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The Design of the Minimum Spanning Tree Algorithms

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ABSTRACT

Based on the graphic theory and improved genetic algorithm, an improved genetic algorithm to search the minimum spanning trees is given. The algorithm uses binary code to represent the problem of minimum spanning trees. It designs the corresponding fitness function, operator and few controlling strategies to improve its speed and evolutionary efficiency. Only one solution can be gotten with running traditional algorithm at one time. The new algorithm can get a set of the solutions with higher probability in a shorter time. The experiment shows that it has a better performance than traditional methods.

KEYWORDS

minimum spanning tree, genetic algorithm, pattern

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