Application of Computer Technology in English Translation

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Abstract. With the continuous development of economy, communication is increasing between China and overseas, and business activities are becoming more and more frequent. In this process, foreign trade English plays an important role. Foreign trade English is unique, professional and practical. Under different scenes of foreign trade, English words can express different meanings. In the course of trade, foreign trade English can help both of parties to communicate, and can achieve the translation of language, the interpretation of contract, the understanding of letter and so on. In the process of language communication and reading important documents, we need a solid foundation of English language and profound foreign cultural background, and have a strong ability to deal with the professional knowledge of international trade and the use of English vocabulary. The characteristics of foreign trade English language are analyzed in terms of vocabulary, style and grammar. At the same time, in the process of language understanding and translation, we need to meet the requirements of real-time. With the frequent exchange of foreign trade between our country and other countries, a large number of English documents will be produced, the relevant departments have put forward higher requirements for the accuracy of these documents and real time of these documents, the traditional manual translation can not meet the growing demand for foreign trade translation. With the help of computer aided-translation software memoQ, we help people do auxiliary translation, therefore, it can reduce translator's burden and improve the accuracy of translation and efficiency of translation. We select a large number of texts and adopt memoQ software to translate, so as to analyze the role of computer-aided translation software in the translation process of English documents.

1. Introduction

With the continuous development of economy, China joined WTO in 2001, there is an increasing trend in international trade. In the process of economic and trade exchanges between countries and regions, foreign trade English[1], as a main communication tool, has become a necessary ability by more and more foreign trade enterprises. Under general conditions, people used to regard foreign trade English as business English[2], foreign trade English and business English are not the same, there is a certain connection and there are obvious differences. Business English is a standard English for business purposes. It includes foreign trade English[3], foreign commodity circulation English[4], cross-border transaction English[5], international tourism English[6] and cross-border transportation English[7]; foreign trade English is the English of foreign commodity circulation, that is, foreign trade English is a part of business English.

Foreign trade English can be divided into written foreign trade English[8] and oral foreign trade English[9]. In the written foreign trade English, the language is more standard, the sentence structure
is more complex, while in oral foreign trade English, the words are more colloquial and the sentence structure is relatively simple. In the process of foreign trade transactions, the type of English should be in accordance with specific scenarios. In the using process of vocabulary, we should try to be as accurate and professional as possible, so that both sides of the transaction can understand the meaning of language clearly. Foreign trade English, as an English of foreign commodity circulation, it is different from ordinary English, foreign trade English is involved in a wide range[10], which included politics, economy, education, trade and other fields, foreign trade English needs to be translated accurately, and the transmission of information can be realized in a short time. From the view of the development of world, most of the foreign trade transactions are communicated in English, and the role of foreign trade English in foreign exchange can be seen, at the same time, it is necessary to pay attention to the fact, that is, the demand of foreign trade English is increasing, it can help translators reduce the burden of translation by computer aided translation software[11], therefore, further improve the efficiency of language exchange.

The rapid development of computer technology has not promoted the popularity of computer aided translation (CAT) software. According to the relevant literature[12], scholar conducted a sample survey on the translation staff and analyzed the data of nearly 50000 reclaimed questionnaires, found that many Chinese translators did not like to put translation software into assisting their work, only 60% of investigators said that the translation software was used in the work, an the same time, scholar investigated this part of the crowd, less than 50% of translators said that translation software was helpful for translation work. In the translation market, most of the translator's recognition are low for translation software, partly because the quality of the translation software is not high, partly because the research is too little in the field of computer aided translation, partly because the translator has a certain bias on computer aided translation software. In the context of globalization, computer aided translation software can help translators achieve higher accuracy of translation and better real-time of translation. Therefore, computer aided translation software is proposed to meet the needs of development in the times.

We analyze the characteristics of foreign trade English, and study it from vocabulary, stylistic and grammatical respectively, choose different English sentences for analyzing. In the process of language understanding and translation, it is necessary to achieve more accurate translation in a relatively short time. In the face of a large number of English documents, the relevant departments have put forward higher requirements for the accuracy of these documents and real-time of these documents, and the traditional manual translation can not meet the growing demand for foreign trade translation. We adopt the computer aided translation software memoQ to test and select a large number of texts for performance testing, so as to demonstrate the effectiveness of software.

