Research on Computer-aided Translation Technology on the Background of Information Age

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Abstract. The rapid development of science and technology has brought a strong impact on people's traditional habits, among which there is no lack of subversive impact. Even in language communication, the progress of computer technology has been involved and achieved a place. Although computer-aided translation software cannot replace translators to complete translation work independently, it plays an important role in translation work. It not only greatly simplifies the work of translators, tightens the burden for translators, improves their work efficiency, but also helps translators to make faster progress in translation, which can be described as half the result. Through the discussion of the help of computer translation technology, computer aided translation software and computer translation software to translators in translation and learning, as well as the application of computer aided translation technology, the author studies the computer aided translation technology in the background of information age.

Keywords: Information age, computer-aided translation, translation software

1. Introduction

With the profound changes in the economic and cultural pattern of the world, the exchanges in international politics, culture, economy and other fields are becoming more and more frequent. As a necessary tool for the exchange of human civilization, the importance of language and writing is becoming more and more prominent. Translation plays a key role in the conversion of languages and characters so that people who use different languages can understand each other. In translation, translators should not only be particularly proficient in language, accurate translation, but also have a clear understanding of the cultures of both sides [1]. To complete some translation, translators often work hard and need to check a lot of information in order to do a good job. In the information age, with the help of computer-aided translation, translators do not need to spend a lot of time and energy looking for that important word from the voluminous books, but can quickly obtain relevant knowledge through the computer at any time, and can quickly find experience from the memory.
function of computer-aided translation software, and can also quickly improve their translation literacy with the help of it [2]. Nowadays, learning to use computer-aided translation software has become a necessary ability for translators.

2. Computer-aided Translation Software

2.1 Overview

Computer aided translation technology refers not only to the translation software used by translation staff in the process of translation, but also to all the tools based on computer technology in the process of translation. As early as the late 1950s, our country began to define machine-aided translation as an important task of scientific development. By the time of reform and opening up, we had realized the success of computer translation for the first time in Chinese history [3]. However, until the end of the century, after the rapid rise of computer network, the economic globalization deepened day by day, the dependence of people on world information became stronger and stronger, and the demand for translation increased in exponential form, and the computer-aided translation technology went up and flourished rapidly. The internal processing program of computer-aided translation technology is shown in Figure 1.

![Figure 1. Internal processing flow of computer aided translation technology](image)

2.2 The Current Situation

The French first put forward the idea of using machine-aided method to realize language translation, and constantly tried and improved it in practice. With the emergence of computers in 1946, while the operating system and network have become more and more powerful, the feasibility of computer-aided translation technology has also increased, and has been constantly improved and optimized in long-term translation practice. Up to now, the emergence of computer-aided translation software blowout indicates that computer-aided translation technology has become more and more perfect and can be recognized and frequently used by people. At present, under the influence of grammatical complexity, diverse situations, cultural diversity, social differences and other factors, computer-aided translation plays a very important role in translation and undertakes a lot of translation
work, but the translation work is still coordinated by translators and computers, and the translator is the main body. A lot of mathematical basic theories should also be used in computer-aided translation technology.

2.3 Basic Principles

The most representative product of modern computer-aided translation technology is computer-aided translation software, abbreviated as CAT. Computer aided translation software establishes a memory core library, which contains a large number of reference books and reference content. When translators use computer-aided translation software for translation, the memory library is useful. It will compare the translated text with the contents of the word bank in the memory core library, provide translators with multiple reference suggestions, and sometimes use its complex database to directly give some translated text reference. The model text of these translations is also part of its memory library. Finally, the translator collates and modifies the translation results of computer-aided translation software and can be written quickly. This not only saves translators the time to check a large number of materials, but also greatly improves the efficiency of translation. The principles are showed in figure 2.

![Figure 2. The principle of computer-aided translation software.](image)

3. Applications of Computer Aided Translation in Practice

3.1 Translation of Science and Technology

The translation of scientific and technological literature is a very important category in translation work. Human science and technology can be as high as today, is the global people on the basis of full communication, exchange, learning on the basis of joint efforts, otherwise, the pace of technological development may be much slower. It is translation work that gives researchers around the world the opportunity to always stand at the forefront of technology and look ahead without repeating what others have already done. In the translation of science and technology, the most important thing is to be faithful to the original language, name, terminology and data, and cannot play any subjective role in the aspects related to principles and results. These requirements are like tailor-made for computer-aided translation technology. Therefore, in science and technology translation, computer-aided translation technology is often more accurate and easier to understand than manual
translation.

3.2 Business translation
Because of the special nature of business, business translation involves a wide range of areas, covering all kinds of industries, but also including all aspects of life, and there are many business professional terms. In business translation, the choice of sentences is very precise, a word difference may lead to a great difference, can be described as "an error of one millimeter, a thousand miles of fallacy". The number of professional terms is large, the meaning is astringent, it is difficult for translators to master the degree of familiarity, but for computer-aided translation technology, it is a piece of cake. Manual translation is more flexible in syntactic structure, and it is easier for every sentence to adapt to the current context [4]. In these two aspects, computer translation technology is slightly inferior, but most of the time it can be accurately expressed, not the overall situation.

3.3 Translation of Literary Works
From the point of view of translation, the translation difficulty of literary works is undoubtedly the most difficult, not only considering that the translated works can be properly placed in front of the readers, but also considering the artistry of the author sending words and sentences. Neither of the two can say the success of a translated literary work, and both of them must consider subjective factors. Computer-aided translation technology cannot consider the author's thought, the background of the times and the corresponding social influence, so that the work loses its original characteristics [5]. Experienced, the translator can stand in the author's translation, so that every word is like from the original author's mouth, and often there is no lack of magic pen, more recognized by the readers.

4. Conclusions
In the period of the great integration of computer and Internet to various industries, as an inextricably linked translation industry in the era of computer birth, of course, it is not willing to lag behind, but makes full use of computer-aided translation technology to carry out the integration of initial language and culture, translators and translation culture, and in this process to expand the cultural vision of translation staff and improve the translation literacy of translators. There is more and more information from all over the world. It is impossible for translators to master a lot of information in the short term because of time and energy, but computers are not subject to such limitations. Its computing and processing power is strong enough to not only obtain the latest and large amount of information through the network, but also memorize the relevant content according to experience in the process of using translators. Provide a reference translation to the translator in the event of a similar sentence. It has also been proved that computers have reached the same level as human beings in science and technology translation, business translation and so on, but they are far less than human beings in the translation of literary works full of artistic information. It is believed that computer-aided translation technology will play a greater role in the road of translation in the future, which is not only the good news of translators, but also the gospel of the target readers.

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