Application of Computer Aided Translation in Technical English Manual

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Abstract: At present, economic globalization is deepening, international economic and trade exchanges are getting closer, and the demand for translation of technical English manuals is increasing day by day. In the past, translation work relied more on manual translation, but with the rapid development of modern information technology, computer-assisted translation technology came into being. This greatly reduces translation costs and improves work efficiency. This article discusses the related content of computer-aided translation and technical English manual. The author combines the application process of computer-assisted translation in technical English manuals to carry out detailed analysis with actual application cases. The purpose of the author is to improve the application effect of computer-assisted translation and improve the translation accuracy of technical English manuals.

1. INTRODUCTION
Computer-aided translation was put forward relatively early, but it remained at the conceptual stage in the early stage. After the computer technology continues to mature, this content has also begun to be implemented. Computer-aided translation provides the necessary technical support for the rapid rise of ideas. At this stage, translation software is applied in many fields, which also provides a lot of application convenience for people's knowledge learning. The application of computer translation to technical English manuals has a positive effect on saving translation manpower input and improving the reliability of translation results.

2. AN OVERVIEW OF COMPUTER-AIDED TRANSLATION AND TECHNICAL ENGLISH INSTRUCTIONS

2.1. Features of Technical English Manual

2.1.1. Rich Variety
At present, there are many types of technical English manuals used. According to the type of products provided, the technical English instructions involved include biopharmaceutical instructions, mechanical product instructions, electronic product instructions, cosmetic instructions, daily necessities instructions, etc. Take biopharmaceutical instructions as an example. The instructions include the main components of the drug, drug properties, attending functions, specific dosage, emergency content, preservation method, approval number, etc. Under normal circumstances, different types of technical English manuals have large differences in the focus of their content. The similarity of the contents of the same type of technical English manuals is relatively high. For example, medicines with similar
functions will mostly remain similar in terms of ingredients. Therefore, when translating it by computer, translators can refer to the same type of technical English manual for translation, so as to obtain more reliable analysis results.

2.1.2. Comes with Illustrations
In order to better improve the comprehensibility of technical English manuals, we will include illustrations in the manuals, which can also better improve the comprehensibility of the manuals. Such content is mainly in the manuals of electronic products, biopharmaceuticals and other products. Take a common mobile phone manual as an example. As shown in Figure 1, the mobile phone manual contains many indicators, which are combined with numbers to enhance its guiding value. This can also better help users understand the main structure of the mobile phone, allowing users to more clearly understand product information. Moreover, in this way, users can better use the product based on the information provided in the map. In this way, analysis ambiguity is not easy to occur, thereby reducing errors in the operation process and improving the pertinence of the product application process.

![Figure 1. Mobile Phone Profile Diagram](image)

2.1.3. Many Professional Terms
Many technical terms are also included in the technical English manual, which is also an objective analysis of the content. For example, in the English manual of biopharmaceutical science and technology, there are professional terms such as Angelica, Helicobacter, glycerin, and Ethyl p-hydroxybenzoate. In the mechanical product manual, proper nouns include clutch, spark plug, touch screen and other professional nouns. These professional terms are generally less common in daily translation, which also puts forward better requirements for the basic quality of translators. This also increases the time cost of proper nouns, which brings great adjustments to manual translation.

2.2. Computer-assisted Translation Content

2.2.1. Basic Content
The continuous optimization of big data technology provides a good development opportunity for the translation industry. The continuous optimization of computer technology has also continuously
improved the accuracy of translation results. Moreover, computer technology also has a very powerful storage function during use. It can be stored separately for this category according to the marked keywords. It can quickly extract value data during subsequent screening of information and add it to the system for application. In addition, in the context of the ever-increasing depth of intelligent technology research, we are also trying to intelligently process translation software. Such as intelligent language recognition and online translation. They all belong to this type of software. At present, youdao translation, Baidu translation and other software that are used more often belong to this category of software. However, there are still some grammatical and proper noun application errors in the translated content. This is also the content that needs to be focused on during subsequent development.

