

SOUTH DAKOTA BOARD OF REGENTS

Budget and Finance

AGENDA ITEM: 7 – C

DATE: May 9-11, 2016

SUBJECT: Capital Asset Purchases Greater than \$500,000

South Dakota State University requests approval of the following item:

Network Rebuild/Refresh: Replacement and upgrade of the original network and fiber is estimated to cost \$3.5M. This refresh will provide four major significant changes from the current network put in place in 2000 with a 2009 upgrade: 1) the network central core equipment will be redundant; 2) the security team will have greater visibility into the traffic traversing the campus to allow faster reaction and preempt an attack or detect malicious activity; 3) the capacity throughout will increase by a factor of ten to better accommodate the increased file size, the amount of data, video and phone traffic traversing the network; and 4) the upgrade will allow SDSU to grow its wireless capacity to match better the increasing internet demand.

The refresh will consist of 424 network devices, comprising of two 100Gb redundant core switches, thirteen 40Gb sub-cores, and 409 10Gb building switches with universal power over Ethernet. To assist in determining its need, SDSU collaborated with peer institutions in other states who currently use 100Gb networks with large file formats and datasets that are terabytes in size. As an example, the Library of Congress collection digitized is only 15 terabytes. SDSU researchers create and move more than that in one day.

Funding for this network rebuild/refresh will primarily come from charge backs along with port charges, tech fees and tuition funds.

University of South Dakota requests approval of the following item:

High Performance Computing Cluster/Supercomputer: The USD Information and Technology Services (ITS) identified a supercomputer cluster for an estimated cost of \$769,911. This high performance computing cluster will serve as a campus-wide resource available to all
(Continued)

DRAFT MOTION 20170509_7-C: I move to approve the South Dakota State University's request to procure the necessary Network Refresh equipment at an estimated cost of \$3.5M. This equipment will replace older existing network equipment. Funding for these network items will come primarily from charge backs along with port charges, tech fees, and tuition funds.

I move to approve the University of South Dakota's request to purchase a High Performance Computing Cluster Supercomputer at an estimated cost of \$769,911. Funding for this purchase will come from the FY16 SDBOR Research and Development Innovation award and a National Science Foundation Award.

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USD faculty, staff, postdocs, graduate students, and undergraduates as well as researchers across South Dakota. USD ITS noted the system's key objectives are to 1) accelerate scientific progress and reduce time to discovery, 2) enable and accelerate scientific results not previously possible, and 3) increase student engagement in computationally assisted research. Funding for this purchase will come from the FY16 South Dakota Board of Regents Research and Development Innovation award and the National Science Foundation (NSF) Award #1626516.