Depth estimation for a mobile platform using monocular vision

Abstract

This paper briefly discusses the depth estimation method for a mobile platform using monocular vision. The biggest challenge for autonomous mobile platform in an unknown environment is the accuracy in the estimation of the distance and the position of obstacles around them. In order for them to safely navigate from one position to another, reliable range sensors are needed to detect any obstacle that blocked their path. Vision sensor can be used for the purpose, as it can provide a better and cost-effective solution. The method discussed in this paper requires a simple calibration. The data obtained from calibration process will be used to generate the equation for depth estimation procedure. The results presented in this paper testify the reliability of the methodology used for depth estimation.