DESIGN AGENT BEHAVIOR IN BADMINTON GAME USING MULTI-OBJECTIVE GENETIC ALGORITHM

It is difficult to design an agent of NPC’s (non-player characters) that have the ability to develop the game when against the player. Development of the game include the ability to attack and survive. In most games are made using a single object with a single objective function involved and usually results in a single solution.

To overcome this problem by making the optimal solution that can be used for various functions of object, namely by using Multi-objective Genetic Algorithm. Multiobjective consider some conflicts to get the goals simultaneously. In this case, usually there is no single optimal solution, but a set of alternatives with different trade-offs. Multi-objective used in this research using NSGA II (Non-dominated Sorting in Genetic Algorithms). NSGA II will give the value of the Pareto front for a minimum function and maximum functionality.

Expected from this research will get the optimal solution that can accommodate the object of the game play badminton and NPC’s agent will be able to have the ability to develop his game adaptif.

Keyword: Multi-objective Genetic Algorithm, Non-dominated Sorting in Genetic Algorithms, Pareto front