ZEDAS: AI-supported assistance systems for the smart railway workshop

Fig. 1: AR application on the tablet shows the correct position of the work step to be perfor-med.
Photo: ZEDAS GmbH

As part of an ongoing research project, ZEDAS GmbH is working together with BLG RailTec GmbH and the BTU on an augmented reality (AR) application for the data glasses and tablet specifically for the railway workshop.

With the AR application of zedas®asset it is possible to relate a wagon and a maintenance order from the asset management system in three dimensions. This means that the corresponding work area on the wagon is display-ed for the order, arrows show the correct position of the next component to be worked on, and drawings, documents, photos and videos are displayed in context. documents, photos and videos are displayed in the context.

When the wagon arrives at the workshop, the wagon number recognition system based on artificial intelligence takes over the clear identification. Faults, orders and check-points are displayed directly on the wagon via AR.

Advantages through AR applications:
- Clearly defined workflows provide the maintenance staff with the exact sequence in which the work steps are to be carried out,
- component-related safety instructions,
- Additional information such as history data or circuit diagrams are displayed at the right time at the right component,
- large knowledge repository that can be accessed by new, long-term and external employees,
- Automated ECM-compliant documentation.

The aim of the zedas® AR applications is to display information to the user where it is needed, depending on the situation: directly in the field of vision and on the object concerned.

www.zedas.com
Halle City Cube, Booth 110