2.2.2. Application Advantage
From the current usage, the translation software that is often used in the computer translation process is SDL Trados software. In the specific application of the software, the storage and memory function in SDL Trados will automatically record the sentences that have been translated. Subsequently, when the system is facing the translation sentence, if its content is similar or consistent with the stored sentence, then the translation can be completed directly at this time, or a similar translation result can be obtained. The translator can correct the grammar in the article according to the reference content provided. The corrected translation will also be recorded in the library to lay the foundation for subsequent translation of other sentences. When SDL Trados stores phrase, the unit is word or phrase. Its grammar has also been greatly improved, and according to statistics, the integration of computer translation can save at least 40% of translation costs every year. Moreover, with the growth of service life, the amount of cost saved by computer-assisted translation is also increasing, which has good application value [1].

3. EASE OF USE
APPLICATION PROCESS OF COMPUTER AIDED TRANSLATION IN TECHNICAL ENGLISH MANUAL

3.1. Preparation Before Translation
When sorting out the technical English manuals, we need to do some basic preparations first. As shown in Figure 1, many extended words and derivative words in the software are used in the computer-assisted translation process. Therefore, translators need to transform the format of the data information according to the actual situation, and extract some terms and vocabulary, and also need to establish a corresponding memory bank. After the format conversion is completed, the translator can transform the text into a state that can be translated and edited. For example, if there is an html format file in the text, you can use SDL Trados to open it during translation. Some picture formats or PDF files need to be processed by Abbyy Fine Reader. This can save 60% to 70% of the compilation time and speed up the progress of the work [2].

| Extend                  | Derive          | Derive                |
|------------------------|-----------------|-----------------------|
| Hub                    | Debug           | De+bug=Debug          |
| Switch                 | Explorer        | Explor+er=Explorer    |
| Router                 | Narrator        | Narrat+or=Narrator    |
| Network bridge         | Subnet mask     | Sub+net mask=Subnet mask |

3.2. Translation Process matching Processing
The storage and memory function of SDL Trados when expanding the translation of scientific and technological English content. It will automatically record the sentences that have been translated, and then directly obtain similar translation results when facing the sentence to be translated. Especially for repetitive content, the memory bank will also directly extract such information into the translation area, and directly use the content of the link. The translation content with high similarity will also be entered
into the translation area as a reference, thus speeding up the translation speed of the entire work. Many proper nouns are used in the technical English manual. These nouns are difficult to find matching content in the initial situation. After the translation is completed, the translator also needs to perform a detailed evaluation of the translated content, and use it after confirming that there are no problems. Thereby reducing the probability of translation errors [3].

3.3. Check after Translation
The translator also needs to check it after getting the corresponding translation. The inspection content includes correctness of vocabulary and grammatical correctness. At the same time, the translator will also use the corresponding calculation software to speed up the verification of the article when controlling its application, so as to obtain a more reasonable translation result. Moreover, the translator needs to complete the verification process of some initial content according to the requirements, and unify the terminology used in the translation process. Meanwhile, the translator needs to identify some errors in the translation, such as text translation errors, digital translation errors. With the help of computer translation software, 60% of the time cost can be saved. Moreover, the accuracy and standardization of the translation results obtained by computer-assisted translation in the translation inspection process are relatively strong, and the format is also consistent with the original application status. This not only reduces the time cost required for re-typesetting, but also has strong economic characteristics [4].

