San Diego Miramar College Technology Plan 2.2 Update

(*The Next Generation*)

Three Year Rolling Technology Plan
Fall 2017-Spring 2020

CEC Approved: 9/12/2017

Contents

College Mission Statement and Strategic Goals

San Diego Miramar College has an integrated planning framework that uses its strategic plan as the overall guide for all campus planning. The 7-year strategic plan, with a midterm 3-year assessment update, set four common goals and specific strategies developed with participation of all campus constituencies.

The Technology Plan is developed within the contextual framework of the San Diego Miramar College's mission and is guided by its strategic goals as noted below. In addition, it is consistent with and directly linked to the college's Program Review process.

Mission Statement

San Diego Miramar College's mission is to prepare students to succeed by providing quality instruction and services in an environment that supports and promotes success, diversity, inclusion, and equity with innovative programs and partnerships to facilitate student completion for degrees/certificates, transfer, workforce training, and/or career advancement.

Strategic Goals

Strategic Goal I: Provide educational programs and services that are responsive to change and support student learning and success.

Strategic Goal II: Deliver educational programs and services in formats and at locations that meet student needs.

Strategic Goal III: Enhance the college experience for students and the community by providing student-centered programs, services and activities that celebrate diversity and sustainable practices.

Strategic Goal IV: Develop, strengthen and sustain beneficial partnerships with educational institutions, business and industry, and our community.

The full Miramar College 2013 -2020 Strategic Plan: http://www.sdmiramar.edu/institution/plan

Technology Committee Membership

2018-2019

Daniel Miramontez, Co-Chair	Dean School of PRIE, Library & Technology
Kurt Hill, Co-Chair	Supervisor Instructional Computing Support Supervisor
Gene Choe	Faculty School of Business, Technical Careers & Workforce Initiatives
Glenn Magpuri	Supervisor Library & Audio Visual
Brenda Wilborn	Faculty School of Math, Biological, Exercise & Physical Sciences
Todd Williams	Classified Administrative Computing Support Specialist
Linda Woods	Dean Administration Representative
Ken Reinstein	Faculty School of Liberal Arts
D. Mehlhoff	Faculty School of Public Safety
David Halttunen	Student Services Representative
Rose Marine	Classified Senate Representative
Orlene Lazaro	Student Representative
Eric Brown	Acting Manager SDCCD Office of Information Technology Representative

2019-2020

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Denise Maduli-Williams	Faculty School of Liberal Arts
D. Mehlhoff	Faculty School of Public Safety
David Halttunen	Student Services Representative
Rose Marine	Classified Senate Representative
TBD	Student Representative
Eric Brown	Acting Manager SDCCD Office of Information Technology Representative

Technology Plan Purpose and Goals

The purpose of the San Diego Miramar College Technology Plan is to provide clear direction to college-wide technology support departments and participatory governance committees, and information to the staff, faculty and management regarding the state of campus technology, resources, and current or upcoming technology initiatives.

The goals of the plan are:

- Facilitate learning and teaching by providing faculty and classified professionals with information about campus technology
- Be an effective framework for participatory governance when allocating resources for technology
- Be an effective framework for Accreditation standards related to technology (See Appendix A)
- Ensure plans are aligned with the college Strategic Plan and Mission

Technology Plan Development

The college Technology Plan is developed under the purview of the campus Technology Committee. The committee has recently reconstructed the process to provide for a true three-year "rolling" plan, appropriately called "Technology Plan 2.0 (The Next Generation)". This plan represents the first of the 2.0 plans. The three technology departments on campus, Instructional Computing Support, Administrative Computing Support, and Audio Visual are tasked by the Technology Committee to develop three year plans for their respective areas. Watermark and Program Review are now fully integral to this process and provide a solid basis for the review of past years, and planning for future years. For example, the "Program Review and Service Unit Outcomes" provide a clear view of past years planning and relevant outcomes. Another integral component to this process is the Technology Committees interaction with the Budget and Resource Development Committee (BRDS). BRDS provides the necessary funding and, importantly, projected funding from which plans can use the information during plan development and updates. The Technology Committee, which contains members from a cross selection of schools and functional areas, reviews and provides feedback on the plan prior to submission through the participatory governance process.

The Technology Plan is aligned to the Academic Calendar, and plan years start at the beginning of the fall semester and runs through the end of the spring of the following calendar year.

Information about Technology Support Services

The college technology support services consists of four departments supporting Miramar College. Audio-Visual, Instructional Computing Support and Web Services operate under the School of Planning, Research, Institutional Effectiveness, Library and Technology. Administrative Computing Support operates under the SDCCD Office of Information Technology.

Administrative Computing Support (ACS)

- Office information: L-114D
- Office Hours: 7:00AM – 3:30PM
- Department line: 619-388-7743
- Department email: twilliam@sdccd.edu
- Supervisor: Eric Brown, Acting Manager, Network Services

Administrative Computing Support is responsible for the setup, configuration and maintenance of faculty and staff computer, peripheral and other campus-based administrative IT systems.

Audio Visual (AV)

- Office information: L-111
- Office Hours: Monday - Thursday 8:00AM – 9:00PM
  Friday 8:00AM – 5:00PM
- Department line: 619-388-7317
- Department email: avmira@sdccd.edu
- Supervisor: Glenn Magpuri
  gmagpuri@sdccd.edu

The Audiovisual (AV) department is responsible for the planning, design, coordination, facilitation, and integration of AV instructional technology on campus.

It houses multimedia video collection and provides media checkout and viewing station services for faculty and students. The AV department has a fully-functional professional production studio that offers pre/post editing production of video/multimedia projects. The AV department oversees the operation and preventive maintenance of audiovisual technology on campus as well as participates in the preparation, specification, and acquisition of the AV equipment.

