

UDC 811.111'255.4

DOI <https://doi.org/10.32447/2663-340X-2023-13.33>

ABBREVIATIONS AND ACRONYMS IN ENGLISH TECHNICAL TEXTS: DIFFICULTIES IN TRANSLATION

Shagala Lesya Bohdanivna

Candidate of Pedagogic Sciences,

Associate Professor at the English Language and Translation Department

Drohobych Ivan Franko State Pedagogical University

24, Ivan Franko str., Drohobych, Lviv region, Ukraine

Since the process of spreading the latest technologies continues, the emergence of new vocabulary and the need for its interpretation remains. Therefore, it is worth highlighting the relevance of research on this topic. The purpose of this work is to study abbreviations in English technical texts and analyze the peculiarities of their translation. By the set goal, the following tasks are formulated: to investigate the peculiarities of English technical texts; to analyze the means of translation used in English technical texts; to determine the peculiarities of the translation of abbreviations in English technical texts. The object of the research is abbreviations and contractions in English technical texts. The subject is peculiarities and means of translation of abbreviations in English technical texts into Ukrainian. The competent translation of scientific and technical abbreviations includes restoring the original form of abbreviations and selecting reliable sources to obtain additional information about the subject or phenomenon indicated by the abbreviation. While working with abbreviations and acronyms, one should always rely on the context and remember that in many cases an important role in choosing one or another meaning of the abbreviation is played by the context. For a competent translation of scientific and technical abbreviations, it is necessary to restore the original form of abbreviations and select reliable sources to obtain additional information about the subject or phenomenon indicated by the abbreviation. It is also necessary to take into account the traditions of the use of the term in a certain form in the original language and translation, the emerging problems associated with homonymy and synonymy can be solved by correct analysis of the context. For a competent translation of scientific and technical abbreviations, it is necessary to restore the original form of abbreviations and select reliable sources to obtain additional information about the subject or phenomenon indicated by the abbreviation. It is also necessary to take into account the traditions of the use of the term in a certain form in the original language and translation. And the emerging problems associated with homonymy and synonymy can be solved by correct analysis of the context.

Keywords: *abbreviation, difficulties, technical texts, translation, peculiarities.*

Introduction. With the beginning of the new millennium, the development of technology gained new momentum. As a result, in modern life, every person at least sometimes uses various devices that facilitate communication or the performance of certain work and satisfaction of personal needs. These are devices such as mobile phones, communicators, computers, etc. Many people cannot imagine life without these technological innovations and often use them in everyday life.

Such an active process of technological development provoked the appearance of many neologisms, which spread and became established in the languages of different countries. This is especially true of the personal computer, as a result of which many jargonisms and professionalisms have arisen, which are already widely used by PC users and continue to replenish the vocabulary of many languages.

Although, at the beginning of its popularity, the computer was not often used by ordinary users, but more often it was used in production or

various developments. But later, with the advent of the Internet and the emergence of affordable operating systems, it became widely used in everyday life.

Convinced of the effectiveness of using such a device, more and more personal computer users began to appear. But this process of mastering the new technology was slow in the first stages, due to the incomprehensibility of the algorithm of using the computer and the large amount of new vocabulary that was directly involved in the process of using the computer.

Thus, there was a need to interpret and clarify such innovations. The publication of various technical dictionaries and editions facilitated the perception of new vocabulary and specific texts. Thanks to the active work of translators, today we can use a personal computer and other high-tech devices without much difficulty.

The purpose of this work is to study abbreviations in English technical texts and analyze the peculiarities of their translation.

Following the set goal, the following **tasks** are formulated: to investigate the peculiarities of English technical texts; to analyze the means of translation used in English technical texts; to determine the peculiarities of the translation of abbreviations in English technical texts.

The object of the research is abbreviations and contractions in English technical texts. **The subject** – the peculiarities and means of translation of abbreviations of English technical texts into Ukrainian.

The problem setting. Scientific and technical literature is a field of wide use of various abbreviations – both those that have entered the language and are recorded in dictionaries, and original, occasional ones that were created only for a specific case and recorded in only one text. In some types of texts, abbreviations sometimes make up 50 % of all word usage and 15 % of the vocabulary. From the point of view of their translation, the indicated distribution of abbreviations is appropriate because the latter, as a rule, have their corresponding full forms in the specific text being translated, and their understanding, of course, does not cause difficulties, while when translating the former, sometimes may not help and translation dictionaries of abbreviations if they do not contain the required abbreviation.

