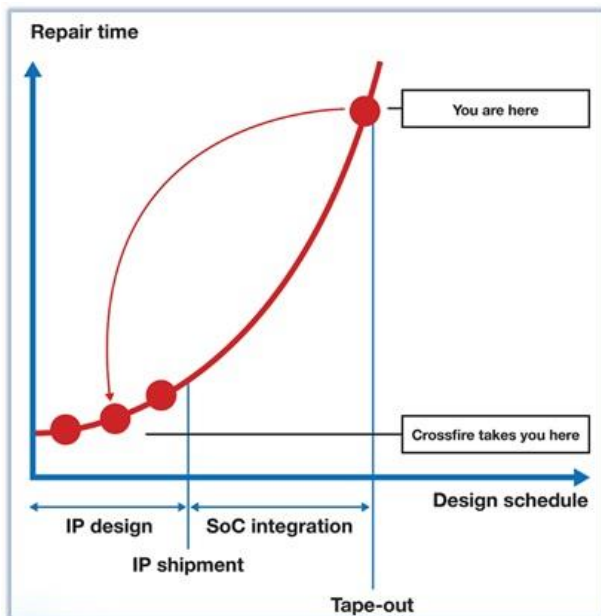


FRACTAL BLOGS ON SEMIWIKI

"IPs must be properly qualified before attempting to use them in any IC design flow. One cannot wait to catch issues further down the chip design cycle. Waiting for issues to appear during design verification poses extremely high risks, including schedule slippage. For example, connection errors in transistor bulk terminals where timing and power closure will work regardless. Such an issue would only be uncovered during final SPICE netlist checks. Another potential problem could include a case where LEF does not match GDS, completely slipping through the cracks, through full synthesis, and would only be caught during chip level DRC or LVS. This would ultimately require updates to the IP as well as re-synthesis (more slippage).

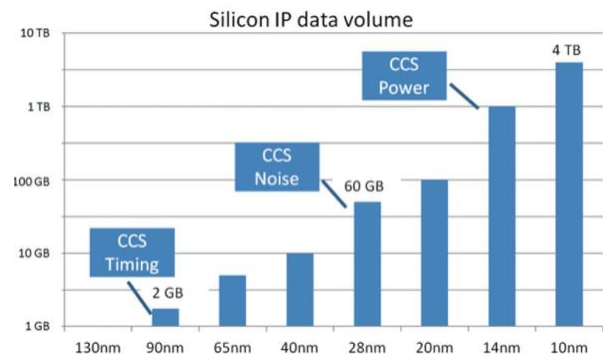


How can one avoid these potential problems? Simple, with Fractal's Crossfire QA suite. Fractal is your specialized partner for IP qualification. Crossfire can help you deal with design view complexities, increasing amount of checks required to correctly QA an IP, and the difficulties of dealing with excessive volumes of data."

[Crossfire Base Line checks article part 1](#)

"In our previous article bearing the same title, we discussed the recommended baseline checks covering cell and pin presence, back-end, and some front-end checks related to functional

equivalency. In this article, we'll cover the extensive list of characterization checks, that include timing arcs, NLDM, CCS, ECSM/EM, and NLPM."



[Crossfire Base Line checks article part 2](#)

CROSSFIRE UPDATES

Recent Crossfire improvements:

- New database beta release: We expect DB size reductions between 10x and 18x. The larger reductions are for larger databases. We have seen 3GB database reduce to 160MB.
- New Rules and Features:
 - SDF format supported
 - IP-XACT format supported
 - SDF versus SDF check
 - Check for missing OCV sigma tables (cell_rise/fall versus rise/fall_transition)
 - Check strict mode usage in Oasis formats

BEST WISHES FOR 2019

We wish you all a healthy and prosperous 2019; enjoy Christmas and New Year with family and friends.



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.

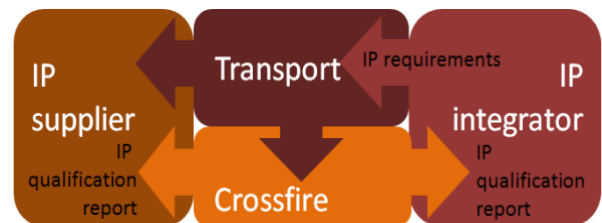
CROSSFIRE USABILITY FEATURES

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.

CONTACT FRACTAL:

For Info, Sales or Support please contact:

info@fract-tech.com

www.fract-tech.com

FOR CHINA AND TAIWAN
AVANT TECHNOLOGY INC:

For Info, Sales or Support please contact:

sales@avant-tek.com

support@avant-tek.com

FOR KOREA
LINKGLOBAL21:

For Info, Sales or Support please contact:

dwkang@linkglobal21.com

FOR JAPAN
JEDAT OFFICE:

For Info, Sales or Support please contact:

tanaka.kenichi@jedat.co.jp