

Impulse C-to-FPGA Compiler Update Enables Co-Processing for Xilinx Spartan-6 and Virtex-6 FPGAs

Impulse C version 3.6 adds C-to-FPGA capabilities to Xilinx ISE version 11.2

KIRKLAND, WA, August 21, 2009 – Impulse Accelerated Technologies today announced that its CoDeveloper C-to-FPGA compiler has been updated to support the latest devices and software from Xilinx, including the newest Virtex-6 and Spartan-6 FPGAs and Version 11.2 of Xilinx ISE Design Suite software.

The Impulse C-to-FPGA tools allow application developers to quickly create custom accelerator and filter modules in C, increasing productivity for developers of advanced video and image processing, DSP, and hardware-accelerated computing applications. Users of Impulse C report saving as much as half their design time using C when compared to using HDL methods.

CoDeveloper 3.6 enables embedded co-processing with the newest Xilinx MicroBlaze and PowerPC processor cores. CoDeveloper decreases design risk by allowing applications to be verified at a higher level using standard C debuggers. CoDeveloper also allows users to verify the generated hardware via an automated C-to-HDL test bench conversion option that is compatible with Mentor ModelSim and other HDL simulators.

"Compatibility with standard C and VHDL is increasingly important to developers of embedded systems," said Brian Durwood, Impulse co-founder. "The biggest body of intellectual property is in standard C, so maintaining compatibility with popular C-language tools is key to increasing reuse and portability of custom hardware modules."

Impulse CoDeveloper Version 3.6 allows users of Xilinx Virtex-6 and Spartan-6 FPGAs to:

- Rapidly create, verify and deploy custom filters for video, DSP and other applications, using supplied templates and wizards.
- Design and deploy royalty-free FPGA algorithms to process data with high throughput, using both automated and programmer-specified parallel optimizations.
- Preserve application compatibility with Visual Studio, Eclipse, and GCC and other common C-language tools.
- Automatically generate I/O including streams, signals, memories and registers.
- Automatically create processor interfaces using PLB, APU and FSL bus interconnections.
- Use hardware/software co-design methods to accelerate PowerPC and MicroBlaze software applications.
- Generate HDL test benches compatible with ModelSim and other HDL simulators from C code.
- Target popular FPGA development platforms, including boards and systems from Xilinx, Avnet, Cray, Curtiss-Wright, Digilent, The Dini Group, DRC Computer, Dynalith, Faster Technology, Nallatech, Nu Horizons, Opal Kelly, PLDA, Pico Computing, SGI, Sundance DSP, Tokyo Electron Devices, VMETRO and others.

"Impulse C is an excellent development tool for our customers, allowing them to easily link C-code applications to hardware resources on our FPGA-based computing platforms," explained John McCaskill, president of Faster Technology. "We are seeing tremendous interest in our products, for applications that must achieve low latency and high throughput. These applications include financial analysis, network attached processing and image processing. Having a C-based toolset that allows developers to work at a

higher level of abstraction makes FPGA-based application development much easier and the development teams dramatically more productive."

Impulse provides software-to-FPGA solutions for embedded and high performance computing. Impulse users write or import C-language algorithms, then can use iterative methods to refactor their code, explore alternative optimizations, and partition applications to achieve performance goals. The Impulse C-to-FPGA compiler converts C-language applications to either VHDL or Verilog compatible with popular FPGA synthesis tools including Xilinx ISE, Synopsys Synplify, and Mentor Precision. The generated HDL is also compatible with Mentor ModelSim and other HDL simulators.

"In 2009, four of the largest defense contractors set up FPGA design labs with Impulse tools," said David Buechner, Impulse vice president of business development. "Applications being developed in these labs include video processing, error correction, DSP image filtering, and machine vision systems. Military and aerospace developers have a strong need to create reusable IP, while also needing to retarget that IP to FPGAs for real time performance."

About Impulse

Impulse provides software-to-FPGA solutions for embedded and high performance computing. Impulse solutions are used to accelerate the development and deployment of high-throughput applications in domains that include medical, defense, aerospace, automotive and consumer electronics.

For more information, visit www.ImpulseAccelerated.com or call 425-605-9543, Ext 101.