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Cross-cultural Approach to the Study of Terminological Units in the System of Information Technologies

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Annotation: *The article brings together theory and practice of terminology and deals with such issues as the growing influence of European English on terminology system of information technologies, setting up a national terminological infrastructure, the relevance of frames and contextual information for terminology. The author wants to demonstrate that terminology is of everyday importance and is of interest to everyone interested in the theory and practice of terminology, from terminologists to computer specialists, to lectures and students.*

It is well known that terminology constitutes the greatest part of every language vocabulary system. Terminology of a language consists of many systems of terms. We shall call a term any word or word group used to name a notion characteristic of some special field of knowledge, industry or culture.

With the development of civilization and new communication technologies many special notions become known to everybody and form part and parcel of everyday speech. For example, we are justified to call such terms of computer technologies as **autocovariance, bitpad, biax, route, decoder, antivirus, hyperlink, cyberspace, intranet, extranet** and other terms which are well known and often used in everyday conversation. From logical-semantic structure ICT terms can be divided into following classes: names of objects (tablet PC, webcam, keyboard), names of processes (loading, surge, relay date processing, installation, transmission), sign or properties (extensibility, continuity, specification), sizes or their units (megabyte, gigabyte, bit, megabit).

However, the everyday English vocabulary, especially the part of it characterized by a high index of frequency, polysemy, the development and change of the semantic structure of words constitutes of a constant source for the creation of new terms in the field of information technologies.

Dictionaries for the most part include these terminological meanings in the semantic structure of the head-word. The fact than one of the meanings is terminological which is signaled by means of stylistic usage labels the field where it can be used. For example, the word **loan** as a technical term means “the amount of current supplied be a generating station at any given time; but at present the word “load” as the ICT term means insert (the required operating medium) in a device, e.g. film in a camera, magnetic tape in a tape recorder a program into a computer, etc. The word **power** as a mathematical term is “the product

obtained by multiplying the number “into itself”; the computer term **power** denotes capacity of doing work; provide; and in telecommunication it means **force**; energy; provide.

Apparently, term as traditionally understood is a word or a word group which is specifically employed by a particular branch of science, technology, trade or the arts to convey a notion peculiar to this particular activity.

One of the most important aspects of the twentieth century vocabulary – the rapid extension of scientific vocabulary in the field of information technologies. The ICT terms studied in this article will be introduced gradually with the full explanation and as far as possible with reference to traditional terms of general currency. Possibly, the use of a special vocabulary eliminates a good deal of ambiguity and possible misunderstanding in the discussion of language.

While studying the term of IT we must pay special attention to the fact that it is often possible to trace terms in order to know their authors. For example, most of them were coined by scientists and these terms assume the names of these inventor: Crook cryptosystem, Kaziski method, Feistel’s cipher, Gabidullin cryptosystem, Goppa’s codes, Huffman coding, McEliece cryptosystem, Merkel’s chorades, Neiderreither cryptosystem, Polibi’s quadrate, Reed-Mueller code, Vernam cryptosystem, Vignere’s quadrate. And some of them were close by connected with place names: Cambridge ring, Graphicon, Manchester coding, Silicon valley etc.

According to our investigation that the most number of English IT terms increase in number owing to semantic extension of common words. IT is the result of actualization of different seme, for example:

bridge – connection, joining of two compute sets;

icon – the element of graphical interface;

Trojan horse – craft: a device (or program) planned to bring about an enemy’s downfall;

spider – searching agent, the name of the searching program mechanism in Web;

window – computing a part of a VDU display selected to show a particular category or part of the date.

Thus, above-mentioned IT terminological units which are formed with the help of metaphor. So it is necessary to describe motivated features of IT terms used metaphorically as well as. One can distinguish the following metaphorically motivated peculiarities of IT terms:

1) shifting by form: bracelet, worm, hedgehog, beetle;

2) expressing the function: bridge, icon, space, bus, cut;

3) denoting the mechanism of action: spider, Trojan horse;

4) the character of action: sleep, load, clocking;

5) shifting by sizes: notebook, laptop.

In particular, metonymy is also considered as universal semantic process in creating new IT terminological units in English. As far as we know that metonymy is a transfer of meaning based upon the association of contiguity. In most cases the transfer may be conditioned by functional among the IT terminological units. For example, some IT terms come out from the names of inventors or scientists: 1) McIntosh → Macintosh – one of the types of personal computer; 2) Blaise Pascal → Pascal – language of computer program; 3) John Vince Atanasoff → Dr. Atanasoff’s Computer – named after the inventor; Alan Mathison Turing → Turing machine and etc.

As stated above that some subgroups of IT terminological units are named metonymically named after great scientists and inventors. Thus, the constant development of IT science brings into being new objects and notions. Words to name them are either borrowed or created from material already existing in the language and it often happens that new meanings are acquired by common literary words. But the main essential part is that the relationship between notion and meaning varies. In particular, a word may have a notion for its referent.

Such notions and terms of IT as quantity of information, reduction, feedback and many more are used in various disciplines. Today linguists, no less than other scholars, must know what is going on in other fields of learning and keep abreast of progress.

Up till now we have been dealing with problems of IT terminology. There is only a part of the whole complex of the linguistic problems concerning terminology. It goes without saying that these are terms for all the branches of IT. Their variety is very great, e.g.: cybercrash, cyberculture (comp.), damage, jabber (telecom.), seizure, viewfinder (TV), masking, maskirator (inf.sec.) phonecard, subscriber marker (phone). No emotional coloring or evaluation is possible when the term is used within its proper sphere.

As it is generally known that a term as a word and its meaning is closely connected with category of notion. In point of fact those notions are mostly international, especially for notions with the same level of cultural development, whereas meaning may be nationally determined and limited.

All these examples above mentioned taken at random are sufficient to prove characteristic and cross-cultural features of IT terminological units in English language. We come across the following cross-cultural features of IT terminological elements in the formation of IT terminological units:

- Terminological units are formed metonymically named after scientists and inventors;
- Terms connected with the names of countries and place-names;
- Term expressing the names of IT process;
- Terms denoting names of IT objects and things;
- Terms expressing names of IT professions;
- Slang and professional words used as IT terminological units;
- Some phrases used metonymically in the sphere of IT terminological system.

So the number of notions expressing by terminological units does not correspond to the number of word, neither does the number of meanings. Their distribution in relation to words is peculiar in every language.

In most cases we have to compare the use and meaning of such terminological phrases of IT in different languages in order to find out **deep** and **surface** identity of these units. For example:

English	Russian	Uzbek
flat noise	белый шум	oq shovqin
hidden field	скрытое поле	yashirin maydon
leaky bucket	дырявое ведро	teshik chelak
public key	открытый ключ	ochiq kalit

orange book	оранжевая книга	olovrang kitob
read book	красная книга	qizil kitob
trojan horse	троянский конь	troyan oti

Everything points to the fact that all the above-mentioned phrases of IT do not have emotional meaning and belong to neutral terminological phrases in compared languages as well as. Comparative analysis of studying phrases (or word combinations) determines that the meaning of these phrases is not identical in different languages, although the same denotata can be expressed through the meaning of varying type, scope and nature. So, at the meaning level, there is an unbridgeable gap between the speakers of different languages, on the level of denotata, comprehension is not really limited.

In view of the great importance of the problem of studying the terminological system of IT requires to organize large-scale researches on the whole question of relations between vocabulary and culture, with special reference to the use of particular and generic terms at different levels of civilization and in different environments.

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