Open FPGA: A Complete Open Source Framework for FPGA Prototyping

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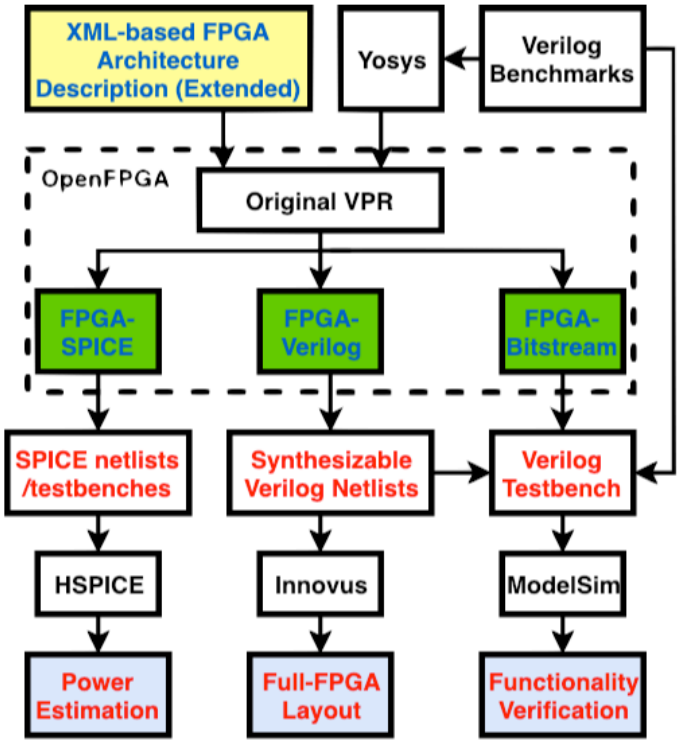
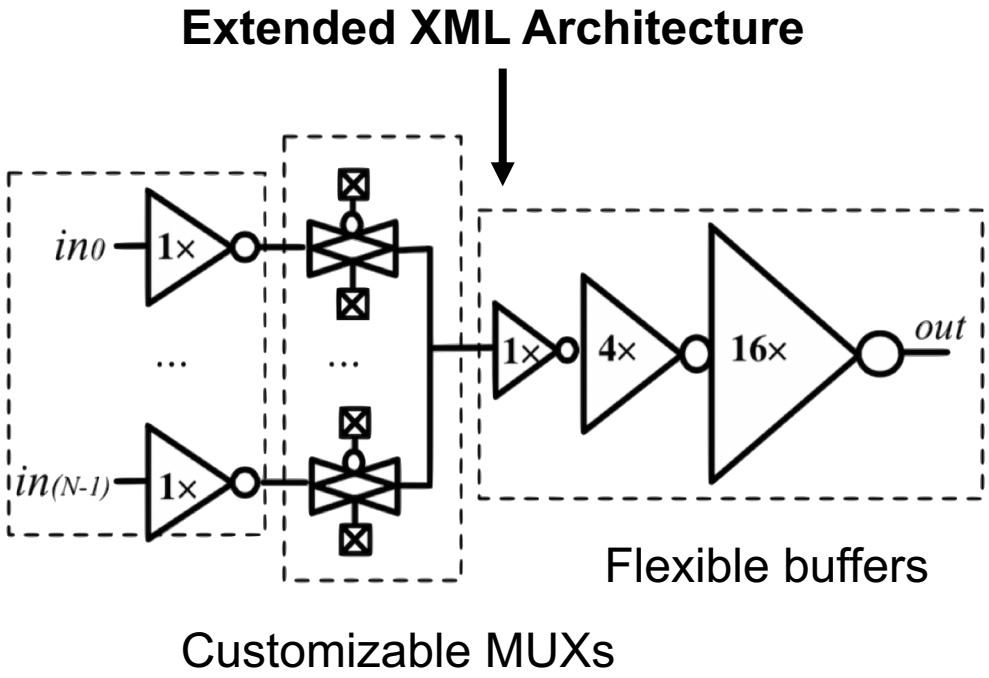
Open FPGA: An extension to VPR [1]

