Robot Framework for Cyber Physical System Test Automation

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Cyber physical systems are becoming increasingly complex and networked. As the number of system components increases and their complexity grows, so does the time required for system integration. Historically the degree of system integration guided by automated tests in the embedded domain is more or less limited to hardware-in-the-loop (HIL)[1] and software-in-the-loop (SIL)[2] automation strategies on the component level. A large part of the complexity in system integration lies in the interaction of the system components however. As a consequence, traditional integration strategies are becoming increasingly inefficient. The solution to the problem is to prioritize system level integration automation and supplement it with traditional automation (if required).

1.4 Why the Robot Framework?

The Robot Framework (abbreviated as RF in the following) is the only truly generic (from an architecture and programming language point of view) and very flexible acceptance/end-to-end test automation framework. It has a proven track of record in various demanding domains like telecommunication and robotics.

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[1] https://www.mathworks.com/discovery/hardware-in-the-loop-hil.html

[2] https://www.mathworks.com/help/ecoder/software-in-the-loop-sil-simulation.html