

Tools for the Analysis of Simulation Dumps and the Evaluation of Burn-In Techniques

Original

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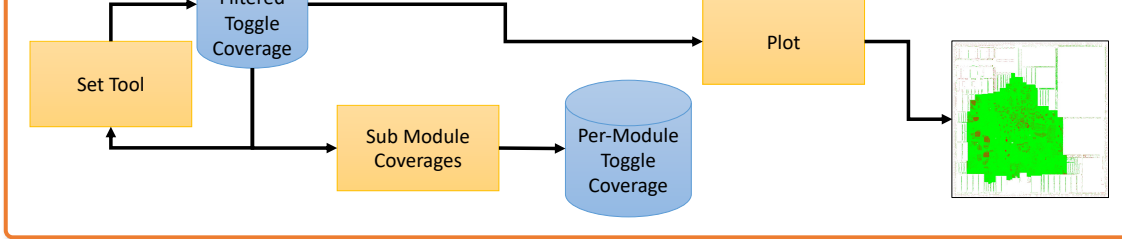
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Set Tool

Given a set of results from the analysis and filtering, the set tool provides:

- A display of a **confusion matrix** showing the percentage of **unique toggle coverage** for each file.
- A set of files showing **unique toggles** for each gate or bus.
- A set of files **grouping** gates and buses by **number of toggles** up and down.
- A single **merged coverage file**, providing the overall coverage.

The **Statistical** tool is used to assess the circuit on the SoC for avoiding redundancy.

The **Multiple-point** tool assesses the controllability of gates, implying a set of files.

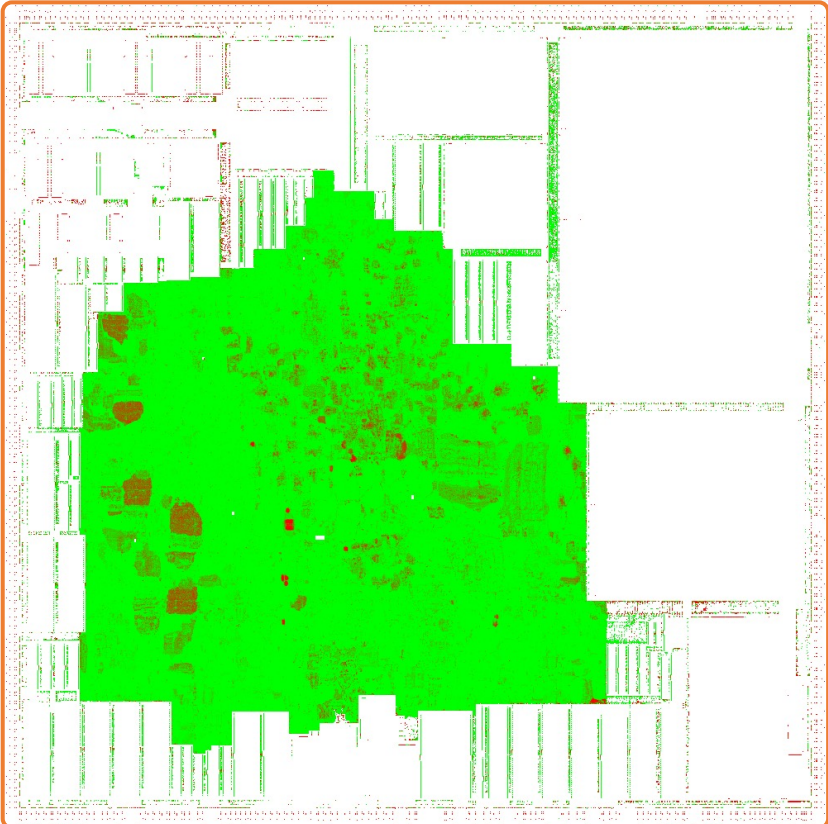
We will focus on the Set Tool.



Plot and Sub Module

Given the **mapping** of the circuit cells, it plots the coverage for one of them.

The Sub Module tool shows the coverage for a specific module in the results. It shows different approaches to analyze the circuit.



Conclusion

We propose a **toolchain** for Burn-In processing of the simulation results.

This toolchain is **flexible** and uses a pass data, allowing to add more analysis.

We carefully optimized the most critical parts, **reducing the time needed from days to hours.**