## Market Data Processing Solutions Minimize Latency via Modular Software and C-to-FPGA Compilation

Impulse and Luxoft Create Modular Computational Finance Solutions

**Kirkland, Washington, USA | Moscow, Russia**, 1 June – Impulse and Luxoft today announced a strategic partnership to develop and deliver accelerated solutions for low-latency financial processing. The partnership leverages engineering talent from the United States and Russia, as well as using the latest advances in modular, highly adaptable software and reconfigurable hardware.

Together, Impulse and Luxoft have created powerful software modules capable of implementing many of the building block functions common in low-latency financial processing. These functions include real-time financial feed handling, searching for specific ticker symbols, comparing real time data to historic data, and placing information-based orders in the minimal possible time. The modular construction of this software enables users to insert their own analytic intellectual property, in-line, without the need to divulge their proprietary IP to 3<sup>rd</sup> parties. Impulse and Luxoft can provide anything from simple IP modules for specific processing tasks, to entire installed turnkey systems.

"Hardware independent software modules and C-to-hardware compilation enables us to offer our clients the quickest, most cost effective initial solution and, more importantly, an infrastructure that is easily adaptable to emerging hardware innovations," explained Brian Durwood, Impulse CEO. "By using reconfigurable software modules, our clients can migrate to the latest available hardware soon after it becomes available."

"After watching design languages come and go over the years, we are seeing a return to basics. The Quantitative Analytical Engineers employed in most investment banks are turning back to C," said Yuri Elkin, Managing Director, Financial Service, Luxoft. "Impulse C really covers the basics of adapting high speed, microprocessor-oriented C to the more parallel world of FPGAs. This preserves the banks' existing investment in C, and taps the world's largest library of existing IP."

The Luxoft/Impulse collaboration is an example of hardware/software co-design, in which available computational resources are optimized for the software problem being addressed. This design method leverages highly reconfigurable, highly parallel computing devices called Field Programmable Gate Arrays (FPGAs). FPGAs offer very high performance and high data through, even while operating at slower clock speeds and using less power than microprocessors. FPGA devices are becoming increasingly important in applications ranging from high-throughput video processing to cryptography and genomics. FPGAs are also excellent platforms for low-latency financial computing, with proven deployments in hedge funds and major banks worldwide.

For more information please contact info@ImpulseC.com<mailto:info@ImpulseC.com>.

## About Impulse

Impulse Accelerated Technologies provides C-to-FPGA tools, training and custom solutions for hardware-accelerated computing. Impulse C has been used to design vision systems, financial feed handlers, encryption systems and database grid accelerators. Impulse products are in use at over half of automotive suppliers, eight of the top ten government contractors, most US government agencies and hundreds of R&D labs worldwide. www.ImpulseAccelerated.com

## About Luxoft

Luxoft, a member of the IBS Group, is an emerging global leader in application and product engineering outsourcing services for enterprise IT organizations and software vendors. Luxoft builds lasting partnerships with its clients, such as Boeing, Deutsche Bank, UBS, Dell, IBM, Sabre and other global leaders, based on the culture of engineering excellence, innovation, and deep domain expertise. Luxoft offers global delivery capability through its network of state-of-the-art delivery centers in North America, Central & Eastern Europe, and Asia. Luxoft`s customers benefit from the right mix of technology skills, industry knowledge, best-of-breed processes and methodologies, and a choice of engagement models.

Luxoft has been awarded the #1 position in the "Emerging European Markets" category of the 2009 "Global Services 100" list. Company is also a recipient of the Applied Innovation Award from the IAOP and Wipro, ITAA and Forbes (together with Deutsche Bank).

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Caption for graphic: Using an FPGA for algorithms and filtering enables trading concerns to more rapidly connect to financial feeds, pull data off of the feed, and add-in their own special trading algorithms or filters.

