

M5.2 (M8): Open Source Repository

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¹MD = management document; TR = technical report; D = deliverable; P = published paper; CD = communication/dissemination.

²PU = Public; PP = Restricted to other programme participants (including the Commission Services); RE = Restricted to a group specified by the consortium (including the Commission Services); CO = Confidential, only for members of the consortium (including the Commission Services).

³This code is constructed as described in the H2020 Project Handbook.

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REVISION HISTORY

Date	Version	Author	Modification
30.11.2018	1.0	F. Kammüller	Started the document, set up GitHub
1.12.2018	1.0	F. Kammüller	Added link in for Isabelle Infrastructure framework
2.12.2018	1.0	F. Kammüller	Added link in for SBIP framework
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1 Executive Summary

We give here the details of an Open Source repository <https://github.com/success-iot> for the software, specification, and verification scripts and proofs of the Project.

2 Open Source Repository

In this section, we give short descriptions of the software provided. This document is put as a public output of the Project itself on the SUCCESS open source software account at <https://github.com/success-iot>. The document contains links to other repositories but the account may itself be used for software of the project.

- Isabelle Insider framework [1]: the entire formalisation of this framework and the application examples from the SUCCESS IoT healthcare case studies are here <https://github.com/flokam/IsabelleAT>.

- BIP-SMC : A Statistical Model Checking Engine for the BIP framework [2].

BIP-SMC is a Statistical Model Checker, a tool for formal modeling and statistical analysis of systems exhibiting stochastic behaviors.

Models subject to SMC analysis are described in the stochastic BIP language, a component-based formal language. They can have as underlying semantics DTMCs, CTMCs, and GSMPs. Properties to be verified can be specified in Probabilistic Bounded LTL and MTL. In addition to classical SMC algorithms (Hypothesis Testing and Probability Estimation), SBIP provides a parametric exploration (PX) in addition to a recent support for rare events analysis (IP).

Documentation and download at <http://www-verimag.imag.fr/BIP-SMC-A-Statistical-Model-Checking>.



3 Conclusion

Open Source repository has been created for SUCCESS under a dedicated GitHub account.

Bibliography

- [1] F. Kammüller. Attack trees in isabelle. In *20th International Conference on Information and Communications Security*, volume 11149 of *LNCS*. Springer, 2018.
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