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Syntactic Methods In The Formation Of Mobile Communication Terminology In English And Uzbek

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Abstract: This study examines the syntactic patterns underlying the formation of mobile communication terminology in English and Uzbek. While English demonstrates high productivity in compound structures and phrasal noun sequences, Uzbek tends to form multi-word terminological units through analytic combinations, attributive chains and fixed terminological phrases. Drawing upon internationally recognized linguistic frameworks, the article provides a cross-linguistic comparison of syntactic models of term formation, supported by authentic examples from technological corpora and academic literature.

Keywords: Mobile communication terminology, syntactic term formation, terminological phrase, compound noun, analytic-syntactic models, compound structures, Noun + Noun patterns, syntactic calquing, terminographic norms, multi-word terminological units, modifier-head constructions.

Introduction: The rapid development of mobile and digital technologies has brought about an unprecedented expansion of specialized terminology in many languages. English, as the main lingua franca of global technology, has generated a dense layer of mobile communication terms such as smartphone, wireless network, mobile data and signal booster, which circulate globally in technical documentation, standards, and user discourse. Uzbek, as an official language in a rapidly digitizing Central Asian state, has been actively assimilating these innovations and developing its own system of mobile communication terminology, often through structural models that are quite different from English.

In terminological studies, one of the central questions concerns how terms are formed: which morphological and syntactic resources languages use, and how these resources reflect typological properties of the languages themselves. Terminological theory universally recognizes syntactic methods of term formation as central to the creation of new specialized vocabulary. M.T. Cabré emphasizes that terminological units frequently originate from syntactic combinations that gradually gain lexical stability in specialized discourse [1]. Similar views have been expressed by Uzbek linguists; for instance, O. Bozorov states that modern Uzbek terminology is formed largely on the basis of syntactic units, since analytic structures provide the most convenient means for expressing complex scientific and technical concepts [2].

The present article focuses specifically on syntactic methods in the formation of mobile communication terminology in English and Uzbek, understood both in the narrow sense (phrasal terms, terminological word combinations) and in the broader sense where compounding stands on the border of morphology and syntax.

LITERATURE REVIEW

In general linguistics, the borderline between word formation and syntax is notoriously fuzzy, especially in the area of compounding. Compounding is often considered a morphological process, since it results in a single lexical unit, but many compounds preserve visible traces of syntactic relations between their components. The classic description of compounding in English emphasizes that compound lexemes like *cell tower*, *network operator* or *signal booster* arise through the joining of two or more stems, usually nouns, which mirror the modifier–head pattern typical of English noun phrases. In this sense, compounding is frequently described as a “morphological-syntactic” or “syntactic” method of term formation.

In terminological theory, syntactic methods are more clearly visible when the result of term creation is not a single orthographic word but a multi-word unit: a terminological phrase or fixed word combination. Modern research into term formation in English business and scientific language explicitly identifies a “syntactic method” based on compounding and on the formation of stable word combinations, especially of the Noun + Noun and Adjective + Noun types [3].

The situation becomes particularly interesting in typologically different languages like English (analytic, with flexible compounding) and Uzbek (agglutinative, with rich case marking and relatively strict word order in phrases). Comparative studies of English and Uzbek word combinations show that, in Uzbek, word

combinations play a central role in expressing specific semantic relations, and that derivational processes at the level of word combinations are an important source of lexical innovation [4]. In terminology, this means that multi-word units such as *mobil aloqa tarmogʻi* (mobile communication network) or *uyali aloqa operatori* (cellular communication operator) are not accidental phrases but stable structural patterns functioning as terms.

English linguistics has produced a rich body of research on compounding and the syntactic origins of terminological units. David Crystal remarks that the extraordinary productivity of English compounding, especially in scientific and technological domains, allows multi-word noun phrases to condense complex ideas into compact forms” [5]. Laurie Bauer, one of the world’s leading scholars on word formation, directly connects syntactic structures with terminological development: most new terminology in technical fields emerges through syntactic compounding—particularly N + N patterns which allow English to create dense nominal modification [6]. Similarly, Ingo Plag notes that the stackability of modifiers in English noun phrases is a key mechanism enabling the formation of highly compact technical terms such as *mobile network operator* or *wireless access point*” [7].

