Machine Translation vs. Human Translation

Can Machine Translation (MT) replace human translators? A growing tendency in government to seek MT solutions as opposed to human translation, most often driven by cost-saving motives and ill-informed understandings of the translation process, profession, and industry, threatens the quality of mission-critical translation work.

Background

MT involves the use of very large databases and statistical models to translate text from one language into another. MT technologies have improved exponentially since research began in the 1950s, with the goal of producing an infallible, universal translation tool. Despite constant improvements, researchers and practitioners recognize the concrete and measurable limitations of using MT. Rather than MT replacing human translation, the effect these advanced technologies have had has been to enhance the speed of human translation. MT is a human translation accelerator, not a replacement.

Limitations to MT

1. Limited Availability of Languages

Some languages are not conducive to MT. This is a result of the way MT (including Neural MT) is developed. Modern MT technology works by compiling large databases of translations and using statistical algorithms to predict which words are likely to appear together. This requires a large body of examples--the more examples a translation software has, the more accurate the translation is likely to be. Less-commonly spoken and rare languages have less content with which to build a usable database, resulting in more inaccurate translations in these languages.

MYTHBUSTING: CAN MT REPLACE HUMAN TRANSLATION?

MT IS HIGHLY COMPLEX

To translate just one segment [of text] "necessitates 2.5x as many instructions to the computer as are required to simulate the flight of a guided missile."

www.smartling.com

TOO MUCH WORK FOR MT

Google Translate supports 80 languages but there are almost 7,000 in use. An estimated 1,000 are of significant economic importance--that leaves **920 languages unsupported by MT.**

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HUMAN TRANSLATORS ARE MORE RELIABLE

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A study pitted 3 major MTs against human translators. Though the MTs were faster, the humans were significantly more accurate.

www.k-international.com

2. **Suitability of Source Content for MT**

Most translation needs are not conducive to MT. It is true that some formal, organized and structured texts with repetitive patterns and predictable use of specialized terminology lend themselves better to MT, insofar as the result requires less editing by a human translator.

While there are many considerations to make in determining whether the content or the intended use of the final product is suitable for low-quality translation results, the most important is whether or not there is a risk associated with an erroneous translation. In certain settings, such as legal, medical, and intelligence settings, MT may pose too great a risk for such high-impact uses of the translated text.

3. **Where MT Isn't Sufficient**

The human elements of context, inference, nuance, dissembling, persuasion, and emotion and cultural proficiency are beyond the capability of MT. A human translator ensures that the translation conveys the same intent as naturally as possible. MT simply does not read as, or sound, authentic to native speakers of the target language, which becomes more apparent as the level of difficulty or technicality of the content increases. This results in MT translations that can be inaccurate and can strike the reader as mechanical, with a lower overall quality and a diminished the impact in the target language. However, MT output may be edited by skilled human translators to address these facets of translation.

Recommendation

While both MT and human translation play an important role in the translation industry, human translation by skilled professionals will always produce a more accurate, precise, and true to nature result than MT. The American Translators Association and the National Council for Languages and International Studies recommend that the Congress ask lep.gov, a unit of the Office of Federal Coordination and Compliance, to indicate best practices for translation in US government agencies under its purview.

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ata American Translators Association
The Voice of Interpreters and Translators

The American Translators Association, founded in 1959, is the largest professional association of translators and interpreters in the U.S. with over 10,000 members in more than 100 countries. ATA's primary goals include supporting the professional development of translators and interpreters and promoting the translation and interpreting professions.

JNCL-NCLIS

The Joint National Committee for Languages, a 501(c)3 organization, and the National Council for Languages and International Studies, a 501(c)4 organization, develop policy recommendations for the Language Enterprise and advocate to the federal government for implementation of those policies . Together, JNCL-NCLIS represent nearly 140 member organizations active in virtually all aspects of the Language Enterprise -- PreK-20 education, research, training, assessment, translation, interpreting, localization, and more.