SensAI

Intelligent sensors, intelligent solutions

Challenge

Nowadays, flexible conveyor and storage technology is no longer imaginable without sensor technology. A look at the intralogistics processes of many companies shows that classic sensor solutions such as cameras for image acquisition are used frequently. However, these sensors are often only for a specific application and must first be implemented in a control loop, which means that a single sensor has little functionality, flexibility and potential. For example, a camera for image acquisition requires additional image processing via computer to calculate the result of the image processing. Today's requirements, characterized by Industry 4.0, are therefore no longer met by this classic sensor technology. In order to fulfill the increasingly complex work tasks, companies need innovative sensor solutions that create more flexibility, transparency and efficiency.

Vision

SensAI aims is to make existing processes »intelligent« by combining artificial intelli- gence and classic sensor technology, thus enabling to create new potentials from sensors. In addition, intelligent solutions such as intelligent-indoor-localization should considerably reduce the introduction costs compared to existing sensor systems, making the new technologies feasible for small and medium-sized enterprises (SMEs).

Research objectives

- identification of objects without barcode, RFID etc.
- indoor-localization without hall infrastructure
- determination of quantity and condition (e.g. counting of empty containers)

Start with the digitalization of your intralogistics today!

As experts for the digital transformation of intralogistics, we have been successfully supporting small and medium-sized enterprises (SMEs) for years. Our work focuses primarily on the creation of completely planned, monitored and controlled logistics processes and production environments to support competitiveness. With the help of our expertise in new technologies such as AI, IoT and smart sensor technology, we create comprehensive transparency over conditions of machines and business events., giving your company the advantage of being able to design intralogistics more efficiently. In addition to the selection of suitable technologies and the creation of a technology strategy, we support your company in growing business by effectively adapting data-driven business models to customers.

Our services for the digitalization of your intralogistics

- Process assessment and optimization
- Technology consulting
- Implementation of digitization - also of machines and systems that have not been networked so far

Make your sensor technology intelligent

By using intelligent sensor technology, it is now possible to combine the actual acquisition of measured variables with integrated signal processing in one device. Thus, analogue data is not only acquired, but also processed according to specified functions and issued as digital information.

In contrast to classic sensor technology, intelligent sensor systems ensure greater efficiency since they offer extended functionality in the monitoring of facilities and process optimization, hence generating new potential for your business processes. Through the additional integration of Smart Devices, all relevant process information can then be made available in the right place at the right time.

Our services for intelligent sensor technology

- Consulting and implementation of AutoID solutions (barcode, optical systems, RFID etc.) and tracking
- Laboratory tests and field trials
- Implementation to the prototype stage and connection to IT systems
- Development of an app, to use the sensor data
- Sensor and technology consulting

Selected references

- **Industry partner:** Company from the chemical, food, and cosmetics industry
- **Challenge:** Optimization of material and information flow in warehouse and production
- **Results:** Reduction in work preparation by **20 %**, reduction of the search effort in the warehouse by **90 %**

- **Industry partner:** Intralogistics system vendor
- **Challenge:** Virtual reality trainings for picking with a pick-by-voice system
- **Results:** Reduction of the training period of employees, increased awareness of logistical processes, higher motivation of employees

- **Industry partner:** Steelwork / rolling mill
- **Challenge:** Identification of semi- finished casting products that are subject to heat treatment, pressure and ageing and thus cannot be marked or labelled
- **Results:** Reliable identification of semi-finished casting products based on the cut surface by using artificial intelligence (AI), traceability for After Sales

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