

THE LOGICAL-LINGUISTIC RELATIONSHIP OF THE INTERNET TERMINOLOGICAL SYSTEM

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This article explores the logical and linguistic interconnectedness of the Internet terminological system. The research highlights the dual-component structure of terminological relations: (1) the content-linguistic aspect, reflecting logical connections such as type-subtype, whole-part, cause-effect, and intersections; and (2) the formal-linguistic aspect, which involves morphological, derivational, and semantic patterns characteristic of Internet terminology. The analysis reveals that the hierarchical principles of term formation—especially the use of common components like software, site, network, server, and affixations such as -ware, e-, and cyber—play a crucial role in ensuring the internal coherence of the Internet terminological system. Moreover, the study discusses how Internet terminology has evolved through phases marked by the dominance of either natural (spontaneous) or conscious (systematic) term creation. Initially confined to a limited circle of specialists, Internet-related terminology has become democratized and diversified due to the mass adoption of the Internet. As a result, the terminological system has undergone functional stratification, distinguishing between professional and user-level lexicons. This paper contributes to the understanding of how linguistic mechanisms support the logical structure and systemic nature of Internet terminology.

INTRODUCTION.

After gaining independence, special attention was paid to language freedom in our country, which led to an increased interest in learning not only the national language but also foreign languages. The Uzbek language has enriched and developed significantly through the adoption of economic-political, cultural-educational, scientific-technical, and international terms. It was emphasized that the Uzbek language has begun to be widely used even in fields requiring special terminology and concepts, such as computers and the Internet, exact sciences, medicine, and economics, showing the vast potential of the language. No matter the field of specialization, every professional must know foreign languages, particularly English, which currently functions as an international language. In recent years, global processes of globalization and integration, along with advances in disciplines related to foreign language teaching methodologies, have led to fundamental changes in foreign language education. The role of foreign languages in society has changed, and their functions are expanding. Foreign language education is receiving significant attention in our Republic. All educational institutions have introduced foreign language instruction, and learners of all levels are provided with modern educational resources.

Today, English ranks among the leading languages in the world in terms of practical use. In science, technology, culture, education, economics, and especially in professional activities, it has become a necessity for every specialist to possess the skill to use English fluently. Studying the linguistic features of English and Uzbek internet terms involves learning how to use English terms in speech by applying word-formation methods. Therefore, teaching internet terminology begins with studying its linguistic features. The issue of term formation is studied by foreign researchers in relation to word-formation processes. In term formation, there are both productive and unproductive methods, and a variety of conflicting views can be found on this subject. A term's meaning is linked to a professional concept, but this is only realized when the term is used within a specific professional context. However, many terms originate in specialized environments, are used only initially in such domains, and later fall out of narrow professional use (this is natural for the internet terminology system). As a result, some terms lose certain aspects of their professional characteristics. For instance, the meaning of the word **email** is given in general dictionaries in the same way as in specialized ones, but the concept it denotes has become common knowledge for modern individuals. Thus, it is no longer considered a strictly scientific, technical, or professional term.

Let us examine how a concept changes when a term is used outside of its terminological domain. For this, we can compare general and specialized dictionary definitions of widely used internet terms such as **email**, **email address**, **home page**, and **website**. Accordingly, we consider a term to represent a specific concept within a defined system of knowledge.

In relation to the issue at hand, the relationship between the lexical meaning of a term and its concept remains a significant question. By summarizing different views on the relationship between a term's concept and its lexical meaning, we can form the following general understanding:

- The meaning of a term (in terms of accumulated knowledge) is equal to the concept.
- "To know the meaning of a term means to determine the content of the concept associated with that term, identifying the essential characteristics that distinguish the phenomena and objects the concept represents."
- A term has lexical meaning, but it is not limited to the concept it denotes. Lexical meaning can only point to an object, whereas a scientific concept includes essential features beyond mere denotation.

