

October 10, 2011

Al Kellie, Director
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Boulder, CO 80307-3000

Dear Al:

This is the customary letter to you following the semi-annual meeting of the CISL High-performance-computing Advisory Panel (CHAP). We heard about a number of things from CISL personnel: the favorable NSF review of CISL, plans surrounding the transition of NCAR's high-performance computing operations to the NCAR-Wyoming Supercomputing Center, an update on the completed construction of the NWSC building, a summary of the NCAR-sponsored CAS meeting in France, a description of the NCAR-CU machine Janus, and a perspective on exaflop computing as it may someday apply to the NWSC.

We continue to regard CISL's HPC efforts as second to none, including the NWSC building effort and the plans for bringing the Center to fully operational status with a machine having about 30 times the capacity of the present Bluefire machine. We are pleased that the building construction was completed earlier than planned and below budget. We are optimistic that a smooth transition to operational supercomputing on a well-balanced and powerful system will occur in the first half of 2012.

Meanwhile, the CHAP dealt with university requests for Bluefire usage totaling 340% of that available in the final 8 months of the machine's lifetime. As you observed, we followed a three-fold strategy to deal with the oversubscription:

- (i) allocating the most important and economical portion of each request to Bluefire, resulting in a 99% subscription of Bluefire;
- (ii) moving some of the requested Bluefire work onto the Janus machine at the University of Colorado, resulting in up to a 90% subscription of the NCAR university portion of that machine, access to which is being facilitated by Rich Loft;
- (iii) transferring and deferring some worthy Bluefire work to the upcoming NWSC.

Additionally, we allocated NWSC resources to those who requested them in advance, resulting in a 48% university subscription rate this time around on that machine.

The CHAP expects to allocate a much larger amount of NWSC computing resources to university requestors at its next meeting. That meeting is scheduled for May 3, 2012 and will most likely take place in meeting space at the Wyoming Center. We hope to see new requests for computing resources from some atmospheric-related disciplines such as turbulence study and geospace research that have found Bluefire to be inadequate for their tasks in the past.

Respectfully submitted on behalf of the CHAP,

-Bert Semtner
CHAP Chair

cc: Anke Kamrath, Rich Loft, Dave Hart, Sarah Ruth, Roger Wakimoto, CHAP members