

INNOVATIVE TECHNOLOGIES IN TRANSLATION

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Annotation: the article analyses the usage of the newest informational technologies in the field of translation. The article examines broadly available informational technologies, which are meant to improve the efficiency of the translation process and help the translator. Particular attention is given to the most progressive programs for translation, based on neural network and cloud storage technologies.

Keywords: informational technologies; translation; translator; machine translation.

Annotatsiya: maqolada tarjima sohasida eng yangi axborot texnologiyalaridan foydalanish tahlil qilinadi. Maqolada tarjima jarayonining samaradorligini oshirish va tarjimonga yordam berish uchun mo'ljallangan keng tarqalgan axborot texnologiyalari ko'rib chiqiladi. Neyron tarmoq va bulutli saqlash texnologiyalariga asoslangan tarjima uchun eng ilg'or dasturlarga alohida e'tibor beriladi.

Kalit so'zlar: axborot texnologiyalari; tarjima; tarjimon; mashina tarjimasi.

Аннотация: данная статья анализирует использование новейших информационных технологий в сфере перевода. В статье рассматриваются доступные информационные технологии, способствующие повышению эффективности процесса перевода и помощи переводчику. Особое внимание уделяется передовым программам для перевода, на основе нейросетей и облачных технологий хранения информации.

Ключевые слова: информационные технологии; перевод; переводчик; машинный перевод.

Introduction

Nowadays, opportunities of informational technologies are growing exponentially. Undoubtedly, this phenomenon covers areas of our lives and nearly every profession. Thus, the demand on adaptation to rapidly growing changes is also increasing. The implementation of new technologies and using machines instead of humans has already changed the modes of work on factories. Therefore, innovations will not bypass the sphere of translation activity, either. It follows that in modern realities a specialist translator needs, in addition to translation competencies, to also master the competencies necessary for effective work within the information society. Machine tools can help to make the translation process more convenient, which is revealed in this work. In the nearest future the development of the cloud storage technologies and neural network will allow expanding the opportunities of the type of translation, such as collective translation, and minimize the responsibilities of the translator to checking and editing the translated text.

Cloud storage technologies in the field of translating

Nowadays, different WEB (World Wide Web) technologies are widely used in the area of translation, which makes it possible to translation team members work collectively from distance. Primarily, it is important to note translation systems based on cloud technologies (Translation

cloud). This type of technology allows translators to organize the efficient collective process of translation activities. This method is not new when it comes to large projects with high amount of work. Notwithstanding all the opportunities, there are some issues in the given technology which include bringing the project to its stylistic terminological homogeneity and rectification of the processed text. Formerly, it required translators to update the translation memory of their environment immediately after importing their part of the project into the database, in order to bring the project to homogeneity.

The solution to this problem was the use of the TM (Translation Method) server database, with access directly from the automated translation systems environment. This allowed all translators involved in the project to have access to an organized TM which was stylistically and terminologically homogeneous. This feature exempt project team members from constantly exchanging files. Many cloud automated translation systems are furnished with a user-friendly interface that makes it easier for the user to work with the environment. Nonetheless, there are few constraints on the usage of the programs working on the cloud based type of TM.[1] Those are: problems with anonymity and safety of the storage of information and the need for constant connection to the network. Moreover, the human factor can also be considered here, since some translators claim that because of the instant control of the process by project manager, they lose their freedom in creativity and inventiveness. Nowadays, the most efficient and popular systems are XTM Cloud, Trados Studio, MemoQ, Wordfast, Déjà vu and OmegaT. The development of these technologies is expected to change the way translators work with software and reduce the constraints in communication and access to the working environment.

Systems of automated translation. This type of the systems have been already mentioned above. The history of automated translation goes back to decades, one of the pioneers in the idea of automated translation is Peter Petrovich Troyanskiy who suggested a machine for selection and typing words in the process of translation from one language to another in 1933. Another representative of this idea was Martin Kay, who articulated the modern form of the automated translation system in 1980.

Nowadays, the most popular ones are CAT-systems (Computer Aided Translation). Their technologies are built on the TM (Translation Memory), which allows using terminology and words saved in the system of translation projects that were made previously. CAT tools can make some corrections and changes in the text with the help of segmenting the information. CAT systems split information into segments, which is further appears in the more convenient form to use. It is important to note that the system is oriented more on the legal or technical translations and works on the basis of the terminology. Thus, the effectiveness will reduce if journalistic, literary and fiction texts are translated. In other words, the less specialized the source text is, the less accurate and appropriate the translation of this text will be. [N.A. Mokhov, 2018: 231]

Neural networks and modern machine translation. The translation of the information from source language to target language using a special software or computer program is called machine translation. There are systems of machine translation based on three main translation algorithms. The first type of system is based on statistical analysis methods. These systems use the statistically most common forms of words and phrases. In such systems there are no preset rules, and with an increase in the number of translations, the accuracy of statistics and translation increases. Nonetheless, this system is efficient in working with small sentences, and phrases, but translation of the whole texts usually turns out to be incoherent and disjointed. The second type of system is characterized with using a dictionary in the program database and a set of rules for

constructing the text. This type of system is considered as least effective, because of the problems with abstract and context understanding of the given text. The third type is the most modern, and it is considered to be the most operative type of machine translation. The technology of this system rests on deep neural networks.

A neural network is a machine learning program, or model, that makes decisions in a manner similar to the human brain, by using processes that mimic the way biological neurons work together to identify phenomena, weigh options and arrive at conclusions. [Warren S. McCulloch and Walter Pitts, 1943: 120-132] Because it is built on the model of the CNS (central nervous system) it can perform interlinguistic machine translation without remembering the translation of individual phrases, but by encoding the semantics of a sentence. [Nazarchuk Yu.I.,2017: 180–189.] The principle of work is built not only on matching appropriate words and phrases, but neural network system also examines and takes into consideration the relationships and the link between these languages, which makes this system flexible. [Ivanova Yu.V.,2006: 125-126] One of the most famous machine translators Yandex Translate and Google Translate, are based on a neural network system. The basis for Google Translate is called GMNT and the neural network, which is the basis for Yandex Translate, is called YandexGPT. These models make it possible to form a complex network capable of adaptation and limited self-learning. The most modern machine translators are based on recurrent neural networks, which allow them to efficiently process tasks where previously specified parameters are important. [Krasnorudsky I.V.,2017: 435-439.]

In the nearest future, according to the information given in this article, neural network algorithms and systems may replace statistical systems and in the field of translation, neural network will be able to approach human translation with the high share of probability.

Conclusion

This article analyses how modern informational technologies influence and modify the ways and ideas about the process of translation. Technological progress will continue to change human life and in order to remain competitive in the translation market having competence in digital translation tools is becoming a necessary skill. According to modern tendencies, such as cloud storage technologies and deep neural networks, a translator needs to be adaptive to new, constantly changing requirements.

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