

Chapter 13

Design and Implementation of a Wireless Robot for Image Processing

Md. Kamaruzzaman

Aliah University, India

Rafiqul Haque

Aliah University, India

ABSTRACT

Robotics has developed into a solid discipline of study that incorporates the background, knowledge, and creativity of mechanical, electronics, electrical, computer, industrial, and manufacturing engineering. The versatility of a robot can be translated into increased productivity, improved product quality, and decreased production costs in numerous ways. The robot can be wired or wireless, and can have a controller device. Radio frequency control system is one of the most efficient controls for a robot. Other than control, image processing is one of the important parts of robotics. Moreover, it also requires hardware for interfacing with the system for radio frequency control. It is one of the key technologies which can be used in defense, safety, intelligent transport system, and efficient management traffic. In recent years, there has been an increased scope for image processing in robotics. The main goal of this work is to show a system that solves the practical problem of identification of real scenes. All the simulations have used MAT LAB software.

INTRODUCTION

Robotics is an interdisciplinary subject which drawing ideas and tools from mathematics, physics, engineering and computing. The field of robotics has its origin in science fiction. The word “robot” is based on the Czech word for slave, and was introduced into our culture in the early 1921 in a play by Czech playwright, novelist; and essayist Karel Capek about mechanical men that rebel against their human masters. Capek dreamt of a situation where bioprocess could create human-like machines,

DOI: 10.4018/978-1-7998-0137-5.ch013