Abstract

The text or symbol detection and recognition from traffic panels is a challenging problem. Number of important application areas is dependent on text detection and recognition, including advanced driver assistance systems, road surveying, and autonomous vehicles. In this research project a novel system for the automatic detection and recognition of text and symbol in traffic signs is proposed. Search regions with in the image must be defined. In this particular region locate a large number of candidates, which are then reduced by applying constraints based on temporal and structural information. This problem can be divided in two stages; First stage will be detection of region and second will be character recognition. The detection stage exploits knowledge of the structure of the scene, the size and location of the road in the frame. Once a potential traffic panels has been located, the next stage attempts to recognize text and symbols within the region. For the purpose of text detection MSER is used and for recognition purpose optical Character Recognition method is used. Automatic testing using XML files provide better accuracy.
References


11. Jesmin F. Khan, Sharif M. A. Bhuiyan, and Reza R. Adhami "Image Segmentation and Shape Analysis for Road-Sign Detection" IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, VOL. 12, NO. 1, MARCH 2011


13. Saturnino Maldonado-Bascn, Member, IEEE, Sergio Lafortune-Arroyo, Pedro Gil-Jimnez, Hi-lario Gmez-Moreno, Member, IEEE, and Francisco Lpez-Ferreras"Road-Sign Detection and Recognition Based on Support Vector Machines" IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, VOL. 8, NO. 2, JUNE 2007


15. Wen Wu, Xilin Chen and Jie Yang "Detection of Text on Road Signs From Video" IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, VOL. 6, NO. 4, DECEMBER 2005

Index Terms

Computer Science

Image Processing

Keywords

Text detection, Text recognition, maximally stable extremal regions (MSERs), Optical Character recognition (OCR)