Abstract:
The traditional way of engineering production systems requires static information flows within and in between automation software, from field control software to manufacturing operations management. The common understanding of data and its containing information is realized by implicit assumptions on data semantics. In contrast, the vision of future production systems as cyber-physical systems (CPS) focuses on intelligent production facilities, which are characterized by autonomous behavior and dynamic, cooperative interactions. As a consequence, data and information that are stored and exchanged within CPS cannot rely on the assumption that other software systems are aware of data semantics. A means to solve this issue is ontologies – an approach being intensely discussed and applied for enhancing data with semantics. However, reuse of ontologies within the automation domain is hampered as ontologies are developed for specific use cases without having reusability in mind. In this paper, these drawbacks of ontology development are discussed and an approach for maximizing reusability through modularizing ontologies for different fields of the automation.
domain is presented.

Kongress-/Buchtitel:
19th IFAC World Congress (IFAC 2014)

Jahr:
2014

Nachgewiesen in:
Scopus; Web of Science

Occurences:
- Einrichtungen > Fakultäten > Fakultät für Maschinenwesen > Institut für Mechatronik > Lehrstuhl für Automatisierung und Informationssysteme (Prof. Vogel-Heuser) > 2014

entries: