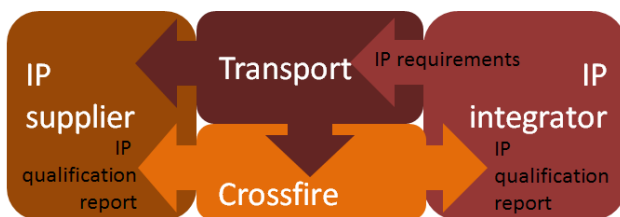


NEW FRACTAL WHITE PAPER

FRACTAL TRANSPORT: ENABLING THE IP QUALIFICATION HANDSHAKE

This paper introduces the Fractal Transport™ formalism for capturing and exchanging IP qualification requirements. It describes using Transport™, in conjunction with Fractal's Crossfire™ IP qualification tool, as an IP sign-off solution between semiconductor design partners.

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 UPDATES

RECENT CROSSFIRE IMPROVEMENTS:

- New Rules:
 - Instance name prefix check based on device type
 - APL parameter check
 - Symbol Origin Check
 - Check that reports any empty spice cells
 - LEF check for layer parameters under pins
 - Check if input pins are correctly connected to gate or antenna diode
 - Check if EM current-values are within a user-specified sensible range
 - Check if EM current-values are monotonic across the load

- Check if EM current types are present in EM tables

MORE FORMATS SUPPORTED

- .lib table support for electro migration tables
- new APL views, cdev9v2 and pwlcap

WAIVERS

Waiver rules support for YAML

FRACTAL AT DAC 2016

Austin, Texas, June 5-9



For demo and presentation on IP Validation please visit us at Booth 1718



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

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 wish 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, 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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