

A CONCEPTUALIZATION FOR THE AUTOMATION OF A LIFT CAR OPERATION IN HIGH RISE BUILDING CONSTRUCTION

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ABSTRACT: The objective of this study provide a conceptualization for the automation of lift car operations on high-rise building construction sites, in order to build high-rise building effectively and make a proper lifting plan. We got the week point of a hand-operated lift car, and got problems of an automatic lift car up to now. And we proposed the improvement schemes considered the week points and the problems for the automation of the lift car.

Keywords: Lift Car, High-rise Building, Automation of Lift Car, USN, WSN

1. INTRODUCTION

1.1 Background and Object of the study

2 The quantity of high-rise buildings in the construction industry market is growing. High-rises have multiplied because the values of construction sites are going up as cities become more congested. Also, citizens want to build high-rise buildings because they can be landmarks for their cities. For the construction of high-rises, construction engineers have to consider more parameters than a normal building. One of the major considerations is the vertical lifting plan for workers and materials. Therefore, it is important that existing hand-operated lift cars are automated for high-rise building projects. However, the study for the automation of lifting equipment is not enough, particularly when workers are using the lift car at a site, they have to call for the car via walkie-talkie. It is not an effective way to communicate with each other, for workers in the lift, and for workers who want to use the lift. Today, hand-operated lift cars are still used on many construction sites, because the way the existing lift car is used, is highly inefficient on account of long

vertical moving distances. The study of the automation of the lift car is necessary.

2.1 Scope and way of the study

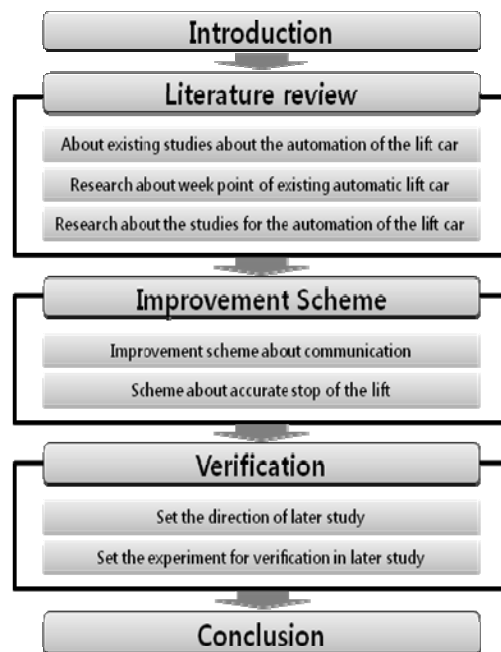


Fig.1 Research process

