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Translation of aviation abbreviations

The article deals with the analysis of the main peculiarities and deviated features of aviation abbreviations in English. Because of breaking linguistic rules, translation of deviant forms of aviation terminology is regarded as particularly challenging activity for future translators and interpreters in the field of aviation.

The subject of the study is extremely relevant because of the rapid development of the aviation industry and the widespread abbreviations and acronyms use in the scientific and technical texts of this field.

Observations of many researchers indicate that at this stage of social development there are no such literary languages, in which there would be no structural varieties of abbreviations. Actually, no phenomenon in word formation, vocabulary, stylistics, attracting so much attention, causes so many contradictions and real language battles, as abbreviations and acronyms.

The differences in linguists views relate mainly to the discovery and definition of the linguistic nature of this phenomenon, its sources and reasons of appearance, the establishment of classification features, the place among other phenomena from the point of view of the culture of language, language relevance, etc. All units in the language, an impetus to the appearance of which served to reduce their complete initial correspondences, are named with the term “abbreviation”.

The purpose of this work is to study abbreviations in English scientific and technical aviation texts in order to analyze the peculiarities of their translation.

As actual research material more than 1500 units (abbreviations and acronyms found in aviation texts), which were selected from the technical dictionaries of aviation subjects, were used in the current study.

The emergence of abbreviations in English writing traditionally dates back to the XV century. Literary memoirs testify that already in those days the abbreviations of various types were widely used.

Abbreviations are the linguistic units that lead to the communication process optimization. They are words, albeit peculiar, which can independently name objects and phenomena of reality and act as one of the means of human communication. The complexity of the semantics of abbreviations is due to a set of semantic differential attributes, correlated with various qualities and properties of the reproduced object. On the other hand, the plan of the word content is formed under the influence of linguistic and non-linguistic factors. Consequently, the abbreviated word is the bearer of elements of semantic, syntagmatic, syntactic, and pragmatic influence.

There are three ways of morphological abbreviation:

- a) morphemic abbreviation: *vortac (VOR and TACAN combination)*;
- b) initial abbreviation: *dcpc (direct controller-pilot communications)*;
- c) combined method: *voice-automatic (voice-automatic terminal information service)*;

The main feature of the scientific and technical text is the exact and complete presentation of the material in the almost complete absence of those expressive elements used in literature, which gives the language an emotional saturation. In scientific and technical texts, the emphasis is on the logical side of the statement rather than the emotional-sensory.

The author of the scientific and technical article seeks to exclude the possibility of arbitrary interpretation of the translated sentence, as a result of which in the technical literature there are almost no such expressive means as metaphors, metonymy and other stylistic figures.

The basic requirement for the term is unambiguousness, that is, the presence of the only once and permanently set meaning. In fact, not all the terms meet this requirement, even within the aviation sphere.

The same is true for abbreviations, for example: *MTTR (mean time to repair) - середнє напрацювання до ремонту; 2. а середній час ремонту*. However, it should be noted that this phenomenon is not inherent to contractions, more often encountered in situations where decoding of the same reduction can have several options. In this case, it is not entirely correct to say that the actual abbreviation is multi-sense, rather it will be noted that abbreviations components may reflect different terminology units, for example:

DA: 1. data available; 2. decision altitude; 3. drift angle.

FAM: 1. family of frequencies; 2. frequency-amplitude modulation.

PER: 1. staff; 2. preliminary engineering report.

This circumstance, as a rule, complicates the work of translator or interpreter, and is an obstacle to an accurate understanding of the text. However, from such a seemingly hopeless situation, there are at least three solutions: 1. to use the context in order to understand terminology hidden under the abbreviation; 2. to perform descriptive translation; 3. omit the terminology units if it does not distort the content of the entire text. However, in most cases, a conscious choice of equivalent should be dictated only by a good knowledge of the features of not only aviation terminology, but also the aviation industry itself.

The active collaboration of linguists and professionals from other fields of science suggests, that there is a need for a multi-dimensional analysis of special terminology. Because it is the professional knowledge, the necessity of accuracy, linguistic and written word savings that stimulates the development of compression of the concept, and quite often the occurrence of abbreviations - one of the most complex and least studied phenomena.

The nature of the construction and use of abbreviations is different. The letter abbreviations are widely used in aviation terminology as text abbreviations, codes, and scientific and technical terms.

Text abbreviations are used for repeated repetition of the term in order to organize a more economical and coherent text. In this case, the reductions follow the preservation of the initial letters of the term: *assigned altitude deviation - AAD, circling guidance light - CGL, distance from touchdown indicator - DFTI, elevation differential area - EDA, final approach point - FAP, ground-based augmentation system - GBAS, instrument landing system - ILS, local mean time - LMT, missed approach holding fix - MAHF, noise abatement departure procedure - NADP, oceanic*

control area - OCA, precision approach terrain chart - PATC, runway center line light - RCLL, simple approach lighting system - SALS, the tropical cyclone advisory center - TCAC, upper air route - UAR, visual flight rules - VFR, the world area forecast center - WAFc, yellow caution zone - YCZ.

