

A3 PROJECT REPORT: Student Project; Pick-By-Vision



Theme / Keywords

Rosen: Picking process in the factory /
LEAN 4.0, Smart Glasses, Pick-by-vision (showcase/pilot)

Background.

The manufacturers are confronted with ever more individual products and are accordingly dependent on a good supply of information (currently through papers or via MDE devices). In order to meet the increasing volume of logistics and the resulting need for information, access to the required information must be simplified. The solution should not only reduce the high running and working times, but also minimize the high paper consumption (identified via Gemba walk).

Analysis.

The picking process requires the use of both hands. For a smooth and efficient workflow it is also important that the order picker has access to the required information at all times to check the order data. In addition, the order picker must understand that the hands-free wearable device gives him access to all the information required for the process. The use of this technology also has a positive effect on the training time.

Goal.

The aim is to make the workflow more efficient by improving the supply of information and to increase productivity (picking rate) by saving time. In addition, process digitization is intended to take a further step towards a paperless factory. Furthermore, a simple solution is to be realized, since no complex / expensive solution is required.

Proposal / Action plan.

The setup consists of:

- a Vuzix Blade (Smart Glasses)

Features of the Smart Glasses:

- Display integrated in the field of view (see-through)
- Good wearing comfort (light, stable, good hold on the head)
- Fast acclimatization time
- Pallet rack (at Rosen)
- (ring scanner: wearable combination)



Source: Vuzix.com



Source: honeywellaidc.com

The application is used to guide the order picker through the process and provide him with all the information he needs. The interaction takes place via simple, easy-to-learn tap and swipe gestures or in combination with a finger scanner (Easy interaction)

Evaluation.

The evaluation was carried out by Rosen employees (including the management level) as well as by researchers from the University of Osnabrück. Several test runs were carried out for this purpose. The results were included in the development.

Results

Pros:

- Simple expandable solution

Cons:

- Problematic for people with impaired vision
- Visualization of the pallet rack (suitable color code)



Conclusion / Follow-up.

The feedback on the application was mostly positive, but there were some discussions about the problem for people with visual impairment. A solution has to be found for this. The implementation of a finger scanner is planned for the future. In addition, images from real life are to be inserted.