IBM

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Dr. Nathaniel Pitts   October 22, 2001
National Science Foundation
Director, Office of Integrative Activities
4201 Wilson Boulevard
Arlington, Virginia 22230

Dear Dr. Pitts,

Computational Grids are rapidly emerging as a promising way of meeting the need for high-performance computing in the future. The Department of Defense, the Department of Energy, the National Science Foundation, and the National Aeronautics and Space Administration are all financing Grid projects. In Europe, several ambitious Grid projects are under way including national Grid in Britain and in the Netherlands.

In early August, IBM announced a new initiative to support and exploit this technology - Grid Computing. (See the Business Section of the New York Times on August 2, 2001.) IBM is committed to the Grid as a major strategic direction for the company. IBM views the Grid as the next evolutionary step in the development of the Internet. The recently-announced NSF TeraGrid project is one existing collaboration between IBM and the scientific community to make the Grid a reality. IBM is also involved in the major European Grid projects as well. IBM has been working with Ian Foster and Carl Kesselman, of the GrADS team, on Grid Middleware. That work currently focuses on job submission, job scheduling, accounting, security, and other aspects of system management.
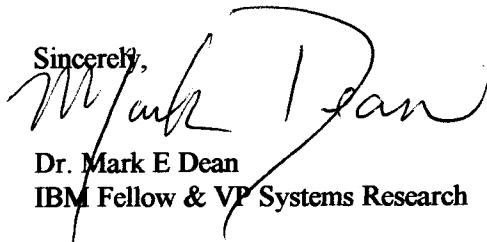
We view that broadening the user community for Grid computing will significantly enhance its value. This will be greatly facilitated by the availability of higher-level interfaces for application developers that let them port applications to the Grid computations and develop new applications on the Grid. Thus, the proposed Center for Grid Application Development Software (CGrADS) addresses issues that bring major value to the Grid computing. For this reason, IBM is committed to collaborating with the CGrADS team. We expect to be active participants in efforts to build high-level programming environments that support development of commercial applications for the Grid. These efforts will include developing and prototyping select advanced software technologies.

To support the proposed center, IBM will

- Participate in collaborative work with CGrADS researchers;
- Appoint a representative to serve on the CGrADS Industrial Council; and
- Help the CGrADS sites put together a small-scale Grid development testbed that models the TeraGrid architecture.

I strongly support and encourage the establishment of the proposed Center for Grid Application Development Software. This center will bring together a team of researchers with the breadth and the depth to tackle the significant problems that hinder widespread use of Grid computing. Their research agenda focuses on the issues and challenges that must be solved to make Grid computing usable throughout the general science and engineering communities. An effort of this kind is essential to the long-term success of Grid computing.

Sincerely,

Dr. Mark E Dean
IBM Fellow & VP Systems Research