MunEDA 사 WiCkeD (WCD)

A. 목적 : Circuit Sizing & Circuit Analysis

B. 구분 : Optimize device geometries (W, L, fins, fingers, R, C, …) and types (low/high Vt) for all PVT corners and Anaylse the circuit with fast & accurate high-sigma statistical method.

C. Supported Platform and O/S System

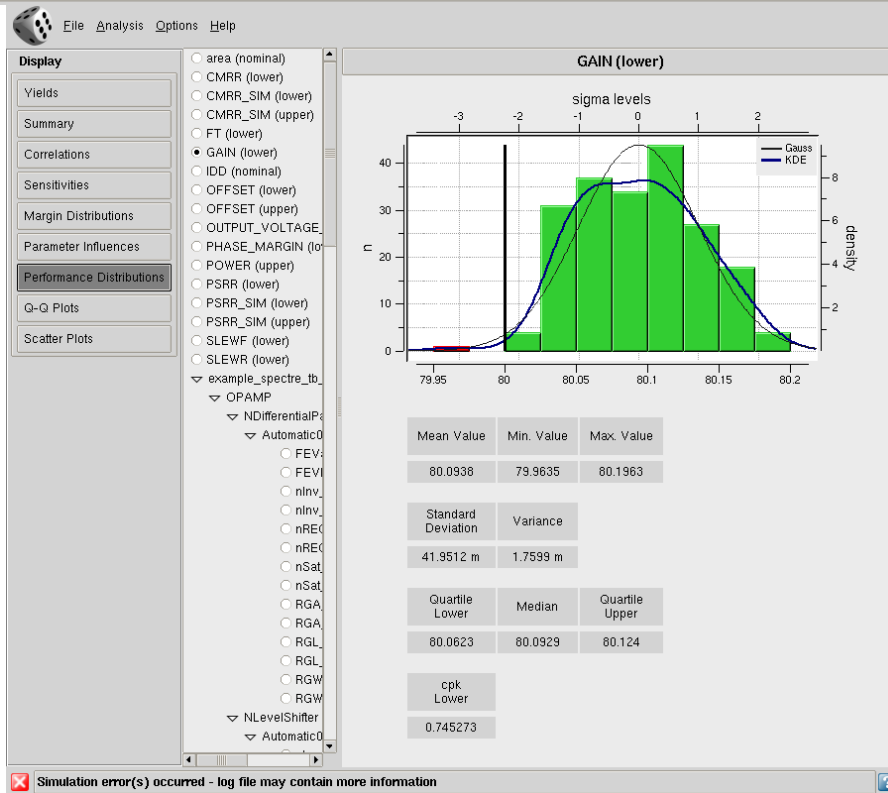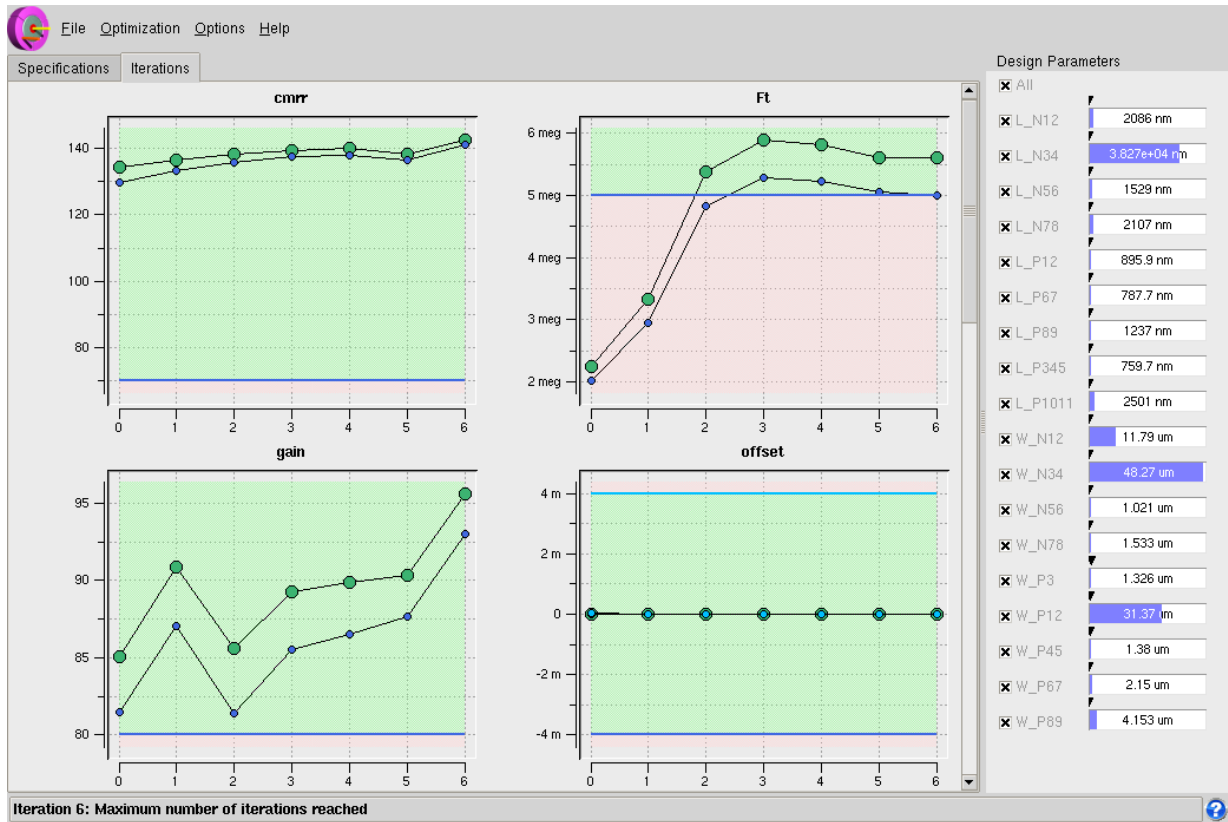 - RHEL 7, 8 (64bit) ~ 최신 버전 / RHEL 6, 7 (64 bit) ~ 직전 버전

