

Computer Terminology in Albanian Versus other Languages and the Benefits of Its Codification

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Abstract

Rapid development of computer technology and the extended use of computer and internet in almost all areas of society naturally brought the need for unification of the terminology of this specific field in Albanian language. The issue of terminology constitutes the backbone of our article, which is organized in two main points: a comparative overview of computer terminology and the importance of its unification. For this, besides the terms in English, which is now regarded as a *lingua franca* in this field, has been used even the experience of other languages, for which is used the database language portal of the official site of Microsoft. This is a free basic data for more than 80 languages that can be used for localization, translation of various studies. Besides Albanian and English, in the comparative overview there are used terms in French and Italian language too.

According to the results of surveys conducted in connection with the use of this terminology by different users it is concluded that despite of all the benefits that has brought unification of terminology, the work should be continuous and uninterrupted, which directly influences the faster and broader extensive of Albanian computer terms, as well as their constant perfecting and updating.

Keywords: computational, terms, terminology, Albanian language

1. Introduction

The great advancement of the information and computing technologies, which in turn has encompassed the wide application of the computer science and internet in the diverse activities of society, has quite naturally posed the need for the codification and elaboration of the relevant terms in the Albanian language. When first introduced into Albanian, the resources of the Albanian language were constantly taxed and the terms for the information technology happened to be preserved as in the loaning language, in English. Taking in consideration the fact that the terms had a higher frequency of usage and earned a greater importance in the course of time, their accommodation in Albanian became an issue of utter importance as well. The scholars and aficionados of Albanian language have shown much concern on this issue by actively posting their opinions and attitudes on the forums in the internet that have developed into controversies over certain computer terms. Despite the work done on increasing the awareness of the laymen to use the Albanian word for the translated terms, it is the scholars and researchers to assume the responsibility for determining the most appropriate term and ensuring that the concept expressed by it be clear, comprehensible and widely used. The research undertaken during many years of industrious study has produced several dictionaries¹ specialized in the computer terminology. The most important aspect is the provision of a single variant of the term rather than several variants as it has most commonly happened and that a single variant of the term be codified and standardized and semantically transparent when compared to the loaning term. Although the opinion that Albanian language is a poor one in meeting the language needs of the great terminological boom in information technology has surfaced, our study of the language material in various languages in this aspect has revealed that many languages which are considered as “big” share the same concern about the process of the accommodation of the computer terminology. Many studies have been carried out to localize the different versions for the terms of Windows operating system and Office² in Albanian and they have produced a database of computer terms, which has been replenished and perfected³ in the course of time. To this end, the studies have relied not only on the terminology in the English language which is considered a *lingua franca* in this domain, but even on the practices and

¹ *Fjalor i informatikës (anglisht - shqip; shqip - anglisht)*, Akademia e Shkencave dhe e Arteve e Kosovës, Nebi Caka, Agni Dika, Seb Rodiqi, red. Rexhep Ismajli, Prishtinë, 2005; A. B. Tomçini, *Fjalor anglisht-shqip i radioelektronikës*, Toena, Tiranë, 2004, 410 p.; Y. M. Basha, *Informatika, interneti dhe struktura e kompjuterit*, Tiranë: SHBLSH e Re, 2004, 135 p.; I. Hoti, *Fjalor enciklopedik anglisht – italisht – shqip për bankën, biznesin, bursën, ekonominë*. “Star”, Durrës, 2002, 1546 p.

² *Windows XP, Windows Vista, Windows 7, Operating System and Office 2003, Office 2007, Office 14 package*.

³ L. Shishani, A. Çerpja & A. Çepani, *Fjalor i termave të informatikës (anglisht-shqip-anglisht)*, Prishtinë, 2010, 703 p.

experiences of the other languages, and the database in the language portal of the official site of Microsoft⁴ has come to the aid of lots of research. This is a database for over 80 languages worth using for localization, translation and different studies.

