南方科技大学
SOUTHERN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Thesis Proposal

-- Multi-robots Target detection and Tracking

A Proposal Prepared for the
Final Project of the graduate Course
CS401: Intelligent Robots

Prepared by*:

羊尊瑞 11510660
刘航晨 11510722
王林 11510064
张依林 11510280

Department of Computer Science and Engineering
Southern University of Science and Technology
Shenzhen, Guangdong, China 518055

Abstract

This document illustrates the main aspect of our Intelligent Robots final project.

1. Background and Motivation

In recent years, robots and artificial intelligence have prospered. Robots that have been running in the laboratory have gradually entered the lives of thousands of families. ROS, a tool for robot development, has also been widely used and has become a universal standard in the field of robotics.

2. Related Work and Novelty of This Work

The problem of organizing multiple robots to effectively cooperate to complete a given task is mainly divided into two parts:

2.1. The recognition and positioning of the robot to the target.

Determine where the robot is located in the work environment. (by using known map information, estimates of the current position of the robot, and observations of the sensor)

2.2. Task assignment for different robots(communication, coordination and cooperation).

A reasonable architecture is needed to complete this part.

3. System Setup and Problem Statement

4. Proposed Design and Methods

5. Hardware and Software Platform

6. Goals, Metrics an Timeline

7. Staff Planning

8. Reference