HDL Analyst

A Unique New Tool for Visualizing Synthesis Results

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HDL Analyst is an optional graphical productivity tool for the Synplify synthesis environment that helps you visualize the results of your FPGA and CPLD designs, improve the quality of your source code, and improve the device performance and area results.

HDL Analyst provides two key benefits:

➤ It gives you an immediate understanding of the results produced by your HDL code, with links back to the source.
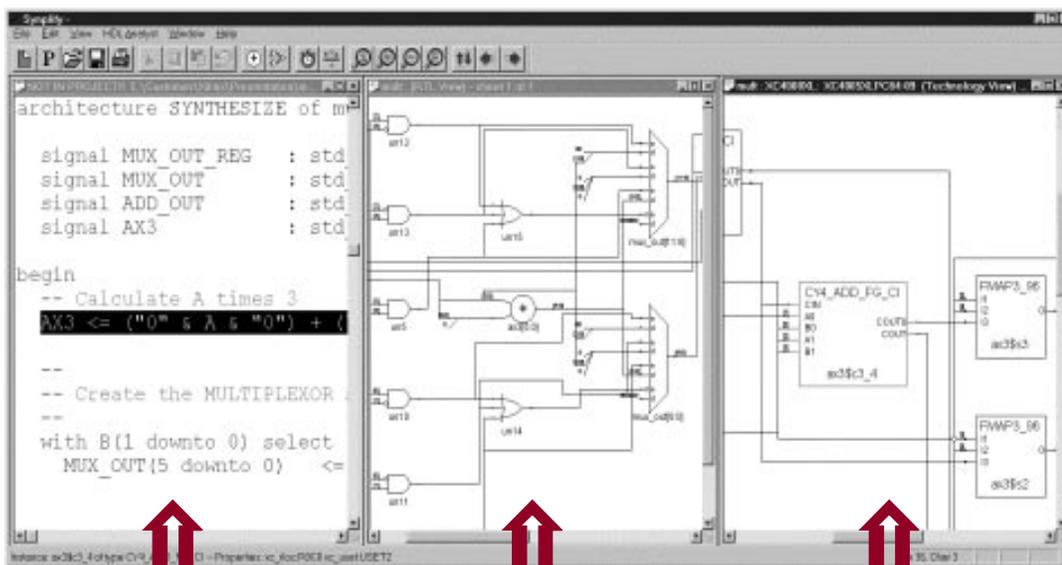
➤ It is a quick and easy way to learn HDL.

HDL Analyst has the unique ability to generate an RTL block diagram of a design based on your Verilog or VHDL source code. In addition to this high-level graphical representation of your design, HDL Analyst provides a technology-primitive representation of your design (LUTs, CLBs, and so on).

HDL Analyst also provides an environment where you can cross-probe between the RTL block diagram, the technology-primitive schematics, and the HDL source code. For example, highlighting a line of text immediately highlights the corresponding logic in the block diagram and in the detailed schematic views. Conversely, double clicking on logic in one of the graphical views highlights the source code from which the logic was created.

The cross-probing capability of HDL Analyst enables you to visualize where coding changes or the addition of timing constraints might increase performance or reduce the required logic resources. Furthermore, HDL Analyst highlights and isolates critical paths within your design, so problem areas may be identified and corrected by adding timing constraints and re-synthesizing.

Success in designing high-density FPGAs is increasingly dependent upon the availability of high-quality synthesis software. Over the years, Synplicity and Xilinx have established an excellent Alliance relationship which has advanced the state of the art in FPGA design. The primary goal of our relationship is to provide you with high-quality synthesis software and productivity-enhancing tools such as HDL Analyst. ◆

Cross-Probing Simplifies Understanding

Language Sensitive Editor
(Describes the functionality)

RTL View
(Graphical analysis)

Technology View
(Mapping)