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Semantic Types Of Mobile Communication Terms In English And Uzbek: Polysemantic, Synonymous And Antonymic Units

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Abstract: The rapid development of information and communication technologies (ICT) has generated a dynamic layer of specialized terminology in many world languages, including English and Uzbek. Within the lexicon of mobile communication, semantic phenomena such as polysemy, synonymy, and antonymy are central to the evolution and usage of terms. This article investigates the semantic types of mobile communication terminology in English and Uzbek, with a comparative focus on polysemantic, synonymous, and antonymic units. The study employs a comparative linguistic methodology based on semantic typology and terminology theory, drawing upon data from English ICT glossaries, Uzbek terminographic sources. Results demonstrate both shared semantic tendencies—such as the extension of basic terms into technical domains—and culturally specific features, including calqued synonyms in Uzbek and metaphor-based polysemy in English. The findings contribute to cross-linguistic terminography, highlighting implications for lexicographic description, translation practices, and standardization of mobile communication terms.

Keywords: Semantic types of terms; polysemy in ICT lexicon; synonymic variation; antonymic opposition; comparative semantics; English and Uzbek terminologies; semantic typology; discourse of information and communication technologies; terminological lexicography; bilingual terminology studies.

Introduction: In recent decades, mobile technologies have developed at a rapid pace, becoming central to the social and communicative life of modern society. This process has led to the emergence of new terms, concepts, and technical units that have occupied a stable place in linguistic systems [3]. English is considered the primary source of mobile communication terminology worldwide, as most technological innovations are first named in English before spreading into other languages, including Uzbek [9].

The study of semantic types of mobile communication terms—particularly polysemantic, synonymous, and antonymic units—is relevant not only for lexicology and terminology studies but also for translation studies, computational linguistics, and research on social communication [4], [12].

The development of mobile communication technologies has significantly transformed not only communication practices but also the lexical systems of world languages. Terminologies in this field evolve rapidly, reflecting innovations in devices, services, and user practices. English, as the global language of technology, has become the primary source of mobile communication terms. Uzbek, like many languages, has adopted, adapted, and indigenized these terms to fit its linguistic and cultural system.

Despite extensive research on ICT-related lexicons, the semantic characteristics of mobile communication terminology—especially in comparative English–Uzbek perspective—remain underexplored. While structural and morphological studies exist, semantic classification of terms into polysemantic, synonymous, and antonymic units has not been systematically addressed. Yet such classification is critical: it reveals how languages conceptualize technological phenomena, how meanings expand or narrow, and

how terminological variation arises.

The aim of this article is to analyze the semantic types of mobile communication terms in English and Uzbek by focusing on polysemy, synonymy, and antonymy. The objectives are:

1. To identify examples of polysemantic mobile communication terms in English and Uzbek.
2. To examine synonymous terminological pairs and clusters in both languages.
3. To classify antonymic relations within the domain of mobile communication.
4. To discuss similarities and differences in semantic tendencies between English and Uzbek.
5. To evaluate implications for bilingual lexicography and terminology standardization.

The novelty of the study lies in its integrated comparative approach, combining semantic typology with practical term analysis.

LITERATURE REVIEW

Research on polysemy has its origins in European semantic traditions, where J. Lyons [10] and D. A. Cruse [4] explored in detail the phenomenon of multiple meanings in lexical units. In Uzbek linguistics, the works of N. Mahmudov [11] and R. Mustafoyev [13] provide important theoretical foundations.

Synonymy also plays a significant role in terminology. Murphy [12] highlights the paradigmatic relations established by synonyms within the lexicon. In Uzbek, D. Kadirbekova [8] and D. Saidqodirova [16] investigated the peculiarities of synonymy in technical terminology.

Antonymy has been analyzed by Apresyan [1] and Lakoff & Johnson [9], who demonstrated the universal laws of semantic opposition. In Uzbek linguistics, antonymic relations in terminology have been addressed by Z. Shirinova [17] and G. Rahimova [15].

In addition, international works on terminology by Cabré [3], Temmerman [18], and Wüster [19] present innovative approaches to understanding terminological systems.

METHODOLOGY

The study applies a comparative semantic approach grounded in lexical semantics and terminology theory [10], [4], [3].

Semantic properties of the terms are analyzed and categorized into polysemantic, synonymous, and antonymic units. Furthermore, their translation equivalents in Uzbek are identified and structural similarities and differences are observed [2], [6].

Data sources include:

English: GSMA Glossary of Mobile Terms [5], Oxford Dictionary of Computing [14], ITU ICT Terminology Database [7].

Uzbek: “Axborot-kommunikatsiya texnologiyalari lug‘ati” (2019), academic articles in Filologiya masalalari, Uzbek ICT news portals.

Selection criteria:

1. Terms must belong to the domain of mobile communication (devices, networks, services, usage).
2. Terms must have established usage in both English and Uzbek.
3. Semantic relations (polysemy, synonymy, antonymy) must be demonstrable in real usage contexts.

The analysis focuses on qualitative semantic description supported by illustrative examples, rather than quantitative frequency counts.

RESULTS

Polysemantic Terms

Polysemy arises when one term develops multiple related meanings. In mobile communication, polysemy often emerges from metaphorical extension.

