Development of a French to Yorùbá Machine Translation System

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Abstract : A review on machine translation systems shows that a lot of computational artefacts has been carried out to translate written or spoken texts from a source language to Yorùbá language through Machine Translation systems. However, there are no work on French to Yorùbá language machine translation system; hence, the study investigated the process involved in the translation of French-to-Yorùbá language equivalent with the view to adopting a rule- based MT approach to build a Machine Translation framework from simple sentences administered through questionnaire. Articles and relevant textbooks were reviewed with key speakers of both languages interviewed to find out the processes involved in the translation of French language and their equivalent in Yorùbálanguage simple sentences using home domain terminologies. Achieving this, a model was formulated using phrase grammar structure, re-write rule, parse tree, automata theory- based techniques, designed and implemented respectively with unified modeling language (UML) and python programming language. Analysing the result, it was observed when carrying out the result that, the Machine Translation system performed 18.45% above Experimental Subject Respondent and 2.7% below Linguistics Expert when analysed with word orthography, sentence syntax and semantic correctness of the sentences. And, when compared with Google Machine Translation system, it was noticed that the developed system performed better on lexicons of the target language.

Keywords : machine translation (MT), rule-based, French language, Yorùbá language
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