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PING Shaves Strokes Off Its Golf Club Design Cycle With a Cray XD1 Supercomputer

Company Uses Complex Simulations to Speed Design and Testing of Prototypes

SEATTLE, WA, Nov 07, 2005 (MARKET WIRE via COMTEX News Network) -- Global supercomputer leader Cray Inc. (NASDAQ: CRAY) today announced that leading golf equipment designer and manufacturer PING Inc. has made a Cray XD1 (TM) supercomputer a critical part of its research and development program. Running Livermore Software Technology's LS-DYNA computer-aided engineering (CAE) software on the Cray XD1 system, PING has reduced the time needed to conduct preliminary structural tests of new club designs from weeks to mere hours. The Cray XD1 system employs a high-performance computing (HPC) architecture that allows designers to run larger, more detailed simulations with greater accuracy than was possible with a conventional engineering workstation.

By simulating golf club characteristics on the Cray supercomputer using finite element analysis (FEA) techniques, PING engineers can eliminate weak or ineffective designs before they move on to more expensive and time-consuming physical prototyping, which involves molding an actual club and testing it using a robotic golfer to precisely hit the balls. It generally takes the company about three to four weeks to produce a physical prototype.

PING tests new club designs on the supercomputer by creating a three-dimensional matrix that closely approximates how the equipment would perform in real life. The system can simulate the impact of a club head against a ball, the bending of the shaft during a stroke, the stability of a putter while in motion and other complex problems. With these capabilities, the PING design team can, for example, identify areas of low stress and virtually reposition weight to other areas of the club, increasing performance while maintaining the original balance and feel.

"PING is committed to ensuring that the innovations we design into our golf clubs result in solid improvements that make the game more enjoyable for our customers," said Eric Morales, staff engineer and FEA design analyst at PING. "With the Cray XD1 system, we can now run simulations in minutes that previously took several hours or even days on a generic workstation. The LS-OPT design optimization and probabilistic analysis package that we use to compute the best design features within specified parameters demands a complex simulation environment that can run jobs across multiple processors simultaneously. That level of computing would have been impossible on our previous system."

"The business advantages that PING will gain through virtual equipment prototyping showcases the power and versatility of the Cray XD1 system's purpose-built, high-performance design," said Himanshu Misra, CAE business manager at Cray. "PING demonstrates that the benefits of HPC are no longer confined to scientific and large-scale engineering organizations. Enterprises of many kinds are increasingly taking advantage of supercomputing to bring better products to market, increase productivity and sharpen their competitive edge in the marketplace."

About the Cray XD1 Supercomputer

The Cray XD1 supercomputer combines direct-connect system architecture, HPC-optimized Linux, management and reconfigurable computing technologies to deliver industry-leading performance on real-world applications. Purpose-built for demanding HPC applications such as computational chemistry, environmental forecasting and CAE, the Cray XD1 system lets users simulate, analyze and solve complex problems more quickly and accurately. The x86-based Cray XD1 system supports a broad range of 32- and 64-bit HPC applications on AMD Opteron single- or dual-core processors. The system also provides application acceleration capabilities using field-programmable gate array (FPGA) technology directly connected to the Cray XD1

compute environment.

About Cray Inc.

As the global leader in HPC, Cray provides innovative supercomputing systems that enable scientists and engineers in government, industry and academia to meet both existing and future computational challenges. Building on years of experience in designing, developing, marketing and servicing the world's most advanced supercomputers, Cray offers a comprehensive portfolio of HPC systems that deliver unrivaled sustained performance on a wide range of applications. Go to www.cray.com for more information.

About PING Inc.

Founded in 1959 in the garage of the late Karsten Solheim, PING designs, manufactures and markets a complete line of golf equipment that includes metal woods, irons, putters and golf bags. The family-owned company is credited with numerous innovations that have revolutionized the industry. Among PING's advances have been perimeter weighting, individualized custom fitting and the use of investment casting in the manufacture of clubs. PING game-improvement products can be found in more than 70 countries. Go to www.pinggolf.com for more information.

Safe Harbor Statement

This press release contains forward-looking statements. There are certain factors that could cause Cray's execution plans to differ materially from those anticipated by the statements above. These include the technical challenges of developing high-performance computing systems, the successful porting of application programs to Cray computer systems, reliance on third-party suppliers, Cray's ability to keep up with rapid technological change and Cray's ability to compete against larger, more established companies and innovative competitors. For a discussion of these and other risks, see "Factors That Could Affect Future Results" in Cray's most recent Quarterly Report on Form 10-Q filed with the SEC.

Cray is a registered trademark, and Cray XD1 is a trademark, of Cray Inc. PING is a registered trademark of Karsten Manufacturing Corporation. AMD, AMD Opteron and combinations thereof are trademarks of Advanced Micro Devices, Inc. All other trademarks are the property of their respective owners.

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