

Thinking outside the flow: Creating customized backend tools for Xilinx based designs

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Abstract

This paper is intended to serve as an introduction to how to build a customized backend tool for a Xilinx based design flow. A Python based library called PyXDL is presented which allows a user to manipulate XDL files which contain a placed and routed design. Three different tools are presented which uses this library, ranging from a simple resource utilization viewer to a tool which will insert a logic analyzer into an already routed design, thus avoiding a costly complete rerun of the place and route tool.