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An Elevator Monitoring System Based On The Internet Of Things

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Abstract

There is situation about elevator supervision lack of effective technical methods, Based on the function of elevator safety monitoring system, we designed a kind of elevator monitoring system based on the Internet of things. it is introduce a schematic diagram of elevator Internet of things,
This paper introduces the application of elevator Internet of things technology in real-time monitoring, fault diagnosis, alarm and maintenance.

Keywords: Internet of things; The elevator monitoring; Internet Phone;

1. Introduction

The building has developed into a trend.It has been developed into a trend as the urban land resources are strained, the elevator became an indispensable vertical transportation tool in people's work and life.

Therefore, peoples are focus on the safe, smooth and comfortable of the elevator operation[1]. At present, most elevators in China only carry out regular inspection and maintenance, and there are only failures or risks to be handled by maintenance personnel. It's not very efficient about this phenomenon wide distribution area of elevator. When the elevator accident, because of the rescue not timely or other reason to the stranded passengers caused a secondary injury[2-3]. For the above reasons, it is urgent to study how to implement effective monitoring of elevator.

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2. Architecture

2.1. Architecture of Internet of things

The work process of Internet of things can be broadly divided into data collection, data transmission, data processing and service, according to these three different processes, its architecture is divided into perception layer, network layer and application layer[4]. As shown in figure 1. Perception layer is mainly used to collect all kinds of data information in the real world, says object identity, made up of all kinds of information collection equipment, including various types of sensors, labels, and reading and writing, code label, laser scanner, etc.

The network layer is responsible for receiving perception layer information, carries on the preliminary processing, will forward it to the Internet network for the transmission, and it is connected to the Internet and traditional networking ties, composed of various network, including broadband network, network, etc., can transmit data by way of broadband network or networks, etc. The application layer is mainly responsible for the information collected by the perceptual layer and the information needed by the function user, and it can provide the specific application of the Internet of things to the user with the specific application requirements[5].

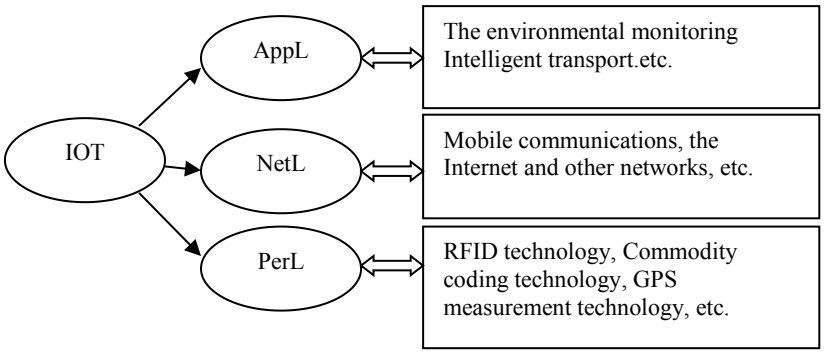

Fig. 1. Architecture of Internet of things

2.2. Internet of things of the elevator

The elevator Internet of things refers to the demand of the relevant departments for the real-time supervision of elevators and user safety ladder, Internet of things technology was applied in elevators, thus realizing the intelligent management of elevator[6]. The architecture diagram of elevator Internet of things is shown in figure 2.Of which, A the national security council. B:monitoring center of unit. C: Maintenance unit D :elevator manufacturer. E:Management personnel