Some scholars (e.g., B.N. Golovin, V.A. Zvegintsev) argue that a term has a concept but no lexical meaning. We adopt the viewpoint that a term's lexical meaning is not identical to the concept but is one of the essential components of the term's semantic structure. As A.V. Lemov rightly notes, "Lexical meaning consists of structured content (denotative, significative components, etc.) and therefore cannot be equated with a concept, but is instead an independent component of the onomasiological situation." A concept is closely tied to the semantic system as a part of a sememe and may be realized through various sememes.

The differences between meaning and concept are as follows:

1. Meanings emerge during the development of a language and are language-specific; concepts arise in the process of learning and cognition, independent of any specific language, and serve as a basis for thought.
2. A semantic structure can consist of several meanings; concepts are always monosemous.
3. Meanings may include connotative (evaluative, emotional), denotative, and other components (including general structural elements); concepts typically include only rational elements.

4. Meanings can be expressed through different phonetic forms (synonyms); concepts do not permit such internal substitution within a language.

5. Meanings can be transferred (figurative meaning); concepts do not generate metaphors.

6. Concepts change only through the development of knowledge, whereas meanings can change due to various other factors.

From the perspective of modern cognitive theory, the relationship between **meaning (sememe)** and **concept** can be described as follows: Both the meaning and the concept of a term are cognitive phenomena, representing how a person perceives and learns a specialized domain. The cognitive features that form the content of a concept reflect specific aspects of objects and phenomena within a given field of knowledge. The meaning of a term (as a sememe or semanteme) also has cognitive nature — it consists of semes, which, in discourse, manifest the individual cognitive features forming the concept's meaning. The key difference between a term's meaning and its concept lies in their domains:

- **Meaning** is an element of the semantic domain of terminology (i.e., a part of the conceptual domain expressed through linguistic signs),
- **Concept** is an element of the conceptual domain of a specialized field of knowledge. "The content is a part of the concept as a unit of thought, which is fixed with a linguistic sign for the purpose of communication."

The meaning of a term appears as a communicatively relevant part of the concept known to most specialists, serving as the signified component in acts of communication. While word meaning is tied to a specific linguistic sign, a concept, as a unit within the conceptual domain, is not necessarily linked to a single linguistic label.

In contrast to the general language system, the connection between terms and concepts in a terminological system is more stable and transparent. However, as mentioned earlier, a real terminological system is not isomorphic to the system of concepts; thus, a single concept may be expressed through several terminological units. If the concept is new or recently formed, it may not yet be represented by a term. In such cases, alternative sign systems (e.g., graphic symbols like keyboard icons) may be used.

Of course, a term's content is closer to a concept than that of a general word, as it reflects the most essential characteristics of an object. However, a concept is always more complex than meaning — especially when discussing multifaceted terms like **internet**, whose

cognitive features reflect not only individual semes of a single sememe but a whole system of semes and semantemes from multiple groups.

Logical and linguistic connections are inherent features of how terms are integrated into a system. Identifying these within a terminological set serves both as evidence of its status as a system and as a tool for defining, refining, and organizing the structure and meaning of its components.

Logical systematicity is based on the interrelation of terms and concepts and is expressed through classification (e.g., by category — object, process, quality — and by type — basic, intermediate, derivative, complex, etc.).

Linguistic systematicity is defined through word formation and semantic relationships.

There is an opinion that **polysemy**, **homonymy**, and **synonymy** contribute to semantic unsystematicity. However, in analyzing the semantic structure of Internet terminology, we conclude that all of these relations have a positive effect on the linguistic connectivity of a terminological system. The logical-linguistic interconnectedness of terminological systems includes two components:

1. The **content-language connection**, which reflects logical relationships (type-kind; whole-part; cause-effect; mixture, intersection, integration);
2. The **form-language component**, which reflects linguistic relationships (semantic field correlations, semantic derivation, antonymy, gradation; use of type terms as elements in kind terms).

The latter feature — the use of type terms in the formation of kind terms — distinguishes linguistic systematicity in terminology from that in general vocabulary. In some terminological systems, this can be so essential that in certain studies it even serves as a criterion for distinguishing morphological types of terms.