2. This paper aims at analyzing the computer terms in Albanian by drawing a comparison between them and the corresponding terms in French and Italian. Despite the endeavors on localizing the computer terms from English, many of these English terms turned out to become international and find their application as such in many other languages. Quite likely, Albanian has not escaped this tendency. Many English terms have been incorporated together with their concepts in Albanian producing a tradition of usage. Some have been phonetically assimilated, some have been properly adopted in respect with the Albanian grammatical and word-formation structure, creating thus family of words.

Some common words of the general lexicon have been used for the computer terminology, as it is most likely to happen in the terminology of every domain, but these words have undergone specialization of meaning due to the influence of the context. Considering that words like these are frequently used as they constitute the part and parcel of the general lexicon, they are likely to be well-received and widely used. They involve terms such as: *accept - pranohet, action - veprim, bind - lidh, channel - kanal, delete - heq, error - gabim, port - portë*, etc.

Many terms loaned from the terminology of the other disciplines make part of the computer terminology like: *matrix - matricë, monitor - monitor, diacritic - diakritik, fraction - thyesë, gradient - gradient, index - indeks*, etc. A specific feature of the dictionaries in terminology is the rendering of the concept by a single word and words like these constitute the backbone of the terminology of different disciplines of study. These single-word terms serve as derivational bases in coining multi-word terms and most often they serve as meaning-bearing elements, which make the semantic and structural centre of the new coinage, its head-member. Sometimes they are used as specializing constituents.

Our study commences by drawing on the English language as a loaning language and making a division of the terms into two major groups: single-word terms and multi-word terms. Relying on the language material of 2000 terms, we have noticed that this division is proportional.

3. Single-word terms

Single-word terms make part and parcel of the computer terminology for they are used as such or as immediate constituents in multi-word terms as well. These terms are characterized by a much greater employability in the menus and dialog windows of different interfaces for they are short in their grapheme composition, which suits the restriction of space in these interfaces.

The single-word terms are of different types. They are simple words, derived and compound ones.

3.1. Terms of simple words

Although at the very beginning when the computers were introduced into Albania there were many English computer terms used due to the rapid growth of the information technology, which challenged many language issues in Albanian, much work has been lately done in albanianizing them. During the whole process of absorbing the computer terminology in Albanian, researchers and scholars have shunned extreme purism and the terminology that has been codified is scientifically based and widely used by the Albanian speakers.

Out of 600 single-word terms of simple words, the terms translated through the manufacturing of them by the Albanian material constitute 90%. Overall, there is a corresponding simple term in Albanian for every simple term in English, which happens to be the case even in French and Italian. The examples worth mentioning are: *allocate (en.) - rezervoj (al.) - allouer (fr.) - allocare (it.); border - kufizues - bordure - bordo; dock - stacionoj - ancrer - ancorare; insert - ndërfut - insérer - inserire; justify - drejtëvizoj - justifier - giustificare; load - ngarkoj - charger - caricare; pixel - pikëz - pixel - pixel; template - shabllon - modèle - modello*, etc.

In cases when a single word in Alb5-0anian cannot serve to entail the meaning of the English term, another solution has been given. Different word-groups have been used and they are mostly noun phrases, such as: *copyright - e drejta e autorit, drive - njësia e diskut, fuzzing - testim arbitrar, guides - vija udhëzuese, ink - shënimi me penë, pipe - vijë vertikale, prompt - shenjë gatishmërie, spam - postë e bezdisshme, stream - transmetim i vazhdueshëm, thesaurus - fjalori i sinonimeve*; but even verb phrases, such as: *crop - pres anët, demote - ul nivelin, dial - formoj numrin, flag - shënoj me flamur, locate - gjej vendndodhjen, loop - kryej një cikël, nudge - lëviz ngadalë, park - bëj pasiv, promote - ngre një nivel*; or prepositional phrases, such as: *available - në dispozicion, manual - me dorë, mute - pa zë*, etc.

Quite likely, a similar occurrence is noticed in Italian and French and here we are providing the comparison we have drawn. A single-word term in English may correspond to a single-word term in Albanian and French, but to a multi-word term in Italian.

