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PRINCIPLES AND PROBLEMS OF MODERN TRANSLATORS

Аннотация. Данная статья посвящена современным переводчикам и методам их реализации. Рассматриваются история развития машинного перевода. Приводятся основные категории программного перевода, их основные черты. Проводится анализ самых распространенных переводчиков, сравниваются методы машинного перевода. В заключении делается вывод о качестве автоматического перевода, а также о его будущем.

Ключевые слова: английский язык, перевод, машинный перевод, язык, переводчик, методы.

Abstract. This article is devoted to modern translations and to methods of their realization. The history of the development of machine translation is considered in this article. The main categories of translation programs and their main features are given. The analysis of the most widespread translators is carried out, methods of machine translation are compared. In conclusion, an inference is drawn about the machine translation's quality and about its future.

Keywords: the English language, machine translation, language, methods, translation.

Since computers were designed and came to our life some scientists started pondering about the possibility of a computer-assisted translation. The idea was tempting – utilization of computers would greatly speed up the translation time and also made possible to save money on some interpreters' services. Eventually, after IBM Company demonstrated the first system of an automatic machine translation, many countries and companies got involved into a development of translation programs and software products. However, years later, developers realized that computer software was not able to completely replace human interpreters with their flexible minds and skills. Scientists argued that any language interpretation is a

creative process and machines could not be creative enough to convey a multiple meaning. Nevertheless, some private and government companies continued further research and development, as well as, funding and investment into this sector of computer technologies. Thus, starting the second half of the nineteenth century, engineers produced few methods of machine translation and developed new programs, which were first tested and implemented by NASA. [2] Nowadays, the quality of e-translation products has significantly improved and increased in numbers. Professionals and lay people use a range of different interpreter's software for a daily personal communication, as well as, for the translation of simple texts and documents. However, the quality of such computer applications is not advanced enough to create, for example, a sophisticated, literary text.

Within the scope on the present work, it is possible to outline some questions for discussion: What would be some principles, which utilized in the foundation of some automatic translation programs? What would be some problems related to the machine translation? What would be a possible future outlook regarding the e-interpreters program?

Initially, it is necessary to clarify what the machine translation is. Machine translation (MT) is transformation of one language into another made by computer systems without human assistance. There are three main types of automatic interpretation used in modern translators: **Rule-Based Machine Translation, RBMT; Statistical Machine Translation, SMT; Hybrid system, including RBMT and SMT.**

Rule-Based Machine Translation or RBMT is often divided into two subtypes: **Transfer System** and **System of Interlingua**. The **Transfer System's** functioning is based on the following: originally, system analyzes a translating sentence morphologically, lexically and semantic-syntactically. Then the system creates a syntactic-semantic parsing tree and after that it converts the structure of the input sentence in accordance with the formal requirements of the targeted language. The result is a conversion of sentence into a foreign equivalent [1, p. 4]. The **System of Interlingua's** functioning is based on the following: originally system affirms that any sentence can be translated into a universal meta language (it is a language of the first level) as a result the system obtains semantic meaning which can be represented similarly, and even meaningfully by using some other language. As it was noticed, this system's subtype uses grammar rules, as well as conducts the semantic analysis of the text producing a higher quality of the machine translation.

Statistical Machine Translation system's functioning is based on the following: it runs words primary in two forms. In the original language and in the language required for translation, afterwards the system receives statistical data about used words' and phrases' and then, it gives the most probable result. Statistical Machine Translation is a self-learning system, this means that the translation process of the texts is based on the statistics data, which was analyzed earlier, so the quality of the statistical translation depends on the number of previously translated texts. [1, p. 4] Thus, the **Statistical Machine Translation** system is closer to an artistic speech than RBMT, because it operates on a different approach to interpretation and it is also the self-learning system. However, there is still a high probability of grammatical and semantic mistakes.

Hybrid Translation includes statistics and grammar structures and function. Moreover, the hybrid translation system uses morphological and semantic analysis of texts, additionally to the idea of utilizing a statistical analysis. This approach is the most helpful to eliminate a majority of semantic mistakes in translation and gives some hints of artistry to the final translation result.

