



National Science Foundation  
Computer and Information Science and Engineering Directorate  
Division of Advanced Computational Infrastructure and Research

April 25, 2002

Dear Colleague:

The purpose of this letter is to inform you about the current activities and plans for NSF's terascale computing project. The NSF Budget Requests to Congress for fiscal years 2000 and 2001 proposed that the terascale systems established by this project would receive upgrades in fiscal year 2002 (see Dear Colleague Letter [NSF-02-119](#) addressed to Terascale Awardees). Beginning in fiscal year 2003 NSF intends to call for proposals for additional sites and facilities to be integrated into an "Extensible Terascale Facility" (ETF). It is anticipated that \$20 million will be available for integrating new sites and facilities into the ETF in fiscal year 2003.

### **Background**

In fiscal year 2000, NSF entered the era of terascale computing with an award to the Pittsburgh Supercomputing Center to construct the Terascale Computing System (TCS), and continued in fiscal year 2001 with a collaborative award to the University of Illinois at Urbana Champaign and the University of California at San Diego to construct a Distributed Terascale Facility (DTF). The TCS began operations on schedule, and the DTF is currently being constructed and is scheduled to begin operations in 2003.

NSF's next step in terascale computing, the Extensible Terascale Facility (ETF), will be a scalable distributed computational grid based on the TCS and the DTF. The ETF will be integrated by an ultra high-speed network (a "backplane network") and will enable science and engineering researchers to conduct analyses at unprecedented scale, to merge multiple data resources seamlessly, and to advance discovery at the frontiers of science and engineering. It will also be a platform for advancing computer science and engineering research on scalable systems.

### **Integrating new Sites and Facilities into the ETF via an Open Competition**

NSF has requested \$20 million for fiscal year 2003 that we anticipate investing in integrating new sites and facilities into the ETF. Such sites and facilities might include FFRDCs (federally funded R&D centers), appropriate R&D centers located at universities, and other research and development facilities. It is further anticipated that in early fiscal year 2003 a solicitation will be released describing the requirements and opportunities for such extensions to the ETF.

### **Workshop in Summer 2002 for Prospective Proposers and Users for Integrating new ETF Sites and Facilities**

In order to plan for the integration of other sites and facilities into the ETF beginning in fiscal year 2003, a workshop will be held in Summer 2002 bringing together TCS and DTF project leaders and prospective proposers and users who may be interested in integrating new sites and

facilities into the ETF. The workshop will focus on architectural design concepts of the ETF and the needs of potential new sites and facilities. It is also anticipated that this workshop will help identify new capabilities that will meet the needs of the broad S&E community of ETF users.

Information concerning the workshop and a frequently asked questions (FAQ) page will be posted on the Division of Advanced Computational Infrastructure and Research web page (<http://www.cise.nsf.gov/>) shortly after the issuance of this Dear Colleague Letter.

General inquiries regarding this Letter should be made to:

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Sincerely,

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