Abstract

License plate localization is considered to be the significant process in Automatic Number Plate Recognition (ANPR) system, because the accuracy rate of license plate recognition relies on the performance of license plate localization. The majority of license plate localization papers are dedicated to daytime where many appearances can be used to locate license plate. The researches were also reported with high detection accuracy, more than 90%. However, a few studies are presented at night when license plate appearances are not easy to obtain. In this condition, license plate detection is very challenging due to the limitation of available appearances and other light sources may interfered. This paper presents a method to detect license plate position at night by combining color-based, edge-based and image processing techniques. The technique uses a variety of sizes of sub-image to improve local contrast in order to solve problems of low contrast and uneven-light images. The experiments were conducted on images at night in various lighting conditions and the method can detect license plate position with accuracy rate of about 85%.
References


Index Terms

Computer Science

Image Processing

Keywords
License plate localization, detection, night