

## TRANSLATION OF ICT NEOLOGISMS IN ESP CLASSROOM

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**Abstract.** *ICT terms and neologisms are a rapidly expanding semantic field to which new terms are constantly being added. Currently, neologisms that have been recently included in English in many cases do not have their equivalents in Lithuanian as the process of inclusion of newly coined words or neologisms into the Lithuanian language is much slower mostly due to institutionally regulated language policy and normative guidelines. As a result, Lithuanian translators face a lot of challenges when they have to find equivalents for English neologisms. As regards ESP classroom, translation-based activities are not widely-used but, if applied in a balanced way, they can significantly improve comprehension of new terminology and neologisms in specific fields. The portal of TED talks is an immense resource of materials related to newest technological developments and is a valuable source for teaching/learning ESP in such a way that is engaging for contemporary learner. Moreover, TED talks provide valuable material for teaching translation as they represent real language in use, and the portal makes comparison of the content in different languages available through translations of the talks into multiple languages. The aim of this paper is to research the ways TED translators from English into Lithuanian deal with neologisms in the context of language policy implications and rapidness of societal technological development. Comparative approach to learning materials facilitates the acquisition of specific terminology. For this particular paper, six talks from the TED portal have been analysed for the occurrences of neologisms. The neologisms have been grouped into three structural groups: (1) single-root terms, (2) compounds, and (3) collocations. The total number of analysed terms is 120. Modern-day neologisms that have been integrated into English in many cases do not have their equivalents in Lithuanian. Hence, the semantic gap in the technical vocabulary of the Lithuanian language which is frequently filled up by loan words or by adapting English terms. Analysis of new coinages revealed the substantial difficulties for translators due to objective factors. The majority of the analysed words are not included in the Modern Lithuanian dictionary. Out of 120 selected items only 4 are included into the Database of Lithuanian neologisms.*

**Key words:** *neologism, ESP teaching and learning, translation, inclusion/non-inclusion*

### 1. INTRODUCTION

The digital age and the internet are challenging languages across the globe. Around 5,400 new words are created every year and 1000 words are added to the lexicon of the English language (Bodle, 2016). New words and terms are born due to the rapid development of computer technology, ICT, globalization and other social processes. Hence, linguists and lexicographers observe the influence of science and technologies on languages. However, languages differ regarding their openness towards acceptance of

new items. For instance, neologisms are more often included into the English language as compared to the Lithuanian language.

The word *neologism*, borrowed from French *néologisme*, was itself a newly coined word in the 19<sup>th</sup> c.; yet, its roots are traced back to the ancient Greek language. Merriam-Webster dictionary (<https://www.merriam-webster.com/dictionary/neologism>) presents the etymology of the term 'neologism' as coming from Greek *neos* (meaning "new") and "logos" (meaning "word"). The word itself was coined at the beginning of the 19<sup>th</sup> century and borrowed from the French *néologisme*. Such words as *webinar*, *malware*, *netroots*, and *blogosphere* are just a few examples of modern-day neologisms that have been integrated into the English language. Currently, neologisms that have been included into English in many cases do not have their equivalents in Lithuanian as the process of inclusion of newly coined words or neologisms into the Lithuanian language is much slower due to subjective and objective reasons, such as the state language policy and legal regulations regarding the use of the Lithuanian language. As a result, Lithuanian translators face a lot of challenges when they have to find an equivalent word or phrase for an English neologism. However, in recent years, the process of inclusion of new coinages into Lithuanian has been facilitated by META-NORD project "Development of the Database" launched in 2011 "to create a database for continuously storing new lexis of the Lithuanian language" (<http://naujazodziai.lki.lt>).

Conceptual understanding of neology is substantially diversified across foreign research publications as well as national Lithuanian academic papers. Some authors view neologisms as newly coined words (Ahmad, 2000), others propose considering them as a separate group from exoticisms or nonce words (Crystal, 1997, cited in Ahmad, 2000) that exist for a very short period of time and never become formally lexicalised. Sometimes, important historical events may serve as a point in the timeline: for instance, a Lithuanian scholar Girčienė (2005) argues that neologisms and borrowings are words that denote concepts and realia that came into use after the restoration of Independence of Lithuania in 1990.

