Matlab 仿真软件对车辆管理中的车牌识别

摘 要

近年来，随着我国社会经济文化实力的增长，每家每户的生活水平得到了极大地提高，人民也变得富裕起来了，而人们的出行也越来越依靠汽车、地铁、公交等交通系统，现在基本上每家每户都有了汽车，而车辆的增长，也越来越使得停车场管理的难度越来越高，造成了道路的堵塞和管理的不方便，无法提高停车效率，导致一些车辆停车时无法及时停靠，造成很大的车位资源浪费和时间上的浪费，所以，如何提高停车效率就成了建设新型停车场的重中之重的问题。

在本课题中，主要是对新型停车场中利用图像处理技术的知识对车辆管理系统的一些研究，然后利用软件处理车牌，对车牌进行一些图像预处理，然后通过系列操作，最后通过字符识别和字符显示技术获得车牌号码，将得到的车牌信息用于计时，收费等，辅助实现智能停车场的管理功能。

关键词：车辆管理；车牌定位；图像预处理；字符识别；字符显示

ABSTRACT

In recent years, with the growth of the social economic and cultural power in our country, the living standard of every household has been greatly improved, the people also become ric h, and people's travel is becoming more and more rely on transportation system, such as car, s ubway, bus now basically every family has a car, and the growth of the vehicle, also more and more makes the difficulty of parking lot management more and more high, caused the road c ongestion and management is not convenient, unable to improve the efficiency of parking, res ult in some vehicle parking fail to dock, cause a lot of parking resources waste and the waste o f time, so, How to improve parking efficiency has become the most important issue in the con struction of new parking lots.

In this topic, mainly using the image processing technology in the new parking lot of the knowledge of vehicle management system studies, and then use software license plate, the lic ense for some image preprocessing, and then through a series of operations, finally, character recognition and character display technology to obtain the license plate number, the license in formation will be used for timing, charge, etc., auxiliary implementing the managing function of the intelligent parking lot.

Keywords:Vehicle management; License plate positioning; Image preprocessing; Character re cognition; Character display

目录