Term	Semantic Meanings	Example	Language
Cell	(1) biological unit; (2) network area; (3) mobile device (colloquial)	“cell phone”	English
Roaming	(1) wandering; (2) using network outside coverage	“international roaming”	English

Chip	(1) fragment; (2) microcircuit; (3) SIM card (in Uzbek usage)	“SIM chip”	English/Uzbek
Cloud	(1) meteorological cloud; (2) remote data storage	“cloud services”	English
Xabar	(1) message in general; (2) SMS/text	“matnli xabar”	Uzbek
Aloqa	(1) communication in general; (2) mobile network connection	“mobil aloqa”	Uzbek

These examples show that English polysemy often involves metaphorical extensions, while Uzbek polysemy often arises from broadening of existing general terms (aloqa, xabar).

Synonymous Terms

Synonymy in mobile communication terminology often arises from parallel borrowings, abbreviations, and calques.

Synonym Cluster	**Variants**	**Notes**	**Language**
Text message	SMS, message, text	Co-exist in English usage	English
Smartphone	cell phone, mobile phone, handset	Semantic overlap, stylistic/register differences	English
SMS	SMS, xabar, matnli xabar	Borrowing + Uzbek equivalents	Uzbek
Mobile communication	uyali aloqa, mobil aloqa	Both in official usage	Uzbek
Recharge	top up, refill, balance recharge	Different stylistic registers	English/Uzbek

Synonymy reveals competition between borrowings and native terms in Uzbek, while in English it often reflects register variation and branding influences.

Synonymy in mobile communication is largely due to the coexistence of native terms and borrowed internationalisms.

English Synonyms	**Uzbek Synonyms**	**Notes**

mobile phone – cell phone – smartphone (informal: mobile, cell)	uyali telefon – mobil telefon – smartfon	Uzbek usage prefers ‘mobil telefon’ in formal contexts, while ‘smartfon’ is a loanword from English.
text message – SMS – short message	SMS – qisqa xabar	English shows three variants; Uzbek mostly uses the international abbreviation SMS.
carrier – operator – provider	operator – provayder	Uzbek preserves both terms, sometimes interchangeably.

Synonymy emerges as a result of regional variation (British vs. American English), as well as technological innovation (new devices and services). Uzbek, on the other hand, often adopts one stable international term, reducing synonymic competition.

Antonymic Terms

Antonymy in mobile communication is highly systematic, reflecting technical oppositions.

Antonym Pair	Meaning	Language
Upload – Download	Transfer up vs. down	English
Online – Offline	Connected vs. disconnected	English
Locked – Unlocked	Restricted vs. open phone	English
Yoqilgan – O‘chirilgan	Switched on/off	Uzbek
To‘liq zaryad – Bo‘sh zaryad	Full vs. empty charge	Uzbek
Ochiq tarmoq – Yopiq tarmoq	Open vs. closed network	Uzbek

While English antonymy tends to be technical and systematized, Uzbek often relies on transparent native oppositions.

Antonymy in mobile communication terminology reflects binary oppositions inherent in technical processes.

English Antonyms	Uzbek Antonyms	Notes
upload – download	yuklash – tushirish	Direct calque; reflects data transfer direction.
incoming call – outgoing call	kiruvchi qo‘ng‘iroq – chiquvchi qo‘ng‘iroq	Perfect semantic parallel.

lock – unlock	bloklash – blokdan chiqarish	Borrowed from English; Uzbek adds native affixation.

Antonymic relations are often straightforward and highly symmetrical across both languages, suggesting universality of technical oppositions.

DISCUSSION

The findings highlight both universal and language-specific tendencies. Polysemy in English ICT terminology often emerges through metaphorical projection [9], while in Uzbek it tends to result from semantic broadening of native words. This difference reflects English's role as the source of technical innovation and Uzbek's role as a recipient language adapting new concepts.

Synonymy illustrates sociolinguistic factors. In English, multiple terms co-exist due to variation across regions (e.g., "cell phone" in the US, "mobile phone" in the UK) and due to commercial branding (e.g., "iMessage" vs. "SMS"). In Uzbek, synonymy is often the result of parallel borrowings and calques, revealing ongoing processes of terminological standardization.

Antonymy reflects systematization of mobile communication terminology. English oppositions like "upload/download" follow logical technical schemas. Uzbek oppositions often arise through productive derivational morphology (yoqilgan/o'chirilgan). This suggests that while borrowing introduces many base terms, antonymic oppositions are often nativized.

Theoretically, these results support Cruse's [4] argument that lexical relations are language-specific instantiations of universal semantic patterns. For terminography, the findings stress the importance of documenting polysemy and synonymy, which can cause ambiguity in translation and lexicography. For example, translating aloqa as "communication" vs. "network" requires contextual disambiguation.

CONCLUSION

This study classified mobile communication terminology in English and Uzbek into polysemantic, synonymous, and antonymic units. It showed that:

1. Polysemy in English is metaphor-driven, while in Uzbek it is extension-driven.

2. Synonymy in English reflects branding and regional variation, while in Uzbek it reflects competition between borrowings and calques.

3. Antonymy in English is highly technical and systematized, while in Uzbek it often employs native oppositional structures.

These insights have implications for bilingual lexicography, translation, and ICT terminology standardization in Uzbekistan. Further research could expand the corpus and apply quantitative frequency analysis.

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