⁴ <http://www.microsoft.com/Language/en-US/Default.aspx>

English	Albanian	French	Italian
balloon	balonë	bulle	area commenti
default	i parazgjedhur	déchiffrement	impostazione predefinita
center	qendërzoj	centrer	allineare al centro
library	bibliotekë	bibliothèque	catalogo multimediale
ribbon	shirit	ruban	barra multifunzione

Some single-word terms in English, Italian and Albanian may correspond to multi-word terms in French like:

English	Albanian	French	Italian
queue	radhë	file d'attente	coda
path	shteg	chemin d'accès	percorso
loop	cikël	exécuter en boucle	ciclo
log	evidencë	fichier journal	log
experience	përvojë	expérience utilisateur	esperienza

Some single-word terms in English correspond to single-word terms in Albanian, but to multi-word terms in French and Italian. In certain other cases, they correspond to multi-word terms in Albanian as well.

English	Albanian	French	Italian
fuzzing	testim arbitrar	test à données aléatoires (fuzzing)	test con dati casuali
locale	parametra rajonalë	paramètres régionaux	impostazioni locali
pipe	vijë vertikale	barre verticale	barra verticale
spam	postë e bezdisshme	courrier indésirable	posta indesiderata
shuffle	përziej	lecture aléatoire	riprodurre con sequenza casuale
hibernate	përgjum	mettre en veille prolongée	mettere in stato di ibernazione
about	rreth	à propos de	informazioni su
stream	transmetim vazhdueshëm	i flux de données	flusso

A small percentage of simple-word terms have been preserved as they appear in the loaning English language in Albanian and other languages, for these terms constitute Englishisms that have become international words and have been accommodated as such in many other languages. However, many terms have adopted the phonetic and grammatical features of Albanian. In some cases, this phenomenon has not occurred in French and Italian.

English	Albanian	French	Italian
macro	makro	macro	macro
margin	margjinë	marge	marginè
script	skript	script	script
site	sajti	site	sito
web	ueb	web	web
console	konsolë	console	console

Quite similarly to the terminology of the other disciplines, these loan words which make part of the Albanian lexicon have become well absorbed in the language and quite productive in creating the corresponding family of the words, such as: *dekriptoj, dekriptim, (i) dekriptuar; defragmentoj, defragmentim, (i) defragmentuar; format, formatoj, formatim, (i) formatuar; konfiguroj, konfigurim, (i) konfiguruar; sinkronizoj, sinkronizim, (i) sinkronizuar; skanoj, skanim, skaner, (i) skanuar, etc.*

3.2. Derived terms

In addition to simple-word terms that constitute the backbone of terminology in every language, a very productive means of rendering a certain concept is derivation. Our study has evidenced that derived terms constitute a very important part of terminology in the loaning language and other languages as well. In general,

almost every derived word in English has a corresponding derived word in Albanian, Italian and French and quite occasionally a compound word: *adapter* (en.) - *përshatës* (al.) - *adaptateur* (fr.) - *adapter* (it.); *adjustment* - *përshatje* - *ajustement* - *rettifica*; *brightness* - *ndritshmëri* - *luminosité* - *luminosità*; *browser* - *shfletues* - *navigateur* - *browser*; *destination* - *vendmbërritje* - *destination* - *destinazione*; *enable* - *aftësoj* - *activer* - *abilitare*; *location* - *vendndodhje* - *trouver* - *posizione*; *orientation* - *orientim* - *orientation* - *orientamento*; *remove* - *largoj* - *supprimer* - *rimuovere*; *reset* - *rivendos* - *rétablir* - *reimpostare*; *selection* - *përzgjedhje* - *sélection* - *selezione*; *upload* - *ngarkoj* - *télécharger* - *caricare*, etc.

