

ALGORITHMS | ALGORITMI & THEORY | TEORIA

Interactive Visualization of Automated Car Parking Systems

Master's / Bachelor's Thesis Project (Software Engineering)

OVERVIEW

Parking a car in a huge parking lot such as airports or malls is taking a considerable amount of time. The solution is with automated car parking systems (ACPS). On an existing parking lot, people leave their cars at exchange station. From that time on, robots will store their cars and retrieve them on demand.

This thesis is part of a longer term project, in which a *simulation* software is developed. The part visualizing the positions of cars and robots and their movement was done in an earlier thesis. Now, we want to give the user of the simulation the possibility to

- Simulate the arrival of a new car at the parking lot;
- Simulate the request of the owner of a car to retrieve his car from the parking lot.

The simulation runs on a web interface. The user requests have to be communicated to a server, which sends back the control commands for the robots.

GOALS

1. Understand the existing (visualization only) software, the tools it uses.
2. Extend the software by plugging in code for interpreting mouse clicks for user interaction during a running simulation.
3. Manage the communication with the server.

REQUIREMENTS

- Javascript
- Web design
- Client-server communication