**Methodology Employed**

The paper compares genetic algorithm and simulated annealing for its implementation in circuit design is placement where components are assigned to physical locations on a chip. A popular contemporary method for placement is the use of simulated annealing. While this approach has been shown to produce good placement solutions recent work in genetic algorithms had produced promising results. Genetic algorithm and simulated annealing algorithms were explained and implemented for the above problem and the results were compared and studied. A genetic algorithm is an iterative procedure that maintains a population of individuals these individuals are candidate solutions to the problem that had to be solved. Each iteration of the algorithm is called a generation. During each generation the individuals of the current population are rated for their effectiveness as solutions Based on these ratings a new population of candidate solutions is formed specific genetic operators. Simulated annealing is an iterative procedure that continuously updates one candidate solution until a termination condition is reached

**Result Achieved**

Both a genetic algorithm and simulated annealing approach were tested on a set of circuits Three circuits were selected for data sets. For the genetic algorithm the population size P and swing value W were varied during testing for simulated annealing the starting temperature T cooling factor number of move state M and stopping value ts were varied during testing Each set of parameter combinations forms a treatment. There were approximately 20 trials per treatment. Genetic algorithm produced a smaller average cut size than simulated annealing for two circuits and while no significant difference was found between the methods for the third circuit. Based on the results of the study the genetic algorithm was shown to produce solutions equal to or better than simulated annealing when applied to the circuit partitioning problem.

**Scope of future improvement**

The study concluded its findings based on a very small dataset rather than considering a large data set to give an approximate percentage as on how much is genetic algorithm more efficient than simulated annealing. However, the paper explains both the algorithms in detail with the procedure and finding for all the test cases considered.

**Platform dependency and Experimental setup requirements**

The experiment performed doesn’t have any specific platform dependency and can execute in any given environment based on the technology used.