## 2. TRANSLATION OF NEOLOGISMS IN TEACHING AND LEARNING ESP

According to a translation scholar Newmark (1988), neologisms are "[...] newly coined lexical units or existing lexical units that acquire a new sense" (p. 140). Newmark distinguishes 2 groups and 12 types of neologisms on the basis of their newness: (a) *existing* lexical items with new senses (words and collocations) and (b) *new* forms (new coinages, derived words (including blends), abbreviations, collocations, eponyms, phrasal words, transferred words (new and old referents), acronyms (new and old referents), pseudo-neologisms, and internationalisms). Pavel and Nolet (2001) distinguish two groups of neologisms on the basis of their structure and semantics: (a) *morphological* neologisms (created through derivation, compounding, blending, acronymy, borrowing, and composition) and (b) *semantic* neologisms (resulting from expansion, metaphor, conversion of grammatical category, and adoption from another subject field). Mikelionienė (2000: 66) points out that the perception of newness can be problematic: the newness of an item has to be felt for a certain period of time but it is not clear how long this should last; thus, the scholar concludes that there can be no definitive answer here which could be applied to all lexical items viewed as neologisms. The researcher (ibid.) assumes that as long as society sees an object or a phenomenon as new, its name is perceived as new. Thus the

status of a new lexical item depends to a large extent on the “perception” of its newness. However, as Mikelionienė (ibid.) points it out, the criterion of newness in each case is not absolute and clearly measurable in some way. This aspect causes considerable difficulties in defining what a neologism is. The safest side is taken by those linguists who view neologisms as those words that have not yet been registered by lexicographers (Algeo, 1991, and Ferm, 1994, cited in Mikelionienė, 2000: 66). But this narrow-in-scope position excludes many neologisms existing in a language and important for language users at a particular period that become common in a society and that are willingly used but that are viewed sceptically by strictly traditional lexicographers, especially in societies where language policies are very strict and might seem overprotective towards a language. In Lithuanian linguistic research on neologisms, Miliūnaitė (2018) adopts a rather comprehensive approach to neology and believes that the main criteria for defining neologisms are the *temporal* criterion (emergence of new words from a defined particular moment in time), the *lexicographic* criterion (a word has not been fixed in lexicographic sources), *instability* of a word’s morphology and semantics (forms are prone to variations and their meaning is flexible and difficult to define for some time) and *perception* of neology (or perception of what is new: language users feel that a word is new, unusual, and sometimes even strange). In listing these criteria, Miliūnaitė (2018: 4) partly builds on contemporary research of neology by Kerremans (2015) and Guerra (2016). Miliūnaitė (ibid.) also points out that these criteria are essentially those that determine the decisions regarding inclusion/non-inclusion of lexical units in the Lithuanian database of neologisms.

Another problematic issue that translators from English into Lithuanian have to face is related with the necessity to take into consideration the normative language policy guidelines regarding introduction and acceptability of new items in a language. Countries considerably vary in this respect. English speakers are very open as regards acceptance of neologisms. This may be explained by the long-standing establishment of English as a lingua franca and the “psychological security” of its numerous speakers as English is not facing the threats that small languages are facing in the era of globalization. As it was noted by Newmark (1998), “Unlike the French, the English has no basis from which to attack new words.” (p. 140). In Lithuania, language policy determines to a large extent the acceptance of neologisms and their status despite of the increasingly more flexible attitudes of young speakers and those who view the institutionalised normativity of language policy as essentially contradictory to the natural development of language, contemporary society and technologies. Thus, certain tensions can be observed in the Lithuanian context but, despite of that, translators into Lithuanian are creatively exploiting the richness of the Lithuanian language resources because dealing with new phenomena has direct implications for the translators regarding language use and professional decision making within the framework of what is normatively acceptable and what is necessary to respond appropriately to arising new societal needs, new phenomena and linguistic developments.

In dealing with neologisms, translators often refer to Newmark’s (1998) classification of neologisms, relevant contextual factors and applicable translation procedures. Among the latter, Newmark (ibid., p.150) lists transference, target language (TL) neologism, target language derived word, naturalisation, recognised TL translation, functional term, descriptive term, literal translation, through-translation, internationalisms and combinations of translation procedures. Damaskinidis (n.d) lists four strategies for translation of neologisms: using near equivalents, explanations, loan translations, and standard/recognized translations (p. 5). Damaskinidis (ibid.) notes, that these strategies have to be often combined when dealing with collocations and complex words incorporating neologisms and suggests additional strategies

for translating such lexical items building on Baker's (cit. in Damaskinidis (n.d.) p. 9) approach to solving problems of non-equivalence: using an item of similar meaning and form, using an item of similar meaning but dissimilar form, translation by paraphrase, translation by omission, and translation by illustration.

