MF2071 Literature study

Andreas Fröderberg, Adam Lang

November 22, 2016

Introduction

The research question given by the company was *What are the pros and cons of different SLAM algorithms which are suitable for autonomous vehicles?*. In the thesis description, there is a stated desire for a comprehensible comparison between different SLAM algorithms, both on the performance of the algorithm and the price of the needed hardware.

Research question refinement

Being rather wide in scope, the research question is divided into smaller parts that each can have a specific search strategy.

Search Method

Since there is a variety of suitable SLAM methods that could be used in autonomous cars there is a need to define the scope of this quantity. The first real important task would be to try to find the relevant methods and categorize them. Once these have been categorized they would need to be researched further one by one to get a sufficient amount of information about them each of them. Using multiple sources will help in getting an as complete picture of the method as possible.

Search iteration

The initial search string used is,

(slam OR mapping OR localization OR sensing OR modeling)
AND (car OR vehicle OR agent OR uav OR robot) (1)
AND (hardware OR sensor OR processor OR input OR data)

focusing on catching as many hardware related sources as possible.

References