Additionally, the AV Department provides assistance with the planning and setup of audiovisual presentations for campus special events, including musical acts, guest speakers, the Commencement ceremony, and other social, academic, and marketing activities. Finally, the AV Department also facilitates the planning and setup of campus video and teleconferencing services.

Instructional Computing Support (ICS)

- Office information: L-114F
- Office Hours: 8:00AM – 4:30PM
- Department line: 619-388-7387
- Department email: miramar.ics@sdccd.edu
- Supervisor: Kurt Hill
  khill@sdccd.edu

The Instructional Computing Support (ICS) is responsible for all instructional computing. This includes the over 1,500 computer systems, laptops, and special-purpose systems (e.g., flight simulators, dedicated instrumentation computers) as well as peripheral equipment such as printers, scanners, etc. used in the classroom. ICS is responsible for necessary software installation as needed in various instructional labs as well and ensuring full licensing compliance. ICS maintains the campus pay-for-print systems.

SDCCD Office of Information Technology (SDCCDOIT)

- Office information: District Office
- Office Hours:
- IT Helpdesk: 619-388-7000
- Department email: ithelp@sdccd.edu
- Director: Don Bertram, Acting IT Director

The SDCCD Office of Information Technology oversees administrative enterprise technology for the district. The campus Administrative Computing Support department reports through SDCCDOIT. In general, issues with enterprise services or other non-instructional IT requests should be reported through the IT Helpdesk.

Web Services

- Office information: L-114G
- Office Hours: 8:00AM – 4:00PM
- Department line: 619-388-
- Department email: btsmith@sdccd.edu
- Supervisor: Daniel Miramontez
  dmiramon@sdccd.edu

Web Services provides campus website development and support, and is here to assist the college with requests, training, and issues regarding the college website. This department generates new pages as required, maintains the website, corrects any errors, and trains faculty and staff in content management. Appointments may be made for training.

Technology Plan and the Participatory Governance Structure

The Technology Plan is a function of the Participatory Governance process, and is produced by the Technology Committee. The plan is developed as a three-year "rolling" plan, which means it speaks to future plans, three years out, but is reviewed and updated annually.

As part of the college's Program Review process, the Budget and Resource Development Committee (BRDS) and the Technology Committee work together to review and prioritize many technology funding requests, in particular, "Requests for Funding". Annually, the BRDS subcommittee collects these requests and forwards them to the Technology Committee for its review and ranking of technology requests. A guiding rubric for ranking technology requests is included in Appendix C.

2015-2016 Technology Plan Review

Overview

In 2014-2015, the campus implemented Taskstream (now called Watermark) as its primary reporting mechanism for the various instructional support areas. Additionally, the Technology Committee undertook a complete redesign of the Technology plan, with a focus on making the plan more proactive, aligning it with college strategic goals and mission statement, and providing a better framework for various campus functions, including budgeting and planning. Furthermore, given that Accreditation is in large part a *by-product* of what we do (in other words, Education is what we *do*, Accreditation is a *by-product* of providing a quality education), the new technology plan should result in an easy translation from planning and review to any required accreditation documentation on technology (e.g., "Standard III.C").

Administrative Computing Support (ACS)

In June of 2015, the campus ACS support staff retired, leaving a gap in service for administrative systems. This gap was only partially covered by District IT staff, during the 2015-16 academic year. As a result, several items of concern became apparent during this time. First, the campus administrative systems did not use any standard password, which greatly impacted the ability of ICS, as well as District IT staff, to help end-users. Having a single person, in isolation, responsible for ACS resulted in other issues as well – as no one else in at the campus IT level knew what projects were underway, what equipment was slated for, etc. However, give the issues during the 2015-16 academic year, the college was able to pull together and serve end-users under the purview of ACS.

Audio Visual (AV)

Part of the AV department's responsibilities is the planning, design, coordination, facilitation, and integration of AV instructional technology on campus. The AV department regularly works with faculty, staff, administrators, and AV integrators to meet the pedagogical and administrative audiovisual technology needs of the Miramar campus by planning the integration of new technology on campus. Additionally, the AV department frequently works with campus administrators, faculty, and staff to create video and audio productions, including the captioning of such media, which may ultimately be distributed for public consumption for marketing and/or pedagogical purposes. When inter-campus or extra-campus video conferencing setups must be accomplished, the AV department is the one that coordinates with the relevant parties to ensure the video conferencing is accomplished.

A large part of the AV department's responsibilities is overseeing the research, purchase, setup, maintenance, security and status of equipment. AV inspects, maintains, and inventories all AV equipment across campus, including new acquisitions and the transfer of old equipment. Whenever new equipment is purchased, or whenever a new faculty or staff members comes to the campus, the AV personnel train the relevant faculty and/or staff members on the use of said equipment. Furthermore, whenever there is a special event on campus that requires special assistance with audiovisual technology, the AV department provides assistance in setting up, operating, and breaking down the audiovisual equipment used for that event.

Currently, the Miramar AV Department is staffed by one full-time Instructional Support Supervisor (1.0) and two full-time Instructional Lab Technicians (2.0).