As regards the ESP classroom, translation-based activities are not widely-used but, if applied in a balanced way, they can significantly improve comprehension of new terminology and neologisms in specific fields. The portal of TED talks is an immense resource of multimodal and multilingual materials related to newest technological developments and is a valuable source for teaching/learning ESP in such a way that is engaging for contemporary learner. Comparative approach to learning materials facilitates the acquisition of specific terminology because acquisition of ESP terminology requires an in-depth analysis of texts and concepts where mere 'gist' reading of materials is not sufficient (Chirobocea, 2018b: 221). Contemporary research evidences the revival of interest in the use of translation activities in ESP learning and teaching highlighting the difference in aims between translation activities used in translator training and translation activities used for ESP learning and teaching (Mažeikienė 2018; Chirobocea 2018a). The aim of using translation activities in ESP learning and teaching is to facilitate acquisition of specific terminology through better understanding of semantic, morphological, syntactic, pragmatic and discourse features of terms in use in different linguistic, social, and cultural environments. The use (and usefulness) of incorporating L1 in learning/teaching ESP is seen by contemporary researchers (Chirobocea, 2018a; Chirobocea 2018b; Fernández-Guerra 2014; Laviosa and Cleverton 2006; Poljaković 2016) as aiding in crystallising minutest specificities of terminology – this is rather difficult if only English definitions of terms are used. Thus, the relevance of translation activities within courses of English for Specific Purposes is well-substantiated by contemporary research in the field.

### 3. METHODOLOGY

For this particular paper, six talks from the TED portal (Mota 2012; Pariser 2011; Redmond 2017; Shirky 2012; Suwajanakorn 2018; Tandon 2012) have been analysed for the occurrences of neologisms. The talks were selected by applying two search filters: the topics filter "Technologies" and the language filter "Lithuanian". The language filter had to be applied as the source language (SL) of most TED talks is English but for teaching various aspects translation-related activities and ESP-related activities in our classrooms we needed comparison of two versions of transcripts: the SL transcript in English and the target language (TL) transcript in Lithuanian, and not all TED talks have been translated into Lithuanian yet. The neologisms have been grouped into three groups according to their structure in the SL, English: (1) single-root terms, (2) compounds, and (3) collocations. The total number of analysed terms is 120. The comparative analysis of SL term and TL term is based on their inclusion/non-inclusion into: the Database of the Lithuanian Neologisms (DLN), the Modern Lithuanian Dictionary (MLLD), and the English-Lithuanian Computing Terminology Dictionary (ELCTD) which is linked to Encyclopaedic Dictionary of Computing Terminology.

Thus, the study comprises empirical investigation of English neologisms and their Lithuanian counterparts. The research was conducted in several stages: 1) selection of source text (ST, English) neologisms and identification of their equivalents in the target text (TT, Lithuanian), 2) grouping of the selected items according their structure, 3) inclusion/non-

inclusion of a Lithuanian term in the dictionaries and/or in the Database of Lithuanian Neologisms, 4) back translation of the lexical item and the comparison of the result with the original version of a neologism in ST of a TED talk. Several dictionaries were explored for the analysis of the Lithuanian terms: the Modern Lithuanian Language Dictionary (MLLD), English-Lithuanian Computer Terminology Dictionary (ELCTD), which is linked to Encyclopaedic Computer Terminology Dictionary (ECTD). ELCTD contains approximately 7000 lexical items and is aimed at addressing translators' and programmers' need. However, the main focus of our research was to determine whether the item is included in the Database of Lithuanian Neologisms and to analyse translations found in the talks using the method of back translation.