2. The Introduction of Computer-Aided Translation Softwares
In the range of world, Trados is a widely used computer-aided translation software (CAT), which its market share is over 15%. In 1998, China introduced CAT software, successively appeared Yaxin CAT company and snowman CAT company, and translation software market have experienced exponentially growth, many domestic enterprises have also entered the translation market, and the translation software has made new breakthroughs in accuracy and real-time. According to relevant surveys, CAT software commonly used in China includes: Trados, Wordfast, snowman CAT and Yaxin CAT.

2.1. Trados Software
Trados[13] is a computer aided translation software, developed by SDL, name comes from 3 words, namely, Translation, documentation and Software, word "Translation" is taken out of the letter of "Tra", word "documentation" is takes out the letter of "do", word "Software" is taken out of the letter of "S", so that it make the word of Trados, the history of Trados software development as follows:
Table 1. The History of Trados Software

| Year | Development Event |
|------|-------------------|
| 1984 | Trados GmbH company launched Trados software. |
| 1992 | Trados GmbH company launched Multi Term software based on Windows version. |
| 1994 | Trados GmbH company launched Translator's Workbench software based on Windows version. |
| 2005 | Trados GmbH company was bought by SDL company. |

2.2. Yaxin CAT
Yaxin CAT was developed by a Chinese company, it is a computer-aided translation software that can help businesses and individuals translate languages. The related technologies involved include Translation Memory (TM) technology, Machine Translation (MT) technology, this kind of software can help people interact with machines, the main advantages of software are as follows:

Table 2. The Advantage of Yaxin CAT

| Number | Description |
|--------|-------------|
| 1      | The translation is more accurate and efficient. |
| 2      | It adopts human-computer interaction technology. |
| 3      | Foreign Language is translated by computer translation software and translators proofread the result. |
| 4      | The system provides abundant lexicon, which can add and delete vocabulary. |

2.3. Wordfast Software
Wordfast[14] is a powerful translation computer-aided translation software, it has a memory function that helps many language translators to do business with business companies at home and abroad. According to relevant statistics, the software has more than 50000 users, its development history is as follows:

Table 3. The History of Wordfast Software

| Year | Development Event |
|------|-------------------|
| 1999 | Wordfast was designed and developed. |
| 2000 | Wordfast is composed of a series of macro commands, which can be compatible with Windows operating system. |
| 2002 | Wordfast formed a stable software version. |
| 2009 | Wordfast released the translation studio version, which included the classic version of Wordfast and the professional version of Wordfast. |

2.4. Snowman CAT
The snowman computer-aided translation software is developed by a Chinese company, the software has the ability of fast computing, the ability to store vocabulary is stronger than any other translation software, the biggest innovation of software is that the operation interface is simple and its advantages are as follows:

Table 4. The Advantage of Snowman CAT

| Number | Description |
|--------|-------------|
| 1      | The user interface is simple and easy to operate. |
| 2      | It can achieve faster speed of search, which can reach 500 thousand sentences / sec. |
| 3      | It can be translated in the contrast mode, and the previewing effect is better. |
| 4      | The array of the translated texts is more aligned, which is in accordance with the English typesetting format. |
3. The Language Characteristics of Foreign Trade English

China joined the WTO in 2001, the trade contacts are becoming more frequent between China and foreign countries. In the communication of language, we should not only pay attention to the accuracy of translation, but also pay attention to the scene of language. We analyze the language characteristics of foreign trade English from vocabulary, language style and grammatical perspectives.

3.1. The Characteristics of Vocabulary

Vocabulary of Foreign trade English has its unique industry characteristics, and there are obvious differences with general English in collocation of vocabulary and choice of vocabulary. What we need to emphasize is that foreign trade English serves the process of foreign trade. In the process of using, people can be more inclined to adopt a more straightforward way of expression and choose a relatively simple vocabulary. These words need to be reasonably matched, they have strong professionalism, which can help the processing of trade, can enable to effectively complete the transaction of both sides. Some words are made up of ordinary words, but the meaning of expression has changed, so we need to take them as a whole to understand vocabulary.

Many professional words are made up of common words, a part of translation is as follows:

“We must know, there are some international vocabulary, such as the committee on Trade and Development, World Trade Organization, and the committee on Budget, Food and Drug Administration, on Telecom Services, on Financial Services, UN Security Council, on Technical Barriers, Federal Reserve Committee of the United States, Subsidies and Anti-subsidies, Agriculture, World Anti-Doping organization, Sea Transportation, Labor Flow, and Customs Valuations, etc.”

