

\approx mesh_v2.pdf [Proposed Multi - Voltage Domain Clock Mesh Topology.] [width = 0.95] mesh_v3.pdf Clock Mesh Topologie

$\alpha f V_{dd} C_{total}$

$\frac{C_{mesh} C_{stub} C_{pmt}}{\alpha f}$

$t_{skew}^{pmt} t_{skew}^{mesh} t_{skew}^{stub} t_{skew}^{mesh} t_{skew}^{stub} t_{skew}^{pmt}$
e_xamp.pdf Simple2 - level Clock Tree with 16 Sinks
SAED 90nm EDK library Synopsys IC Compiler Synopsys Custom Sim XASynopsys

\approx on purpose

$slew_{const}$

$slew_{const} slew_{max}^i slew_{max}^i < slew_{const} slew_{max}^i$

$slew_{const} slew_{max} > slew_{const} + slew_{margin} N \times N N N$ max insertion delay is in the same domain for all cases max insert

\times

SAED 90nm EDK Library

Design Compiler Synopsys IC Compiler Synopsys Custom Sim XASynopsys

V_{dd}

V_{dd}

V_{dd}

IC Compiler $slew_{const} \times$

\approx compare.pdf Skew Comparison vs. Typical Skew Budgets

Proceedings of the International Symposium on Physical Design (ISPD)

Proceedings of the ACM Great Lakes Symposium on VLSI (GLSVLSI)

Proceedings of the ACM/IEEE Design Automation Conference (DAC)

Proceedings of the IEEE International Conference on Computer Design (ICCD)

IEEE Transactions on Very Large Scale Integration (TVLSI) Systems

IEEE Transactions on Very Large Scale Integration Systems (TVLSI)

IEEE Transactions on Computer-Aided Design (TCAD)

IEEE Journal of Solid-State Circuits (JSSC)

Proceedings of the IEEE Symposium on VLSI Circuits (VLSIC)

Proceedings of the International Symposium on Quality Electronic Design (ISQED)

Proceedings of the IEEE International Conference on Computer Design (ICCD)

Synopsys 90nm Generic Library