The development of the database (<http://naujazodziai.lki.lt>) started in September 2011 in line with the European Commission-funded project META-NORD and since then it has been undergoing continuous updates. The new lexis – new coinages, or neologisms – makes its way into the language either through borrowings (translation) from other languages, creating new words on the basis of the languages' own word formation principles, or by giving new meanings to existing words. At the end of 2018, the database contained more than 4,900 new words from different domains of usage of the modern Lithuanian language. The database provides the definition of a new coinage, indicates the field of its use, shows semantic and formation ties with other new words in the database, illustrates usage with examples, and offers normative comments to language users if necessary.

#### 4. INVESTIGATION OF SPECIFICITIES OF NEOLOGISMS IDENTIFIED IN THE ANALYSED TED TALKS

##### 4.1. Analysis of Single-Root Items

The first group comprised terms the most typical examples of which are presented in Table 1. In the first group, only three terms are included into the Database of Lithuanian Neologisms (DLN): *robotika* (7), *žiniatinklis* (8) and *naršyklė* (9).

Table 1 Examples of single-root items

	SL	TL	DLN	MLLD	ELCTD	BT
1	circuit	grandynas	-	-	-	circuit
2	laptop	kompiuteris	-	+	+	computer
3	(to) track	sekti	-	+	+	track
4	(to) scale	atvaizduoti	-	+	+	picture; map
5	blending	suliejimas	-	+	+	blending
6	averaging	suvidurkinimas	-	-	+	averaging
7	robotics	robotika	+	-	+	robotics
8	web	žiniatinklis	+	+	+	Web; WWW; World Wide Web
9	browser	naršyklė	+	+	+	browser
10	copyability	kopijavimo galimybes	-	-	+	copying capabilities/ capacity
11	personalization	personalizacija	-	-	-	personalization

The Lithuanian term *robotika* (7) was included in the Database in 2012 by identifying it as a loan word from English. The meaning of the neologism is “a branch of engineering that involves the conception, design, manufacture, and operation of robots. This field overlaps with electronics, computer science, artificial intelligence, mechatronics, nanotechnology and bioengineering” (WhatIs.com). The word is also included in ELCTD and Encyclopaedic Dictionary of Computing. However, the term is not found in Modern Lithuanian Language Dictionary (MLLD). The Lithuanian equivalent of the term *web* (8) in MLLD is *žiniatinklis*. This term is an accepted Lithuanian neologism included in the DLN in 2014 as a term defining a network of world webpages. The DLN and ELCTD provide a synonym *saitynas* to the word *žiniatinklis*. Back translation strategy revealed that the term *žiniatinklis* has three equivalent terms: *web*, acronym *www* and its full form *world wide web*.

The definition for the neologism *naršyklė* (browser) (9) is: “a computer program with a graphical user interface for displaying HTML files, used to navigate the World Wide Web” (OED) or “a computer programme used for information, esp. Internet search” (MLLD). The term was included in DLN in 2014 instead of a jargon calque *brauzeris*. As a term of computing it is also included in ELCTD. However, *browser* also means: “A person who looks casually through publications or websites or at goods for sale” which in fact is the first meaning provided by OED. Interestingly, comparison of the SL term and TL equivalent (LT) revealed differences in gender. The Lithuanian term has a feminine gender, while the SL word ‘browser’ is masculine. The neologism *naršyklė* is composed of the verb *naršyti* which means “to search for smth.” or “to look through” morpheme *narš* + *ykl* (suffix) + *ė* (ending marking feminine gender).

The second sub-group comprises the terms included in one or two dictionaries (circuit (1), laptop (2), track (3), to scale (4), blending (5), averaging (6). The word *laptop* is translated as *kompiuteris*, although, dictionaries provide several versions for this term specifying the type of a carry-along computer: *skreitinukas*; *nešiojamasis kompiuteris* (MLLD); *nešiojamasis kompiuteris* (ELCTD). *Copyability* (10) is a term that is a new coinage and most probably a nonce word which is not found in OED. Yet, its meaning can be easily understood as it is made of *copy* + *ability* = *copyability*. This term was translated as *kopijavimo galimybės*, the collocation descriptively implying the same meaning. Back translation of the collocation is *copying capabilities or capacity*. The term *personalization* (11) is not included in either dictionary and was translated as *personalizacija* by using a borrowing technique.

#### 4.2. Analysis of Complex Terms (Compound Words)

The most typical and telling examples of structurally complex terms (compounds) are provided in Table 2.

