Abstract

Converting symbols of spelling into symbols of pronunciation is strongly dependent on the characteristic of the language to be considered, in this thesis Bahasa Indonesia. A particular language in general has a different grapheme to phoneme conversion system. Implementation of grapheme to phoneme conversion system itself has been carried out based on the rules. The rules themselves can be formed through a variety of techniques and methods. One method that can be used is the genetic algorithm. Genetic algorithm repeatedly forming the best rules through the process of recombination and mutation to the existing rules in the population for a generation in the range of the number of replacement generation. The test results in various parameter values of genetic algorithms and data sets grapheme-phoneme pair of words in the Indonesian language suggests that the genetic algorithm is able to form rules for grapheme to phoneme conversion system in Indonesian with good accuracy. Genetic algorithm parameter highly influential in finding a good rule of thumb is the size of the population. The greater the number of potential solutions (rules) generated in a population, the better the accuracy obtained for the rules of the grapheme to phoneme conversion systems tend to be. The recombination, mutation, and replacement of generation itself are visible effect on the size of the resulting rules. Good test result in diverse data sets also shows that the rules established by the genetic algorithm is able to work on the characteristics of the Indonesian language.

***Keywords** : conversion, graphemes, phonemes, rule, Bahasa Indonesia, genetic algorithm, population, recombination, mutation, generation replacement, parameter, dataset.*