Development of an intelligent, decentralized communication architecture for productions systems (Plug&Record)

Initial situation

To remain competitive in today's market environment, increased automation and flexibility of production systems are necessary. A decentralized and intelligent production device recognition can achieve this. The heterogeneous equipment landscape of today's production systems is problematic here. Up to now, there are only a few state-of-the-art approaches that deal with the automated reconfiguration of process monitoring.

Objective

Within the scope of this work a software architecture will be developed which automatically identifies data of individual operating resources and forwards them to a database (Plug&Record).

Requirements profile

- Interest in: production systems, virtual commissioning and communication protocols
- Prior knowledge (desired): OPC UA Server/Client, .NET (C++/C#), NoSQL, Container Architecture
- Personal initiative and creativity

Contact

M.Sc. Clemens Gonnermann
Research group
Cyber-Physical Assembly Systems
Tel.: 089 / 289 15484
clemens.gonnermann@tum.de