ReDO

A full System Reliability Design Optimizer

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Product Overview

ReDO improves the reliability of your system design by selecting the best combination components (technology, hardware and software) to meet your design constraints. ReDO let you explores hundreds of design alternatives automatically. ReDO features an advanced optimization algorithm inspired by the Extremal Optimization evolutionary strategy, and it is based on the CLERECO Bayesian reliability engine.

*"There is only one way to optimization: be sure you are getting only the **best of all**."*

- 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

Extensions & Tools

- Full system stack optimized (from technology to the application software)
- Very fast design exploration
- Full Design exploration logged
- Multi-objective optimization functions
- Maximum optimization time definable by the user based on early stop conditions

Target Components

Full optimization for:

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

Optimization Parameters:

- ✓ **Reliability**
- ✓ **Time**
- ✓ **Area**
- ✓ **Power Consumption**
- ✓ … any parameter that can be described and evaluated.

Measurements

- AVF/FIT
- Percentages of improvement.
- Influence Probability

Key Features

- Fully design optimization via support of users defining objective functions.
- **Full GUI available**

System Requirements

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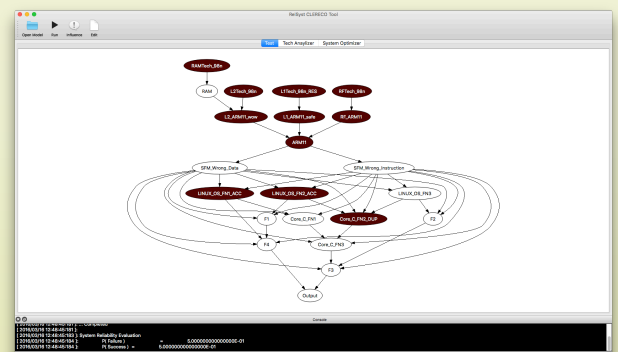
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