Upholding translation quality with highly specialized translators

Not all translation service providers are the same. Translation companies are often specialized by industry and types of translation; some use only translators, while others use a combination of translators and machine translation technology.
Even though machine translation (or MT) continues to advance and can be helpful to get the gist of a document, human translation is still a critical component, particularly for translations of highly technical or publication-quality documents, such as patents or other legal documents. Machines can attempt to translate based on a stored glossary, on a linguistic corpus (sentence, phrase, or word based), or on a set of algorithms and mathematical formulas (rules-based or statistical). When technically precise translations are needed, the work should be performed by human translators who are intimately familiar with both the meaning behind the words and the technical subject matter.

The advantages of a human translation for technical documents

Technical translation requires a combination of linguistic and technical knowledge. For example, a chemical patent should be translated by someone familiar with both patent terminology and chemistry. In this case, in addition to the task of translation, the translator or trained desktop publisher may be responsible for some adaptations to the patent in order to comply with formats and regulations mandated by the country in which the patent will be filed. If the final document does not comply with those requirements, it can lead to high, unforeseen business costs due to the patent’s rejection or on a set of algorithms and mathematical formulas (rules-based or statistical). Technical translation requires a combination of linguistic and technical knowledge. For example, in addition to the task of translation, the translator or trained desktop publisher may be responsible for some adaptations to the patent in order to comply with formats and regulations mandated by the country in which the patent will be filed. If the final document does not comply with those requirements, it can lead to high, unforeseen business costs due to the patent’s rejection and a lack of patent protection. Similarly, when translating a marketing piece from English into Chinese, using a translator familiar with market-technology and chemistry. In this case, in addition to the task of translation, the translator or trained desktop publisher may be responsible for some adaptations to the patent in order to comply with formats and regulations mandated by the country in which the patent will be filed. If the final document does not comply with those requirements, it can lead to high, unforeseen business costs due to the patent’s rejection and a lack of patent protection. Similarly, when translating a marketing piece from English into Chinese, using a translator familiar with market-technical knowledge. For example, in the case of the Chinese marketing document, localization of the document for the intended audience. All these aspects of professional translation are beyond the scope of machine translation’s capabilities.

Machine translation does have its place, being a useful tool for a person or company who needs to understand ideas or general themes in a foreign document, or when a precise translation is not needed.

Examples of machine vs. human

The chart below shows examples of a human translation compared to the renderings of two machine translation applications on a German patent dispute document. Examples 1 to 3 come from the first page of the patent, which lists the parties and addresses of those involved in the patent dispute. The final example is from the body of the document, where the letter writer refers to specific aspects of the patent.

<table>
<thead>
<tr>
<th>Example</th>
<th>Human Translation</th>
<th>Machine Translation #1</th>
<th>Machine Translation #2</th>
<th>Human Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Einsprechende: Speaking up:</td>
<td>Opponents:</td>
<td>Opponent:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Zustelladresse der Einsprechenden: delivery address of the speaking</td>
<td>Opponents of the delivery address</td>
<td>Mailing address of Opponent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. l. Zum Streitpatent: (l). On the dispute</td>
<td>l. The patent dispute</td>
<td>l. Regarding the disputed patent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. h. Die wässrige Aufschlämmung weist bei Eintritt in den Sprühturm eine Temperatur von 50 – 80°C auf.</td>
<td>h. is in a temperature the aqueous Aufschlämmung upon entry into the spray Tower of 50-80 °C.</td>
<td>h. The aqueous slurry has when it enters the spray tower at a temperature of 50 – to 80 °C.</td>
<td>h. The aqueous suspension has a temperature of 50 to 80°C upon entrance into the spray tower.</td>
<td></td>
</tr>
</tbody>
</table>

In example 1, both the human translator and machine translation #2 translated “Einsprechende” as “opponent,” with the machine turning it into a plural word. Machine Translation #1 erroneously renders it as “speaking up,” a mistake replicated in the next line down, in example 2, when the words “Zustelladresse der Einsprechenden” were used as a heading over the opponent’s address. While the second machine translation got the words themselves right, the order of the words was mixed up. If this document was needed only for informational purposes, neither of those mistakes would be a problem because the meaning is clear. However, this is a legal document that was needed for official purposes and that required a precise translation.