Program Review and Service Unit Outcomes

AV created a program review and series of action items in the Tasktream (now called Watermark) system in 2015. A summary list of statuses follows:

- Purchase new up-to-date Smart/AV Equipment and replacement of aging Smart/AV equipment. *AV has requested funding for the purchase of new smart AV equipment for instructional and administrative support, special events, and media productions.* –The AV Department, through various funding sources, continued to purchase and update campus audiovisual equipment in the 2015-2016 fiscal year. This includes, among other projects, the A201 Police Academy conference room projection system update and a refresh of the AV equipment in three other Miramar Police Academy classrooms. G:\DATA\LIBRARY-AV DEPARTMENTS\FISCAL BUDGETS\FISCAL BUDGET 2015-2016 AV
- Provide sufficient staffing for AV-related campus Instructional and student support. *To meet the growing demand of Audiovisual Services, The AV Department needs to establish and fund two new full-time contract positions, one Media Clerk and one Media Technician. Currently, there are only 2 Contract Staff working in the Audiovisual Department. The Audiovisual Department overall served 376 administrators, faculty, staff, and students in the last fiscal year alone. In order to sustain hours and access to AV services the campus must immediately support an increase in AV staffing levels by a total of 4.0 contract staff.* – The AV Department did not receive the additional requested contract staff in the 2015-2016 year.
- Increase the capital outlay and supply budgets to meet the growing need of the department *With the recent campus expansion and increase in the number of students and faculty served, the Miramar AV department is receiving unprecedented demands for equipment maintenance and design, special event services, and media production requests. . In order to accommodate the growing student and faculty needs, the AV department requires an increase to its capital*

outlay and supply budgets. – The Miramar AV Department did not see an increase in capital outlay budget in the 2015-2016 year.

- Provide professional development to AV staff on the latest audiovisual technologies.
  Technology and pedagogy in a post-secondary environment are constantly evolving The AV Department has the responsibility of liaising with and advising faculty and administrators regarding campus audiovisual technology integration and media production. In order to keep up with the state of post-secondary pedagogical technology and media, the AV Department requires regularly training and attendance at seminars that keep staff up to date on technology and pedagogical trends. – At least one member of the AV Department attended a professional conference related to the audiovisual and/or pedagogical industry. In January 2016, an AV member attended the NAMM Show, a conference for professionals in audio production.
- To have available power for remote locations (completed)
  This goal was met in 2016.
- To have a budget for lamp reserves for campus projection units
  In order to accommodate and meet the campus projection lamp needs and requirements, bulbs on reserve are necessary. AV continually requests yearly funding for the purchase of campus projection unit lamps through BRDS.
- Campus-wide Smart/AV Classroom Technology update, renovation and replacement.
  This responsibility has been allocated to other departments outside of AV.- The AV department serves as a resource to the campus by providing advice and recommendations. The responsibility of prioritizing Smart/AV Classroom Technology update, renovation and replacements fall in the purview of the Administrator and Deans of each school.

Instructional Computing Support (ICS)

In the 2016-2017 fiscal year, the campus expended nearly $489,000, replacing 425 older computer systems, including updating the entire "M" building which contains the 6 largest computer labs on campus, and updated 48 laptops on campus to newer models. In terms of percentages, 94.5% was spend on direct equipment replacement, and 5.5% on back end software & technology to support the instructional network. Additionally, the campus filled the long-vacant network specialist position in June of 2016.

Several important events happened in the 2015-2016 fiscal year. The campus received a large block of funding due to the recovering economy and restoration funds. This resulted in the largest block of non-bond funding for IT in recent memory. In prior years, the Budget and Resource Development Subcommittee (BRDS) planned for 80% of IELM funding to go towards "technology refresh". As a result $336,000 was available for campus instructional technology.

IELM Technology Funding Expenditure Strategy

Given that the IELM Technology funds are the largest source of planned funds for campus instructional computing needs, it is appropriate to include the manner in which these funds are used in the campus Technology Plan.

IELM funds are expended in two rounds. The first round expends the bulk of the funding towards planned infrastructure and campus equipment replacement, but leaves a planned reserve amount for expending towards the end of the fiscal year. The reserve is meant to accommodate any "X factors" that may have been missed in initial planning. Near the end of the fiscal year, the remaining funds are used to purchase additional campus equipment (laptops, printers, and computers). Any unplanned "X

factors" would typically be related to infrastructure needs.

The exact amount held back can vary greatly based upon a number of factors, such as the scope of any new technology initiatives or the size of various campus labs in need of replacement, so there is no set percentage.

Program Review and Service Unit Outcomes

ICS created a program review and series of action items in the Watermark system in 2015. A summary list of the items statuses follows:

- Utilize professional consulting for thin-client/VDI project
  Initial consulting service provided in November, 2015 was not at the level requested. A further three days of consulting was arranged for and provided in March, 2016 to complete the contract.
- Staffing Needs: Enterprise Network Specialist and Lab Tech
  ICS has requested additional staffing for a number of years. In particular, a Network Specialist and a Lab Tech. It was identified that the request for a Network Specialist needs to be changed to a request for an Enterprise Network Specialist given the higher range of duties being performed. Staffing needs are currently being reviewed.
- Enterprise Software Licensing
  The ICS budget is insufficient to maintain current licensing, therefor this will remain an action item until line-item funding is sufficient to cover these costs. Progress has been made, as indicated by a recent increase to ICS 5xxx budget.
- Purchase Supplies & Materials
  ICS was provided nearly $16,000 for campus instructional supplies with a target to expend by January 2016. ICS is currently significantly behind in expending these funds due to the arbitrary $200 definition of a supply item, the implementation of the new ERP system and a myriad of other projects and deployments competing for staff time. ICS has currently (as of March, 2016) expended about $9,500 towards supplies.
- IELM Technology Refresh
  ICS has currently (as of March, 2016) expended approximately $140,000 of $336,000 towards technology refresh. Expenditures to date have been focused on infrastructure. $65,000 is currently targeted towards campus equipment (computers, printers, laptops), with up to $90,000 planned for the second round

SDCCD Office of Information Technology (SDCCDOIT)

No Update provided

Web Services

Much of the work done by Website Development and Support has involved the pending overhaul of the campus website. In early 2015, the existing website was given a cosmetic makeover, which included a simplified menu structure. This makes it easier for students to look at the main menu, and see what they are looking for at a glance.