It describes many international words, such as "UN Security Council", which consists of 3 words, they are "UN", "Security" and "Council", these words are nouns, nouns and nouns are not connected, the combination of words can express new meaning, therefore, in the process of translation. it is necessary to regard this type of vocabulary as a whole.

“There are 3 ways of issuing L/C: Full Cable L/C, Short Cable L/C, Mailed L/C. There are many kinds of bak documents, for example, commercial loan invoices, goods information tables, bill of lading / air waybill, commodity insurance vouchers, land transfer vouchers, special customs invoices and so on.”

This paragraph describes the evidence that a bank can prove, among the vocabulary, "L/C" means a letter of credit, a word "invoice", it represents a kind of bill, rather than a sound, the meaning of "invoice" may be related to the sound. At the same time, it should be noted that, in the writing of foreign trade vocabulary, vocabulary may occupy a long character, not easy to write, it will increase the number of writing characters that people are making in the transaction documents. Therefore, some words can be abbreviated, as shown in table 5:

| Abbreviation | Description                      |
|--------------|----------------------------------|
| AWB          | Air Waybill                      |
| C/VO         | Certificate of Value and Origin   |
| DDP          | Delivered Duty Paid              |
| GM Food      | Genetically Modified Food         |
| VER          | Voluntary Export Restraints      |
| ASEAN        | Association of South East Asian Nations |
| IMF          | International Monetary Fund      |
| ECB          | the European Central Bank        |
| FDA          | Food and Drug Administration     |
| PC           | Piece                            |

As we can see from table 5, many abbreviated words can express multiple meanings in different scenes, in which "PC" expresses a number of words in foreign trade, it can also express personal computer in the computer field; "GM" expresses GM in foreign trade, and it can also express general
motors; "DDP" represents material delivery after a settlement tax in foreign trade, it can also be represented as a data processing pipeline.

In the expression of words, there is a phenomenon, which one word have many meaning or one meaning have many words, that is, a word can express different meanings in different semantics, or similar meaning needs different words in different scenes. We express the "multi meaning of one word" as A phenomenon of vocabulary, and express "multi words of one meaning"as B phenomenon of vocabulary, the A/B phenomenon of vocabulary is shown in Table 6:

| Phenomenon Type | Example Sentences |
|-----------------|-------------------|
| A               | He set up in business as a property developer. |
|                 | They are now doing almost twice as much business as they were last year. |
|                 | He runs a small business in the town. |
|                 | A teacher’s business is to help children learn. |
|                 | Investing in stocks can be quite a risky business. |
|                 | The world commodity price has been affected by inflation. |
|                 | The country's main products are cocoa and gold. |
| B               | We make a 20 percent discount off the price of goods. |
|                 | We sailed from Newcastle with a cargo of coal. |
|                 | A large shipment of grain has just arrived. |

In Table 6, A phenomenon of word, we take the word "business" as a situational vocabulary, in the first sentence, "He set up in business as a property developer.", vocabulary can be expressed as a business; in the second sentence, "They are now doing almost twice as much business as they were last year.", vocabulary can be expressed as volume of transaction; in the third sentence, "He runs a small business in the town.", which is expressed as a store; in the fourth sentence, "A teacher" s business, which can be expressed as responsibility, that is, the teacher's duty is to educate the students; in the fifth sentence, "Investing in stocks can be quite a risky business.", which can be expressed as a career, that means occupations.

The B phenomenon of vocabulary is described as "goods" in different words, the word "product" represents the meaning of the goods, but it emphasizes the process of production; the word "commodity" means the meaning of the goods, but the scope of its application is very wide.

3.2. The Characteristics of Language Style

The style of foreign trade English is closely related to its professional characteristics, its style can also be expressed as a form of letter. Economic activities and trade activities involve trade contacts between entrepreneurs, executives, individuals and even countries, the trade will take different forms of language between different organizations, that is, various forms of communication, which include legal style, business letters, trade documents, contracts and agreements, and different language styles get different requirements for the application of vocabulary and the collocation of vocabulary.

Formal language and rigorous language are the characteristic of foreign trade English. Economic activities and trade activities involve the responsibilities, rights, obligations and risks in the trade of both sides, and the memorandum and agreements, such as words and certificates, they are vouchers for various trade, it can promote development of trade, and it has a certain legal effect. Therefore, the format and content of these materials must be cautious in the writing process and words must be accurate. If the material is wrong in individual words, it will bring irreparable damage to both parties.