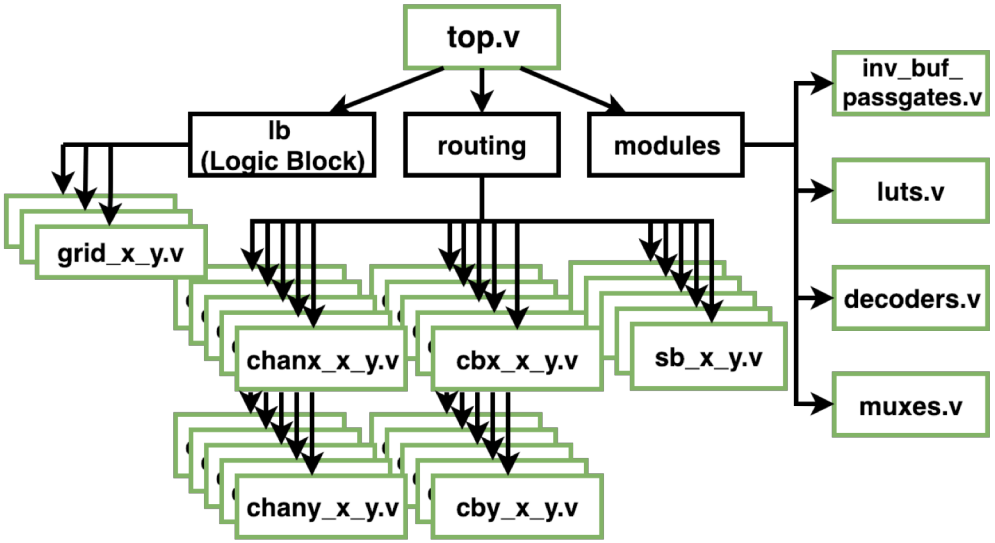
Motivation: Need for deeper exploration on FPGAs



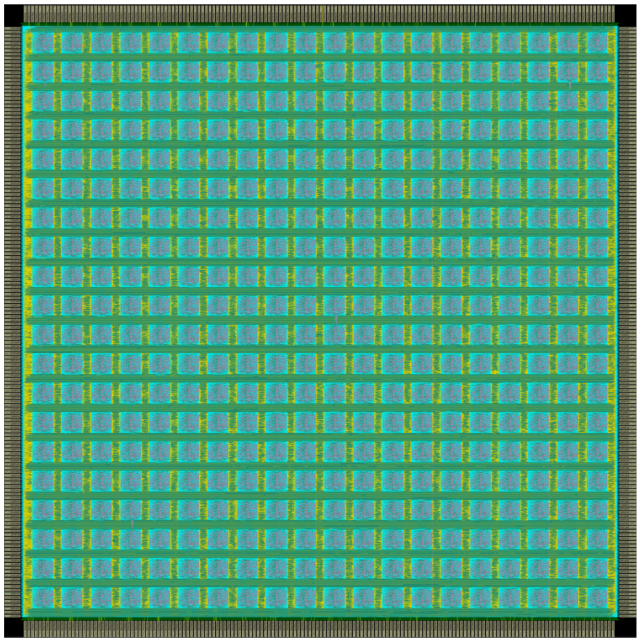


[1] J. Luu, J. Goeders, M. Wainberg, A. Somerville, T. Yu, K. Nasartschuk, M. Nasr, S. Wang, T. Liu, N. Ahmed, K. B. Kent, J. Anderson, J. Rose and V. Betz "VTR 7.0: Next Generation Architecture and CAD System for FPGAs," ACM TRETS, Vol. 7, No. 2, June 2014, pp. 6:1 - 6:30.

Proof of concept: FPGA 20x20; N=10; k=6

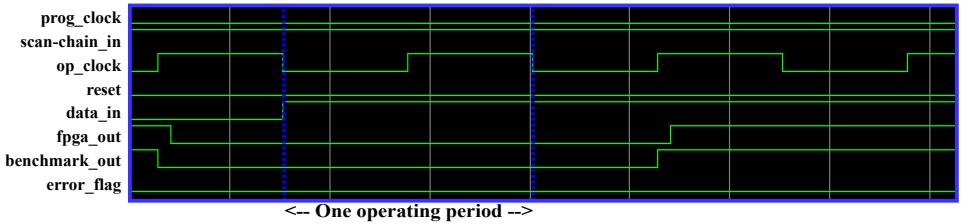


Hierarchical Verilog generated



Layout generation with a semi-custom design tool

Area: $10.3\ mm^2$



Auto-generated testbench for Modelsim

=> Design ready for tapeout