DNA COMPUTING APPROACH TO OPTIMAL DECISION PROBLEMS

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Abstract. *We encounter such inefficient situations that all elevators are moving in the same direction or that all elevators arrive at the same floor even in rush hours of the morning. In order to resolve such situations all elevators should be controlled to assign the best elevator to passengers according time to time change of passengers. The group control system is employed in selection of driving patterns according to the change of traffic volumes or driving management in accidents. Such a group control realizes comfortable, safe and economical management of elevators. The objective of this paper is to apply DNA computing to calculate complex and huge combinatorial problems of a group of elevators and huge number of floors. The optimal solution will be presented to the group control of elevators on the basis of the DNA computing.*
Keywords: DNA computing, Optimize scheduling algorithm, Group management system

1. **Introduction.** Theoretical studies of applied DNA Computing researches [1], [6] are spare. Especially, optimize scheduling algorithm problems [2-4], [7] have intensively studied. Genetic algorithm is kind of soft computing with genetic mechanism in organisms, searches optimal values, when it assumes a number of control patterns in repeating GA simulation. Therefore, development group management systems have intensively studied for improvement of an elevator's transportation efficiency and convenience. It grows up in an elevator that is in the usage condition and advance in the operation pattern that manages the elevator hourly changed as a gene by the generation is high and is economical passenger's satisfaction rating.