Website Redesign & Software Upgrade

The College uses the Drupal content management system platform, enabling each department to maintain its own web content. Until 2014, there was little to no training budget, so Web staff were self-taught. This meant that the campus website served as both an active web presence and a training lab. Development was slow and often based on the correction of programming and configuration errors.

Web staff are now able to attend Drupal classes and workshops once or twice a year, which promises to speed development.

The college currently uses version 6 of the Drupal platform. As end users become more familiar with content management, we are receiving requests for more advanced features which are not available in 6. For this reason, the department began planning for a software upgrade. Drupal 7 is the current most stable version of the software. It provides easily accessible advanced features, a more customizable appearance, and will be supported for several more years.

Currently, Website Development and Support also occasionally performs photography and graphic design as needed for both the production website and prototypes. The most significant imperative for the new website is that it be competitive, in appearance and features, with any other top-of-the-line higher education web presence (for examples, see MiraCosta, Antelope Valley, Columbia).

Program Review and Service Unit Outcomes

Training of website staff is an ongoing concern. In addition to the annual DrupalCon and the local SANDCamp training events, it would be helpful if budget could be found to subscribe to an online Drupal training service. Drupalize Me and Build A Module both offer excellent subscription-based online courses. These steps will provide the foundation needed to keep the website and associated technologies timely through the fiscal year and into the next decade.

It can be seen from observing cutting-edge college websites that these sites feature many high-quality graphics—far more than a small Web department is able to produce. If Miramar is to join their ranks, among the department's most critical needs (if not the most critical) is greater graphics support in the form of an extensive library of photos. Many more of these than we now have should be people-centric.

Training

Toward the end of the previous fiscal year, there was considerable staff interest in learning to maintain website content. Website Development and Support conducted a number of training classes. Even with the initial phase of training over, many employees still require review and ongoing training. Most training is now done on an informal, one-on-one basis.

Another aspect of this departmental function is the creation and maintenance of training materials. Handouts are currently up to date, but will require revision in the next few months. For the rollout of the new college website, a complete rewrite of handouts will be required.

Other

Website Development and Support is currently staffed by one individual, the College Web Designer, with substantial input and assistance from Instructional Computing Support.

Fall 2017-Spring 2020 Three Year Technology Plan

Departmental Technology Plans

Administrative Computing Support (ACS)

2017-18

ACS staff deployed Windows 10 to upgraded student services Kiosk machines for student use. Work will continue during the next annual cycle.

Upgraded and/or replaced user workstations for faculty replacing DQ35/45 with DQ57. Obtained quotes for new workstations, peripherals, and other equipment. All upgraded PCs were upgraded to the Office 2016 suite.

Remediated software licensing issues related to the Attachmate EXTRA program for ISIS access. Over three hundred workstations were manipulated to remediate the unlicensed copies.

Began deployment of enhanced desktop security model to replace legacy configurations. The new model will allow ACS staff to centrally manage security and configuration changes for all administrative workstations

Deployed Internet Explore(IE) 11 to all administrative workstations to support the SDCCD Peoplesoft ERP portal update project.

Facilitated network and power infrastructure enhancements and supported outages related to both.

Coordinated cabling additions and modifications with ACI vendor for new and existing data for building and offices, insuring the work is complete.

Responded to and resolved hundreds of TrackIT problem calls and service requests related to campus wide network, power, and software related outages.

Upgraded the SDCCD library Horizon system and all campus workstations to the latest supported 7.x version.

2018-19

Windows 10 deployment to all workstations

Deploy Microsoft Office 2016 throughout the campus.

Student ID and Scanner workstation upgrades

Support deployment of new Peoplesoft Campus Solutions product

2019-20 – No update provided

Three-year Summary Analysis

No update provided

Audio Visual (AV)

2016-17

In January 2017, AV began utilizing the audiovisual production studio equipment and continuing audio visual technology refreshes throughout the Miramar campus. Additionally, AV continued serving campus end users by providing Special Event assistance, Media Productions assistance, training and troubleshooting. Although AV sought two full-time Media Technicians and an increased hourly support budget in 2015 and 2016 to accommodate the increased workload, additional contract staff was not acquired. In the 2016-2017 fiscal year, AV refreshed the technology in rooms such as I101A, Police Academy classrooms A223, A227 & A228, as well as Child Development room F209 & F212.

AV Repairs, Updates, and Refreshes

There were several buildings on campus that went out of warranty and require system updates, repairs, or a complete AV technology refresh in the 2016-2017 fiscal year. The buildings that went out of warranty were the following: the Automotive Building, the "F" Child Development Building, the "F1" Aviation Building, the College Services Center Building, the "H" Humanities Building, the "L" Library and Learning Resources Center Building, the "A200" Police Academy Building, the Police Substation, the "S5" Science Building, "I" English Building and the "C2" Diesel Technology Building. In 2016-2017, the AV Department continued the systematic tracking of instructional technology equipment in these buildings, including wear and tear and need for replacement. As the need for replacement arose, the AV Department coordinated with the end users, researched to find the most pedagogically/administratively effective instructional technology at the greatest value to the District, drafted designs to implement the necessary updates/repairs/refreshes in those rooms, and oversaw that integration. For example, the AV Department facilitated a refresh of the F1-109 Aviation building projector system refresh as well as A229, S5-103, S5-105, S5-106, S201, S401 and Phase 1 of H210.