A characteristic feature of terminology abbreviation is that it is used as parallel versions of multicomponent terms. In this case, the one-component terms are not reduced, as themselves are sufficiently comfortable and compressed in use. Multi-component terms, subjected to compression, form new words that reflect the same features as the original term: *AVGAS - aviation gasoline, TRANSLEV - transition level*, etc.

From practice it is well known that the abbreviation is one of the most difficult element to understand and translate in foreign special texts. A complete understanding of the lexical units abbreviations is possible only for the excellent knowledge of the subject to which specific text is devoted, as well as when the reader is aware in advance of the meaning of the abbreviations used in the text. However, familiarity with the basic laws of abbreviation and the principles of creating abbreviations greatly facilitates the task of understanding and translating abbreviations.

To decode the abbreviations, it is recommended to use the following basic methods: analyzing the context; using dictionaries of abbreviations and other reference materials; analyzing the structure of reduction; using analogies.

With almost exclusively nominative function, the abbreviation is translated as the equivalent - the name of the same referent to the target language, and in the absence of the same - often the name of the related concept. Actually, the translation can be called only conditionally, because the abbreviation, as a rule, does not have its own meaning, but is a diminished reflection of the original language - the ratio that should be retained when translating.

Abbreviations translation implies the presence (or creation) of it in the target language. Best of all, when it is already affirmed in the language unit. For example: *A/C (aircraft) - ПС(повітряне судно), APU (auxiliary) - ДСУ(допоміжна силова установка), ATS (air traffic service) - ОПР(обслуговування повітряного руху), BDC (bottom dead center) - НМТ(нижня мертва точка), DH (decision height) - ВПР (висота приймання рішення), FIR (flight information region) - РІП(район польотної інформації), GPU (ground power unit) - АПА(аеродромний пусковий агрегат), IFR (instrument flight rules) - ППП(правила польотів за приладами), LMD (linear delta modulation) - ЛДМ(лінійна дельта-модуляція), MVG (master vertical gyro) - ЦГВ(центральна гіровертикаль), PAM (pulse amplitude modulation) - АІМ(амплітудно-імпульсна модуляція), SHF (superhigh frequency) - НВЧ(надвисока частота), TNI (traffic noise index) - ІТШ(індекс транспортних шумів), TWY (taxiway) - РД(рульова доріжка), VFR (visual flight rule) - ПВП(правила візуальних польотів).*

The translation of the expanded form is used in the case when there is no reduction in the equivalent in the target language. The translation of the expanded form is the translation of the original unit, which should be as accurate as possible. The original unit is translated: *abc (advance booking charter) - артерний рейс із попереднім бронюванням, bcc (block check character) знак перевіряння блоку, cca (call control agent) - агент керування викликом, dgl (dangerous goods list) - перелік небезпечних вантажів, efis (en-route flight advisory service) - консультативне обслуговування*

польотів на маршруті, *fpr* (fixed pitch propeller) - вітряний гвинт фіксованого кроку, *gmc* (ground movement controller) - диспетчер наземного руху, *his* (hazard information system) - система інформування про небезпеку, *jp* (jet propulsion) - реактивний рух, *lrns* (long range navigation system) - навігаційна система великого радіусу дії, *meca* (main engine controller assembly) - система керування основного двигуна, *nlg* (nose landing gear) - передня опора шасі, *oper* (flight flight plan) - очатковий план польоту, *pbl* (passenger boarding list) - пасажирська відомість, *qcrsk* (quaternary coherent phase-shift keying) - фазова маніпуляція з когерентними четвертинними сигналами, *rltk* (rhumb-line track) - лінія шляху за локсодромією, *sdp* (signal data processor) - пристрій оброблення сигналів, *trc* (terminal radar control) - кінцевий пункт радіолокаційного контролю, *ufir* (upper flight information region) - верхній район польотної інформації, *vasi* (visual approach slope indicator) - візуальний індикатор глибини, *wsws* (windshear warning system) - система попередження про зсув вітру.

Conclusion

All in all, aviation abbreviations are particularly challenging for translators even more challenging for interpreters because of the immediacy of their task.

To convey the exact abbreviation meaning from the source language into target language it must be translated either as the equivalent (the name of the same referent to the target language) or in case it does not have any equivalent in the target language using the name of the related concept. In order to avoid any possible mistakes in translation, the analysis of the special terminology abbreviations components is critically important, especially in the situation, where decoding of the same abbreviation can have several variants that abbreviations components may reflect different terminology units.

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