

Abstract

Elevator is a modern transportation that can replace the role of stairs to facilitate users in moving from one floor to another. Elevators can usually be found in high-rise buildings, one of which is in campus. Elevator can make time and energy efficient, especially students who chase time to get to class on time. In this thesis, the author analyzes the performance of the TSP fuzzy method with greedy for the elevator scheduling system. The elevator scheduling system in question is a smart elevator system that can move automatically according to the schedule of students on each floor. Fuzzy logic is used to determine the weight value for each path and the TSP method with greedy functions to choose which path to go through. The results of this thesis in the form of testing the implementation of a smart elevator system that is applied to the prototype five-story elevator. The results of testing the TSP fuzzy method with greedy are quite optimal to be used for scheduling elevators because it can meet all the floors of objectives that must be passed in accordance with student schedules, the percentage of floor coverage reaches 100%. And the travel time produced by the smart elevator system is 223 seconds, 76 seconds faster than the normal elevator system travel time. If calculated the percentage of smart elevator systems that use the fuzzy TSP method with greedy can save travel time by 25.41%.

Keywords: elevator, fuzzy, TSP, greedy