Computer Assisted Translation and its Tools

The first thing you need to know in this lesson is that translation technology *is the* cover term *of* anything that is computerized and helps to facilitate the process of translation in its various denominations. *This lesson presents what is meant by MT (machine translation) and CAT (Computer-assisted translation) and its tools respectively*.

1. Machine Translation:

First, translation technology means "machine translation" (MT). This, in turn, has many synonyms, such as Fully Automated High Quality Machine Translation (FAHQMT), computer translation, and automated/automatic translation. There is no human involvement. *When you hear machine translation you directly think of Google Translate whether its online or offline product*.

Machine Translation technology is the first generation of translation technology. Since its conceptual inception in the late 1930s after modern computer technology came into availability and the enthusiastic promotion of it by Warren Weaver in his seminal *Memorandum* (1949, cf. Hutchins 2000) to meet the huge demand for information transfer between languages (mainly English and Russian), machine translation has gone through several phases of development *since 1940s*.

2. Computer-assisted translation:

Second, translation technology means "computer-aided translation". It is also called machine-assisted translation or computer-assisted translation. Depending on how much human labour is needed, this can be further divided into human-assisted machine translation *(HAMT)* or machine-assisted human translation *(MAHT)*. In this type of translation technology, human involvement is required. Computer-aided translation came into being in the 1980s after the dissatisfaction with the output of machine translation technology in the first several decades of its development and the availability of large computer storage capacities. Bilingual and multilingual corpora, particularly those paralleled ones, make it possible for computer to memorize or store corresponding segments in two or more languages. These segments can then be retrieved to be reused and recycled endlessly for future translation tasks. The idea of translation retrieval and later Translation Memory, as a core technology, was put forward by Arthern (1979), Kay (1980), and Melby (Hutchins 1998) and helped to lay the theoretical foundation of computer-aided translation. Here, the technology incorporates editing done by human into the software and the process of translation is interactive to guarantee the quality of the final output. Translation generated this way is usually in little or no need of post-editing.

Two companies, Trados in Germany and StarGroup in Switzerland, were able to put this revolutionary idea into practical use in 1984. Many followers (e.g. Déjà Vu, MemoQ, Wordfast, and Yaxin which became later well-known software) have up to now developed similar technologies and established similar businesses beyond Europe. This type of software is

primarily designed to enable translators, working individually or in teams, to reuse the results of previous translation jobs to arrive at both efficiency and consistency. At present, leading computer-aided translation tools often incorporate machine translation technology to offer instant suggestions and solutions for translators[i].

3. Computer-assisted Translation Tools:

Nowadays CAT tools are cloud based i.e. they are accessible from anywhere at any time through web browsers. These tools are also found in software like SDL Trados and MemoQ.

1. Translation Memory Tools:

These are databases of text in the original language and translations into several other languages. This tool divides the units into segments. It is responsible for storing the content into the database of already translated parts. So, as the translator goes further with the translation, the translation memory tool offers them suggestions that are similar to the already translated segments.

2. Terminology Managers:

These help translators maintain and manage consistent terminology throughout a translation, especially when it comes to translating marketing and customer-related content. The integration of AI techniques like NLP and content recognition streamlines this process because AI systems capture, extract, and analyze text content to identify the point the author writes about and find in-context patterns and terminology in a few seconds.

3. Terminology Databases:

These tools can be either downloaded or used online to help the translator get accurate terminology for the translation. These databases allow the translator to add terms and check whether it consistently translated the added words throughout the draft.

4. Bitext Aligner

It is a tool that aligns the translated and the original text side by side so that the translator can compare the two versions more efficiently. The software will attempt to fit each segment of the original work with the translated text.

5. Full-Text Search Tools

These are also called indexers. Full-text search tools enable the translator to search for various kinds of already translated documents.

All of these computer tools are essential for keeping track of possible mistakes done by the translator, enhancing the quality of the translation.

What is more, CAT tools will not interfere with the authenticity of the translated content. So, the interpretation, in general, carries the imprint of the translator. The conveying of the meaning is done by how the translator understands a particular phrase or sentence.

And CAT tools will only make it more accurate. It is why CAT is of great value to translators, and it can find its application in other business fields as well[ii].

[i] See, Qian, Duoxiu. ¨Translation Technology and Its Practical Applications.¨ An Encyclopedia of Practical Translation and Interpreting, edited by Chan Sin-Wai, The Chinese University Press, PP 393-413.
[ii] https://www.goodfirms.co/computer-assisted-translation-software/blog/computer-assisted-translation-software