

FRACTAL AT DAC, BOOTH 2333



**DESIGN
AUTOMATION
CONFERENCE**

FROM CHIPS TO SYSTEMS – LEARN TODAY, CREATE TOMORROW

DAC 2018, San Francisco, CA, June 24-28



SEMIWIKI CEO INTERVIEW

“We (SemiWiki) have been working with Fractal for close to five years now publishing 25 blogs that have garnered more than 100,000 views. Generally speaking QA people are seen as the unsung heroes of EDA since the only time you really hear about them is when something goes wrong and a tapeout is delayed or a chip is respun.”

“FinFETs really changed QA by introducing many more complexities that require an increasing number of timing, power, and noise characterization checks for example. The foundries and leading-edge companies are forgoing internal tools in favor of Crossfire from Fractal where they can collaborate (crowdsource) and increase QA confidence.”

“The fractal people and I have crossed paths many times over the years working for some of the same companies and recently I joined Fractal for business development work that you will be reading about moving forward. Fractal really is an impressive company with a unique approach to a very challenging market segment. It is my hope that Fractal can be an example to other emerging

IP quality not your problem?

This and other common myths debunked



Trust your IP supplier to check it all?

- Your design, your problem. Who's paying for the re-spin?
- Only Crossfire incoming inspection ensures your IP supplier, foundry or in-house colleagues have done their job

IP is clean if the tools read it?

- EDA tools could not care less about missing arcs, wrong conditions or related power pins
- Only IP that passes your golden Transport quality deck can be called clean

IP issues are trivial anyway?

- Some are – but they still cause delays
- Can you find them in 4TB of IP data?
- Many are far from trivial – how do you trace back the right related power pin in a large SPICE netlist?

Final verification will catch it all?

- LVS is the worst part in the design cycle to reveal IP issues – high complexity, no time left for fixing
- Timing and power verification check vs the Liberty model, not vs SPICE



EDA companies who want to solve problems others have not addressed in a very sensible way, absolutely.”

[Click link to read CEO interview](#)

VISIT FRACTAL BOOTH 220 AT TSMC 2018 TECHNOLOGY SYMPOSIUM

Tuesday May 1st, Santa Clara Convention Center, 5001 Great America Parkway, Santa Clara

CROSSFIRE UPDATES

Recent Crossfire improvements:

- **New Rules and Features:**
 - Support for new APL:leakage format
 - Beta release for full syntax checking in System Verilog
 - Support for System Verilog Instance check
 - Ensure lower via exists for every metal pin in LEF
 - Internal power condition coverage check
 - SPF versus SPF net capacitance check
 - Layout versus Layout speed and memory improvements for large MW databases, OA, Oasis and GDS2



ABOUT CROSSFIRE

Crossfire reports mismatches or modeling errors for Libraries and IP that can seriously delay an IC design project.

Library and IP integrity checking has become a mandatory step for a "state of the art" deep submicron design due to the following challenges:

- The sheer number of different views
- The complexity of the views (ECSM, CCS)
- The loss of valuable design time
- Time to market

Crossfire helps CAD teams and IC designers achieving a high quality of design data in a short time.

Crossfire assures that the information represented across the various views is consistent and does not contain anomalies.

CROSSFIRE USABILITY FEATURES

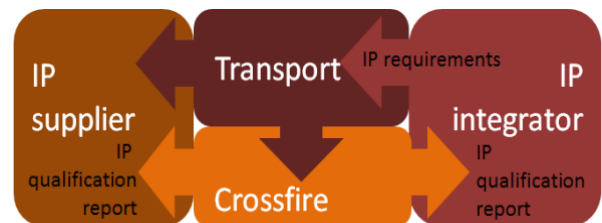
Graphical setup creation & run environment as well as batch runs

Powerful hierarchical configuration language supporting macro functions

- Graphical debugging (message > double click > open relevant views)
- Graphical output filtering (zoom in on cells/formats/error-types)
- Waiving mechanism
- HTML and CSV reports
- Automatic setup generation
- Setup API
- Generic setups
- Parallel Parsing feature

FRACTAL TRANSPORT

Transport™ serves as an input format to Crossfire, describing what checks Crossfire needs to execute on which IP databases, as specified by the IP integrator.



Fractal Crossfire and Transport

Read the [Fractal White Paper](#) online!

CROSSFIRE INTEGRATION FEATURES

API for creating database independent checks, available in: Perl, Tcl and Python

Existing customer validation scripts can be integrated

Visualization messages/results from customer scripts (double click opens message)

CROSSFIRE INTERVIEW

Visualization and browsing of database contents
Opens e.g. LEF, GDS, CDB, OA and Milkyway views in a single window

CROSSFIRE DIAGNOSE

Diagnose is the Crossfire GUI designed for users that to only analyze Crossfire results. The setup and test definition sections of Crossfire are completely shielded from the user. The user can see, report, filter wish, waive and analyze the generated Crossfire messages.



ABOUT FRACTAL TECHNOLOGIES

Fractal Technologies is a privately held company with offices in Los Gatos, California and Eindhoven, the Netherlands. The company was founded by a small group of highly recognized EDA professionals.

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