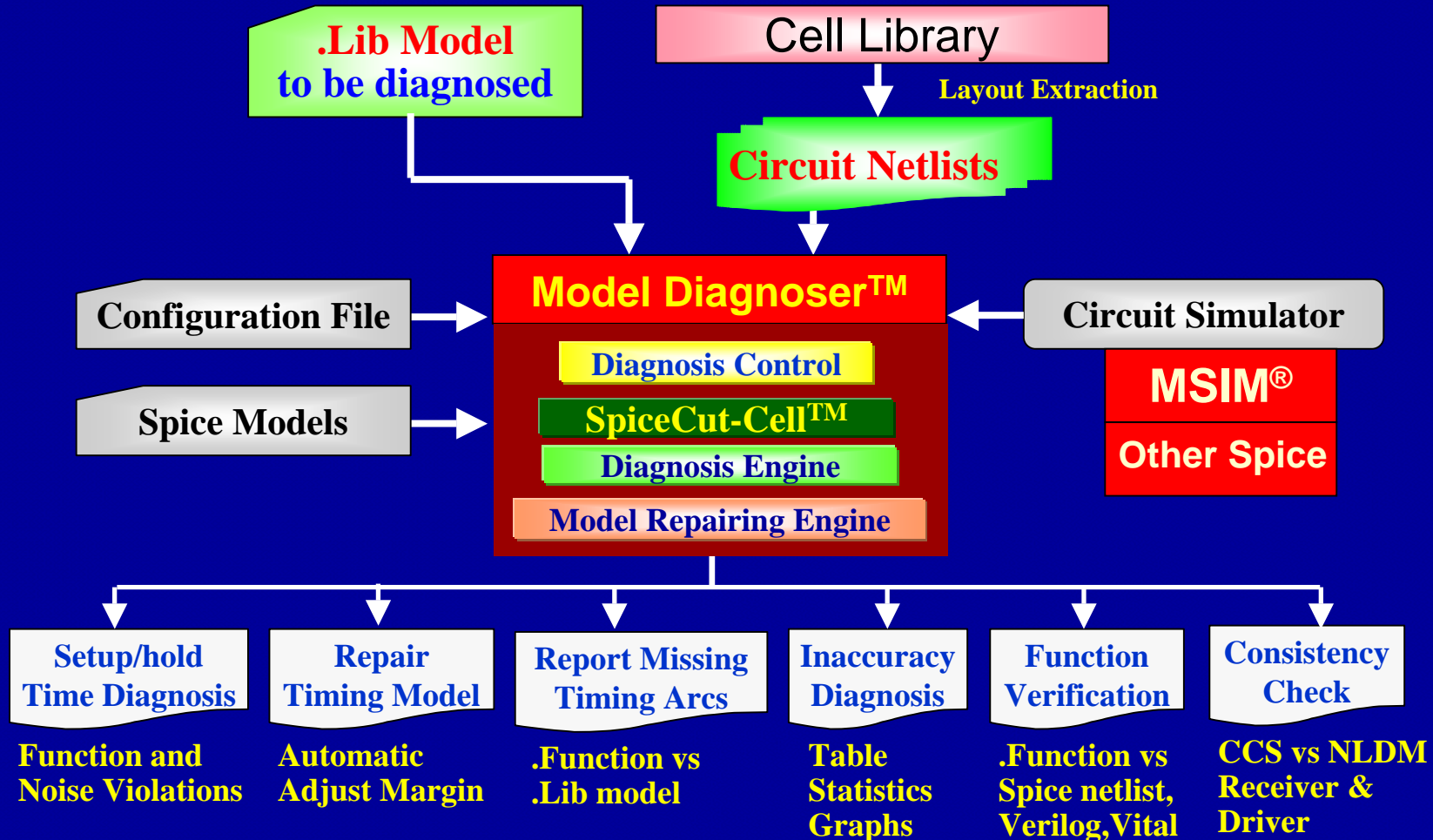


QA and Diagnosis

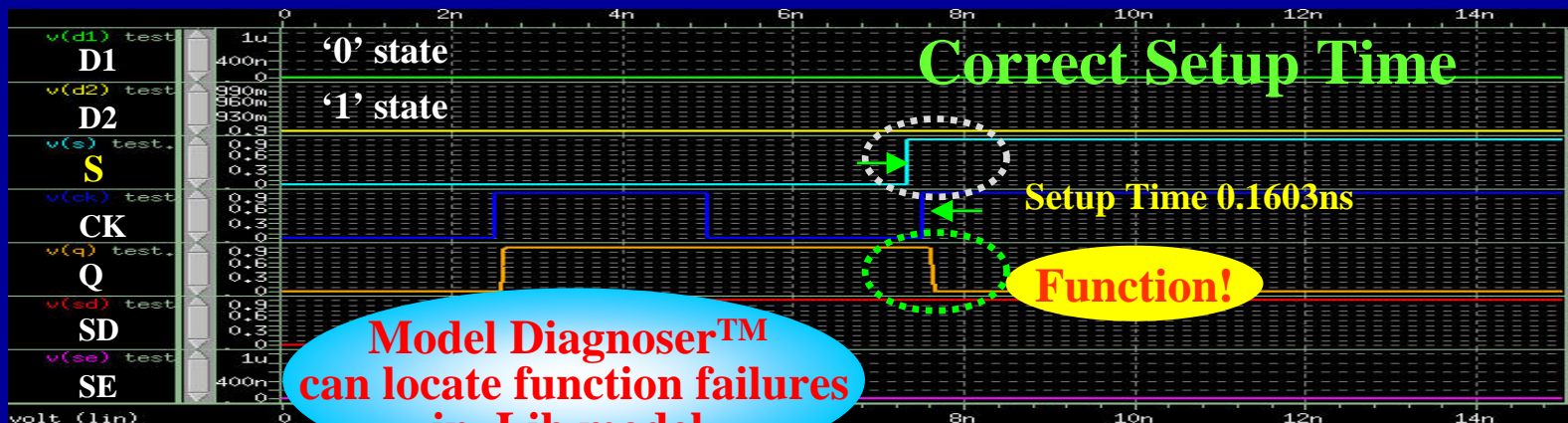
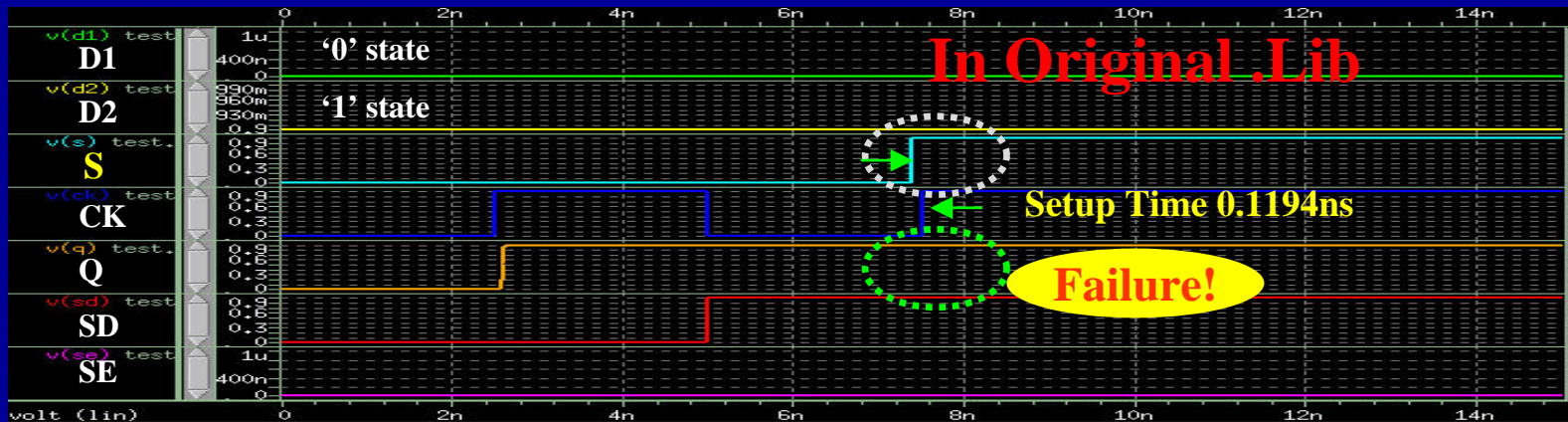
Standard Cell Library .Lib Model

- ◆ Setup/hold time diagnosis for function/noise violations
- ◆ Repairing library model from function/noise violations
- ◆ Reporting missing timing arcs which could be accessed
- ◆ Inaccuracy diagnosis by library model comparison
- ◆ Function verification between views of library model
- ◆ CCS consistency check of library model
- ◆ Interactive Debugging

Model Diagnoser™ Flow



'Function' Violation Due to Insufficient Setup Time



Model Diagnoser™
can locate function failures
in .Lib model.

Run-Statistics Examples

Setup/Hold Time

- ◆ Diagnosing one cell library normally takes 2~4 hours

Cell Library	Number of Latch & FlipFlop Cells	Add Margin 0.05ns/ 0.1ns/ 0.2ns		Violation-Free Margin to add
		Function Violation	Glitch* Violation	
40nm (857 cells)	158	46/ 4/ 2	0/ 0/ 0	0.25ns
55nm (1084 cells)	294	2/ 0/ 0	15/ 5/ 1	0.22ns
65nm (814 cells)	228	28/ 0/ 0	13/ 0/ 0	0.1ns
90nm (837 cells)	251	76/ 71/ 10	130/ 126/ 1	0.3ns

		Add Margin 0.5ns/ 1.0ns/ 1.5ns		Violation-Free Margin to add
0.18um (594 cells)	145	51/ 2/ 1	0/ 0/ 0	2.4ns
0.35um (588 cells)	139	97/ 45/ 20	0/ 0/ 0	1.7ns