

J-H. SHIN, S-W. KWON, M-N. LEE, D-Y. MOON. **An optimized operation algorithm for twin or multi-cage lift systems for high-rise construction sites.** *Gerontechnology* 2012;11(2):421; doi:10.4017/gt.2012.11.02.434.00 **Purpose** The objective of this study is to develop an algorithm which can increase productivity of lift operation on temporary twin-cage and multi-cage lifts for construction sites. the algorithm is developed for optimizing operation efficiency at high-rise construction sites. Moreover, it is expected that the algorithm can reduce working hours and traffic queues through operation optimization. **Method** The developed algorithm can optimize lift operation time by using a lifting cycle-estimating method which is generated based on the fundamental concerns when lift scheduling is planned. Lifting cycle-estimation is a vital part for an arithmetic computation based on lift selection algorithm which controls factors such as distance between each lifts, among passengers, and distances among lifts according to moving direction. **Results & Discussion** We carried out surveys and conducted interviews with mechanical and construction professionals to analyse fundamental considerations of material lifting operation planning. We extracted the weight of each of the relevant factors. Based on the weight of factors, we set the lifting cycle-estimate suitable for high-rise buildings. The optimized operating algorithm is extracted through lifting cycle-estimates. Finally, we propose the prototype of an interface that is embedded into the lift with the optimized operating algorithm.

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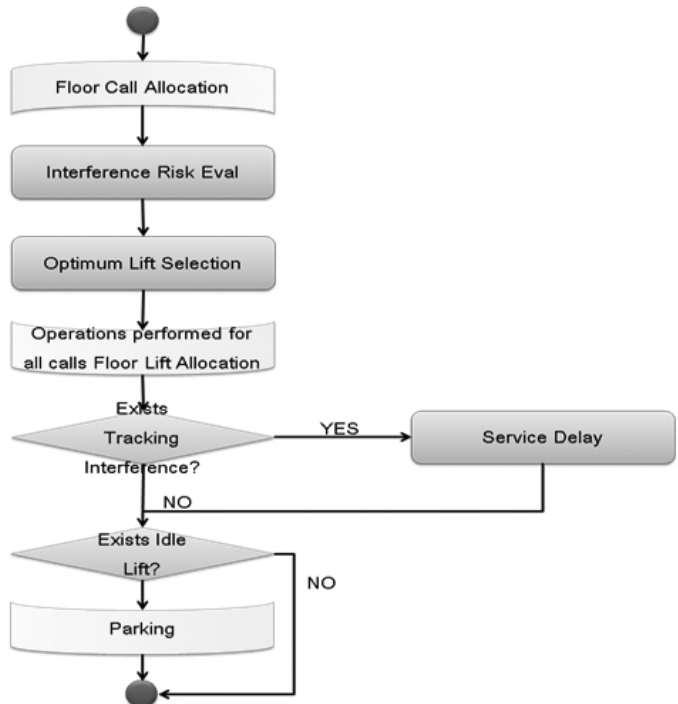


Figure 1. Algorithm flow of smart lift