

Chapter 1

State of the art

1.1 Multicopters

1.2 Simultaneous Localization And Mapping

Simultaneous Localization and Mapping (SLAM) refers to the joint task of creating a map of a robot's surroundings, while also keeping track of the robot's location in this map. The word "robot" should be understood very broadly in this context, for example it could be a simple handheld camera. Because there are countless different types of robots that do SLAM, SLAM is also a very diverse field, with different algorithms for different kinds of sensors. Here, we will focus on monocular visual SLAM, which is SLAM where the main sensor is a monocular camera.

1.3 Computer Vision

1.4 Bundle Adjustment

1.5 Loop Closure