Production Studio Upgrades and Services

As more Miramar end users began taking advantage of Miramar AV production capabilities thanks to the new AV Production Studio (completed in 2017), the demand for updated media production-related hardware, software and storage also increased. Thus, the AV Department continued researching the most effective media production equipment and methodologies and purchasing new studio equipment. At least one member of the AV Department attended a professional conference in the 2016-2017 year related to media production and/or pedagogy. Specifically, a member of the Miramar AV department attended the NAB Show, a trade conference specializing in media production. The AV Department did not, however, receive the requested additional funding for staff and equipment, in the 2016-2017 year.

Digital Signage Refresh

In the 2016-2017 fiscal year, two digital signage kiosks in the L-building went out of warranty and required a hardware/software upgrade. The AV department has escalated the issue to District Purchasing and Gafcon for resolution on the warranty , software and hardware of the two kiosk. Currently, the digital signage systems used by the campus is by a company called Visix and were installed back in 2012. The Audio Visual Department works with District IT regarding the implementation, maintenance and training of the digital signage systems. From the date of install, the system is warrantied for 3 years. Updates to the firmware of all Visix player units are scheduled for Fall 2017.

Ongoing Professional Development for AV Staff (Conferences, Classes, Webinars, Certifications)

Ongoing professional development for AV Staff is essential to keeping abreast of the latest technology available in the market. From Conferences, Classes to Webinars and Certifications, the Audio Visual Staff must continually update their knowledge in all things AV. Attendance of conferences expose AV Staff to every sector of the industry including Education, Broadcast, Digital Media, Film, Entertainment,

Telecom, Post-Production, Academia, Advertising, Security, Live Events and Online Video. In the 2016-2017 year the AV staff both attended conferences and met with manufacturers, systems integrators, dealers and distributors, independent consultants, programmers and multimedia professionals to help develop AV standards. As previously noted, in 2016-2017 a member of the AV Department attended at least one professional industry conference.

Examples of Conferences, Classes, Webinars, and Certifications include:

- NAB - NAB Show is an annual trade show produced by the National Association of Broadcasters.
- INFOCOMM - is the trade association representing the professional audiovisual and information communications industries worldwide.
- EDUCAUSE – The EDUCAUSE Annual Conference is the premier convening of AV/IT professionals and technology providers across the diverse higher education landscape. The conference creates networking opportunities for colleagues to share idea regarding strategies, leading change, effective processes, what's working, and sometimes – more importantly – what isn't.
- Vendor Technology Conferences – hosted by SDCCD vendors Southland Technology and GST

2017-18

In 2017-2018, the audiovisual department focused on the following:

- Production studio upgrades and services. The department also acquired new sound processing equipment, including two new compressors and a 500 series chassis for audio production.
- With a few exceptions, the majority of buildings on campus utilize outdated analog technology rather than the current digital standard. Many classrooms still *only* have VGA laptop connections, even though Intel and Advanced Micro Devices phased out chipset support for VGA back in 2015. Today almost all PCs and laptops come with either a HDMI or digital display port video out, yet our S5 Science, Automotive, "F1" Aviation, "F" Child Development, "M" Math and Business, College Services, "H" Humanities, "L" LLRC, "A200" Police Academy, Police Substation, and "C2" Diesel Technology buildings have rooms with no HDMI or digital video connections. In order to accommodate the current needs of instructors and students, the AV Department worked with campus to integrate digital connectivity into their respective areas. Specifically, the AV Department facilitated the digital refresh of five S5 Science building classrooms.
- Updates to the firmware of all Digital signage Visix player units were completed in Fall of 2017 in collaboration with District IT.
- Attended conferences and trainings for certifications and professional development. In September 2017, one AV Department technician attended a multi-day training course on Pro Tools Audio production software and, after passing the requisite exams, became a certified AVID Pro Tools user.

2018-19

In 2018-2019, the audiovisual department will focus on the following:

- Plans to utilize the audiovisual production studio to provide two new campus audiovisual media productions. Also, the department will continue to assist with the design integration for analog-to-digital upgrades as needed.
- It is critical that Miramar implement BYOD (Bring Your Own Device) wireless integration across the campus. Updating instructional audiovisual technology not only means updating the

relevant hardware, but also updating the methodologies to conform to the latest pedagogical and administrative standards. The question of whether campuses must accommodate "BYOD" functionality is closed. According to the April 2014 University Business.com article, "BYOD Boundaries on Campus," at least 42 percent of colleges and universities had a BYOD strategy in place in 2014. That article also pointed to a 2014 Educause study that found that an estimated 60 percent of college employees use their own devices at work. Many secondary and post-secondary institutions have already implemented technology initiatives that aim to provide BYOD in the classroom (see https://www.washingtonpost.com/local/education/stem/schools-move-toward-bring-your-own-device-practices-to-boost-student-tech-use/2014/09/14/4d1e3232-393e-11e4-9c9f-ebb47272e40e_story.html).