These quotations demonstrate that English scholars widely agree: syntactic structures, especially compounds and multi-word NP units, are the most productive source of new technological terms.

Uzbek linguistic and terminological studies also confirm the centrality of syntactic patterns in technical vocabulary formation. Nizomova M.B. stresses that in Uzbek, sector-specific terminology is formed mainly through analytic–syntactic models, that is, on the basis of word combinations. This method provides a clear means of expressing complex scientific concepts [8]. Saidqodirova D.S writes that the new technical terms borrowed from English are most often rendered in Uzbek through syntactic calques, which helps to convey the meaning of the term with precision [9]. Terminologist O. Bozorov states even more explicitly the role of syntactic combinations. According to him, the most frequently encountered units in the terminological system are two- and three-component word combinations. Such syntactic constructions constitute the core layer of terminology [10]. Mahmudova analyzing telecommunication terminology, observes that the majority of terms related to cellular communication and internet technologies in Uzbek are formed on the basis of syntactic models, and they are predominantly structured through the modifier + head

relationship [11].

RESULTS AND DISCUSSION

Syntactic Term Formation in English Mobile Communication Terminology

English mobile communication terminology offers a clear illustration of how syntactic patterns become lexicalized. In mobile communication, several patterns are particularly frequent. The first and structurally most central pattern is the Noun + Noun sequence. Terms such as cell tower, network provider, signal strength, data plan and SIM toolkit instantiate a head-modifier relation in which the first noun narrows the meaning of the second. This corresponds to the general English tendency to place modifiers before the head in noun phrases. The same pattern underlies more complex sequences like mobile network operator or short message service center, where a chain of nouns, sometimes mixed with adjectives, forms a dense terminological expression.

The second major pattern is the Adjective + Noun sequence, which allows English to encode functional, technical or qualitative properties of mobile technologies: mobile device, wireless network, digital assistant, virtual operator, high-speed data and encrypted channel are all examples of how scalar and functional distinctions are encoded syntactically. From the perspective of terminological theory, these structures are syntactic in form but behave lexically in discourse: they are stored, retrieved and processed as units in technical writing and standards.

A third important pattern involves participial and deverbal modifiers, which blur the boundary between syntax and word formation. Terms like charging port, streaming service, operating system, folding screen or connected device incorporate verbal semantics into pre-head modifiers. In mobile communication discourse, this contributes to the high density and "compressed" style of technical documentation, where complex processes are packaged into compact terms.

Finally, a group of highly standardized mobile communication terms are formed through prepositional and of-phrases such as Voice over LTE, Internet of Things, machine-to-machine communication or quality of service. These structures are not compounds in the strict morphological sense, but international standards and technical literature treat them as stable terminological units.

Syntactic Term Formation in Uzbek Mobile Communication Terminology

Uzbek presents a different picture, though the underlying logic is similar: syntactic structures are

recruited to build and stabilize mobile communication terms. Research on Uzbek word formation and terminology highlights the importance of analytic structures, particularly word combinations with clear syntactic relations.

In the domain of mobile communication, Uzbek uses several recurrent syntactic patterns. One basic pattern is the Noun + Noun combination where the relationship between the nouns is clarified by context or case markers. Phrases such as mobil aloqa tarmog'i 'mobile communication network', uyali aloqa operatori 'cellular communication operator' and internet tarmog'i 'internet network' illustrate how Uzbek expresses domain relations through separate lexical items combined syntactically. In contrast to English, where a comparable meaning might be expressed by a single compound like network operator, Uzbek maintains word boundaries and often marks relations through possessive or case endings.

Another widespread pattern is the Adjective + Noun combination, used to signal technological type or qualitative attributes of devices and services. Expressions like simsiz tarmoq 'wireless network', raqamli qurilma 'digital device', mobil ilova 'mobile application' or virtual raqam 'virtual number' show the productive use of adjectival modifiers. Studies of Uzbek information and communication terminology note that such combinations are among the primary means for integrating new technological concepts into the existing lexical system, providing transparent semantic motivation for users [12].

