SC09 BOOTH #2589
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Media Contact: Melody Townsel
214-244-1072 mobile
melody@promotesuccesspr.com

Leading Scientific Innovators – Stanford University, Berkeley Lab, Oak Ridge National Laboratory – Select Convey Computer™ Corporation's Hybrid-Core Systems

Convey HC-1™ Speed, Energy Efficiency
Provides Unparalleled Platform for Data Analyses
In Seismic Processing, Climate Research, Mission-Critical Research

PORTLAND, Ore. (Nov. 16, 2009) – Convey Computer™ Corporation, the pioneer of hybrid-core computing, announced today that three of the world's most prominent scientific organizations – the Stanford Center of Computational Earth and Environmental Science (CEES), Lawrence Berkeley National Laboratory (LBNL), and Oak Ridge National Laboratory (ORNL) – have selected the company's innovative Convey HC-1™ computers to power a fresh wave of scientific discovery.

The announcement, made at the SC09 conference in Portland, Oregon, comes as the company begins shipping production units worldwide, and in the wake of the recent completion of Convey's $24.15 million Series B funding round.

All three scientific groups are using the Convey HC-1 to explore the application of reconfigurable computing technology to challenging computing problems, including bioinformatics, security and discrete event simulation. Officials at the three groups say they expect their projects to benefit directly from their use of Convey's groundbreaking hybrid-core technology, which was purpose-built to help high-performance computers run faster while significantly reducing the energy they use.

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"These high-profile customer installations underscore the traction that Convey is gaining in the high-performance computing market," said Bruce Toal, CEO and president of Convey Computer Corp. "The decision by three of the world's most recognized scientific think-tanks to utilize Convey's HC-1 computers as they undertake some of today's most advanced research projects is exciting and gratifying for our young company and supports our hybrid-core technology."

Scientists at Stanford's CEES will be using the Convey HC-1 to develop new seismic-imaging and reservoir-simulation algorithms for modern computer architectures as part of a new research consortium, the Stanford Earth Sciences Algorithms and Architectures Initiative. Among other critical objectives, the project is designed to evaluate modern HPC architectures for applied Earth Sciences algorithms.

"High performance computing has entered a period of rapid change that brings opportunities for huge performance gains," said Dr. Biondo Biondi, co-director of the Stanford Exploration Project and one of the Initiative's principal investigators. "Convey's hybrid-core computing shows promise of achieving impressive performance using high-level programming languages and standard programming environment. We are looking forward to working with and testing this innovative system."

At Berkeley Lab, a team of researchers will use the HC-1 system to accelerate simulations of new computer architectures and approaches to developing more energy-efficient systems to model climate change at unprecedented resolutions. The Berkeley group also is studying the application of the HC-1 system to solving challenging bioinformatics problems – such as graph theoretical calculations required for gene cluster analyses – that perform poorly on conventional HPC systems.

"Energy efficiency has become a first-order design constraint for future systems. We really don't see the current path of scaling up conventional hardware as sustainable either in terms of the initial hardware cost or the price of powering such systems over its lifetime," said Dr. John Shalf, head of Berkeley

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Lab's Science-Driven Systems Architecture team. "The HC-1 presents an intriguing alternative approach to achieving energy-efficient computing using an architecture that can adapt to the requirements of the science problem. We are looking forward to getting our hands on the system to assess all aspects of its scientific computing capability."

Scientists at ORNL will use Convey's HC-1 for a variety of mission-critical programs. These proposed programs range from nuclear energy, climate modeling to new energy-efficient, extreme-scale computing systems to support open science and other areas supporting the nation's security and infrastructure. ORNL, established in 1943, has six major mission roles: neutron science, energy, high-performance computing, systems biology, advanced materials, and national security.

"We chose the HC-1 as a lead development platform for many of the elements expected to take us into the next decade in focused performance, power-efficient systems and productivity of proposed future systems. The team backing the HC-1 has a proven track record in innovation and bringing 'ease of use' to the broader HPC community. The system is designed to have a very modular suite of reconfigurable components allowing the HC-1 system(s) to act as specialized components of an overall larger design. We will be able to evaluate new algorithms, optimize old algorithms and design new systems and architectures from the first principles point of view. The HC-1 will be an integrated part of the newly formed Hybrid Multi-Core Consortium," said Dr. Jeffrey Nichols, associate laboratory director for Computing and Computational Sciences at Oak Ridge National Laboratory.

