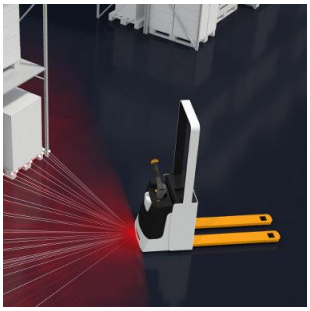
IFOY AWARD
international intralogistics and forklift truck of the year



IFOY Innovation Check (Feb 12, 2020): BOSCH REXROTH Locator - Laser Localization Software
Category: Intralogistics Software

Market relevance
The market for driverless transport systems/ automated guided vehicles (AGV) continues to develop well. The product is of interest to both the automation of standard industrial trucks and to manufacturers of special solutions, as it decouples them from the development of expertise in the field of environment-based localization when companies decide to use this relatively new procedure, which is free of installation costs. For these reasons, the market relevance is considered to be high.

Customer benefit
The Locator enables new manufacturers of AGVs to easily enter the market. The producer can concentrate on his core competence of vehicle construction and/or automation of standard industrial trucks. Time and cost advantages also arise when commissioning individual vehicles at a customer's premises, as the environment-based localisation does not require any set-up and measuring work. Supported by the software, a map of the area of application is generated and the relevant points can be localized.

Novelty
With the Locator, Bosch Rexroth is introducing a product that performs the software function of environment-based localization based on laser distance measurement. The software is designed to work with various laser distance measurement sensors. This implementation of environment-based localisation, which is strictly limited as a product, is not fundamentally innovative. However, the systems available on the market so far still require considerable adaptation and calibration effort and require expert knowledge. Bosch Rexroth has anticipated this engineering work for many applications and environmental factors and integrated the adaptation functions into the software. The innovation therefore lies in the tailoring and design of the product, which is specifically tailored to current market requirements.

Functionality / type of implementation
The Locator is offered both as software for implementation on an already existing vehicle computer and on a separate computer with defined interfaces for the sensors for laser distance measurement and the output of the localization data. Technologically, the solution is up to date with freely available and commercial solutions. The complete integration of all operating principles and functions in one system relieves the automation specialist from the work of map creation and updating as well as localization within the map. He can concentrate on automating the driving of the respective industrial truck. In addition, if the characteristics of the environment permit, he can also access localization information when the vehicle is reinitialized.

Market relevance	+
Customer benefit	+
Novelty / degree of innovation	Ø
Functionality / type of implementation	++
++ very good / + good / Ø balanced / - less / -- not available	