- Continue to work with District Technology to integrate wireless devices that permit BYOD and wireless functionality, such as the Extron Sharelink 200, Miracast displays, Chromecast, and Apple TV. Currently, the AV Department has plans to integrate this type of BYOD wireless integration in the new Police A300 Mat Room and the Child Development renovation projects. The Miramar AV Department will continue to conduct research on trends in BYOD wireless classroom technology integration, work with District IT and end users, design plans, and oversee the integration necessary to bring BYOD wireless functionality to our learning and administrative environments. By the end of fiscal year, the AV Department aim to have 20% of the campus classrooms BYOD integrated.
- Continue to provide faculty and administrative assistance with the integration of new digital signage and digital signage refreshes.
- Continue to attend conferences, seminars, webinars and trainings for certifications and professional development. AV will request funding to accomplish these necessary training activities.
- Ongoing professional development for AV Staff is essential to keeping abreast with the latest technology available in the market. From Conferences, Classes to Webinars and Certifications, the Audio Visual Staff must continually update their knowledge in all things AV. Attendance of conferences will expose AV Staff to every sector of the industry including Education, Broadcast, Digital Media, Film, Entertainment, Telecom, Post-Production, Academia, Advertising, Security, Live Events and Online Video. AV staff also meets with manufacturers, systems integrators, dealers and distributors, independent consultants, programmers and multimedia professionals to help develop AV standards. Attendance at these conferences and training are crucial to maintaining well-informed capable technology resource staff. Examples of Conferences, Classes, Webinars, Certifications include:
    - NAB - NAB Show is an annual trade show produced by the National Association of Broadcasters.
    - INFOCOMM - is the trade association representing the professional audiovisual and information communications industries worldwide.
    - EDUCAUSE – The EDUCAUSE Annual Conference is the premier convening of AV/IT professionals and technology providers across the diverse higher education landscape. The conference creates networking opportunities for colleagues to share idea regarding strategies, leading change, effective processes, what's working, and sometimes – more importantly – what isn't.
    - South by Southwest – The South by Southwest (SXSW) technology conference is an annual conference presenting the latest in technology and technology practice. SXSW features guest speakers, tech presentations, and other activities on topics including technology security, film programming, music programming, and more.
    - SXSW EDU - The SXSW EDU Conference & Festival cultivates and empowers a community of engaged stakeholders to advance teaching and learning.

- Technology & Business Summit - The Technology & Business Summit is an education-oriented event highlighted with exhibits from some of the top manufacturers in the industry, featuring their newest & most exciting products. The Summit is brought to you by Independent Manufacturer Reps in your territory. The local event and one-on-one atmosphere promotes real-world education, practical business development, and networking for all involved. Exhibits, Education, CEU Credits,
- ISTE Expo - ISTE 2018 is the place where educator-tested strategies come together with proven resources for transforming learning and teaching. It's also the place to get connected to the brightest minds in edtech, then network with them all year long.
- Vendor Technology Conferences – hosted by Southland Technology and GST

2019-20

In 2019-2020, the audiovisual department will focus on the following:

- Plans to utilize the audiovisual production studio to provide three new campus audiovisual media productions. Also, the department will continue to assist with the design integration for analog-to-digital upgrades as needed.
- Continue working with campus departments to facilitate the integration of BYOD AV technology. By the end of the year, the AV Department aims to have 40% of the campus classrooms BYOD integrated.
- Continue to provide faculty and administrative assistance with the integration of new digital signage and digital signage refreshes.
- Attend conferences, seminars, webinars and trainings for certifications and professional development. AV will request funding to accomplish these necessary training activities.
- Plans to implement E-Learning training modules for new incoming faculty. The focus of the modules will be to provide digital interactive training on classroom AV components such as operation of the AV lectern, document camera, and Smart Board. The modules will also aim to save staffing resources while simultaneously providing new faculty with a comprehensive understanding of the pedagogical benefits and uses of classroom AV equipment. The Department's goal is to have at least 1 new training module created.
- Ongoing professional development for AV Staff is essential to keeping abreast with the latest technology available in the market. From Conferences, Classes to Webinars and Certifications, the Audio Visual Staff must continually update their knowledge in all things AV. Attendance of conferences will expose AV Staff to every sector of the industry including Education, Broadcast, Digital Media, Film, Entertainment, Telecom, Post-Production, Academia, Advertising, Security, Live Events and Online Video. AV staff also meets with manufacturers, systems integrators, dealers and distributors, independent consultants, programmers and multimedia professionals to help develop AV standards. Attendance at these conferences and training are crucial to maintaining well-informed capable technology resource staff. Examples of Conferences, Classes, Webinars, Certifications include:
    - NAB - NAB Show is an annual trade show produced by the National Association of Broadcasters.
    - INFOCOMM - is the trade association representing the professional audiovisual and information communications industries worldwide.
    - EDUCAUSE – The EDUCAUSE Annual Conference is the premier convening of AV/IT professionals and technology providers across the diverse higher education

landscape. The conference creates networking opportunities for colleagues to share idea regarding strategies, leading change, effective processes, what's working, and sometimes – more importantly – what isn't.

- South by Southwest – The South by Southwest (SXSW) technology conference is an annual conference presenting the latest in technology and technology practice. SXSW features guest speakers, tech presentations, and other activities on topics including technology security, film programming, music programming, and more.
- SXSW EDU - The SXSW EDU Conference & Festival cultivates and empowers a community of engaged stakeholders to advance teaching and learning.
- Technology & Business Summit - The Technology & Business Summit is an education-oriented event highlighted with exhibits from some of the top manufacturers in the industry, featuring their newest & most exciting products. The Summit is brought to you by Independent Manufacturer Reps in your territory. The local event and one-on-one atmosphere promotes real-world education, practical business development, and networking for all involved. Exhibits, Education, CEU Credits,
- ISTE Expo - ISTE 2018 is the place where educator-tested strategies come together with proven resources for transforming learning and teaching. It's also the place to get connected to the brightest minds in edtech, then network with them all year long.
- Vendor Technology Conferences – hosted by Southland Technology and GST

Three-year Summary Analysis

From 2016 through 2019, the AV Department has provided continuous planning and integration assistance for campus faculty and administrators seeking to update and refresh their audiovisual technology. Additionally, AV has provided regular troubleshooting and special event assistance. Due to the growth in demand for AV services, funding for additional Media Technicians and Media Clerks is essential.