In some business contracts, agreements or letters, some more formal and solemn words will be added, such as:

"you are already aware of our terms of business, but to encourage you to store a stock of the new computer accessories; we will allow a certain discount of 10 percent on any order received on or before June 11.”
In this statement, "be aware of" means that the meaning of knowing and knowing is equivalent to "know", in the presentation of the event time, the "on or before" is put here, which is a relatively vague statement, that means the opponent's attitude to "you" is very important in the sentence itself.

In the application of foreign trade English vocabulary, some ancient vocabulary is used, but in the current vocabulary, ancient vocabulary is rarely used, it can increase the official taste of statement, it will highlight the formality of transaction, such as:

“We have pleasure in sending you herewith the goods and a list of goods' prices, which can be as reference.”

In this sentence, we adopt the word "herewith", which is linked "here" with "with", in many English articles, this kind of vocabulary is very small, usually be separated, or, directly represented as "send sth with", it generally does not represent "we have pleasure in doing sth", this way of expression highlights the fact that the sender is very honored to complete something, and the receiver is a person with a certain status.

The legal documents of foreign trade (including various contracts, agreements and documents) and the language of business letters have a more strict expression. This kind of documents have legal effect, and the statements need to be added to attributes of many things. In terms of structure representation, there is a fixed format, which can be applied in a sample, the style is edited in the mode of contrast.

“China Lenovo Computer Corporation (hereafter called Party A), Beijing, China and International Business Machines Corporation (hereafter called Party B), State of New York, the United States, after friendly negotiation by authorized representatives of both parties, have enter into contract with items.”

In this sentence, we can see the two sides of negotiation, their business names, and their headquarters, which can be explained, adopt the way of bracket, which can be simply writed, it describes as group A, group B, both sides of the negotiations are represented for both parties to complete the transaction, therefore, the representative of a company has certain authority. When it describes, it needs to be represented as "authorized representatives" instead of "representatives".

The expression of bill is more fixed, you can fill in any content in the corresponding field, in the whole bill, the format is fixed, the content of the filling will not affect reading, the fixed format of bill plays a binding role.

B/L No:
Consignee:
Notify Party:
Place of Receipt:
Place of Delivery Final Destination:
No. of containers:
Description of Goods:
Gross Weight:
Measurement:

In this form, there are several attributes to be filled in, which include the place for the goods to be delivered, the location of the cargo, the container number of storing, the description of goods, the net weight of goods and so on.

3.3. The Characteristics of Grammar
There is no fixed grammatical structure in foreign trade English, but there is a clear gap between foreign trade English and common English in the grammatical structure, of which, the most important thing is that the sentence must have integrity.

Foreign trade English requires the integrity of sentences, which is required in terms of contracts, agreements, trade documents or business correspondence. The sentence is long and complex, each sentence expresses an independent meaning, there is not much connection between sentences, it is more about the overall situation of the transaction, occasionally, interrogative words or imperative words are adopted to express the demands of the transaction.
“This is the second time that we have complaints about shipment delays. If you fail to ship the goods in the extended shipment date again, you will lose probably half of the business you usually receive from us, since our order is very big for us.”

In the expression of this sentence, we can see that a large number of attributive are adopted in the sentence, in the delay of the goods, the "This is the second time that" was adopted to modify the goods, it emphasize that the delay of the goods had occurred two times; when the business was lost, the "you usually receive from us" is adopted to modify the delay of the goods, and we would no longer deal with the goods.

The passive voice does not need to specify the subject element, it can better express the fact, so it becomes a very important characteristic of foreign trade English. In foreign trade English, the degree of nominalization is high, and more active voice is used to express the meaning, but more personal color will be produced, which will bring some misunderstanding to the other party, that is, whether the information of statement is true.

“As we mentioned in last year, we need the goods to meet our development, so we are only compelled to seek an alternative source of supply.”

In this sentence, the buyer, in order to express his urgent demand for the source of goods, put "be compelled to" into expressing his own mood, so as to inform the seller that it needs to be able to supply it quickly.

4. Experiment And Analysis of English Translation Based on Memoq Software
MemoQ is a computer aided translation tool, its interface is simple, have powerful function. It integrates language editing function, word library management function, translation memory function and context analysis function into one system, which enables translators to adopt multiple functions to complete complex translation tasks at the same time. We introduce the memoQ software module, then design experiments to analyze the accuracy of language translation and real-time of language translation.

