A methodological approach to evaluate the benefit and usability of different modeling notations for open loop control automation systems

In order to evaluate different model based approaches using specific modeling notation a methodology is necessary, which includes complexity of the control task, applicability to the type of the control task, but also usability measures, e.g. number of faults in model or program (effectiveness) and time needed (efficiency) to finalize the task. Our experimental focus has been up to now on open loop control. The relevant factors will be discussed; the HTA as method to describe the modeling task as well as three evaluations will be introduced comparing UML, ICL, SysML and IEC 61131-3.
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