



Advanced Cluster  
Systems



FOR IMMEDIATE RELEASE:

## **Supercomputing Engine for Mathematica - on 64-bit Linux!**

Irvine, CA - October 16, 2009 - Dauger Research, Inc., and Advanced Cluster Systems, LLC, announce today that the Supercomputing Engine for Mathematica (SEM), which combines Wolfram Research's Mathematica with the easy-to-use, supercomputer-compatible Pooch clustering technology of Dauger Research, will extend support to 64-bit Linux. Not only will the patent-pending SEM run on Linux and Macintosh separately, but SEM will also utilize mixed clusters of Macintosh and 64-bit Linux. Like Pooch, SEM will further enhance the power of clusters for its users.

Inspired by the industry-standard Message-Passing Interface (MPI), SEM creates a standardized way for Mathematica kernels to communicate with each other directly. This solution stands in contrast to typical grid implementations that are master-slave or server-client in that all the kernels can communicate with each other directly and collectively as with modern supercomputers. Within the Mathematica environment, SEM creates an "all-to-all" communication topology, which practitioners have found necessary to address the largest problems in scientific computing since early large supercomputers. Like a supercomputer, SEM harnesses many Mathematica kernels to provide solutions that once never seemed possible.

64-bit Linux Supercomputing Engine for Mathematica will be available at the Supercomputing 2009 conference in Portland, Oregon, in November. Please join us at ACS Booth 2295 for a demonstration and to ask questions about the Linux and Mac implementations of SEM. At 11:00 a.m. on Wednesday, November 16, we will offer a special presentation of SEM at the Exhibitor Forum Room E143-144.

Profiled on national television by William Shatner's "Keeping America Strong", Dauger Research makes high-performance computation and visualization accessible and easy to use. Our award-winning team reinvented the cluster computer in 1998 by pioneering easy-to-use, high-performance clusters. Dauger Research is committed to bridging the gap between the scientifically and technically complex and the user-friendly.

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