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Functional Module of The Software Package for Trilingual Electronic Translation

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Abstract: The article presents the current relevance of trilingual electronic translation and a brief description of electronic translation. The principles, tasks, and bases of work multilingual translator's functional modul are clearly presented. In addition, a description of the functional module of the software package for trilingual electronic translation is presented by scheme. The main features of the functional module, the advantages of using functional modules in the program, and the functional module scheme of the software package created specifically for trilingual electronic translation are presented. The blocks of this functional module and the tasks of its implementation are described on the basis of a full life cycle.

Keywords: Electron translation, functional modul, block, software package, life cycl.

Introduction:

Linguistics specialists have been working on countless problems related to translation activities for many years. The linguistic features of this type of speech activity are one of the most studied areas in this field. [1]

Electronic translation is understood as an action performed on a computer to transform a text in one natural language into an equivalent text in another language, as well as the result of such an action [2]. The process of electronic translation begins with the launch of a special algorithm, which is a clear sequence of specified operations performed on the presented text. This algorithm is created to compare translation correspondences in the required pair of languages in a specifically specified direction (from the original language to the target language).

Special software uses these complex sets of rules and then transforms the grammatical structure of the source language into the structure of the target language.

In our republic, a number of scientists, including A.Q. Pulatov, Sh. Nazirov, M. Hakimov, M. Aripov, have worked on a number of works related to computer linguistics, including improving electronic translation, creating a software package for implementing multilingual electronic translation, thoroughly studying existing electronic translators and eliminating shortcomings, modeling natural languages, formalizing Turkic languages, etc.

A software package for implementing electronic translation is a complex system, the functional modules of which are connected by sequential blocks. Each block performs a specific task. The blocks are interconnected, and the order of the sequence of

tasks must not be violated. This is called the life cycle of the software package. The life cycle chain describes the general functions of the software package.

Today, in the field of modern translation studies, there is a trend towards increasing interest in the problem of studying the features of the translation process as it is carried out in different conditions and areas of application, which is explained by the growing need to create high-quality texts in numerous areas of human activity as the volume of documentation received by businesses, government agencies, etc., continuously increases [3-4].

METHOD

A functional module of a software package is an independent component of software designed to perform a specific function or task. A functional module often simplifies the design and development of a software solution by dividing a large program into smaller, manageable parts [5-7].

The main characteristics of a functional module are:

- Task-oriented, each module is designed to perform a specific function. For example, user authentication, data storage, or graphics.

- Independence: Modules are designed to work as independently as possible. This facilitates their reuse and testing.

- Reusability: The module can be reused in other projects or programs.

- Interface communication: Modules communicate with each other through interfaces, which allows them to exchange information.

Part of a larger system: Functional modules work together and help achieve the goals of the entire system.Advantages of using functional modules in software

[8-10]:

1. Modularity: Simplifies software development by dividing a large system into smaller, manageable parts.

2. Reusability: Modules are developed as independent parts that can be used in other projects.

3. Ease of error detection: Modules can be tested separately, which allows for quick detection and correction of errors.

4. Facilitation of teamwork: Different programmers can work on each module, which reduces the development time of large projects.

5. Scalability: Modularity makes it easier to add new features or update existing ones.

Functional modules simplify the structure of software development, improve code management, and speed up the development process. They are important tools for making large systems efficient and flexible [11].

RESULTS AND DISCUSSIONS

The functional module of the software package that performs trilingual electronic translation consists of 5 blocks. They are as follows:block of selection task;

1. block of initial entry data;
2. block of E-liner task;
3. block of evalution electronic translation;
4. block of output results.

In the first block, the task given by the user is selected from all the tasks and moves to the next block. In the initial data entry block, data is entered based on the selected task. For example, in the translation task from Uzbek to Kyrgyz and Karakalpak, Uzbek text is entered. In this block, the text is tokenized, tagged, and morphological analysis is performed.

The general sequence of the above blocks is depicted in the diagram below (Figure-1).

