TECHNISCHE UNIVERSITÄT DRESDEN

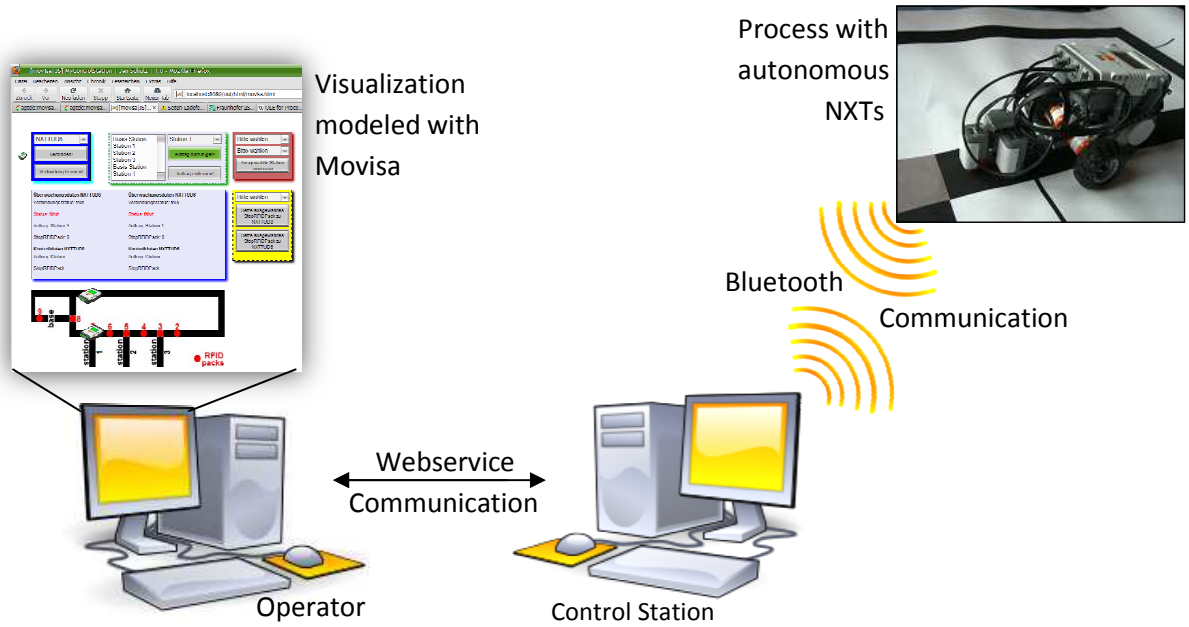
Fakultät Elektrotechnik und Informationstechnik

Institut für Automatisierungstechnik

Conception of a visualization solution with Movisa for a Lego-NXT as autonomous transport vehicle in manufacturing engineering

Abstract

At the software development especially of visualizations of automated processes the visualization has to be adjusted to every terminal device. The effort at this software development is minimized by dividing the visualization in different models. One approach of this model-driven software procedure is represented by the modeling language Movisa that is developed at the Institute of Automation at the Dresden University of Technology. A case study in the field of manufacturing engineering is processed in this study research thesis to examine the already implemented features of Movisa. Therefore, autonomous Lego-NXT-vehicles are remote monitored and operated through a web browser by the modeled visualization. A control station controls the communication between the vehicles and the user application and manages the process data. At the end, the modeling with Movisa is critically evaluated to reveal possibilities for improvement. As a result of this study research thesis, the performance of Movisa and the benefit of the reduced development effort are revealed.



Tutor: Dipl.-Ing. Stefan Hennig

Supervisor: PD Dipl.-Ing. Annerose Braune

Day of Submission: 8.11.2011