The use of type terms as elements in kind terms is one of the common methods of forming Internet-related terms. We have identified several frequently used term-semantic groups (TSGs) that consistently apply the type-kind principle to activate hierarchical relationships:

- **Software:** *alpha software, anti-spam software, anti-virus software, beta software, blocking software, communications software, public domain software, etc.*
- **Websites:** *anonymizer site, backup site, chat site, copycat site, portal site, personal website, diary site, download site, font site, game site, hate site, hot site, HTML validation site, etc.*
- **Computer viruses:** *boot virus, companion virus, data virus, device driver virus, executable virus, macro virus, etc.*

- **Internet protocols:** *Directory System Protocol, Exterior Gateway Protocol, File Transfer Protocol, Hello Protocol, Internet Control Message Protocol, Hypertext Transfer Protocol*, etc.
- **Networks:** *broadcast network, bus network, circuit-switched network, closed network, cooperative network, peer-to-peer network, personal area network, point-to-point network*, etc.
- **Servers:** *ad server, advert server, authentication server, caching proxy server, chat server, commerce server, database server, groupware server, mailing list server, FTP server*, etc.
- **Hyperlinks:** *absolute link, obsolete link, broken link, dead link, deep link, email link, FTP link*, etc.
- **Addresses:** *email address, Ethernet address, hardware address, loopback address, Internet Protocol (IP) address, multicast address*, etc.
- **User accounts:** *demo account, dial-up account, dormant account, group account*, etc.

Other formal features of terminological systems include the presence of derivational nests and consistent terminological paradigms. Among the most extended derivational nests, the following can be highlighted: *cybrarian, cyberrhea, cybersexism, cyberspeak, cybersquatting, cybercafe, cyberchondriac, cybermystic, cybernaut, cybersitter, cyberstalker, Web accelerator*.

The term element *electronic* has a shortened *e-* variant, which functions similarly to a special affix (compare *hyper-*), producing several terminological variants: *electronic journal – e-journal, electronic mail – e-mail, electronic book – e-book, electronic wallet – e-wallet*, etc.

From a linguistic perspective, a systematic feature is the presence of series of lexical units with similar structure. Compare the lexical units from the **software** group: *accessware, beggarware, bloatware, shareware, censorware, charityware, crippleware, demonware, freeware, fritterware, groupware, guiltware, middleware, payware, postcardware*, etc.

The **type component** is a morphologically consistent affixal morpheme (the suffix *-ware* indicating software), while the **kind component** is the variable root morpheme. All derived terms are formed by combining the *-ware* suffix that reflects the type characteristic and a changeable root, which defines the kind of term. The root may vary in grammatical class: substantive, adjective, verb, or compound.

The *-ware* suffix-based terminological paradigm is considered regular and productive. However, this group may also include terms without such consistent morphological markers: *filter, glue, padded cell, plug-in*.

Another example of a productive and regular term-formation model is the use of the *-net* element to form names of various networks: *Internet*, *intranet*, *extranet*, *catenet*, *FidoNet*, *Gripenet*, *BITNET*, *JANET*, etc.

Such regular terminological paradigms reflect the internal connections of units and contribute positively to the linguistic interconnectedness of the terminological system.

The formation of terminological systems is a complex, multifaceted process tied to the development of a knowledge domain, the evolution of its conceptual system, and the use of linguistic systems to clearly express and formalize the concepts within that field.

In conclusion, it can be stated that the predominance of naturalness and intentionality has alternated at different stages in the formation of Internet terminology. During the early stages of the development of information networks and the emergence of the field's core concepts and their corresponding terms, the spread of the Internet was minimal, the terms were known only within a narrow circle of specialists, and the terminology experienced very limited external influence. Later, the Internet became accessible to a broader range of users — first the military and educational professionals, and eventually users of all levels and backgrounds. This led to a stratification of the specialized vocabulary into the language of professionals and that of general users.

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