Abstract

In translating English sentences (text) to Yoruba sentences (text), some Yoruba verbs change tone from the bilingual dictionary low-tone to mid-tone when they are translated to Yoruba. They are called tone change verbs. These tone change verbs do pose some challenges in English to Yoruba machine translation. Most of the time it changes the meaning of the sentence. These changes usually depend on the positions of the nouns and pronouns in the sentence. The verbs in this category were collected from different Yoruba sentences that contain tone change verbs. Some re-write rules were designed for the two languages. The re-write rules were tested using JFLAP. Apart from re-write rules, there are other grammatical rules considered and the rules affected the Yoruba translations. The software was designed using unified modelling language (UML). The Rule-based approach was used for the translation. Python programming language was used for the software development. The python has natural language tool kits that are used for the sentence parsing. The system accept English sentence then discover the pattern for the sentence. The system was implemented and tested for twenty tone change verbs within the home domain. The two languages are subject verb object (SVO) sentence structure with some
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differences. The results show that the MT system can translate these tone change verbs. The system is efficient in its response time. IFEMT2 system was developed to handle the translation of tone changing verbs. IFEMT2 was used to compare with the Google translator. IFEMT2 system performs better than the Google translator. The Google translator could not adequately translate these tone change verbs.

References


Index Terms

Computer Science

Information Sciences
Keywords

Tone-change, Yorùbá, Linguistics, rules, translation.