

December 12, 2008

To: Deans, Vice Chancellors and Vice Provosts,
Faculty with Research Computing Needs, and
Staff Supporting Significant Administrative Services

RE: Computing Facilities in Support of Research and Administrative Services

Dear Colleagues:

We are writing to update you on the process the campus has established to better address the existing and growing needs for facilities capable of supporting significant academic, research, and administrative computing needs. We invite you to contact us (details follow), if you already have, or anticipate to have, significant needs for such facilities.

Coordination of requests for server room space

Last December Provost Horwitz established a leadership group (see <http://vpviet.ucdavis.edu/saicf.cfm> for the charge letter) to help ensure that we, as a campus, are making strategic investments in renovations and new spaces needed to support research and administrative computing. As you know, effective computing facilities are costly to build or renovate, and the “hidden” cost to the campus for powering and cooling today’s more powerful systems is significant and growing. In addition, there is growing concern about renovations that may be requested to accommodate server rooms in spaces that may not be appropriate. The committee for a Strategic Approach to Investments in Computing Facilities (SAICF) has established a technical subcommittee to promptly and flexibly address individual requests to renovate existing server room spaces or establish new ones. In most cases we will aggressively pursue alternatives that allow for centralized placement of servers in facilities designed for such use. This attempts to change the trend of decentralized server facilities being associated with each unit in spaces not designed or managed for this purpose. To date, we have reviewed 23 requests from 16 different units and, in every case, have identified specific solutions for the short term, through:

- Currently available space¹ (such as the campus Data Center and the recently completed server room facility in the Watershed Building); and
- Renovation of college facilities (VetMed 3A and Center for Geotechnical Modeling).

We are currently evaluating our ability to accommodate significant requests over the medium term (next several years) through the above mechanisms and, potentially, through:

- The creation of significant new server room space in existing buildings² (such as the Academic Surge Building and/or Hoagland Hall).

Computing Facilities Liaisons

An ongoing challenge is to ensure a comprehensive understanding of existing, near term, and longer term computing facility needs – particularly those needed to support research. To assist in that effort, each dean has already designated a “computing facilities liaison” who is asked to represent the current and projected needs of their respective units. A list of these liaisons is available at <http://vpviet.ucdavis.edu/saicf.cfm>. Faculty with research computing needs (significant server space, massive data storage, renovations to address power or

¹ Unallocated space as of December 2008 in the Data Center and Watershed includes:

Data Center: 5 racks [administrative computing]

Watershed: 9 racks [research and administrative computing]

Groups have suggested additional spaces that we are also exploring; we appreciate and encourage college-campus partnership in identifying other suitable spaces for shared use.

² Potential additional space we are exploring may accommodate up to 100 racks.

cooling needs, specialized networking or other requirements) are encouraged to contact their unit's liaison to ensure their needs are well-understood and represented.

Given the significant campus investments that will be needed to ensure adequate computing facilities to support faculty needs, requests for renovations and the creation of new computing spaces will be routed through the deans to help ensure their support and the effective management of resources available to individual schools and colleges. To support the growing number of multi-college "interdisciplinary" or "center" projects, the Academic Coordinating Council of Deans (ACCD) venue will be used to address the computing facility needs for projects that span across two or more colleges. Again, we will be attempting to identify all opportunities for centralized facilities that have efficient energy systems and adequate security.

Longer-term planning

The SAICF recognizes that efforts to accommodate near-term needs must be aggressively complemented with longer-term planning. To that end, development is well underway of specifications for longer-term facilities that could accommodate the combined needs of the Davis and Sacramento (Health System) campuses. A Request for Proposals (RFI) will be released in January 2009 to enable discussions of campus needs with companies that lease, manage, and/or build data center facilities. In addition, a consultant is reviewing space in Academic Surge and Hoagland Hall for both medium-term and longer-term use.

Other options under consideration

Finally, the campus is also actively pursuing emerging technologies that can help make more efficient use of computing resources. One such option is virtualization, which allows often dozens of computing services to be placed on a single server. This is effective for both individual servers and for aggregating separate services in a college or central facility. (A proposal for a centrally-managed virtualization service will be finalized later this month.) This technology allows us to maximize the use of each server while also conserving space and energy. Other options, such as grid and cluster computing, are also being investigated.

Contact information

- Additional questions on the process: Faculty should contact their dean's liaison; administrators in central units should contact their vice chancellor or vice provost.
- Technical questions regarding computing facilities relating to current or future needs (including grant proposals): Contact Dave Zavatson (dhzavatson@ucdavis.edu) in IET, who chairs the technical subcommittee of the SAICF.
- Additional information will be available and kept current at <http://vpict.ucdavis.edu/saicf.cfm>.

To summarize, the campus is working hard to create a multi-faceted strategic approach to investments in computing facilities. Feel free to contact either of us for questions on the approach. We appreciate your patience as we have moved this important process through its growing pains.

Sincerely,

Peter M. Siegel
CIO and Vice Provost
Information and Educational Technology

John Meyer
Vice Chancellor
Resource Management & Planning

Cc: Strategic Approach to Investments in Computing Facilities Committee
Server Room Space Evaluation Committee (SAICF Subcommittee)