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PROMOTING INNOVATION
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Japanese Text Automatic Transliteration Method

Innovative liguistic method to create Long Unit Words from an automatic division of a Japanese text into morphemes

IP Status

Patent application submitted

Seeking

Licensing

Background

Japanese texts do not have spaces between logograms and uses 3 main types of characters: 2 phonetic alphabets: – hiragana and katakana - and kanji logograms. Reading and learning Japanese language can however be less difficult for both native Japanese and foreigners with the identification of LUW (Log Unit Word). The described method favors the correct identification of the meaning and correct transcription of the LUW, for a more efficient and precise translation.

Tech Overview

A method to create Long Unit Words (LUWs) from an automatic division of a Japanese text into morphemes. Each LUW is associated with a correct transcription in the phonetic alphabet hiragana and transliterated into Latin characters, facilitating the learning of the written language for both Japanese children and foreigners of all ages, allowing easier identification of word boundaries and the associated grammar rules.

At the state of the art, there are systems that allow the translation of a Japanese text into morphemes or that create LUW from dictionaries of morphemes, but it was not previously possible to properly automate a process. Even when done manually, these systems were a source of errors and misinterpretations. The proposed method allows the automatic creation of LUWs, their correct transcription in kana and a transliteration into Latin characters. This offers the possibility to present the same Japanese text in multiple versions, allowing its understanding by learners with different levels of knowledge of the language. The method has been deposited as Computer Implemented Invention and is the basis of an online platform for the study of the Japanese language (Figure 1 , Figure 2).

Benefits

- Facilitates understanding of Japanese text
- Automates the process of creating LUW
- Automates transcription between phonetic alphabets and transliteration into Latin characters

Applications

- Japanese Language E-Learning method
- Automatic translation systems
- Automatic text reading systems

Opportunity

Open to collaborative projects to further develop the technology and/or licensing.

Patents

- IT: 102019000002235

Appendix 1

Figure 1

Appendix 2

Figure 2