Abstract— Paper presents an effective method for license plate detection from the moving objects. On any toll both the vehicle has to stop for paying the toll. The project trying to develop a system that would pay the toll automatically and reduce the queue at the toll booth. The license plate is regarded as one compositional object, which is decomposed into several characters. Meanwhile, these characters are arranged in specific spatial and visual configurations.

The plan to use discriminative local features to detect license plate characters directly. Unlike low-level feature-based methods, our work is motivated by component-based models for object detection. Our approach can adapt to various environmental factors, such as cluttered background and illumination variation. A series of experiments are conducted on images that are collected from the actual road surveillance environment. For the identification of the vehicles, the information of the vehicle is already stored on the central database. So captured number will be sent to the server received at the toll.

Keywords - Object finding, license plate detection, edge detection, OCR.

I. INTRODUCTION

Intelligent transportation systems (ITS) are advanced applications which, without embodying intelligence as such, aim to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated, and 'smarter' use of transport networks. Various forms of wireless communications technologies have been proposed for intelligent transportation systems.

License Plate Recognition (LPR) systems have many applications in ITSs, such as the payment of parking fee, controlling the traffic volume, traffic data collection, etc. Nowadays in developing or developed countries, the Intelligent Transportation System (ITS) technology has attracted so much attention to itself. The license plate is regarded as one compositional object, which is decomposed into several characters. Meanwhile, these characters are arranged in specific spatial and visual configurations.

One crucial factor of ITS that supports these tasks is the ability to extract information regarding moving objects in traffic surveillance systems. Hence, automatic motion detection is an important element of traffic management. It facilitates the gathering of detailed information regarding traffic conditions, and it is also the first essential process in the development of traffic surveillance systems which provide object classification and tracking, behavior recognition, activity analysis, and so on.

Furthermore, the applications of motion detection in traffic surveillance systems are many, and span from description and analysis of traffic situations to pedestrian collision prediction and driver assistance. In recent years, component-based models (or called as part based models) for object detection have become one topic. These models mainly utilize contextual information among constituent components. The components are either defined in a semantic way or extracted as image patches for codebook representation. Compared with traditional holistic object detectors, component-based detectors simultaneously consider both structural information and object appearance.

Therefore, it is more robust with the occlusion and the appearance variance of objects. Under the framework of component-based object detection, probabilistic graphical models (PGMs) are popular to capture the structural feature with the form of probability distribution. Among various PGMs, conditional random field (CRF) is widely used for object detection and recognition because of its discriminative feature. By making components as the nodes of CRF, the posterior distribution of node labels with given image observations is modeled by incorporating interactions among neighboring nodes.

II. LITERATURE REVIEW


In this a novel algorithm is used for license plate detection in complex scenes, particularly for the all-day traffic surveillance environment. Decomposition, modeling, and inference are the three steps involve in the detection process. Here the CRF model was introduce and which having direct relationship with MSERs [1].

In this FPGA is used for real time based identification of license plate detection with the help of edge detection technique [2].


Here again the edge analysis technique was used for fast detection method of license plate, and accuracy is increases up to 98%. Also here Edge Based Method is used to detect edges of the image and very sensitive to noise [3].


The method which described in this paper gives the toll taxation more efficient, reliable, and safe. IPTB system is used as a system for fast and efficient collection of toll at the toll plazas [4].

III. PROBLEM STATEMENT

When available issues such as performance, execution time, and platform, for each methods are reported. It should be emphasized that there is a lack of uniformity in the way that methods are evaluated, and therefore, it is inappropriate to explicitly declare which methods actually demonstrate the highest performance. One of the scopes of this is to highlight the lack of common test sets to achieve a common reference point for algorithmic assessment.

In previous work there is to work the system all the time for capturing the image of vehicle, no resting time for the system. That causes the retardation of the hardware parts, and so refresh rate of the system decreases. System can degrade the performance. When vehicle is come then it is capture by the system in the form of image. This image is goes under further operation. First of all, fixed-size connected components are extracted from the input image. They are regarded as candidate license plate characters. Next, the CRF model is constructed. Candidates that satisfy certain neighborhood conditions are selected as observed nodes of CRF. It uses regional feature extraction algorithm. The CRF model is lengthy for implementing and time consuming also. It requires a highly digitize camera for capturing the image.

In this their id no need to work system all the time. When moving object detects on stable object then it stimulates the system.

There is no need to take or capture the image of the vehicle. It processes the video and capturing the vehicle image. Use a new pattern matching technique for removing unwanted objects. This could not done previously.

IV. PROPOSED METHODOLOGY SYSTEM DESIGN

Fig 5.1: Overall system architecture of Automatic Traffic Monitoring for license plate detection system.

Flowchart for License plate number extraction system

Fig 5.2: License plate number extraction system

V. RECENT RESEARCH

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VI. OBJECTIVES OF THE PROPOSED SYSTEM

From the above discussion, we analyzed that, all the time the thresholding and OCR detection method are continuously done on all objects. That reduces the efficiency of a system.

To overcome these problems, this paper proposes to move object detection. On the basis of this the objects are finding and then respective operations are carried out on that particular object instead of whole system.

VII. CONCLUSION

The license plate is regarded as one compositional object, which is decomposed into several characters. Meanwhile, these characters are arranged in specific spatial and visual configurations. This paper gives the effective algorithm for detecting the license plate number. It describes not only the efficiency of the method but also to be implemented the object detection, so that the edge of the license plate can be detected faster.

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