Xilinx-based Hardware/Software Co-Simulation Accelerated on Dynalith/Impulse C-to-FPGA Prototyping System

<u>Simulation acceleration and rapid prototyping system generates APIs and hardware</u>

Kirkland, WA and Seoul, Korea – November 5, 2009 – Dynalith Systems (Korea) and Impulse Accelerated Technologies today announced the successful integration of a new toolkit for engineers simulating and prototyping high performance computer systems. Based on powerful Xilinx FPGAs, the kit supports a full development path from Visual Studio, GCC, and other compilers, through hardware/software partitioning to a deployable FPGA-based development board. The integrated tool flow streamlines development by creating an environment for hardware/software partitioning and experimentation, and by automatically generating APIs.

"Software developers in particular are looking to accelerate algorithms in programmable platforms, but have been traditionally limited by the complexities of generating appropriate hardware interfaces," said Brian Durwood, Impulse co-founder and COO. "This new kit automates these interfaces, simplifying the development of applications targeting Dynalith FPGA boards. The main benefit from this integration is that software applications can be run alongside acceleration logic operating in the FPGA fabric. A wide range of sample applications are available as a part of Impulse C, including royalty free, ready to run image processing, financial, math, and scientific programs."

"We see the advent of stable APIs between FPGA hardware and software elements as a major step towards FPGAs extending their reach into the traditional domains of software developers," commented Dr. Ando Ki, Dynalith R&D Director. "We see tools like Impulse C as the missing link in this process – enabling software developers to adapt high speed, highly parallel algorithms to the incredibly broad I/O architecture of FPGAs, and to do so with little or no hardware knowledge."

"Xilinx FPGAs bring great power to the developer who needs to quickly simulate or develop a circuit," said David Buechner, Impulse Vice President of Business Development. "By being able to use intelligently configured, Xilinx-based development boards from Dynalith, plus reliable APIs, many of the basic 'plumbing' difficulties disappear."

By integrating Impulse and Dynalith, the software part of the application can be run on the host computer, while the hardware part runs in one or more FPGA processes. Hardware and software are connected through industry standard hardware channels such as PCI, PCIe, or USB.

About Impulse

Impulse Accelerated Technologies provides C-to-FPGA tools and custom hardware/software solutions for financial, government and industrial customers. Impulse products are in use at eight of the top ten defense contractors, half the automotive manufacturers and hundreds of R&D labs worldwide. The company offers software tools, IP libraries and custom engineering services. For more information visit www.ImpulseC.com or call 425-605-9543 ext. 101.
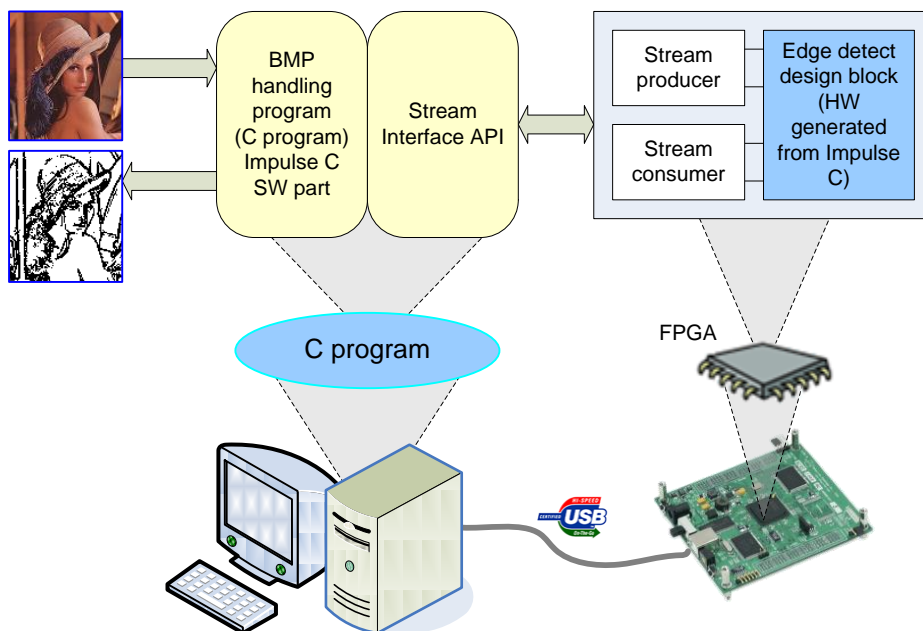
About Dynalith Systems Company Ltd.

Dynalith Systems develops and markets specialized hardware and CAD solutions that enable electronic system designers to verify algorithms in real hardware environments at an early design stage, and thereby significantly reduce time-to-market. Dynalith products include USB/PCIe/PCI-based FPGA boards. Dynalith makes a range of Xilinx-based development boards for simulation, prototyping and low- to medium-run manufacturing. For more information on Dynalith, visit www.dynalith.com.

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Graphic caption

An image processing edge detector, written in C, is partitioned between software running on the host computer, and multiple streaming processes running in customized FPGA hardware logic.

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