From 2016-2018, the Audiovisual department received a total of $313,335 in funds for classroom repairs and refresh. From those funds, a total of 16 rooms have been completed and another 6-9 rooms are slated to be completed in 2018-2019.

AV has continued to update its production studio with new equipment such as microphone preamplifiers and compressors. These new items have been successfully used in multiple campus events and media productions. AV expects to continue to use this equipment and purchase new production studio equipment moving forward.

AV Multimedia Specialists, in collaboration with District IT, completed a campus wide firmware update for all digital signage Visix players at San Diego Miramar College and continues the integration of digital signage and digital signage refresh. Per District directives, the two L-Building kiosks were decommissioned. Campus administration directed the AV Department not to pursue the matter. Currently, the two kiosk stations are with the integrating vendor, CCS Presentation systems.

The AV Department continues its efforts to undergo professional development and training. In 2017 An AV Department Lab Technician became certified by Audiograph International in Pro Tools 101 and 110 (User Certification) digital audio workstation (DAW) software. Additionally, AV Department personnel has

attended Infocomm (2016, 2018), NAMM (2017), and NAB (2016, 2017, 2018) trade shows to participate in industry exhibitions and trainings.

The AV Department continues to advise and assist in the planning and integration of BYOD technology across campus. AV recently provided research and planning for the S5 Science Building integration whereby they recommended and procured quotes for integrating the Barco Clickshare BYOD device into the classrooms. Citing the cost of the unit and limited budget, the administrator declined to implement AV's suggestion. AV will continue to work on cost-effective and robust BYOD solutions.

Instructional Computing Support (ICS)

2016 –17

In 2016 ICS plans to begin production deployment of thin-client technology in selected open-labs, including the Library and the ILC. Current year IELM funds will be used to purchase additional licenses and hardware needed for scale out, and provide for increased capacity and reliability in the back-end.

ICS will continue to advocate for additional staff. Although thin-client is, in large part, driven by a desire to maintain a low headcount by increasing the ability to manage more aspects of campus technology centrally, this does not equate to ICS having adequate staffing. The campus is rapidly moving to the end-of-life for Windows 7, and beginning to see signs of age many of the systems purchased with prop S & N funds. Given the past level of growth, and as the College continues to grow, additional staff is needed to handle the physical workload in a timely manner and manage the various complex technologies being used.

New infrastructure and software to install and configure in 2016 will include primarily upgrades to existing equipment. Major items a Dell Equallogic SAN to upgrade our server storage, and provide better fault tolerance. A second SAN may be needed, and will be purchased from round two if necessary. An additional Nutanix node and a series of 10Gb switches will increase performance and reliability in the VDI infrastructure. ICS will migrate from Symantec/tape based backup to Veeam to better automate & protect the existing virtual infrastructure.

Aside from infrastructure projects, between $60,000 and $150,000 in new computers, printers and laptops will be purchased, as well as a rewiring of room I-127, which will clean up cabling and allow network equipment to be removed from the room and placed in the telecom room where it belongs. A large block of SSD drives is also being purchased, to be used to upgrade older equipment. Replacing an old mechanical hard-drive with a new, fast SSD may improve system performance significantly, and extend equipment life span.

In 2016, it is likely that at least some instructional systems will need to be upgraded to Windows 10. ICS is purchasing a number of SSD drives in preparation for upgrading systems as necessary to improve performance.

It should be noted that in April, 2016, the ICS Department Network Specialist accepted a new position as Miramar's ACS department Enterprise Network Specialist. The campus is seeking to reclassify the Network Specialist Position to a high level, given the current nature of duties for the position. As a result, it is expected that filling this position will take an extended period of time. This will delay some projects, such as thin-client and rolling out SCCM (Microsoft System Center Configuration Manager).

In late 2016, ICS ordered 132 (108 desktop, 24 laptop) new computer system to replace aging systems, as well as several replacement printers. These will be replaced as time/staffing allows through the Summer and Fall semesters.

There was $336,052 available in the 2015-2016 Fiscal Year for ICS Technology Refresh.

2017 –18

In the summer of 2017, ICS replaced a total of 493 computers on campus, consisting of 445 desktop systems and 48 laptops. The bulk of the summer was spent introducing the new Network Specialist to our roll out process (image creation, deployment, etc) and the physical distribution of the systems, including the roll-down of older systems and preparing older systems for surplus. Of note, ICS adopted Solid State Drives (SSD) as the new standard for instructional systems. SSD's are significantly faster than standard hard drives, but have less capacity for similar cost. A fully installed/configured instructional image, however, needs less than 150GB, so SSD's have become practical and affordable in the 256GB range.

As a result of the large number of systems replaced, the oldest systems on campus deployed in any significant number are currently Intel DQ67 based systems purchased in early 2012. These systems are capable of running Windows 10 and perform adequately for the tasks they are used for (primarily Office and Internet access).

The current year PPIS (formerly IELM) funding amounts to $171,818, and will replace approximately 170 systems on campus. The PPIS replacements will be rolled out beginning in the summer, 2018.

Windows 10 was rolled out to the campus with the new systems, beginning with the M building replacement. This was followed by the ILC, to ensure the open computer lab was configured similarly to the largest group of computer labs currently in use.

The switching between the vSphere hosts were successfully upgraded to 10Gb, and the SAN storage migrated to the newest EqualLogic storage.

ICS introduced more pro-active network/server monitoring and configured vSphere to provide enhanced uptime. Currently, ICS staff will be notified of any of a number of possible issues automatically. For example, when backup storage runs low, or an SSL certificate is expiring, or the web server becomes unresponsive, ICS staff receive an email notification. Additionally, certain host failures will result in automatic rebooting of the affected server, on another, healthy, host. Downtime in those cases would be measured in minutes.