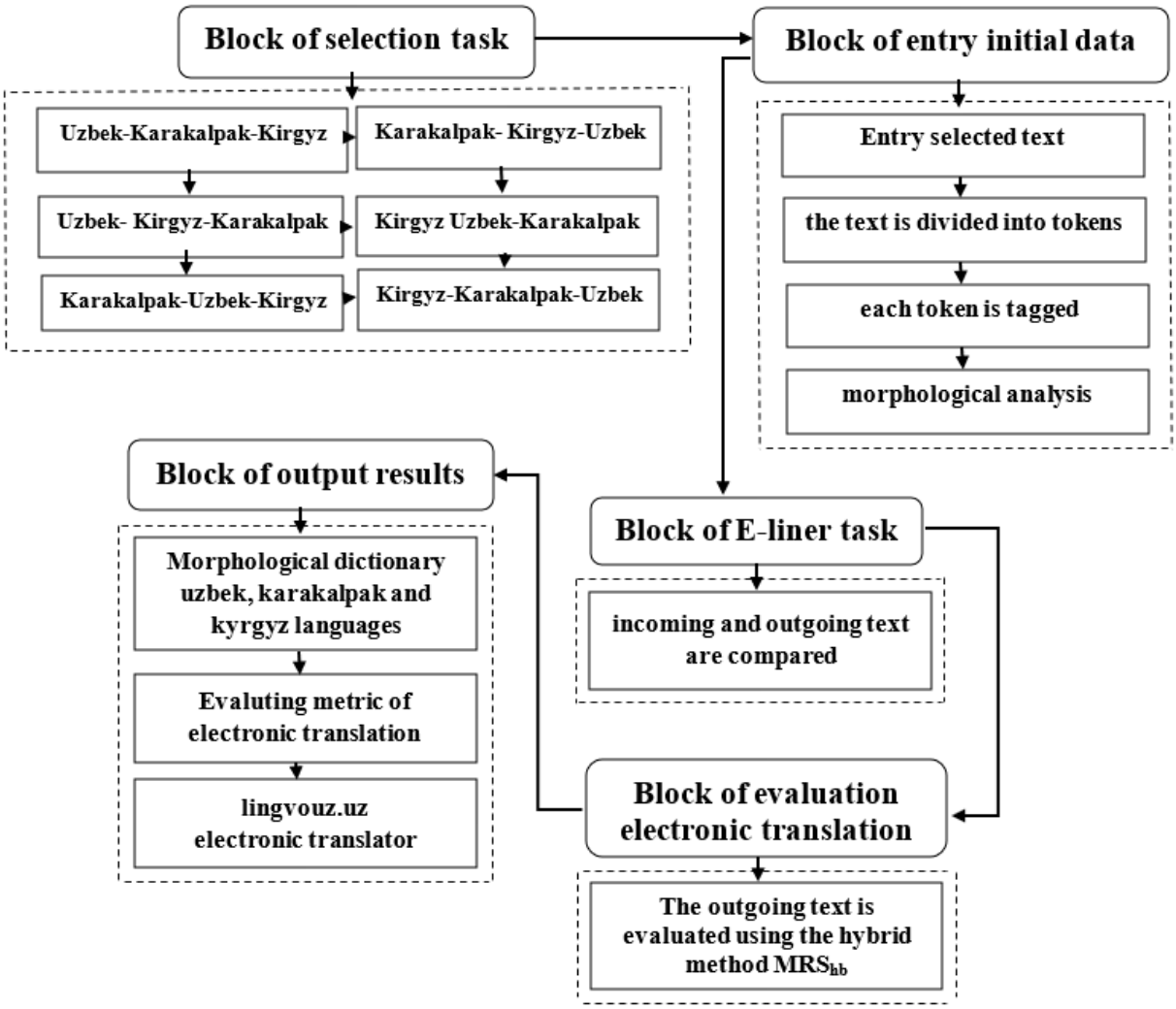

Figure-1. Functional modul of the software package that performs electronic translation

The functional module presented here allows you to see a large-scale process in one go. It is not easy to describe a software package that performs trilingual electronic translation in human language. This figure briefly and clearly shows 5 blocks and the specific tasks of each block, which not only includes this scheme, but also the database for performing trilingual translation, the links placed in them, the query language for creating the database, the programming languages for writing program codes, etc. complex tasks work systematically and inextricably linked to each other.

CONCLUSION

In the current era of advanced digital technologies, the demand for electronic translators is clearly increasing day by day. Obtaining an easy, accurate, high-quality translation from one language to another through computerization and modeling of natural languages is a complex process. In addition, there are a large number of natural languages in the world with limited resources and slow development. A number of scientists are working to combine these two large-scale urgent issues and come up with a single solution. A functional module for the operation of a software package that implements trilingual electronic translation has been developed. This module consists of blocks, which are called the life cycle of this software package.

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