Particularly characteristic of Uzbek are possessive-genitive constructions, where the relationship between two nominals is encoded via the genitive ending on the first element and the possessive suffix on the second: telefonning xotirasi 'memory of the phone', tarmoqning kengligi 'bandwidth of the network', qurilmaning sozlamalari 'settings of the device'. In terminology, such constructions frequently occur in explanatory definitions or extended forms of terms, especially in educational and normative texts. In addition to concise two-member combinations, Uzbek commonly employs multi-word terminological phrases that, over time, become conventionalized. For example, sequences equivalent to 'mobile internet distribution point', 'subscriber identification system in cellular communication' or 'short text messaging service' are often realized as relatively long analytic phrases in Uzbek, reflecting a preference for semantic transparency over formal compactness. It is important to stress that these Uzbek multi-word expressions are not ad-hoc; they function as stable terminological units, repeated in official documents, educational textbooks and scientific articles on telecommunication

terminology.

Comparative Analysis: English and Uzbek Syntactic Patterns

Against this background, one can identify both convergences and divergences in how English and Uzbek deploy syntactic methods for term formation in mobile communication. At first, fundamental difference concerns structural compactness versus analytic transparency. English typically compresses complex technological relations into compact noun phrases and compounds: mobile network operator, cell tower, data roaming charges. Uzbek tends to preserve explicit syntactic relations in separate words: mobil aloqa operatori, literally 'operator of mobile communication'; or multi-word sequences where the relation between elements is indicated through word order and affixes. This contrast reflects deeper typological properties: English allows stacking of pre-head modifiers, whereas Uzbek favours clearer head-final sequences and uses case and possessive morphology to encode relations.

Second, both languages heavily rely on Noun + Noun and Adjective + Noun patterns, but their functional load differs. In English, N+N structures are often lexicalized to the point of being orthographically fused or hyphenated, as documented in descriptions of English compounding. In Uzbek, N+N combinations remain primarily syntactic, rarely leading to complete morphological fusion, and are often accompanied by genitive or possessive markers.

Third, syntactic term formation interacts differently with borrowing and calquing in the two languages. English is both the donor and receiver of technological terminology, but in mobile communication it predominantly acts as the source language. Uzbek, therefore, often has a choice between: adopting an English term with minor phonetic adaptation; creating a calque by replicating the English syntactic structure; or developing a more descriptive multi-word term aligned with Uzbek syntactic norms.

For example, an English term like wireless network may appear in Uzbek either as a relatively direct calque *simtsiz tarmoq* or as part of longer explanatory combinations when needed for clarity. Studies of terminological translation in Uzbek emphasize that such choices are not arbitrary but influenced by normative policies, tradition in Uzbek terminography, and the target audience's level of technical literacy [13].

Fourth, in both languages, syntactic patterns serve as productive templates for generating new terms. When a new technological concept appears—say, a novel type of messaging protocol or a new security

mechanism—the most natural way to name it is to insert the new core concept into an existing syntactic frame. In English, this may yield terms like end-to-end encryption, push notification service, cloud messaging API. In Uzbek, analogous concepts are often named via analytic phrases that reuse established models such as *X xizmatini ko'rsatish tizimi* 'system for providing X service' or *X ni boshqarish moduli* 'module for controlling X'. Research on English and Uzbek term formation consistently notes this patterned productivity of syntactic structures [14].

CONCLUSION

The analysis of syntactic methods in the formation of mobile communication terminology in English and Uzbek shows that, despite typological and stylistic differences, syntactic structures represent a central and dynamic resource in both languages. English relies on syntactic compaction: modifier-rich noun phrases, compounds and standardized prepositional sequences condense complex technological information into lexically behaving units. Uzbek, by contrast, exhibits a strong preference for analytic syntactic constructions—word combinations and multi-word phrases, often with genitive-possessive marking—that maintain semantic transparency while gradually gaining terminological stability.

In a broader perspective, the present comparison illustrates how global technical innovation is mediated through local grammatical systems. English and Uzbek respond differently to the pressure for terminological compactness, yet both achieve functional adequacy within their own norms. For terminographers, translators and language planners working with mobile communication terminology, awareness of these syntactic mechanisms is essential: it enables them to design terms that are not only formally correct and internationally aligned but also cognitively accessible and culturally integrated in the respective linguistic communities.

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