The compound (N+N) term *search engine* (1) is translated as *paieškos sistema* which using back translation technique means *search system*. However, ELCTD provides two Lithuanian equivalent words for *engine*: *vykdyklė* and *variklis*. This instance reveals the fact that translators do not always refer to dictionaries for checking meanings of words. OED provides the definition of the compound *search engine* defining computing as its area of use: “A program that searches for and identifies items in a database that correspond to keywords or characters specified by the user, used especially for finding particular sites on the World Wide Web”.

Table 2 Complex terms (compounds)

	SL	TL	DLN	MLLD	ELCTD	BT
1	search engine	paieškos sistema	-	++	-/+	search system
2	game machine	žaidimų konsolė	-	-	+/-	game console
3	news feed	naujienų srautas	-	-	+	news stream
4	Facebook feed	Facebook naujienos	+/-	-	-/+	Facebook news
5	broadcast society	transliacijų visuomenė	-	+/+	-	broadcast society
6	content industries	turinio pramonė	+	-	+	content industry
7	screen shots	gautų rezultatų ekrano nuotraukas	-	+	+	screen photos of obtained results
8	game player	žaidimų konsolė	-	-	+	game console
9	object detection	objekto aptikimo modelis	-	+/+	+ /+	object detection model

Two selected items that fall into the category of compound neologisms are *game machine* (2) and *game player* (8). Both of them are N+N collocations and both were translated as *žaidimų konsolė* (Npl.+N). Back translation: *games console*. The first part of this neologism *game* is included in ELCTD, but the second *machine* is not. The word *console* is provided in ELCTD as *žaidimų pultas* (game panel). Comparison of SL terms and TL terms and back translation technique shows transformation in the category of the number: EN word *game* (sing.) becomes *žaidimų* (pl.) in Lithuanian.

*News feed* (3). Oxford English dictionary defines the word *feed* in the area of computing as: “A facility for notifying the user of a blog or other frequently updated website that new content has been added”. The Lithuanian dictionaries do not include the term. In TED talk *news feed* is translated as *naujienų srautas*. ELCTD provides the word *padavimas* for *feed*. However, the collocation *naujienų srautas* sounds more natural in Lithuanian. In this case the translator searched for words that are understandable for the TT reader and correspond to the everyday use of the collocation. A similar example is *Facebook feed* (4) which contains the name of the social networking company. The name “Facebook” is included in the Database of Lithuanian Neologisms with an equivalent of *feisbukas* which is already seen as a common noun. However, the word was not translated following DLN recommendations regarding the spelling (*feisbukas*). This item is translated as *Facebook naujienos*; SL *feed* is translated as *naujienos (news)* in TL.

*Broadcast society* (5) is a N+N neologism. The meaning is not found in the dictionaries. “Broadcast”, according to OED, is “A radio or television programme or transmission.” MLLD provides separately the definitions for the word *transliacija* (meaning 1. transmission of television and radio programs, 2. programme). The word *visuomenė* is defined as a group of people that was formed historically. It is translated as *transliacijų visuomenė*. However, the meaning of the collocation ‘*Broadcast society*’ is not a sum of the meanings of two separate words. Translation of this item is rather challenging where the context may be important and taken into consideration.

*Content industries* (6) is a N+Npl. collocation. TL counterpart is *turinio industrija*. The meaning of the term is not provided in OED, although the definition of the item *content* is explained in relation to information: Information made available by a website or other electronic medium The definition of the collocation is found in Wikipedia: The content industry is an umbrella term that encompasses companies owning and providing

mass media and media metadata (Wikipedia). The concept of content in ELCTD is explained as “information existing in a document with its presentation form” while *industry* in MLLD is explained as extraction of raw material, energy. Translation of this collocation shows grammatical transformation of the number category when the plural noun *industries* is translated as singular noun *industrija*.

*Screen shots* (7) N+N collocation. Translation *gautų rezultatų ekrano nuotraukas* (Adj. +N+N (gen.)+N). The Lithuanian term is identified as a compound which was included into the DLN in 2014. The new coinage *ekranvaizdis* is made of two words: the root of *ekran(as)+ vaizd(as)* adding the ending *-is* (marking masc. gender). ELCTD gives the meaning of this neologism as *ekrano kopija* (copy of a screen) and provides its explanation in ECTD: computer screen copied at a particular moment. Back translation of this item *screen photos of obtained results* indicates translator’s choice of free translation.

