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TRANSLATION HYPOTHESIS SPECIFICS AND PROBLEMS OF TRANSLATION OF SCIENTIFIC AND TECHNICAL MULTI COMPONENT TERMS

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ABSTRACT

In this article highlights of translation hypothesis. specifics and problems of translation of scientific and technical multicomponent terms. We divide it into two components: the total power and the directed rays. One of the most effective methods for testing a hypothesis is a search engine on the Internet. The dictionary includes only a limited set of values in each zone: not everything that is in the language, but only what may be needed for automatic processing of highly specialized texts and makes this processing less complex. In order to translate them correctly, you need to understand how the keywords are expressed in these terms. We see that all of them have a suffix-n, which most likely indicates that they belong to the verbal forms of the noun.

KEYWORDS: *Transdict, Russian Terms, Dictionary, Search Engines Google And Yandex, Structure.*

INTRODUCTION

As mentioned above, 4-component noun phrases are the most difficult to translate into English. This is due to the fact that they are not available in paper dictionaries, and such a developing and new science as opt informatics constantly requires competent translation, especially complex terminology.

There is a special algorithm for translating terms, which greatly simplifies the task of the translator.

1. Since we consider the specifics of the translation of a multicomponent terminology, and, as mentioned above, it is almost impossible to find such a term in a paper dictionary in its full version. In this case, the translator must refer to the terminology dictionaries in order to find the translation of each n-gram component separately. For example, consider such a four-component term as the total power of the directed rays. We divide it into two components: the total power and the directed rays. One of the most effective methods for testing a hypothesis is a search engine on the Internet. It is such because, when we search for a term in the search bar, we see the frequency of use of terms in the texts of various fields of knowledge and can choose the one that is used in our own field. After translating the first component in the terminology dictionary, we get the full capacity translation. The translation of the second component in our hypothesis will sound like directed beams. Combining both elements, we get the translation: full capacity of the directed beams. To make sure that the translated name group is correct, enter the resulting translation of the term in the search bar. Sometimes, search engines can display a complete translation of one or even two components, but, in this case, you need to be extremely careful in the texts of what nature this term or part of it occurs. In our case, we see that 37 variant of the wording of the translation of the term is not found in the search engines Google and Yandex.

2. In cases where the terminology dictionary and search engines they cannot cope with the task, a good assistant in the translation of scientific and technical terminology, and, in particular, multicomponent vocabulary, can be the Transdict program, which is a bilingual lexicographic knowledge base. The dictionary includes only a limited set of values in each zone: not everything that is in the language, but only what may be needed for automatic processing of highly specialized texts and makes this processing less complex. The main advantage is that Transdict includes the translation of nominal phrases related to the area of knowledge we are studying. Another advantage of the program is the introduction and preservation of multicomponent terms, which are then checked by specialists in this field.

3. Turning to the dictionary Transdict, select the search field where you need to enter the desired 4-gram. We get the translation: the total power of the associated rays in order to check the correctness and use in scientific works on opt informatics, it will be correct to use any of the search engines again. Again, we enter the resulting translation of the total power of the connected rays in the search bar. The Google search engine produces a huge number of results, but the very first ones already make it possible to understand that there really is one and it is used in materials related to opt informatics - the theory of the optical waveguide-Page 71-The result from Google and the Book. According to the first sentence, which shows the user where the desired term is used, it becomes clear that we are looking at a scientific work, which is indicated by the keywords in this sentence. Consider, an immediate consequence of this definition is that fibers with the same profile volumes carry the same total power of the bound rays when illuminated by a diffuse source.

The translation will sound something like this:

An immediate consequence of this definition is that fibers with equal profile volumes carry an identical total transmission beam power when illuminated by a diffuse source.

Thus, thanks to the compilation of a translation hypothesis, which in most cases can be trusted, but always to question and verify the correctness of a particular term, as well as the use of

specialized automatic translation dictionaries related to narrow areas of knowledge-makes the task of translating a complex, multi-component term much easier.

During the translation process, a specialist may encounter such a problem as a search for an English equivalent for a Russian term, since in English it can be interpreted in different ways, that is, it may have more than one syntactic structure. For example, take two multicomponent terms, the shape of the refractive index profile and the function of the refractive index profile. We see that the structure of these terms in the Russian language is the same and, moreover, the three components of this 4-gram are absolutely identical. But despite this, when translating two given multicomponent elements, their syntactic structure will differ. The refractive index profile function can be translated as a complex attribute group refractive index profile function, while in 4-gram-refractive index profile form-the defining word in the translation will stand at the beginning-shape of the refractive index profile, which makes the term for the translator much simpler in structure. Accordingly, the choice of a translation of terms that are identical in structure in Russian directly depends on the word being defined.

Another difficulty that can be identified when translating scientific and technical multicomponent terms is the variety of translation options for the same nominal group. In such cases, the choice of the equivalent of the term when translated into English is influenced by three other components that belong to this nominal group. For example, the following terms as a "system of coupled mode equations", it can be translated in two ways. The first option will sound like system of equations of the coupled mode, while another valid translation option may be the multicomponent term system of coupled mode equations.

In order to check which version of the translation is correct, really used in real texts of a scientific nature, you should again turn to the search engine. When checking the first term, we will make sure that it is used very rarely in texts, while the second version of the translation is found on the Internet about 40 million times. Another example is the 4-gram “field of higher-order modes”. We can translate this term in two ways: field of modes of the higher-order and field of the higher-order modes, and referring to the texts in which these translation variants occur, we are convinced that several equivalents can correspond to the Russian term in English, and the most frequent in use, as a rule, are terms in which three components form an attribute construction.

Special attention should be paid to the problem of translating terms in the field of opt informatics in grammatical constructions. In the body of the text were such multicomponent terms as “use of three-dimensional photonic quasicrystals”, "production of three-dimensional photonic crystals", and "violation of total internal reflection" are found. In order to translate them correctly, you need to understand how the keywords are expressed in these terms. We see that all of them have a suffix-n, which most likely indicates that they belong to the verbal forms of the noun. Only they, in turn, are translated into English by a gerund, which combines the features of a noun and a verb and carries the meaning of a process. This form is not inherent in the Russian language.

As a result, we get the translation using the three-dimensional photonic quasicrystals, acquiring three-dimensional photonic crystals and breaking of the total internal reflection, which once again confirms the difference in grammatical forms of the two languages, which can cause problems when translating. The text body contains multicomponent terms that should be

translated from Russian into English using attribute constructions. Examples of the most frequent terms constructed on an attribute basis are presented in Table 1.

TABLE 1 – TRANSLATION OF RUSSIAN TERMS INTO ENGLISH, BY ATTRIBUTE GROUPS

форма профиля показателя преломления	15	refractive index profile form
параболический профиль показателя преломления	14	parabolic refractive index profile
эффективность возбуждения основной моды	14	fundamental mode excitation efficiency

In our study, we considered four-component terms, since they are the main difficulties in translating from Russian into English. Russian translation is based on the difference in the syntactic structures of the two languages, the variety of equivalents in English that fall on one Russian term, as well as the appearance of new components in the English equivalent when translated from Russian.

Further, a translation hypothesis was developed, which makes it easier for the translator to solve the problem and increases the chances of finding a more accurate equivalent of the term in English. Each term was translated using this technique, as well as checked in Internet search engines in order to identify the use of a particular term in the texts of technical fields of knowledge. Dictionaries such as Transdict, Google, and Prompt were among the main helpers in translating terms.

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