

SyRA



FP7-CLERECO
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A full System Reliability Analyzer

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Product Overview

SyRA automates reliability analysis of complex electronic systems by means of component based statistical reliability models. SyRA enables to model the target system in terms of components (technology, hardware and software) and resorting to the CLERECO Bayesian reliability engine can efficiently analyze how faults and errors propagate through components, accounting for complex interactions among them that are not modeled with simpler statistical models.

*"You don't need to know that your system is reliable, you need to **prove it!**"*

- Testgroup (Polito)

Supported Architectures

- Supported microprocessors architectures through other CLERECO tools (ARM Cortex A9, ARM Cortex A15, x86_64)
- Single/Multicore architectures
- Single/Multithread applications

Target Components

- All hardware components and subcomponents.
- All functions of the OS and the Software.

Key Features

- The model is highly parameterized. It enables to include any factor that can potentially affect the reliability of the system (e.g., environmental factors such as location and temperature) by simply adding new variables to the model.
- Full GUI available**

Extensions & Tools

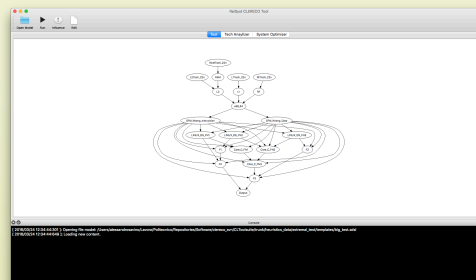
- Full system stack analyzed (from technology to the application software)
- Detailed hardware and software description
- Montecarlo simulation to account for uncertainty on reliability parameters of the single components
- Very fast analysis for early design exploration.

Supported Fault Models

- ✓ **Transient**
- ✓ **Permanent**

Measurements

- AVF/FIT
- Influence Probability



System Requirements

- OS:** Linux, OS X 10.8 or later
- Libraries:** SMILE, QT, Boost
- RAM:** 4GB



**POLITECNICO
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