In some cases, terms that are derived words in English have word-group counterparts in Albanian and derived words or word-groups in French and Italian. These are mostly noun phrases such as: *capitalization* - *shkrim kapital* - *mise en majuscules* - *capitalizzazione*; *dialer* - *formuesi i numrit* - *numéroteur* - *dialer*; *handout* - *material i printuar* - *se bloquer* - *stampato*; *header* - *koka e faqes* - *en-tête* - *intestazione*; *imaging* - *përpunimi i imazhit* - *acquisition d'images* - *creazione dell'immagine*; *inking* - *shënimi me penë* - *entrée manuscrite* - *input penna*; *spammer* - *postues i bezdisshëm* - *expéditeur de courrier indésirable* - *spammer*; *rendering* - *përgatitja e paraqitjes* - *rendu* - *rendering*; *kerning* - *rregullimi i hapësirës midis karaktereve* - *crénage* - *crenatura*; *logging* - *mbajtja e ditarit* - *journalisation* - *registrazione*; *footer* - *fundi i faqes* - *pied de page* - *piè di pagina*, etc. Some are prepositional phrases such as: *gapless* - *pa zbrazëti* - *sans blanc* - *senza pause*; *posterize* - *me njolla* - *postériser* - *posterizzazione*; *unavailable* - *jo në dispozicion* - *non disponible* - *non disponibile*; *wireless* - *pa tel* - *réseau local sans fil* - *wireless*. Some of them are verbal phrases: *caching* - *ruaj në memorie* - *mettre en cache* - *memorizzazione nella cache*; *resize* - *ndrysho madhësinë* - *redimensionner* - *ridimensionare*. Quite rarely they constitute adjectival phrases: *flagged* - *i shënuar me flamur* - *marqué d'un indicateur* - *contrassegnato*.

3.3. Compound terms

In the technical and scientific terminology, there is a tendency to use compound terms which are coined by joining together two derivational bases built on the stems of independently functioning words and are thus semantically more transparent in rendering the notion of the term. The analysis we have drawn in relation to the data on the computer terminology has evidenced that the category of compound terms constitutes a relatively small proportion as compared to the other single-word terms, whether simple or derived (approximately 13%). We can make a mention of just a few cases when the compound terms in English correspond to compound words in Albanian: *broadband* - *brezgjerë*, *gateway* - *portëkalimi*, *spreadsheet* - *fletëllogaritëse*, *striketrough* - *i mesvijëzuar*, etc.

The compound terms in English have mostly different kinds of word-groups as their counterparts in Albanian: *autoshapes* - *forma të gatshme*, *clipboard* - *kujtesa e fragmenteve*, *gridline* - *vijat e rrjetës*, *snapshot* - *pamja e çastit*, *toolbar* - *shiriti i veglave*, etc.

Many other compound terms in English have derived words as their counterparts and just a few terms have simple words as their counterparts in Albanian: *antialiasing* - *lëmim*, *download* - *shkarkoj*, *keyboard* - *tastierë*, *lowercase* - *jokapital*, *overlap* - *mbivendos*, *overview* - *shqyrtim*, *playback* - *rilexim*, *storyboard* - *historik*; *newspaper* - *gazetë*, *nickname* - *nofkë*, etc.

A similar tendency is noticed in French and Italian in terms of the corresponding counterparts for the compound terms in English. These languages share the same treatment of the computer terminology in this aspect. This is most noticeable in the cases when the English compound terms are translated by making use of the same means of word building in these languages. The translated words may be simple words, derived, compound or word-groups of different kinds: *network* - *rrjet* - *réseau* - *rete*, *overtyp* - *mbishtyp* - *refrapper* - *sovrascrivere*, *shortcut* - *shkurtore* - *raccourci* - *collegamento*; *megabyte* - *megabajt* - *mégaoctet* - *megabyte*, *checkpoint* - *pikë kontrolli* - *point de contrôle* - *punto di controllo*, *plaintext* - *tekst i thjeshtë* - *texte en clair* - *testo non crittografato*, *troubleshooter* - *zgjidhësi i problemit* - *utilitaire de résolution des problèmes* - *strumento di risoluzione dei problemi*, *worksheet* - *fleta e punës* - *feuille de calcul* - *foglio di lavoro*, etc.