Hybrid-core computing extends a commodity instruction set (e.g., x86) with application-specific instructions to accelerate HPC applications. Convey's hybrid-core system, the HC-1, transforms HPC in three main ways. It: 1) breaks through the current power/performance wall to significantly increase performance

for certain compute and memory bandwidth intensive applications within bioinformatics, financial analytics, seismic, and other application areas; 2) is easy for programmers to use because it provides full support of an ANSI standard C, C++ and FORTRAN development environment; and 3) significantly reduces support, power and facility costs for companies, yet it makes integration into current HPC environments simple and inexpensive. Convey HC-1 computers will be demonstrated at SC09 in Booth 2589.

Convey is managed by a seasoned team of technology executives including Toal; CTO Tony Brewer; and chief scientist Steve Wallach. The co-founders first worked together at Convex Computer Corporation, which was purchased by Hewlett-Packard in 1995. The trio assembled the Convey team, including many former colleagues from Convex Computer Corporation.

Convey's recently closed Series B round, led by new investor, Braemar Energy Ventures, comprised Series A investors CenterPoint Ventures, Intel Capital, InterWest Partners, Rho Ventures and Xilinx®. Convey, which was founded in 2006 and introduced its product, the Convey HC-1, in November 2008, has received $39.25 million in venture funding to date.

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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. Convey brings decades of experience and intellectual assets to performance problem-solving. Its executive and design teams all come from successful backgrounds of building computer companies, most notably Convex Computer Corporation and Hewlett-Packard. Convey Computer investors include Braemar Energy Ventures, CenterPoint Ventures, Intel Capital, InterWest Partners, Rho Ventures, and Xilinx. More information can be found at: www.conveycomputer.com.

About the Stanford Center for Computational Earth and Environmental Sciences (CEES)

CEES is a research partnership created by the Stanford School of Earth Sciences and affiliates from the Stanford Computer Systems Laboratory and private industry. The goals of CEES include expanding the capacity for interdisciplinary Earth science research and engaging computer architects to

design hardware and software systems that are better suited to Earth and environmental science problems. Founded on the Stanford campus in 2002, the Department of Global Ecology conducts basic research on the interactions among the Earth's ecosystems—land, atmosphere and oceans. It is one of six scientific research departments operated by the Washington, D.C.-based Carnegie Institution.

About the Lawrence Berkeley National Laboratory (LBNL)

The Lawrence Berkeley National Laboratory (LBNL) is a U.S. Department of Energy (DOE) national laboratory conducting unclassified scientific research. Located on the grounds of the University of California, Berkeley, LBNL (www.lbl.gov) is managed and operated by the University of California. The Berkeley Lab is the oldest of the U.S. Department of Energy's National Laboratories. Eleven scientists associated with Berkeley Lab have won the Nobel Prize and 55 Nobel Laureates either trained here or had significant collaborations with LBNL. Thirteen LBNL scientists have won the National Medal of Science, the nation's highest award for lifetime achievement in fields of scientific research.

As of 2008, 61 Berkeley Lab scientists had been elected into the National Academy of Sciences (NAS), considered one of the highest honors for a scientist in the United States. Eighteen LBNL engineers have been elected to the National Academy of Engineering, and two of its scientists have been elected into the Institute of Medicine. Berkeley Lab is a member of the national laboratory system supported by the U.S. Department of Energy through its Office of Science.

About Oak Ridge National Laboratory (ORNL)

The Oak Ridge National Laboratory (ORNL) (www.ornl.gov) has a staff of more than 4,600 and annually hosts approximately 3,000 guest researchers who spend two weeks or longer in Oak Ridge. Annual funding exceeds $1.4 billion. As an international leader in a range of scientific areas that support the Department of Energy's mission, ORNL has six major mission roles: neutron science, energy, high-performance computing, systems biology, advanced materials, and national security. ORNL's leadership role in the nation's energy future includes hosting the Leadership Computing Facility, the U.S. project office for the ITER international fusion experiment, and the Office of Science−sponsored Bioenergy Science Center. ORNL is managed by UT-Battelle for the Department of Energy.