The presentation of the main material. The abbreviation is a method of word formation, the essence of which consists in cutting off part of the base, which either coincides with the word or is a word combination united by a common meaning. Abbreviations are usually classified into lexical and graphic. Lexical ones include clipped or stump words and acronyms (initial words or acronyms). Any fragments of a word can be shortened, regardless of morpheme boundaries.

Abbreviation (lat. *Abbrevio* – to shorten) – complex shortened words formed from the first letters or from other parts of words that are part of the name or concept. They are used in oral and written language. Abbreviations are also called acronyms (from the Greek *αλόμυς* – "highest, extreme" and *όνυμος* – "name") (Ponomariv, 2001).

Regarding the use of the term "acronym" there are different opinions: according to one, acronyms are any words made up of the first letters or parts of words in an abbreviated word combination, according to another – only those that are pronounced as complete words, and not as a sequence of letter names.

The process of word formation may not end with truncation but may be complicated, for example, by substantivization, if it shortens the word that was part of the word combination. The shortening

of each of the words occurs, as is clear from the definition, in only one way – final truncation. Orthographically, acronyms are also unambiguous, representing a combination of capital letters.

The computer vocabulary of the English language has specific features. One of them is the inherent nature of some computer terms "imagery". Although in general scientific and technical texts are characterized by a lack of emotionality and imagery, some computer terms have a pronounced shade of concrete imagery of the English language, for example, the term mouse, which denotes a device for regulating the movement of the cursor, looks really like a mouse, and the name of the Windows program is based on the similarity of the principle of providing information in the form of windows on a computer display (Glendinning, McEwan, 2001).

When characterizing the computer terminology system, one cannot fail to mention the dynamics of its development and the intensity of its enrichment with new lexical units. The rapid development of computer technology caused the activation of nominative processes, as a result of which a large number of lexical units of a terminological nature was formed and continues to be formed.

The peculiarity of computer terms is that, unlike other technical terms, as a result of the deep penetration of computer technology into all spheres of social life, they gradually lose their highly specialized nature of functioning and become the result of a general literary language.

Thus, in the second half of the 20th century, the information revolution caused the formation and rapid development of the computer terminology system. In the 1980s and 1990s, it was enriched by a large number of lexical innovations, which, according to linguists, make up 10 % of the number of all neologisms created during that time.

Graphic abbreviations are also numerous and are used to indicate measures, units or values (kg, km, mph, Dr, Mr, etc.). The conventionality of this type of contractions is manifested in the fact that in oral speech they are reproduced completely. A specifically English subtype of abbreviations is semi-abbreviations that is, combinations of the acronym of one word combination with the full base of another. Such half-abbreviations are close to symbols, which is also confirmed by the widespread use of the word *X-mas*, the first part of which is nothing more than replacing the name Christ with the symbol of the cross (Hornby, 1995).

In the modern language of business communication, the process of creating new acronyms and abbreviations significantly outpaces term-forming processes. The process of translating

an abbreviation that is not in dictionaries and reference books is carried out in two stages, the first of which is the deciphering of the abbreviation, that is, the identification of the initial English form or correlate. The second stage is the transfer of correlates using the Ukrainian language, that is, the search for an equivalent Ukrainian form that most accurately conveys the revealed content.

When talking about reduction, you should also mention:

a) use of consonants (first and last or first, middle and last) to shorten the word: *jr* (*junior*); *shtg* (*shortage*); *ppd* (*prepaid*).

b) use of the initial composition: *nukes* (*nuclear weapons*) – *nuclear weapons*;

c) mixed abbreviations: *E-mail* (*Electronic mail*) – *electronic mail*; *X-rays* – *X-rays*.

Letters as constituent parts of neologisms may not be abbreviations. By themselves, they mean something as *Y-intersection* – *the intersection of roads in the form of the letter Y*; *X-ing* (*Crossing*) – *transition*.

Finally, abbreviations from letters and numbers began to be used to express words and even whole phrases that sound the same as the name of the letters and numbers: *B4U* – *before you*; *ICQ* – *I seek you*; *B&B* – *bed and breakfast* (Hornby, 1995).

Each field of activity has its abbreviations. A translator who specializes in one or another area should follow the appearance of new abbreviations and update his active dictionary of abbreviations.

Due to the very close relationship between spoken and written forms of language, it is sometimes very difficult to distinguish abbreviations created in oral speech from graphic abbreviations. Moreover, the latter appears more and more often in oral speech and is widely used in communication.

