



Photo: WZL/RWTH

As part of the Pro Sense research project, the WZL investigates the next steps in production planning and control.

### PRODUCTION PLANNING

# Brain As A Model

The Machine-Tool Laboratory (WZL) of Technical University of Aachen (RWTH) presents a first insight into the so-called cyber-physical systems for the fine planning of production.

🇬🇧 At the WZL, it became clear during research and industry projects of recent years that the demands on production planning and control have grown so much because of increasing market dynamics that they can no longer be met by existing fine planning systems. The systems are not flexible enough, says Prof. Dr. Günther Schuh, who succeeded Prof. Eversheim in 2002 in the chair for production systems at RWTH Aachen and has meanwhile joined the boards of the WZL and the Fraunhofer Institute IPT. The internationally renowned expert for manufacturing systems draws the following conclusion from his exten-

sive experience: "We can make no further progress with the usual IT solutions."

In the Pro Sense project, sponsored by the Federal Ministry of Research, the engineers in Aachen, led by Prof. Schuh, are now investigating what consequences should follow: "There is no question," as Till Potente, senior engineer in the department of production systematics, describes the approach of the research project, "that we will continue to need IT-based solutions, but they must be faster, more flexible and more intelligent. The human as the decision maker must have optimum support from the planning system and should not have to interpret individually outdated and static data. Every 20 months, currently, the data deposits of the world double," Potente cautions us – "we have to deal with that."

Already tested, and presented at the Hannover Fair, is the idea of a cyber-physical fine planning system as a further development of systems already embedded in companies. While today's IT systems draw on master data for production, based on assumptions and one-time estimates, the cyber-physical system is to process intelligently high-resolution data.

The model is the brain, says Potente. Functions such as stimulus orientation, selection and prioritisation of perception and also constructing hypotheses are to be imitated. The shop-floor level can therefore only be the starting point. The final, but decisive, component will always be the interface to the user. (hk)



Prof. Dr. Günther Schuh, WZL of RWTH, Aachen: „We can make no further progress with the usual IT solutions.“

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