But quite often, the compound terms in English have a separate language treatment in their means of wordformation in the three languages and here we are providing some examples like: *placeholder* - *vendmbajtës* - *espace réservé* - *segnaposto*, *firewall* - *mur mbrojtës* - *pare* - *feu* - *firewall*; *bookmark* - *shenja e referimit* - *signet* - *segnalibro*, *highlight* - *theksoj* - *mettre en surbrillance* - *evidenziare*; *rollback* - *prapësim* - *restauration* - *ripristino dello stato precedente*, etc.

As it is noticed in the aforementioned examples, some of the means of the wordformation for the computer terminology can be the word-groups in one language, and derivation and composition in the other language/s.

In the English computer terminology, there are some intermediate means of word-building that verge composition and word-group. They are sometimes written as hyphenated compound words or with a space between the constituents. Overall, they have their counterparts as word-groups in Albanian, French and Italian, with the exception of certain cases in which they are graphically written as in the loaning language. Some of the examples worth mentioning are: *double-click* (*double click*) - *klikoj dy herë* - *double* - *cliquer* - *fare doppio clic*; *drag-and-drop* (*drag and drop*) - *zvarritje dhe lëshim* - *glisser* - *déplacer* - *trascinamento della selezione*; *macro-*

enabled (macro enabled) - makro të aftësuar - prenant en charge les macros - con attivazione macro; multi-touch (multi touch) - prekje e shumëfishhtë - interaction tactile multipoint - multitocco; read-only (read only) - vetëm për lexim - en lecture seule - di sola lettura; right-to-left (right to left) - nga e djathta në të majtë - de droite à gauche - da destra a sinistra; write-protected (write protected) - i mbrojtur nga shkrimi - protégé en écriture - protetto da scrittura, etc.

Holding that the codification of the terminology exerts a great influence in its reception, usage and spread in people, we have taken into consideration the fact of having a single counterpart in Albanian for the English terms in this undertaking of ours for the localization of the computer terms in the Albanian language. Two or three variants of the terms are given in Albanian in a limited number of cases when they denote different concepts in different contexts, such as: *complete - plotëso, përfundo; edition - version, edicion; fill - mbush, plotëso; home - shtëpi, bazë; issue - çështje, problem; power - fuqi, energji; size - madhësi, përmasë; sound - zë, tingull; stroke - goditje, çërkël, shenjë; tile - kuadrat, radhitje, etc.*

The same thing holds true for Italian and French: *home - shtëpi, bazë - personnel, accueil, domicile - casa, home; check - kontrolllo, zgjidh - vérification, contrôle, sélectionner - controllo, verifica, seleziona; play - lexo, luaj - exécuter, lecture - riproduci, gioca, play; setup - instalo, parametrizo - configuration, paramétrage, installation - configurazione, installazione, etc.*

4. Multi-word terms

In the computer terminology, single-word terms cannot meet the needs for the rendering of every new concept in this field of study. Therefore, despite the single-word terms, other composite coinages are created in which the single-word terms are of primary importance for they constitute either the semantic centre, or they can limit and specialize the other constituent. Terms like *file - skedar, access - qasje, remote - largësi, print - printim, section - seksion, bar - shirit, location - vendndodhje, navigacion - navigim* etc. can get combined with other single-word terms or other words of the general lexicon and coin composite terms which are given as separate lexical units in the dictionary, such as: *remote reference - referencë në largësi, remote access - qasje në largësi, log file - skedari i evidencës, file format - formati i skedarit, navigation pane - paneli i navigimit, section break - ndërprerja e seksionit, network drive - njësia e rrjetit; ease of access center - qendra e qasjes së lehtë - options d'ergonomie - centro accessibilità; printing and imaging devices - pajisjet e imazhit dhe të printimit - périphériques d'impression et d'acquisition d'images - periferiche di stampa e acquisizione immagini; volume license product key - çelësi i produktit të licencës së shumëfishhtë - clé de produit de licence en volume - "product key" per contratti multilicenza; compact disc read-only memory - disk kompakt me memorie vetëm për lexim - disque compact à mémoire en lecture seule - compact disc read only memory active directory domain services - shërbimet e domenit të direktorisë aktive - services de domaine active directory - servizi di dominio active directory, etc.*