Some abbreviations, however, appear in both forms: *EPA* and *E. P. A.* (*Environment Protection Agency*). Such words formed from the initial letter or letters from each of the successive parts of the word combination have two possible types of orthoepic correlation between written and spoken forms.

If the abbreviated written form is written and read like an ordinary English word, then the word formed in this way is called an acronym. Acronyms are formed from the initial letters of words included in a word combination united by a common meaning. This way of forming new words is becoming more and more popular in almost all fields of human activity and especially in political and technical dictionaries. For example *U. N. O.*, also *UNO* [*'ju:nou*] – *United Nations Organization*; *NATO* – *the North Atlantic Treaty Organization*; *SALT* – *Strategic Arms Limitation Talks* (Hornby, 1995).

The last example shows that acronyms are often homonymous to common words; sometimes deliberately chosen to create certain associations. Thus, for example, the National Organization for Women is called *NOW*.

Acronyms have become so popular that their number justified the publication of special dictionaries, such as "Dictionary of Computer Acronyms and Abbreviations" by J. C. Rigdon (2016). We will mention only one example from computer terminology – rather ironic *GIGO*, which means *garbage in, garbage out*. Acronyms are of particular interest because they illustrate the operation of the lexical adaptive system.

The main requirements for the translation of terms are the complete preservation of the semantic content of the translation unit. Translation is characterized as a process of secondary nomination and the terms that have been translated occupy a valid place in the terminological structure of the Ukrainian language and even receive the status of commonly used vocabulary.

Scientific and technical texts are characterized by a special style that distinguishes them from other types of texts. When translating such texts, this feature creates additional difficulties and problems.

Among the lexical difficulties of scientific and technical translation, V. I. Karaban singles out "multiple meanings of words (terms) and the choice of an adequate dictionary counterpart or translation variant of a word (term), the peculiarities of the use of common words in scientific and technical texts, the correct application of one or another method of vocabulary translation, determination of the limit of admissibility of translation lexical transformations, translation of neologism terms, abbreviations, such "false friends" of the translator as pseudo-internationalism, lexicalized plural forms of nouns and homonymous terms, ethno-specific vocabulary and ethnonational variant of terms, foreign words and terms in English scientific and technical texts, various proper names and titles (firms, institutions, and organizations), etc." (Karaban, 1997, p. 12).

To grammatical differences, the author refers to the peculiarities of the grammatical structure of the language, the form and tradition of written scientific communication. "English professional texts use passive forms and impersonal forms of the verb, adverbial inflexions and specific syntactic constructions, personal pronouns of the first person singular and one-member infinitive and nominative sentences, etc., much more often than in Ukrainian" (Karaban, 1997, p. 14).

The main difficulty in the translation of scientific and technical texts, namely the translation of terms,

lies in the disclosure and transmission of foreign realities using the Ukrainian language. It would be wrong to talk about the translation of terms as such. A prerequisite for a complete translation of any special text, especially a scientific and technical one, is its full understanding by the translator. Mechanical memorization of terms, without penetrating their essence, without knowledge of the very phenomena, processes and mechanisms that are discussed in the original, can lead to gross errors in the translation. The translator must study in detail the field of science and technology in which he works.

However, in a special text, there is often an element of novelty, which is particularly interesting for the reader, but is connected with the use of new terms not yet recorded in dictionaries. Such cases can create serious problems for the translator. The main condition for overcoming these difficulties is a detailed analysis of the described phenomenon and its transfer in terms that are already established in science. Current scientific problems, the latest technical inventions and discoveries are covered in printed publications and, above all, in periodicals, to which the translator should refer. Consulting a specialist in this field can be of great help here. First, it is necessary to establish precisely what the problem described in the foreign language translation is and what the problems of its presentation in the translation are. As already indicated, the problem may be in the description of new processes or the latest equipment. The translator must carefully compare all cases of the use of new terms or places that are difficult to convey by the means of the Ukrainian language to get a clear idea of the described problem from the general content of the text.

Any scientific text is characterized by a certain repetition of terms. Therefore, to correctly convey the meaning of an unfamiliar and missing term or terminological combination in dictionaries, it is very important to take into account and compare all cases of its use in this text and only after that try to clarify the meaning of the term by familiarizing yourself with the special literature on this issue. The translator can be greatly helped by already existing translated literature on this issue, especially if there is an opportunity to compare the original and the translation.

