Smart Unmanned Parking System Based on Radio Frequency Identification Technology

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Abstract : In order to tackle the ever-growing problem of the lack of parking space, this paper presents the design and implementation of a smart unmanned parking system that is based on RFID (radio frequency identification) technology and Wireless communication technology. This system uses RFID technology to achieve the identification function (transmitted by 2.4 G wireless module) and is equipped with an STM32L053 micro controller as the main control chip of the smart vehicle. This chip can accomplish automatic parking (in/out), charging and other functions. On this basis, it can also help users easily query the information that is stored in the database through the Internet. Experimental tests have shown that the system has the features of low power consumption and stable operation, among others. It can effectively improve the level of automation control of the parking lot management system and has enormous application prospects.
Keywords : RFID, embedded system, unmanned, parking management
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