Abstract

Human-robot interaction is an evolving area of research in the past few years. Human-robot interaction deals with how humans can interact with, send data to, or receive data from robots. One of the major obstacles in this field is how the robot can obtain the depth information of the surrounding objects. Few years ago, Microsoft has released a depth sensor that computes the depth information using IR rays. Many researches are conducted to control robots using depth sensors, such as Microsoft Kinect and Asus Xition. Although depth sensors are considered to be low cost, it may be unavailable for many users. In this work, we develop a low-cost system for controlling robots (iRobot) with a web-cam and just red markers on the user's hands. Our system requires no extra devices or hardware or other complex technologies. Experimental results of the proposed system demonstrate good results compared to those provided by depth sensors.

References

- Spong M. W. and Fujita M. Control in robotics. The Impact of Control Technology: Overview, Success Stories, and Research Challenges (T. Samad and A. Annaswamy, eds.).

Index Terms

Computer Science

Artificial Intelligence
Keywords

HRI  IRobot Create  Color detection.