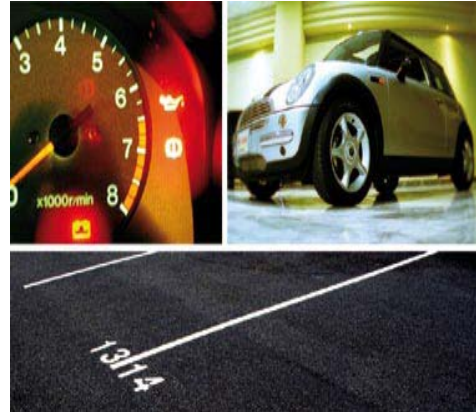


The Challenge

Reworking Assistance in Car Manufacturing

In car manufacturing, reworking involves completing the production steps not finished on the production line and/or rectifying the stages of production that were failed by Quality Assurance. An efficient reworking process demands precise and up-to-date information on the workload of the individual reworking stations and the quantity of cars still to be reworked ("buffer area"). In addition, the cars and the free reworking stations must be located quickly and reliably. This is done in order to maintain the quality of production by examining and analysing key performance indicators, e.g. the average time taken by each car for reworking.



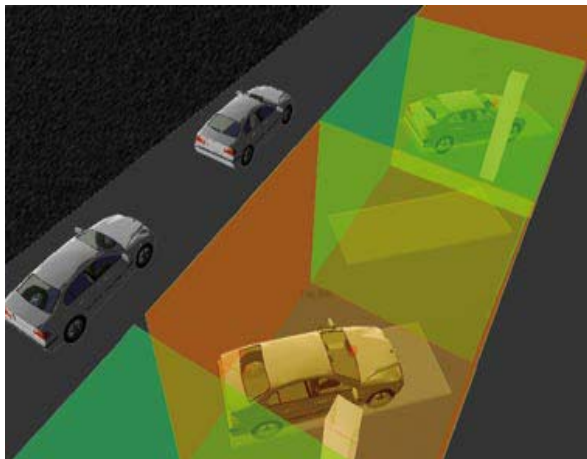
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The Solution

Continuous Location of Cars during Reworking

Solution Description

The solution is based on the Ubisense Real-Time Location System to track cars and tools with high resolution. This system allows the continuous location of cars to a spatial accuracy of 30 cm and a temporal resolution of 0.1 seconds. Spatial zones are assigned to the individual reworking stations and to the buffer area for cars that are waiting to be reworked. When a car enters or exits a zone, an event is triggered.



Process Description

- Before the start of the reworking process, each car is assigned an active tag with a unique tag ID. Car ID and car type are assigned to this tag.
- Every car tag is positioned in exactly the same place on the car e.g. centrally underneath the windscreen.
- In the entire reworking zone, all cars are now automatically located with high spatial accuracy (30 cm) in real time and on a continuous basis.
- If car 4711 enters the reworking zone X, an event is triggered. The event can be visualised directly on the Ubisense software platform (in the adjacent graphic e.g. by the colouring of the corresponding zone) and can also be evaluated by third party systems.
- The spatial results allow the rapid and reliable location of cars and of free parking spots.
- In addition, analyses can be carried out on the length of time cars spend at the reworking station or in the buffer area or on the average workload of the reworking stations.

About Ubisense

Ubisense is the world leader in Precise Real Time Location Systems, tracking unlimited numbers of people and objects in any space of any size. With unmatched 15cm 3D tracking accuracy and high reliability, its acclaimed open standards technology platform gives enterprises the power to bring visibility and control to previously intractable business processes. Together Ubisense consulting and its partners, such as IBM, Atlas Copco, Lockheed Martin and Raytheon deliver geospatial and RTLS systems, pioneering innovation whilst reducing costs, gaining competitive advantage and improving safety for companies across all vertical markets. With over 400 customers worldwide including BMW, Caterpillar, DHL, Duke Energy, Deutsche Telekom, US Army; Ubisense is revolutionising industries today. Visit www.ubisense.net

For further information please contact: enquiries@ubisense.net

Worldwide offices

Ubisense UK & Ireland

St Andrews House
90 St Andrews Road
Cambridge CB4 1DL, UK
t: +44 (0) 1223 535170

Ubisense Asia Pacific

1 Fullerton Road
02-01 One Fullerton
Singapore 049213
t: +65 6472 0186

Ubisense Australia

Level Twelve 200 Queen Street
Melbourne VIC 3000
Australia
t: +61 3 8681 0400

Ubisense Europe

ADAC Haus
Freie-Vogel-Str. 393
44269 Dortmund, Germany
t: +49 (0) 231 99955 500

Ubisense Korea

Youngdong Tower #902
300-4, Sungsu-Dong 2-GA
Sungdong-Gu
Seoul, 133-120
Korea
t: +82 2 529 1472

Ubisense New Zealand

Level 3, 10 O'Connell St
PO Box 6714 Wellesley St
Auckland 1010
New Zealand
t: +64 9 304 1048

Ubisense Americas

5445 DTC Parkway, Suite 1110
Denver, CO 80111, USA
t: +1 (720) 249 4149

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