

ELEVATOR SUPERVISORY AND THE CONTROLLER SYSTEM (ESCS)

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ABSTRACT

Elevator supervisory and controller system is a system that implemented to monitoring all events for conventional elevator system. This project presents further development and strategies on elevator supervisory and controller system. The elevator system itself controlled using programmable logic controller and the supervisory and controller system developed using computer based visual basic programming software. The parallel communication port interface card was use to link between elevator system modeling structure and the personal computer.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Conventional elevator system was developed and operates using a controller system such as programmable logic controller (PLC) and microprocessor based. Nowadays elevator system is compulsory for multi storey building for goods and humans transportation. Thousands of elevator system installed in a building and operates without any monitoring system. Thus many cases involving elevator malfunction events and people trapped in elevator car reported. Therefore monitoring system for an elevator system is a strategy to solve all these problems.

Besides of emergency event, the performance of an elevator depends very much on supervisory control. An elevator system supervisory control is responsible for coordinating the operation of individual lift cars within a group, in order to make efficient use of the lift group. A good supervisory control system must be able to maximize the traffic flow with minimum installation, and it must be as flexible and user friendly as possible. All control algorithms must be able to follow changes in passenger demand at all the times. Applications of artificial intelligence (AI) are mainly in this area. For efficient performance, the elevator controlling system is developed to fulfill the requirement of fast waiting time and fast journey time. Beside, it will provide monitoring system in which help maintenance job.

Computer based monitoring system are preferable for further development of elevator monitoring system. In general, a personal computer will need special hardware in the form of input and output boards and software consisting of programs for data input or output and the controller modes. This approach to computer-based control is particularly suitable for small-scale or isolated control system needs. Control system is a collection of electronic devices and equipment which are place to ensure the stability, accuracy and smooth transition of a process or a manufacturing activity [1].