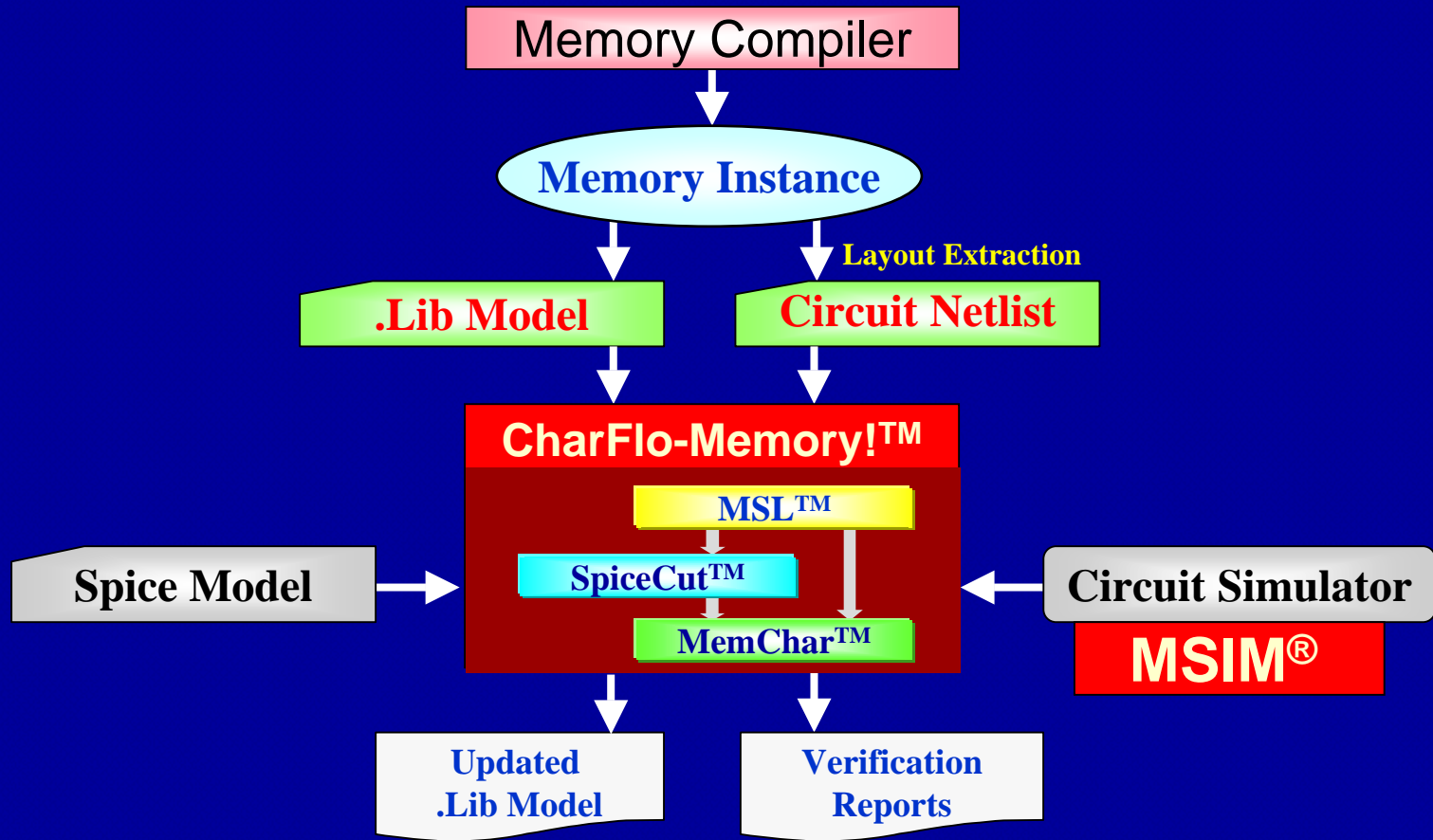


# Memory Characterization by MSIM®



# MSIM<sup>®</sup> Accuracy Benchmark

## Full-Circuit 'Access Time' Simulation Results / Comparison

*This SRAM circuit has 21,087 MOS, 73,374 Rs and 44,639 Cs*

Access Time	Standard* Accurate Mode	MSIM Accurate Mode		MSIM Default Mode	
	Time	Time	Difference	Time	Difference
O[0] rise	<b>1.4776ns</b>	1.4769ns	<b>-0.0474%</b>	1.4849ns	<b>0.4940%</b>
O[24] rise	<b>1.4832ns</b>	1.4823ns	<b>-0.0607%</b>	1.4880ns	<b>0.3236%</b>
O[0] fall	<b>1.5448ns</b>	1.5441ns	<b>-0.0453%</b>	1.5552ns	<b>0.6732%</b>
O[24] fall	<b>1.5446ns</b>	1.5445ns	<b>-0.0065%</b>	1.5633ns	<b>1.2107%</b>

**Standard\* Accurate Mode is taken as 'GOLD' for comparison**

*\* Standard means the most popular Spice simulator*

**Leader in IP Characterization and Circuit Simulation**

**Legend**  
Design Technology



# MSIM<sup>®</sup> Multi-Thread Benchmark

## ◆ Register File ‘RF2R1W16X128S’

Access Time (5 input slopes and 5 output loadings)

25 Simulation Jobs

	CPU Time	Gains
1 MSIM <sup>®</sup>	7 Hours 17 Minutes	1.0 X
4 MSIM <sup>®</sup>	2 Hours 8 Minutes	3.4 X
8 MSIM <sup>®</sup>	1 Hour 13 Minutes	6.0 X
25 MSIM <sup>®</sup>	18 Minutes	23.9X

# MSIM<sup>®</sup> Certifications

- ◆ MSIM certified by TSMC's Spice Tool Qualification Program

*<http://www.legenddesign.com/BW/021009.shtml>*

- ◆ JEITA (Japan Electric and Information Technology Industries Association) has qualified MSIM-PCB for simulating IBIS models in PCB designs. Those results can be downloaded from JEITA web:

*<https://ec.jeita.or.jp/ibis/>*