A desktop 3D printer in safety-critical Java

It is desirable to bring Java technology to safety-critical systems. To this end The Open Group has created the safety-critical Java specification, which will allow Java applications, written according to the specification, to be certifiable in accordance with safety-critical standards. Although there exist several safety-critical Java framework implementations, there is a lack of safety-critical use cases implemented according to the specification.

In this paper we present a 3D printer and its safety-critical Java level 1 implementation as a use case. With basis in the implementation we evaluate the specification and its usability for developers of safety-critical systems.

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