August 4, 2008

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WSU Applied Sciences Lab adds high-performance computing capability

Washington State University's Applied Science Laboratory (ASL) has installed a new high-performance computing (HPC) cluster for applied research in the physical sciences and engineering. The equipment will enable materials research, modeling and simulations of the types of problems that formerly could only be conducted at large national laboratories. Advances in computing technology have brought costs down and increased capacity, enabling the type of intensive computing problems that ASL will undertake for its industry and government partners.

According to Santanu Chaudhuri, ASL research scientist, he and other ASL researchers will utilize 90 percent of the cluster's computing power, twenty-four hours a day, seven days a week. Initial projects include quantum chemical (atomic level) simulations of materials properties for industry and federally funded research. For example, ASL researchers are modeling reactive materials of interest to the Office of Naval Research (ONR) and examining deicing properties of materials for next generation aircraft, which is of interest to Boeing. The HPC cluster will also provide opportunities for students, postdoctoral researchers, and area faculty to work with ASL scientists and use advanced HPC methodologies to solve scientific problems.

The machine, which was purchased by ASL, has been installed in the Steam Plant building in downtown Spokane, and is connected to ASL's space in the Sirti building on the Riverpoint Campus via leased dark fiber from VPnet. Funding for the HPC cluster comes from the State of Washington and ONR. Avista is hosting the cluster in the Steam Plant building and Sirti, a state economic development agency headquartered on the Riverpoint Campus that partners with WSU on a number of projects, administers the network connectivity.

About ASL
Washington State University's Applied Sciences Laboratory (ASL) is a Spokane based, contract research organization that undertakes a broad range of applied research projects for government agencies and private corporations, including the development of commercial applications. ASL, formed in 2004, is the applied research component of Washington State University's Institute for Shock Physics and has a research emphasis well beyond shock physics. Through strategic investments in physical sciences and advanced technology, ASL will provide the intellectual and scientific foundation for fostering economic growth in the region. Recent research partnerships announced include Avista Corporation, Itron, Inc., and Boeing. Visit www.asl.wsu.edu.