5. Considering the complexity of the issues that the usage of the terminology of the information technology poses in Albanian, we hold that there is much work to be done in terms of the standardization of the computer terms in line with the scientific principles and criteria. It is not a rare occurrence that the foreign terms of different disciplines find their way in the language and we should consider shunning them in the cases in which it can be helped and endeavor to manufacture them of the Albanian material by using its lexical resources and wordformation processes.

Computer terminology has become an important part of the Albanian technical and scientific terminology. The comparative analysis we have drawn and covered has helped us in acknowledging that Albanian language does not fall behind other languages in the translation of the computer terms. In reaching so far, Albanian language has relied in its lexical resources and capacities and all the means of its expression, without neglecting the scientific accurateness needed for the clear rendering of concepts.

6. How far has the computer terminology been acquired by its users?

To provide an answer to this question, we have consulted written documents in which computer terms are used, such as different leaflets, newspaper articles and different comments, official sites, chat windows and blogs where people ask all the questions in terms of the different technical problems urged and answers are given in some special forums.

Similar terms are widely found in the textbooks of the disciplines closely connected with them, such as the books that encompass knowledge about information technology. What constitutes a great concern for all is the fact that the content of the textbooks with the unstandardized terms exerts an utter influence in the generations of the specialists to come in the discipline of information technology, as they fix up the terms the way they learn them at the university, and later on it is quite difficult for these people to receive and use the albanianized variants of the terms, and they might find these variants quite unnatural.

The table below illustrates 10 terms and the percentage of their usage in their standardized and unstandardized

variant as per 50 cases each.

No.	English term	Standardized variant		Unstandardized variant	
		Term	Percentage	Term	Percentage
1.	accept	<i>pranoj</i>	64%	<i>akseptoj</i> <i>akceptoj</i>	36%
2.	attachment	<i>bashkëngjitje</i>	29%	<i>ataçment</i> <i>atashment</i>	71%
3.	cancel	<i>anuloj</i>	53%	<i>kanceloj</i> <i>bëj cancel</i>	47%
4.	database	<i>bazë e të dhënave</i>	22%	<i>databeiz</i> <i>databeis</i> <i>database</i> <i>databazë</i> <i>të dhënat bazë</i>	78%
5.	file	<i>skedar</i>	42%	<i>dokument</i> <i>fajll</i>	58%
6.	option	<i>opcion</i>	56%	<i>opcion</i> <i>obcion</i>	44%
7.	provider	<i>furnizues</i>	19%	<i>provajder</i> <i>provider</i>	81%
8.	router	<i>rrugëzues</i>	11%	<i>ruter</i> <i>rrugëzim</i>	89%
9.	web browser	<i>shfletues uebi</i>	34%	<i>veb-brauzer</i> <i>web shfletuesi</i> <i>ueb browser</i>	66%
10.	shortcut	<i>shkurtore</i>	16%	<i>shkurtësë</i> <i>shortkat</i> <i>shortcut</i>	74%

As the table makes clear, the unstandardized variants make a great percentage. Many variants are oftentimes used for one and the same term and these are either phonetic variants in the Albanian or variants in the shape of other languages, especially English. This phenomenon evidences the fact that the standardized variant has not been well established in its usage. Therefore, necessity obliges us to work hard on compiling dictionaries of different kinds, explanatory ones, monolingual or bilingual dictionaries of different sizes, so that everyone, ordinary people and specialists at large, make an accurate use of the computer terms.

A great importance should be laid on the different published scientific articles and books, school and university textbooks, as well as on the terminology that appears in them, which would in turn increase the awareness among its users and gradually lead to the usage of the standardized terms even in the discipline of information technology.

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