Thus, it was determined that the main ways of translating terms are transliteration/transcription, tracing, explication and translation based on analogy (Yenikeeva, 2001).

Transliteration and transcription when translating computer terms are rarely in their pure form, more often a transcription is used with the

preservation of elements of transliteration (eg, hacker, interface, computer). Examples of pure transcription include cache, slash, and BASIC. Examples of transliteration are more numerous: *port (nopm)*, *adapter (адантеп)*, *cursor (курсор)*, and *supervisor (супервайзер)*.

Transliteration and transcription are extremely productive means of translation and enrich the layers of not only standard vocabulary but also jargon, for example, upgrade, user, and shareware. If transliteration/transcription is used mainly in the translation of individual words-terms, then the translation of terminological phrases is carried out more by tracing and explication.

Tracing is a means of translating a lexical unit of the original by replacing its parts (morphemes or words) with their lexical correspondences in the target language. Tracing is justified when translating terminological phrases when the constituent elements of these phrases have already occupied a certain place in the terminological system of the language being translated and are accessible to specialists.

In the case when the word combination consists of terms that have not yet entered into use in a certain field of science or technology in the language of translation and require their interpretation, explication is used.

Explication (descriptive translation) is a lexical-grammatical transformation in which a lexical unit of the original language is replaced by a word combination that gives an explanation or definition of this unit. Explication is an extremely productive means of translating computer terms since the rapid development of the field of information technology does not allow many terms to find their equivalents promptly and take root in the translation language. With the help of explication, multi-component terminological phrases are translated, such as *native mode – режим роботи в рідній системі команд*; *processor-specific code – програма, прив'язана до конкретного процесора*; *pointouse program – програма, яка не підтримує роботу з мишею*; *business application – програма для комерційних розрахунків*; *nucleus – ядро операційної системи*.

The productivity of explication, when translated into Ukrainian, is also explained by differences in the means of creating words and phrases. The English language, which is analytical in its structure, is dominated by multi-component prepositional phrases, which is not inherent in the Ukrainian language and creates certain difficulties in the translation process. Difficulties in the translation of multi-component phrases are often eliminated by tracing with a change in the sequence of the

components of the phrase. Cf.: *BIOS (Basic Input/Output System)* – базова система введення-виведення; *DMA (Direct Memory Access)* – прямий доступ до пам'яті.

The advantage of tracing over explication is that the explication is multi-word, and in the case of tracing, each element of the phrase in the original language corresponds to one element of the phrase in the language of translation, therefore, the principle of saving linguistic means is implemented. Sometimes explication works in conjunction with tracing, such as, for example, *EISA (Extended Industry Standard Architecture)* – розширена галузева стандартна архітектура. Lexical units of the Ukrainian language, just like English, develop new meanings to denote new concepts and objects.

Examples of the functioning of lexical units in the new lexical-syntactic variant are such terms as multiplication "revival", menu "list of commands", and program "computer". Most of these innovations passed a synchronous path together with English terms in the process of developing a new meaning, so it would be more accurate to consider that a new meaning was borrowed, rather than a lexical unit.

Thus, the terminological system of the field of information technologies has a dynamic character, which is evidenced by the emergence of new lexical formations to denote innovative developments in this field.

Conclusion. The intensive development of science and technology together with globalization processes in modern society lead to the enrichment

of the terminological system of the Ukrainian language with words and phrases related to the field of information technologies. Unfortunately, the processes of creating special lexicographic sources are also slow, and modern translators and information technology professionals lack special dictionaries. Nominative processes in the field of information technologies function in the languages of all technologically developed countries of the world. Borrowing new terms is a manifestation of integrative processes taking place within the boundaries of science, technology and economy of different countries, and the basis of world globalization. In the modern language situation, abbreviations are found in scientific literature, and various reference books, in the form of names of states, institutions, associations, etc. Therefore, when working with abbreviations, one should always rely on the context and remember that in many cases an important role in choosing one or another meaning of the abbreviation is played by the context. For a competent translation of scientific and technical abbreviations, it is necessary to restore the original form of abbreviations and select reliable sources to obtain additional information about the subject or phenomenon indicated by the abbreviation. It is also necessary to take into account the traditions of the use of the term in a certain form in the original language and translation. And the emerging problems associated with homonymy and synonymy can be solved by correct analysis of the context.

