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Convey Computer Increases Graph500 Performance, Accelerates Big Data Analytics

--Latest graph personality is highly threaded, increases performance more than 4x over previous versions--

HAMBURG, Germany, June 19, 2012— Convey Computer Corporation today announced two new entries on the Graph500 List; the entries increase performance three to four times over Convey's prior results. Convey credits the dramatic speed up to the company's recently developed breadth-first search (BFS) implementation and to the increased processing power of the newly introduced HC-2 Series.

Convey hybrid-core systems use *personalities*— customized instruction set architectures that increase performance of specific portions of an application, in this case the BFS algorithm. Using the new personality, the single-node Convey HC-1^{ex} increased performance from 1.7 GTEPS to 5.9 GTEPS (billion edges per second), an increase of 3.5x on problem size 27. On the new HC-2^{ex}, the performance was even more dramatic, clocking in at 7.8 GTEPS for an increase of 4.5x over the earlier HC-1^{ex}. This kind of performance in a single-node system reinforces Convey as a performance/power leader in executing graph type applications.

Convey's latest version of the BFS is a highly threaded algorithm that utilizes over three thousand independent threads of computation. This capability allows for massive parallelism that speeds all graph type applications. In addition, the unique hybrid nature of the architecture allows portions of the benchmark to simultaneously execute across the multiple compute resources of the system.

“Our latest Graph500 numbers continue to show that Convey's hybrid-core systems provide pound-for-pound and watt-for-watt superior processing power compared to other systems on the list,” explained Bruce Toal, CEO of Convey. “Graph algorithms are used to solve many of today's advanced analytics challenges in areas such as genomic research, data analytics, and security.

Convey is at the forefront of providing a new and better way to increase performance through our hybrid-core technology.

In April 2012, Convey announced a new family of hybrid-core systems – the HC-2 Series. Accelerating computing even more than previous Convey systems, the HC-2 provides users with greater performance, functionality, and energy efficiency. The Convey HC-2 systems increase application performance 2-3 times over previous generations of Convey servers and orders of magnitude over commodity servers.

"Graph applications are about finding and mapping links and relationships, and they are critical in understanding large amounts of unstructured data," states Addison Snell of Intersect360 Research, an analyst firm highlighting the application of high-performance technologies to big data analytics. "Strong performance on the Graph500 benchmark indicates that the system could efficiently be applied to a wide range of complex analytics problems."

Convey's groundbreaking hybrid-core computing architecture tightly integrates advanced computer architecture and compiler technology with commercial, off-the-shelf hardware – namely Intel® Xeon® processors and Xilinx® Field Programmable Gate Arrays (FPGAs). The systems help customers dramatically increase performance over industry standard servers while reducing energy costs associated with high-performance computing.

About Convey Computer Corporation

Based in Richardson, Texas, Convey Computer breaks power, performance and programmability barriers with the world's first hybrid-core computer – a system that marries the low cost and simple programming model of a commodity system with the performance of a customized hardware architecture. Using the Convey hybrid-core systems, customers worldwide in industries such as life sciences, research, advanced analytics, and the government/defense are enjoying increased application performance and lower costs of ownership.

For More Information:

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