4. ANALYSIS OF APPLICATION EXAMPLES OF COMPUTER AIDED TRANSLATION

4.1. Original Presentation
The Bluetooth speaker has the following features during use: (1) Bluetooth audio; the maximum receiving distance is 10 meters; (2) Bluetooth call: high voice clarity, no echo; (3) MP3 playback: can be played directly MP3 files stored in the TF card, or connected to a third-party terminal (computer, mobile phone, etc.) via Bluetooth, can play the stored MP3 software; (4) FM radio: FM stereo radio is adopted, and the radio station has a memory playback function; (5) Audio input: There is a stereo audio input port, which can be directly connected to various audio playback software; (6) Breakpoint memory function; after reconnecting, it can automatically play the music played when it was disconnected and the volume level; (7) Built-in battery: Use lithium battery as the built-in battery, with features such as green, environmental protection, energy saving and practical; (8) USB connection: connect to a computer, you can copy or delete MP3 files stored in the TF card.

4.2. Proper Nouns
In the translation process of the sentence "Breakpoint memory function", the result of literal translation with the aid of computer-aided translation is "memory performance after disconnection". However, the result of such literal translation cannot express the professionalism of the vocabulary. Therefore, translators will use "breakpoint memory" as a professional vocabulary when using computer translation software for processing. And "function" can choose the translation result of "function" to apply, thereby improving the practical value of the proper noun itself [5].

4.3. Second Test
When testing the sentence translation results, you can select "can be played directly MP3 files stored in the TF card, or connected to a third-party terminal (computer, mobile phone, etc.) via Bluetooth, can play the stored MP3 software;" to perform translation verification. The result of its direct translation is "You can play TF card MP3 files, or play internal MP3 software after connecting to a third-party terminal (computer, mobile phone, etc.)." In the process of translation, there are some grammatical deficiencies in the content, which also needs to be adjusted at this time. For example, it can be translated into "You can directly play the MP3 files stored in the TF card. Or you can play the stored
MP3 software after connecting to a third-party terminal (computer, mobile phone, etc.) via Bluetooth", which improves the value of the content [6].

4.4. Software Application

The translation software used in the computer translation process is SDL Trados software. The software will transform some format data information in specific application links. At the same time, the software extracts some terms and vocabulary in the process, and establishes a corresponding data memory bank. Moreover, after the database has completed the format conversion processing, the translator can also edit and translate it according to requirements, so as to obtain more accurate translation results. For example, "Built-in battery" directly translates to "built-in battery", and it can also be displayed more professionally and concisely [7].

4.5. Treatment of Special Words

There are some special words in the article that need to be processed during translation, such as "Bluetooth call" and "USB connection". In order to show the professionalism of these words in translation, the translator needs to sort out the literal translation results. In this way, more professional content such as "Bluetooth call" and "USB connection" can be obtained. This also facilitates people to better understand the content of translation [8].

4.6. Check Translation Results

After the translator gets the corresponding translation, he also needs to check it. The inspection content includes the correctness of vocabulary usage and grammatical correctness. The translator will also use the corresponding calculation software to speed up the verification of the article when controlling its application, so as to obtain a more reasonable translation result. According to the information content obtained above, in the specific translation link, the specific translation content is as follows: "The Bluetooth speaker is in use. It has the following features: (1) Bluetooth audio; its maximum receiving distance is 10 meters; (2) Bluetooth call: its voice clarity is high and there is no echo; (3) MP3 playback: it can directly play the MP3 files stored in the TF card. Or it can play its storage after connecting to a third-party terminal (computer, mobile phone, etc.) via Bluetooth (4) FM radio: it uses FM stereo radio, and the radio station has memory playback function; (5) audio input: it has a stereo audio input port, which can be directly connected to various audio playback software; (6) breakpoint Memory function; it can automatically play music and volume when it was disconnected after being reconnected; (7) Built-in battery: Use lithium battery as the built-in battery with green environmental protection, energy saving and practical characteristics; (8) USB connection: It can be connected to a computer and can copy or delete MP3 files stored in the TF card."

5. CONCLUSION

In summary, with the continuous acceleration of translation software updates, the accuracy of computer translation results that can be obtained is also improving. Moreover, the application of computer-assisted translation in the technical English manual can optimize the translation content. This has a positive effect on improving the reliability of translation results.

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