MemoQ has 5 main functional modules. We introduce them separately, and then design experiments based on this software, which can analyze the performance of language translation.

(1) The software can count the files, there are many statistical methods, which include the vocabulary statistics, the comparison with translation memory database, the similarity of internal content and the appearance frequency of format labels; in the statistical process of the format label, the location of label can be taken into consideration, and the statistics are set up, we install fixed length; the similarity of content can be analyzed, rather than just the frequency of vocabulary in the process of statistical documents.

(2) The software has a tagging function, it can be marked for similar information in the process of translating the text, this similarity can be compared to translation memory database, stored reference, professional terminology data set, and the external resources.

(3) The software has the function of translation memory management, The software will create unit and manage the information for a large number of translation information, part information will apply for a unit in the translation database and store the information; in the process of translation, the stored information can be transformed as the translation memory electronic exchange (TMX)[15], data exchange between translation management module and auxiliary system; the storage information needs to be delivered remotely, in order to reduce the data loss caused by data analysis, the information adopts the data format of XML to realize the integrity of data transmission.

(4) The software has the function of terminology storage, a term is a set of words, consisting of many words, the expression of term is a combination of the abbreviations, a new vocabulary can be born; the term is a special vocabulary, interpreter the term is interpreted to grasp the composition of the term; the same term can be used. To express different meanings, terms need to be interpreted in combination with context, Linking the interpretation, the same term is helpful for the query of term meaning.

(5) The software has a function of reference information management, it can interpret words in a variety of ways, the vocabulary can be a term or a low frequency vocabulary; in the process of querying the vocabulary, the software will mobilize all the databases, which include the vocabulary
database, the unit database, the terminology database; from all the databases, the matching of current querying word is used to get the explanation of the word.

We described the software function of memoQ, and we carried out experiments on the accuracy of memoQ software and real time of memoQ software. The translation steps of different experiments are consistent, which include the explanation of software operation, the addition of software lexicon, the translation of text, and the evaluation of translation results between groups; the difference is that, the translation accuracy's experiment is counting the vocabulary number of correct translation, and the translation real time's experiment is the amount of vocabulary in the calculation of unit query operation.

In the process of translation, students need to understand the basic operation of software, practice the addition / delete operation of vocabulary, select a large number of foreign trade English texts for training of translation, revise the translation manuscript, submit the formal translation version, and the group evaluate the translated version of receiving. The group evaluate the translated texts and then analyzed the data. The results are as follows:

Table 7. The Comparison of The Correctness of Translation

| Object           | Correct Rate(%) |
|------------------|-----------------|
| Text₁            | 60              |
| Text₁+memoQ      | 80              |
| Text₂            | 55              |
| Text₂+memoQ      | 70              |

Table 8. The Comparison of Real-Time of Translation

| Object           | Speed of Vocabulary Query(x words /min) |
|------------------|----------------------------------------|
| Text₁            | 10                                     |
| Text₁+memoQ      | 20                                     |
| Text₂            | 13                                     |
| Text₂+memoQ      | 37                                     |

We can see from table 7 and table 8 that the introduction of memoQ software can greatly improve the accuracy performance and real-time performance of translation. In the test of the accuracy of translation, the adopting of memoQ software can increase the accuracy of translation by 15 percentage points; in the test of real-time translation, the adopting of memoQ software can speed up the query speed of vocabulary, and the speed will increase to more than 2 times that of the original speed.

5. Discussion
With the continuous development of economy, communication is increasing between China and overseas, and business activities are becoming more and more frequent. We analyze the language characteristics of foreign trade English from vocabulary, language style and grammatical perspectives.

In the process of vocabulary, people can be more inclined to adopt a more straightforward way of expression and choose a relatively simple vocabulary; the format and content of these materials must be cautious in the writing process and words must be accurate; there is a clear gap between foreign trade English and common English in the grammatical structure, of which, the most important thing is that the sentence must have integrity.

We choose memoQ as a computer aided translation software, analyze the function of the software, which includes file statistics function, tagging function, translation memory management function, terminology storage function, and reference information management function. We compare the accuracy and the real time of the translation software, the experiment proves that the translation software can greatly improve the accuracy of translation and speed up the query speed of vocabulary.
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