

Design of a Shared Parking System with special attention to security aspects

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1 Abstract

At the beginning the thesis introduces the parking problem in big cities and presents related work in the field of intelligent parking systems. The main part of the work focuses on the design of a Shared Parking System. This design will also be implemented as an Android App. While the implementation follows the main suggestions regarding security aspects that the work provides, there are also different alternative solutions presented and their respective advantages and disadvantages evaluated. The thesis is finished by various proposals for further work in this area.

2 Indrodution

As big cities are growing more and more, the parking situation in those cities is becoming more precarious than ever. Parking demand already exceeds the limited amount of parking spaces available, and thus people searching for a place to park generate a significant part of those cities' traffic. This leads to frustration with drivers, more traffic jams, unnecessary use of petrol and further air pollution. The creation of new parking spaces is often either difficult or very expansive, which means existing parking spots have to be used more efficiently. Intelligent parking systems are trying to solve that problem. This thesis is focused on Shared Parking, a special kind of intelligent parking system, which opens the possibility of sharing a parking place between different people. This work features the design and implementation of such a system with special attention given to security aspects.