Abstract:
The industrial automation systems are slowly changing from a centralized architecture to a modularized, system of systems architecture nowadays. Subsequently, there are efforts to replace the classical sequential plant engineering by systems engineering, where the distributed automation entities in a plant represent a system. Considering this revamp, we propose AutomationML based mechatronic models as an enabler for automation systems engineering. Aggregating requirements from a motivating example, a prototypical implementation of a mechatronic model in AutomationML and its potentials concerning automation systems engineering are presented. A use case and its evaluation is detailed where these mechatronic models are visualized for model-based automation engineering or re-engineering. Initial results and future directions are presented.

Stichworte:
- factory automation
- mechatronics
- production engineering computing
- systems engineering
- model-based automation engineering
- AutomationML mechatronic models
- industrial automation systems
- systems engineering
- Mechatronics
- Automation
- Data models
- Production
- Standards

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