OGLALA LAKOTA COLLEGE TECHNOLOCY PLAN

2012 TO 2017

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A. Introduction **2**

B. History of Technology at Oglala Lakota College **2-3**

C. Current and Future Initiatives **3-4**

Attachments

1. Technology Needs Assessment Executive Summary **5**

2. Network Evaluation Executive Summary **6**

Technology Plan 2012-2017

A. Introduction

This Technology Plan for Oglala Lakota College is meant to align with the OLC Strategic Plan. The goal of the Technology Plan is to provide a framework for meeting the technology needs of the stakeholders of Oglala Lakota College. The Technology Plan was developed with input from the Technology Committee, the Technology Director, the Distance Learning Coordinator and the Vice-President for Business. An executive summary of the technology needs assessment and the network evaluation is attached. The raw data from these documents is on file with the Assessment Director.

B. History of Technology at Oglala Lakota College

Oglala Lakota College has historically been an innovator in the use of instructional technology. OLC acquired personal computers in the early 1980s which were used with small LANs for instruction in word processing, databases and spreadsheets. In the early 1990s internet access was provided through dial-up connections and a 56k line to SDSM&T. In 1995 the BIA provided a T-1 for internet access. A VAX/VMS student management system was used in the 1990s which was later replaced with the Jenzabar system we use today. OLC's WAN was first utilized for videoconferencing in 1996 when T-1s were installed at Pejuta Haka and Pine Ridge. During the 21st century, OLC rapidly expanded its online presence with content management servers, blogging, a wiki, audio and video streaming as well as content filtering.

An institutional technology plan was first developed at Oglala Lakota College during the 2003-04 academic year. This plan and its successors provide the framework for numerous important activities involving computer and communications technologies. Technology resources, including hardware, software, networks, and support staff, have assumed increasingly important roles in the higher education enterprise. Given the rapidly changing nature of the technology environment, it is critical that institutional technology planning be strategic. Toward this end, a college technology planning committee was formed during the 2002-03 academic year.

The process is continually refined. This may involve, but is not necessarily limited to: reviewing progress toward existing Plan goals; modifying, deleting, or adding goals as necessary; identifying responsibility for particular plan activities; suggesting timelines for the completion of activities; recommending funding priorities to the Vice President for Instruction and the Vice-President for Business, and the Institutional Development and Instructional Affairs committees on matters related to instructional technology. Its' charge is to foster innovation and promote appropriate use of technology for the entire Institution. The Technology Committee together with the department of Technology Support Services (TSS) provides the entire Institution with the apparatus necessary for good analysis and decision making.

For the current (2012-17) planning cycle, Technology Committee members decided to address specific needs voiced by the students and staff of Oglala Lakota College. The technology needs assessment enabled the committee to identify and focus on the more significant issues, in an effort to better set the College direction in these important areas. Additionally, an external consultant was retained for the purpose of a network evaluation. Many of his recommendations have been and are being implemented through this planning process.

C. Current and Future Initiatives

Funding sources used for technology initiatives include Technology Fees, Title III funds, NSF/EPSCOR and tuition funds. Initiatives are completed in the order of need as determined by the Technology Committee and the Administration and the Board of Trustees.

Current initiatives as of the summer of 2011 are:

Replacement of database servers.

Maintenance of computer labs.

Video live-streaming to cable TV systems.

Increase Internet bandwidth at Pejuta Haka and Pine Ridge college centers to 5 MBps.

Replacement of internal DNS, DHCP, NAT and content filtering servers.

Installation of rack mounting system and centralization/consolidation of servers.

Implementation of fail-over generator and transfer switch for mission-critical communication systems at Piya Wiconi.

Implement Promethean Board in Graduate Studies department in the basement of the Culture Center.

Future initiatives include:

Continue with scheduled 3-year hardware replacement.

Re-cable 2nd floor Piya Wiconi Building to Category 6 specification.

Re-cable Pine Ridge College Center to Category 5e specification.

Install fixed-mount large format video display device in every college center (ie LCD/Plasma TV (42" or larger)).

Investigate installing Promethean type board systems at various locations provided additional funding can be found.

Replace Director, Counselor and Tutor workstations.

Increase internet bandwidth at various locations.

Implement managed gigabit 48-port switch at head-end of WAN.

Replace 802.11g Wireless Access Points with centrally managed 802.11x Wireless Access Points.

Provide sufficient battery backup solutions for (switches, servers, videoconferencing units, emergency lighting and wireless access points) to allow classes to complete in the event of power failure.

Continue student laptop purchase program.

Investigate long-distance point-to-point enterprise wireless backhaul technologies.

Technology Needs Assessment Executive Summary

In the spring of 2011, a technology needs assessment was conducted at Oglala Lakota College. Students and staff were asked to respond to a web-based survey while faculty was asked to respond by email. The staff and students overall are fairly well satisfied with existing technology solutions although frustrations with printing and slow internet were expressed and have been addressed. The faculty repeatedly expressed the desire for large-format displays and promethean type systems for classroom instruction. Faculty also expressed dissatisfaction with the videoconferencing systems, so these were updated and a parts inventory was acquired.

Network Evaluation Executive Summary

An onsite review of the OLC network was conducted on November 18 and 19, 2010. During the onsite review the Consultant toured the technology facilities of the Administration site at Piya Wiconi as well as one college center, Pejuta Haka, located in the community of Kyle.

The onsite review conducted by the Consultant was a combination of stakeholder interviews, observations, review of OLC supplied documentation, and some testing of the receptiveness of the network via the Internet. The report that follows takes into account the onsite review as well as research conducted by the Consultant with regard to best practices and ultimately the recommendations that have been prepared for OLC.

Weaknesses of the existing network include:

Hub is a single point of failure for entire network
IT staff is very limited in size
Multiple E-mail clients and multiple Web Proxies
Training and education of network users recommended along with strengthened communication between parties
Standardization of hardware and software images on the machines
Unrestricted network access and no user account authentication

Threats to the existing network include:

Power Failures (Outages, Brown outs, Dirty Power)
Data lines getting cut
Network Users
Malicious users outside the OLC network that can penetrate the servers and applications at OLC

Overall

Large numbers with widely varied technology literacy is apparent with the stakeholders of the Oglala Lakota College network. The work of Technology Support Services is challenging. Short term, there are patches that can be deployed to the existing hub and spoke network. Longer term and a more permanent solution can come from migrating to a distributed topology.