Example 3 shows how both types of translator, human and machine, were able to translate the words, but the human translator was also able to use the context of the document to place the words in the proper order.

Example 4 more clearly shows how a machine translation cannot correctly translate complex information. Machine translation #1 was unable to translate the word “Aufschlämmung” and skipped over it. Machine translation #2 translated the same word as “slurry,” while the human translator used the word “suspension.” A quick Internet search of the World Intellectual Property Organization, a patent database, showed that “aqueous slurry” had 1,136 hits
while “aqueous suspension” had 3,153 hits. Both “slurry” and “suspension” are valid words and valid translations, but it would be up to the human translator (who would know the difference between the two words due to his specialization) to determine which word is appropriate based on the context of the document.

Machine translation continues to improve, refining as we further understand the complex interactions between language, culture, and technology. However, due to the complexities of language, the role of humans may never be completely eliminated from the processes of translating technical documentation or revising technical documents. A medical document

Ten questions to ask your translation service provider

1. Where do the translators reside?
   In-country translators best know the language of the intended audience, including its subtleties, because they live their language and culture on a daily basis.

2. Are your translators “general” translators or do they have knowledge and a background specific to your industry (e.g., medical, IT, automotive)?
   Advanced degrees in specific areas give translators needed comprehension of technical documents. A medical document is best translated by someone who has a degree or degrees in health-related fields, preferably earned in his or her native country.

3. What is their localization process, including desktop publishing and quality control?
   A good translation company will have a well-defined process and will be able to talk about the details of the process as well as show examples of how the process assists in ensuring that the translation is of the highest quality.

4. How regularly do the staff and translators, including external linguists, receive continuing instruction or training on new processes?
   Training should not be limited to in-house employees. Using today’s technologies to reach across the world, the company should be able to offer regular training to their translators.

5. Do they use terminology lists or glossaries?
   The translation company should have language-specific and industry-specific glossaries and terminology lists that not only help with translation but also provide increased efficiency. If you are a client that provides regular work to a translation company, your contractor should create a client-specific glossary to reduce translation times while increasing linguistic quality.

6. Do they welcome and implement feedback?
   A good translation company will welcome feedback and implement it quickly. The goal is to produce the highest-quality translation at the lowest possible cost to the customer; a continual feedback loop between the translation company and the client makes that possible.

7. Are they willing to provide translation samples?
   While some companies are wary of providing free translations to inquiring potential clients, the company should be willing to provide limited samples of translations before a contract is signed, to demonstrate the quality of work they will provide.

8. Are they open to having you visit their facilities or willing to meet face to face?
   Having a one-on-one visit with not only the sales person but also a project manager or top-level manager in the translation company will help to build a lasting relationship of mutual understanding as well as help establish expectations for both parties.

9. What kinds of translation technology do they use: machine translation, translation memory technology, or both?
   Finding out whether a company uses machine translation or translation memory as part of their process is helpful to determine how savvy they are with cost-saving tools. If machine translation is used, a post-edit phase of the translation may be mandatory because a human edit will catch MT mistakes. There is a variety of translation memory technologies on the market, and a competent translation company should be able to use and be proficient with the majority of them. A small portion of translation companies have created and/or patented their own translation memory technology, giving those companies a distinct proficiency advantage when working with that technology.

10. Have they been certified by any quality- or process-certification standards (for instance, ISO 9001 or EN 15038)?
   Both the ISO and EN certification processes look at how well a company is functioning internally as it works to produce translations. You want a translation provider that uses efficient processes to safeguard and expedite your translation in addition to producing accurate translation work.

Emmanuel Margetic is the vice president of marketing at Multi-Ling, a global company specializing in the translation of patents and technical materials in the IT, chemical, medical technology, biotechnology and automotive industries. He has more than 15 years of experience in the translation industry.

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