BIBLIOGRAPHY

1. Єнікєєва Є. М. Особливості перекладу комп'ютерних термінів на українську мову. *Вісник СумДУ*. 2001. № 5 (26). С. 54–59.
2. Карабан В. І. Посібник-довідник з перекладу англійської наукової і технічної літератури на українську мову. К. : Політична думка, 1997. 300 с.
3. Пономарів О. Д., Різун В. В., Шевченко Л. Ю. та ін. Сучасна українська мова. К. : Либідь, 2001. 400 с.
4. Glendinning E. H., McEwan J. *Basic English for Computing*. Oxford University Press, 2001. 340 p.
5. Hornby A. S. *Oxford Advances Learner's Dictionary*: Ed. Crowther J. Oxford University Press, 1995. 1428 p.
6. Rigdon J. C. *Dictionary of Computer Acronyms and Abbreviations: plus file name extensions*. Createspace Independent Publishing. Platform, 2016.

REFERENCES

1. Yenikieieva, Ye. M. (2001). Osoblyvosti perekladu kompiuternykh terminiv na ukrainsku movu. [Peculiarities of translation of computer terms to Ukrainian]. *Visnyk SumDU*. № 5 (26). S. 54–59. [in Ukrainian]
2. Karaban, V. I. (1997). Posibnyk-dovidnyk z perekladu anhliiskoi naukovoї i tekhnichnoi literatury na ukrainsku movu. [Handbook in translation of English scientific and technical literature to Ukrainian]. K. : Politychna dumka. [in Ukrainian]
3. Ponomariy, O. D., Rizun, V. V., Shevchenko, L. Yu. ta in. (2001). Suchasna ukrainska mova. [Modern Ukrainian Language]. K. : Lybid. [in Ukrainian]
4. Glendinning, E. H., McEwan, J. (2001). *Basic English for Computing*. Oxford University Press.
5. Hornby, A. S. (1995). *Oxford Advances Learner's Dictionary*: Ed. Crowther J. Oxford University Press.
6. Rigdon, J. C. (2016). *Dictionary of Computer Acronyms and Abbreviations: plus file name extensions*. Createspace Independent Publishing. Platform.

АБРЕВІАЦІЇ ТА АКРОНІМИ В АНГЛІЙСЬКИХ ТЕХНІЧНИХ ТЕКСТАХ: ТРУДНОЩІ В ПЕРЕКЛАДІ

Шагала Леся Богданівна

кандидат педагогічних наук,

доцент кафедри англійської мови та перекладу

Дрогобицького державного педагогічного університету імені Івана Франка

вул. Івана Франка, 24, Дрогобич, Львівська область, Україна

Оскільки процес поширення новітніх технологій триває, зберігається поява нової лексики та потреба в її тлумаченні. Тому варто підкреслити актуальність досліджень даної теми. Метою даної роботи є дослідження абрєвіатур в англійських технічних текстах та аналіз особливостей їх перекладу. За поставленою метою сформульовано такі завдання: дослідити особливості англомовних технічних текстів; аналізувати засоби перекладу, що використовуються в англійських технічних текстах; визначати особливості перекладу скорочень в англомовних технічних текстах. Об'єктом дослідження є абрєвіатури та акроніми в англійських технічних текстах українською мовою. Грамотний переклад науково-технічних скорочень включає відновлення оригінальної форми скорочень і вибір достовірних джерел для отримання додаткової інформації про предмет або явище, позначене абрєвіатурою або акронімом. Працюючи з абрєвіатурами завжди слід спиратися на контекст і пам'ятати, що в багатьох випадках важливу роль у виборі того чи іншого значення абрєвіатури відіграє контекст. Для грамотного перекладу науково-технічних скорочень необхідно відновити вихідну форму скорочень і вибрати надійні джерела для отримання додаткової інформації про предмет або явище, позначене абрєвіатурою. Необхідно також враховувати традиції вживання терміна в певній формі в мові оригіналу та перекладі, а виникаючі проблеми, пов'язані з омонімією і синонімією, можна вирішити шляхом правильного аналізу контексту. Для грамотного перекладу науково-технічних скорочень необхідно відновити вихідну форму скорочень і вибрати надійні джерела для отримання додаткової інформації про предмет або явище, позначене абрєвіатурою. Необхідно також враховувати традиції вживання терміна в певній формі в мові оригіналу та перекладі. А виникаючі проблеми, пов'язані з омонімією і синонімією, можна вирішити шляхом правильного аналізу контексту.

Ключові слова: *абрєвіатура, труднощі, технічні тексти, переклад, особливості.*