Abstract: Within the maintenance of the IEC 61131-3 standard, its extension towards object orientation (OO) is currently discussed and very likely to happen. Such an extension would enable the bidirectional mapping between OO-IEC 61131-3 software structures and graphical UML class diagrams (ISO/IEC 19501). This paper presents the main OO-extension to IEC 61131-3, like: hybrid function blocks, interfaces, methods, properties and inheritance. This is followed by a specification of a possible bidirectional mapping to UML class diagrams. Finally this paper presents exemplarily a design pattern for the implementation of a modular machine mode control according to IEC 61512. Within a research project a class diagram editor and the corresponding mapping rules were prototypically implemented evaluated in CoDeSys V3.
Occurences:
- Einrichtungen > Fakultäten > Fakultät für Maschinenwesen > Institut für Mechatronik > Lehrstuhl für Automatisierung und Informationssysteme (Prof. Vogel-Heuser) > 2009

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