Audi Production Lab: journey into the future

- Audi designs factory of the future on a laboratory scale
- New visual presentation technologies for testing and assembly activities

Ingolstadt, June 30, 2015 – In the Audi Production Lab, production planners of the premium manufacturer are working together with experts from various departments of the company on innovative technologies for the production processes of the future. A promising technology is hand projection. In the future, it could support production employees with testing and installing components.

Jens Dehlke and his colleagues are currently working in four fields of operation in the Audi Production Lab. The first field deals with new ways to automate quality control. The second examines opportunities for making cars more assembly friendly in the future. Field number three addresses Big Data, i.e. how we master large amounts of data. And field number four is about the interaction of humans and machines using augmented and virtual reality (AR and VR).

“Three approaches could be of particular interest to Audi: tablets, data glasses and hand projection. All three have the potential to support production employees with their tasks,” says Dehlke. As the technology currently stands, hand projection consists of a laptop in a backpack and a unit attached to a strap that goes over the shoulder. It encompasses a compact infrared sensor and a small laser projector, which projects simple information – such as the instruction “check oil level” – onto the palm of the wearer’s hand. To do so, the sensor measures the distance to the hand and its position, in order to adjust the projection. The image is always sharp and disappears as soon as the user closes his or her hand, so it never disturbs the user while carrying out a task.

In the near future, Audi intends to be the first manufacturer to carry over the principle of hand projection to data glasses, thus making it ready for series production.

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