Master Thesis – Vehicle path planning algorithm evaluation

Thesis Description

An essential task for the AGV (Automated Guided Vehicle) system is to plan the most efficient drive path for the vehicles. The path planning algorithm is embedded in the run-time system that handles traffic control and order assignment. AGV path planning is an important part of the AGV system where it is possible to create a significant performance boost by selecting the best algorithm. There is no single solution that fits all problems. It's more a set of algorithms that carefully selected could deliver an optimized solution.

Currently we run the complete system to measure the performance. We need to develop a test bench to simplify and speed up the evaluation process. The thesis should try to find out how such a test bench can be realized. The challenge is to evaluate and validate the algorithms and measure their performance. If needed tune and further develop the algorithms.

The thesis involves:

- Research to find out how to build a test bench.
- .Net programming.
- Data collection.
- Data presentation, tables and graphics.
- Algorithm tuning/enhancement.

A stretch opportunity would be to develop a new algorithm and validate them on the test bench.
Further information and contacts

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Send your questions and application to career.agv@kollmorgen.com
For more opportunities at Kollmorgen Automation AB in Mölndal, see www.ndcsolutions.com/career

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