*Object detection* (9). The collocation (N+N) is translated as “*objekto aptikimo modelį* (*N+N+N*Caus.) using an addition of the word *modelį*. The word “*aptikimo*” is made of the word *ap(suffix)+tikimo*. The collocation is not provided in any of the Lithuanian dictionaries. However, as separate items they are included in ELCTD and MLLD. MLLD provides the meaning of the verb *aptikti* (*to find*). ELCTD provides the meaning of the verb *aptikti* and also the definition for the word *object* in computer science (*objektinio programavimo sąvoka/a* concept of object programming).

#### 4.3. Analysis of Complex Terms (Collocations)

This group comprises various collocational items which have different morphological structures ranging from verb + noun collocations to acronyms + nouns (see Table 3).

Table 3 Collocations (including acronyms)

	SL	TL	DLN	MLLD	ELCTD	BT
1	(to) micro-pattern channels	mikro-modeliuoti	-	-/+	-/+	(to) micro-pattern channels
2	(to) outfit electrodes	įrengti elektrodus	-	-/+	-/+	to install electrodes
3	(to) flow the cell culture media	tiekti ląstelių kultūros mediją	-	-/+	-/+	to supply with cell culture media
4	information junk food	greitas, nesveikas informacijos maistas	+	-	-	fast, unhealthy information food
5	IP address	IP adresas	-	-	+	IP addresses
6	algorithmic editing of the Web	algoritminis tinklo redagavimas	-	-	+	algorithmic editing of the net

Verb + noun collocations are one of the most typical types of collocation and for a translator this usually means search for the equivalents of component parts of a collocation. Collocations 1-3, for instance, contain component elements that are found in in general and specialised dictionaries, for instance, (to) model, prefix “micro-“ or electrode. What this implies for a translator, however, is not only looking up the meaning of separate component parts but also making sure that the TL collocation retains its status as a term and that the overall terminological meaning is not distorted.



*Information junk food* (4) is a collocation made of information + junk food. DLN provides the definition and explanation of the Lithuanian equivalent *šlamštamaistis* for junk food. Therefore, the collocation of *information junk food* may become obvious from the context. However, translator utilised word-for-word translation technique which is confirmed by back translation as *fast, unhealthy information food*.

The collocation *IP address* (5) is a computer related item including acronym IP which stands for Internet Protocol. The meaning of this term is: “A set of rules governing the format of data sent over the Internet or other network” (OLD). The Lithuanian translation shows grammatical transformation of the number evidenced by back translation: English word *address* (sg) is translated as *adresai* (pl). Moreover, the term is included in ELCTD and ECTD.

The collocation *algorithmic editing of the Web* (6) is understandable to programmers and scholars of computing. However, the term *editing* is primarily related to books and their publishing. Translation of this item is *algoritminis tinklo redagavimas*. ELCTD and ECTD give the explanation and definition for *algorithm* which means “a computer programme readable by a computer”, whereas *editing* is defined as “document correction commands”. Back translation of the term indicates incorrect transfer of the meaning of the word *web* which in TL means *žiniatinklis* or *saitynas*.

#### 4. CONCLUSIONS

TED talks provide valuable material for teaching translation as they represent real language in use, and the portal makes comparison of the content in different languages available through translations of the talks into multiple languages of the world. ICT terms and technology domain-related neologisms are a rapidly expanding semantic field to which new terms are constantly being added, as language has to keep up with the technological development of contemporary society. Modern-day neologisms that have been integrated into English in many cases do not have their pair-equivalent in Lithuanian. Hence, the semantic gap in the technical vocabulary of the Lithuanian language which is frequently filled up by a loan word or by adapting an English term. Analysis of new coinages found in the selected TED talks regarding ICT terminology and neologisms through comparison of ST and TT pairs revealed the substantial difficulties for translators due to objective factors. The majority of the analysed words are not included into the Modern Lithuanian dictionary. Out of 120 selected items only 4 are included into the Database of Lithuanian neologisms. The findings shed light on the problems that translators encounter when dealing with newly coined words. Back translation technique revealed some inaccuracies of the translated items as well as instances of translators’ creativity in finding a word or phrase, which conveys a similar meaning of a ST segment.

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