for Virtual Keyboard (2010), http://bit.ly/cO6Vix.

How to Use Translation Tools and Next Steps

While many of the machine-translation services offer a variety of features, they alone cannot replace the unique skills of a human translator or be solely relied upon to give LEP clients meaningful access to information and services. The better approach is to use machine-translation services to create a draft that a human translator then reviews for accuracy and to capture the idea and form of the original.

Public interest law offices and agencies should pool resources to meet the translation needs of their LEP clients. ¹⁴ In the face of limited resources, explore the possibility of creating online networks of translators who can revise and finetune machine translations of vital document forms and website content. This approach has been successful in some communities and can serve as a model for public interest law offices and agencies working to improve access to our justice system. ¹⁵

¹⁴Julia Alanen, Language Access Is an Empowerment Right: Deprivation of Plenary Language Access Engenders an Array of Grave Rights Violations, 1 International Legal Studies Program Law Journal 98 (2009), http://bit.ly/b1ApQz.

¹⁵See Global Voices, Lingua Global Voices Translation Project (n.d.), http://bit.ly/doax4V; Technology, Entertainment, Design, TED Open Translation Project (n.d.), http://bit.ly/axFYch.



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