ABSTRACT

Android is an open source operating system which is currently used for mobile devices be it a smartphone or a tablet computer. In the android operating system there are a lot of applications to support user needs. In addition to the application that allows users in the activity, android also provides entertainment applications such as music player, video player, and games. One type of game found on the android operating system is a board game, or better known as the game board. Many well-known board games, among others are chess, tic-tac toe, and scrabble. In the scrabble game, its main purpose is to develop a word with the greatest value on each player's turn. In some countries, scrabble often contested, so it requires a good sparring partner for practice in order to play well in the game.

In this thesis made a scrabble game in which there are NPC (Non - Player Character) as a sparring partner. NPC in the game is inserted with Artificial Intelligence (AI) to find the word with the greatest value. Greedy algorithm is a search algorithm that forms in the process using the heuristic function *h (n)* to select the most optimal node, in this case, the optimal node is a node with the value of *h(n)* the highest .

Based on the results of alpha testing, greedy algorithm which is applied to the NPC can be considered quite successful due to get a success rate of 75 % and has a speed of finding words with an average time of 0.3 seconds. Moreover, judging from the results of studies of beta, scrabble game made interesting with NPC received the title are hard to beat. However, the speed of NPC raises rely heavily on word processor user device

Keyword: *Android, Scrabble, Corona* SDK, *greedy algorithm*