In order to identify some problems in machine translation, it is necessary to analyze translation results of commonly used, various interpreters. Based on a conducted survey which topic was "What translators do you use?", the following research tools were recognized as the most popular programs for the translation purposes. The research showed a subsequent result: Google translator – SMT (70 %), Yandex translator – SMT (18%), Translate-Hybrid (5 %). Based on the gathered opinion, the most frequent discrepancies encountered in the translation process were related to a small stock of professional vocabulary, the lack of translation of phraseological units (paraphrased verbs, idioms), the lack of congruence between Russian and English grammar.

Comparative analysis considers this survey's result, and thus, e-translator tools based on their ability to give in a correct translation are compared. In the beginning, some controlled phraseological units and set expressions are chosen: сыт по горло (fed up), когда рак на горе свистнет (when pigs fly), льет как из ведра (it's raining cats and dogs), take with a pinch of salt (относиться с недоверием), a sore point (больная тема), out of the blue (внезапно) and identify how programs will convert them from English to Russian language or vice versa.

Yandex's results were: fed up, when pigs fly, cats and dogs – взять с щепоткой соли, больной точки, изсинего. As it was displayed, Yandex

good enough translated Russian to the point we would understand, but as to English idioms, the interpretation was not good or correct enough. Only one of three phrases was right.

Google's results were: fed up with, when the cancer on the mountain whistles, it's raining cats and dogs – взять с щепоткой соли, больной, совершенно неожиданно. **Google's** translation was correct in four cases out of six. There is not even an approximated translation exists for the phrase “when the cancer on the mountain whistles” into English language. Apparently, an idiom expression represents an enhance translation difficulty.

Prompt's translation results were: when cancer on the mountain whistles, it's raining pitchforks – возьмите с щепоткой соли, больной вопрос, внезапно. Incorrect interpretation and lack of accuracy were observed as well, confirming a necessity of customizing the program's dictionary. However, when translation results were analyzed for phrases above, there were not any contexts surrounding these phrases, so it was decided to check how **Prompt** will translate a full sentence: “Я сыт по горло твоими песнями.” There is the result: “I am full up your songs”. As we observe, that translation of phraseological unit is incorrect again. The idiom “fed up” exists in English and it literally translates as “сыт по горло”, but “full up” (fill out) means to make something full, or to become full [4], so technically the translation received an incorrect meaning.

The second attempt to compare requires translating a small sentence, which has some professional words: “To use applications remotely requires a lot of bandwidth, which is only really available from a broadband connection or a leased line to the ASP itself.” [3, p.58]

Yandex's translation result: «Для использования удаленных приложений требует большой пропускной способности, который только действительно существующих из широкополосное соединение или выделенная линия до самого АСП». As we can see, program does not put words in right order, and, as the result, the meaning of the sentence has significantly changed (использования удаленных приложений instead of использование приложения удаленно).

Google's translation result: «Для использования приложений удаленно требуется большая пропускная способность, которая действительно доступна только из широкополосного соединения или выделенной линии для самого АСП». This translation is better than previous, it looks like a coherent text, closer to original meaning, but there are some mistakes too.

Prompt's translation result: «Использовать приложения удаленно требует большого количества пропускной способности, которая только действительно доступна от широкополосного соединения или выделенной линии к самому ASP». **Prompt's** texts have some small collisions with words connections, but translated sentence has the almost same meaning as the original.

In conclusion, there are three main methods of machine translation, however, all translators demonstrated sometimes a questionable result with discrepancies in translation, which were noted and based on the interpretation and conversion of ether idioms, phraseological units or terminology. Difficult to say now which of the methods could be the most reliable in the future, so far, looks like the Hybrid method has a good chance to be developed into a something successful. Currently, this method is still in the stage of improving the efficiency of the entire translation process. As well as, Google and Yandex translating systems may have a promising future. This statement is based on the fact that the SA (statistics analyses) programs are self-developing and also Google and Yandex translating systems have already existed for more than 10 years, so they have accumulated a big systematic database. It is obvious that daily translation process getting more and more interactive. For example, automatic systems attempt to predict translation by producing some suggestive translation hypotheses. These hypotheses may be either a complete sentence or just a suggested phrase, which facilitates a consequent human editing of the translated text, as well as improving the quality of the machine translation.

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