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3L EXPANDS DIAMOND MULTIPROCESSOR ALLIANCE

3L and Impulse Accelerated Technologies Inc. Extend Their Integrated Design Flow to Multiprocessing Systems From Lyrtech Inc. Shortens Development Time, Reduces Project Costs and Manages Multiprocessor Design Complexity

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3L, a leading provider of multiprocessor design software and Impulse Accelerated Technologies Inc., creators of the CoDeveloper suite of C-to-FPGA design tools today announced a new design flow that targets multiprocessor systems from signal processing specialist Lyrtech Inc. By integrating the 3L Diamond multiprocessor tool suite and CoDeveloper, the design flow accelerates the creation, debug, verification and implementation of very complex applications that require multiprocessor performance. Ease-of-use features enhance design productivity, and tight integration with Lyrtech hardware frees the designer from the platform architecture to focus effort on application optimization.

At the core of the 3L Diamond tool suite is a multiprocessor model that provides an extremely straight-forward but powerful way of developing applications for multiprocessor systems. 3L Diamond helps the designer create tasks that are self-contained blocks of code which communicate with other tasks on DSP, FPGA or GPP fabrics. The low latency inter-processor communications and synchronization between the tasks are automatically created by 3L Diamond.

“We selected 3L Diamond because its ease-of-use, technical performance and industry proven multiprocessor model was a perfect complement to our multiprocessing systems,” said Martin Turgeon product manager — advanced development platforms

division at Lyrtech. “With the additional benefit of the C-to-FPGA design tools from Impulse we can drive further productivity and performance benefits into the design flow.”

The joint solution provided by 3L and Impulse provides a level of design abstraction that is unique for DSP+FPGA multiprocessor systems. The Impulse CoDeveloper tools allow C-language applications to be quickly and efficiently retargeted to FPGA devices. This enables application developers to rapidly exploit the inherent parallel processing features of FPGA technology and accelerate signal processing applications. When this capability is put together with 3L Diamond, the shared level of abstraction can mask platform level details and offer designer independence from the hardware. And because the application structure is independent of the processors on which the tasks are placed, the designer has greater freedom to explore the design space by simply dragging and dropping different tasks onto different processor targets, at any stage of the design flow.

“This joint solution delivers a level of abstraction and flexibility that is unique in the industry”, said David Pellerin, founder and CTO of Impulse. “Application designers are able create coprocessor modules and processor peripherals from their system level code and this is particularly important in the multiprocessor segment of the high performance computing market.”

The joint 3L/ Impulse design flow is targeted in the first instance at Lyrtech’s SMQ range of DSP-FPGA high performance computing platforms. The SMQ (SignalMaster Quad) features a combination of FPGA and DSP devices designed around two clusters of one Virtex® 4 LX FPGA and two TMS320C6416 DSPs. Each cluster can yield up to 16,000 MIPS/MMACS of DSP processing power and 48 GMACS of FPGA-based DSP processing power. It features Dual LYRIO+ very-high-speed expansion sites, 128-MB external SDRAM per DSP and FPGA, and six 8-Gbps RapidCHANNEL onboard links.

“The Diamond Multiprocessor Alliance continues to grow as we see more partnerships with software design partners and multiprocessor hardware vendors”, said Peter Robertson, 3L’s managing director. “With 3L Diamond we have not shoe-horned or re-engineered a single processor solution for the multiprocessor paradigm. Since its

inception 3L Diamond has been expressly created for multiprocessor development and this is being recognised through end-system performance and increasing customer adoption.”

3L Diamond and Impulse CoDeveloper for Lyrtech is available immediately. For more information visit www.3L.com or contact lyrtech@3L.com.

About 3L

3L has been a leading provider of multiprocessor software development systems since 1987. Its Diamond multiprocessor tool suite is used by some of the world’s leading electronics companies for complex multiprocessor design targeting DSP/FPGA/uP systems. It provides an easy to use, flexible environment where very high performance processing technologies can be quickly leveraged and applied to demanding signal processing applications. The Company services customers worldwide and has commercial presence across Europe, Asia, Australia Canada, USA India, Japan, Middle East, New Zealand, Russia and South Africa. For more information visit www.3L.com

About Impulse

Impulse products allow developers of advanced embedded, DSP and image processing systems to rapidly move applications originating in ANSI C to FPGA coprocessors. The Impulse CoDeveloper tools are in use by software and hardware application developers worldwide, in domains that include image processing, DSP, secure communications and high performance, hardware-accelerated computing. For more information on Impulse C-to-FPGA software, or to register for a free web seminar, visit www.ImpulseC.com.

About Lyrtech

Lyrtech develops and manufactures advanced digital signal processing solutions for companies worldwide, a vital technology to network and wireless communications, audio and video processing, as well as electronic systems in all fields of technology. Lyrtech offers a full range of DSP-FPGA development platforms, as well as design, prototyping, and manufacturing of electronic products through its manufacturing division. Lyrtech works in partnership with industry leaders such as Texas Instruments, The MathWorks, and Xilinx. Lyrtech's customers include many prestigious names of the consumer electronics, telecommunications, aerospace, and defense fields. For more information, visit www.lyrtech.com.

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