D. 특성 및 기능

 - 여러 Performance Spec을 통합적으로 고려하는 Optimization & Analysis 기능 제공
 - Worst-Case를 중점적으로 분석하여 보다 빠른 Screening 수행 지원
 - TSMC Partner社로서 다양한 Circuit (AMS/RF, I/O, custom cell, memory)에 대한 적용 경험 보유
 - Cadence Virtuoso Interface 내에서의 실행을 지원하여 사용 편의성 확보

Performance or Constraint	Bound Type	Progress	Specification	Nominal Value	Worst-Case Value	Diff.	Diff. / Nominal	Worst-Case To Spec Margin	Rel. Margin	Cload	Ibias	Vdd
gain0	Lower	finished	> 80 dB	96.57 dB	93.74 dB	-2.823 dB	-2.92%	13.74 dB		30 pF	10.5 uA	4.5 V
gbw	Lower	finished	> 1.3 meg 1/s	2.407 meg 1/s	2.175 meg 1/s	-231.9 k 1/s	-9.6%	874.7 k 1/s		30 pF	9.5 uA	4.5 V
phase	Lower	finished	> 60 °	61.49 °	54.4 °	-7.088 °	-12%	-5.6 °		30 pF	9.5 uA	5.264 V
slewF	Lower	finished	> 3 V/µs	3.225 V/µs	3.035 V/µs	-190.2 m V/µs	-5.9%	35.3 m V/µs		23.48 pF	9.5 uA	4.5 V
slewR	Lower	finished	> 3 V/µs	3.011 V/µs	2.128 V/µs	-883.5 m V/µs	-29%	-872.2 m V/µs		30 pF	9.5 uA	4.5 V
psrr	Lower	finished	> 80 dB	97.56 dB	96.71 dB	-850.7 m dB	-0.87%	16.71 dB		30 pF	10.5 uA	4.5 V
power	Upper	finished	< 1.3 mW	0.5229 mW	0.6082 mW	+0.08531 mW	16%	0.6918 mW		20 pF	10.5 uA	5.5 V
sat1M3	Lower	finished	> 0	663 m	663 m	0	0%	663 m		20 pF	10 uA	5 V
sat2M3	Lower	finished	> 0	806.4 m	800.7 m	-5.707 m	-0.71%	800.7 m		30 pF	9.5 uA	4.5 V
sat3M3	Lower	finished	> 0	143.4 m	137.7 m	-5.707 m	-3.98%	137.7 m		30 pF	9.5 uA	4.5 V
sat1M4	Lower	finished	> 0	663 m	663 m	0	0%	663 m		20 pF	10 uA	5 V
sat2M4	Lower	finished	> 0	806.4 m	800.7 m	-5.707 m	-0.71%	800.7 m		30 pF	9.5 uA	4.5 V
sat3M4	Lower	finished	> 0	143.4 m	137.7 m	-5.707 m	-3.98%	137.7 m		30 pF	9.5 uA	4.5 V
cmvgsM3	Lower	finished	> 0	143.4 m	137.7 m	-5.707 m	-3.98%	137.7 m		30 pF	9.5 uA	4.5 V
cmvgsM4	Lower	finished	> 0	143.4 m	137.7 m	-5.707 m	-3.98%	137.7 m		30 pF	9.5 uA	4.5 V
cmdvdsM3M4	Lower	finished	> 0	1.5	1.5	0	0%	1.5		20 pF	10 uA	5 V
sat1M8	Lower	finished	> 0	867.9 m	867.9 m	-38 n	0%	867.9 m		20 pF	10.5 uA	5 V
sat2M8	Lower	finished	> 0	1.95	1.919	-30.68 m	-1.57%	1.919		20 pF	9.5 uA	5 V
sat3M8	Lower	finished	> 0	1.082	1.051	-30.68 m	-2.84%	1.051		20 pF	9.5 uA	5 V
sat1M5	Lower	finished	> 0	1.565 m	-221.6 m	-223.2 m	< -100%	-221.6 m		20 pF	10.5 uA	4.5 V
sat2M5	Lower	finished	> 0	1.087	894.1 m	-193.1 m	-18%	894.1 m		20 pF	10.5 uA	4.5 V

다양한 Spec 값을 동시에 고려하는 Operation Flow

GUI 기반의 결과 분석 도구 제공

LinkGlobal21