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## ОСОБЕННОСТИ ТЕХНИЧЕСКОГО ПЕРЕВОДА В РАМКАХ ОБМЕНА НАУЧНО-ТЕХНИЧЕСКОЙ ИНФОРМАЦИЕЙ В ПРОЦЕССЕ СВО (на примере инструкции к самолету-истребителю F16)

В данной статье доказана необходимость наличия военных переводчиков там, где идет военный конфликт, в так называемых горячих точках, при этом отмечено, что в настоящий период времени для Российской Федерации такой точкой является Украина, где проводится специальная военная операция.

Автором подробно охарактеризованы основные тактические характеристики самолета-истребителя F16 и предложены последовательные этапы работы над кратким письменным переводом инструкции к самолету-истребителю F16.

*К л ю ч е в ы е с л о в а: переводческая деятельность; военно-технический перевод; истребитель; переводчик; инструкция, цель.*

## FEATURES OF TECHNICAL TRANSLATION IN THE FRAMEWORK OF THE EXCHANGE OF SCIENTIFIC AND TECHNICAL INFORMATION IN THE PROCESS OF SMO (USING THE EXAMPLE OF THE INSTRUCTIONS FOR THE F16 FIGHTER AIRCRAFT)

This article proves the need for military interpreters where there is a military conflict, in the so-called hot spots, while noting that at the present time for the Russian Federation, such a point is Ukraine, where a special military operation is being conducted.

The author describes in details the main tactical characteristics of the F16 fighter aircraft and suggests successive stages of work on a short written translation of the instructions for the F16 fighter aircraft.

*К e y w o r d s: translation activities; military-technical translation; fighter; translator; instruction; goal.*

The development of science and technology in our time is impossible without a wide exchange of special information between people speaking different languages. Usually people speaking different languages use technical translation. A technical documentation translator is an intermediary, without whom this exchange would be impossible. A military translator can be a technical documentation translator, too, since he or she often has to deal with technical documents (instructions for foreign equipment, plans, etc.) [1].

It should also be noted that military translators often use wide variety of online translation programs and electronic dictionaries. However, due to the fact that there are very few specialized dictionaries designed for military translation in digital format, they do not meet the ever-increasing requirements for military translation. Regarding online translation programs, it should be noted that in many cases they make mistakes if we are talking about highly specialized texts, which include instructions, manuals and specifications for military equipment, enemy negotiations, etc. Such programs do not take into account the context well enough, and due to the ambiguity of terms found in specialized military texts, the translation may be erroneous, which can lead to irreparable consequences. Accordingly, it is necessary to develop an algorithm for translating highly specialized military texts. Such an algorithm, among other things, can be used in the process of training artificial intelligence and neural networks designed to work with foreign-language military texts. All of the above will make it possible to automate the activities of military translators as much as possible and make full use of all the possibilities of modern digital technologies.

Military translators are needed first of all where there is a military conflict, for instance flashpoint. Nowadays it's Ukraine, where a special military operation is

carried out. Therefore the demand for translation specialists in the military sphere is very high. For example, the United States is going to supply Ukraine with F-16 Fighting Falcon fighters and teach the Ukrainian pilots to fly the plane. This compact jet offers a high-performance weapon system at a relatively low cost, making it an attractive choice for the United States and its allies.

To successfully resist the attacks of this fighter, the Russian Armed Forces need to know its technical characteristics. Using the example of this instruction, we will analyze the features of the technical translation of instructions for foreign military equipment. For the first look, it will be enough to make a short translation of the instructions (or summary).

The F-16 is a single-engine, highly maneuverable, supersonic, multirole tactical fighter aircraft. It was developed by General Dynamics for the United States Air Force (USAF). It is the most popular fourth generation fighter [2].

The aircraft has undergone six major changes including four generations of core avionics, five engine versions, five radar versions, five electronic warfare suites and two generations of most other subsystems.

It is designed for high-precision weapons strikes on ground targets at any time and in any weather in conditions of tough opposition from the enemy's air defense.

F-16 main specifications:

It weighs 8.3 tons. Its length is 15.06 meters. Its wingspan is 9.96 m. The maximum speed is 2,178 km/h. Its combat range is 546 km. The weight of each bomb is 454 kg.

The F-16 fighter aircraft is armed with 20 mm Vulcan 6-barrel rotary cannon. It has up to 511 rounds. Despite being lightweight, the F-16's fuselage maintains its strength, and it can withstand up to nine Gs with a full load of internal fuel [3].

The work on a short written translation of the instruction consists of successive stages:

1. First we read the original document through. It is necessary to use working such sources of information: dictionaries, reference books, special literature, etc.

2. Then we work on the logically highlighted parts of the original: highlight the meaningful parts of the text (a sentence, a paragraph, a section); translate the part of the text, observing the style of the original.

The manual for the F16 aircraft is freely available on the Internet. The manual consists of 14 sections, though they describe in detail only the flight characteristics of the fighter and how to control it.

3. Finally, we edit the translation in order to check the quality, uniformity and logic of the presentation of the entire translation and make the necessary amendments. It is necessary to check the accuracy of terms in special military reference books and dictionaries [4].

Examples:

*1. The pilot induces steering commands to the FLCS via the Side Stick Controller (SSC) and rudder pedals. – Пилот подает команды рулевого управления в систему управления полетом с помощью контроллера боковой ручки управления (БРУ) и педали руля направления.*

2. *As opposed to many other aircraft the F-16 is built for an unstable mode, so called Relaxed Static Stability (RSS).* – В отличие от многих других самолетов, F-16 рассчитан на работу в нестабильном режиме, на так называемую расслабленную статическую устойчивость (PCY).

3. *The cockpit of the F-16 is rather special as there are very few aircraft that give that much external visibility.* – Кабина F-16 имеет свои особенности, поскольку очень небольшое число самолетов могут обеспечить такой хороший внешний обзор. [5; 6].

The main goal of translation is to achieve adequacy that is such a translation in which the content is transmitted at the necessary and sufficient level using the norms of the translating language. At the same time, the main task of the translator is to skillfully perform various text transformations so that the translation text conveys all the information contained in the original text as accurately as possible, while observing the relevant norms of the translating language. All of the above also applies to the translation of military texts, which, as mentioned above, is complicated by the need for a clear knowledge of terminology and consideration of context due to the ambiguity of terms in modern English. Due to the fact that digital technologies are currently actively developing, as well as artificial intelligence technologies, military translators need all the achievements of these technologies to facilitate their work.

The algorithm for translating military-related texts (using the example of the instructions for the F16 Fighter Aircraft), developed by the author of this article, can be successfully used to train neural networks to translate the above-mentioned texts. The use of such an algorithm will make it possible to more quickly and effectively train artificial intelligence systems to translate military-related texts as close as possible to the original, taking into account the context. In addition, this algorithm can be expanded on other examples of military-related texts and used to create improved versions of electronic translators based on modern technologies, as well as specialized translation programs that make it possible to do not a complete translation, but a brief “squeeze” from the text while preserving all the necessary information. Such improvements will enable military translators to work more efficiently and save man-hours that can be used for other military needs.

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