2018-19

During the 2018-2019 academic year, ICS replaced 154 systems scattered around campus, upgrading computers in the Science buildings, the Police Academy, Aviation, Diesel, Child Development, Fieldhouse and Fire Technology buildings. This freed up sufficient DQ87 (Purchased in late 2014) to replace ost of the oldest systems on campus, except for the LLRC and a few special-purpose/dedicated systems). The oldest systems now widely deployed are currently DQ67's, nearly seven years old. It must also be stated that specialty labs – music and graphic arts – suffer disproportionately at low funding levels. First, there is nearly no chance that there will ever be roll-down Apple systems that are suitable for these areas, so they can only be replaced by new systems. The challenge is that new Apple systems generally cost significantly more than comparable Windows systems, so replacing a lab of Apple systems comes at the expense of two (or more) other labs.

Plans to update the hypervisor infrastructure were halted when our Network Specialist accepted a new

position outside the District.

2019-20

There were insufficient funds this year to make any significant upgrades, therefore the funding was used to renew needed software licensing and maintenance agreements, and the remainder was released back to BRDS and assigned to AV. The total expended for ICS licensing/maintenance agreements from PPIS was $35,179.

With the exception of a few systems dedicated to specialized lab equipment, the oldest computer systems deployed in large numbers on campus are now in the LLRC. The logical next upgrade is the ILC, with about 130 computers. Unfortunately, there was not enough funding in the 2018-2019 PPIS to replace the ILC, so it was decided to release the bulk of the "Technology Refresh" funds back to the Budget & Resource Development Committee (BRDS) where it was ultimately assigned for AV use. ICS retained $35K in order to maintain necessary licensing & maintenance agreements. Instructional Computing requested that BRDS

Three-year Summary Analysis

During the 2016-2020 Technology 2.x plan cycle, ICS replaced approximately 650 computer workstations to instructional areas, a little over 40% of the campus inventory of instructional systems. New systems were deployed with Windows 10, and SSD drives. The shortfall in funding during the third year not only reduced our replacement rate, but will have a ripple-effect for years to come as suitable roll-down systems become scarce.

On the back-end, ICS improved it's OS imaging & software deployment, back-end management and server uptime. Details of these updates shown below:

- Improved backup/restore capability by utilizing Veeam
- Upgraded switching between vSphere hosts to 10Gb
- Increased SAN storage
- Introduced better systems monitoring by using PRTG Network Monitor
- Decreased server downtime by implementing vSphere HA (High Availability); failed VM's automatically re-launch on available host server
- Implemented ticketing system
- Increasingly automated software deployments via group policy
- Implemented Windows Server Update Services (WSUS) to control aggressive, massive and rampant Microsoft updates to Windows 10

There were some notable setbacks in this three year cycle. Primarily, ICS lost two network specialists to internal and external advancements. As ICS has only one network specialist, each loss represents a significant amount of "brain drain", and more complex projects are delayed, deferred and may even require completely starting over. These losses highlight the critical nature of this position, and the need for a second Network Specialist, to provide continuity of knowledge. Given these losses, more complex projects have been put on hold or mothballed. A major project for the current year, examining the Acropolis hypervisors as a possible replacement for the aging vSphere hardware must now wait, and the thin-client system is effectively in a maintenance mode until we hire a new network specialist.

The fluctuations in funding and lack of staffing continue to be challenges. It is difficult to say for certain what will happen from one year to the next when funding varies so much year-to-year. Further, when ICS has only two full time technicians (A Lab Technician/C.S., and a Network Specialist), the loss of anyone represents a crippling loss of knowledge. There are many facets to the technology we manage, and when that knowledge must be concentrated in one individual, the department and the campus can ill-afford the loss of continuity when one leaves for any reason.

SDCCD Office of Information Technology (SDCCDOIT)

2017-18

Deployed the district wide 10GB Dark Fiber infrastructure to provide high speed redundant access to all SDCCD and Internet resources.
Deployed 10GB Miramar campus fiber access from the U-Building Telco to the Data Center for increased Intranet and Internet access.
Executed a wireless access point(AP) refresh of approximately 60% of the campus APs to new 802.11ac standard.
Performed 24/7 Enterprise monitoring, maintenance, and data backups of all Miramar College servers, Email, VOIP phones. network equipment, and related services. SDCCDOIT also provided Enterprise anti-virus, anti-SPAM, and network security for both individual and campus-wide systems.

2018-19

Network Upgrades. Upgraded network and wireless hardware with newer hardware to interact with the new software for application of security rules and monitoring of the switches and access points throughout the campus. ACS staff added additional equipment throughout the campus for improved wireless coverage.
Deliver campus network and power infrastructure enhancements. Working with ACI vendor for new and existing data for building and offices, insuring the work is complete.
Support deployment of new Peoplesoft Campus Solutions product through software, hardware, and infrastructure improvements.
Deploy Microsoft Office 2016 throughout the district.
Deploy Windows 10 for all new and upgraded workstations.

2019-20 (SDCCDOIT needs to provide an update here)

No update provided

Three-year Summary Analysis

No update provided

Web Services

2016-17

In 2016, the department, together with Instructional Computing Support and Institutional Research, began the planning and discovery phase of this redesign. We have been meeting with a representative population from all website stakeholders: administrators, faculty, students, and classified staff. These discussions are providing the department with valuable feedback regarding the current website, and an indication of stakeholder needs and wants for future incarnations.

Following the discovery phase, the department will begin the development phase. This will involve the

creation of 1–3 prototype designs, based largely on information gathered from stakeholders. With input from key people on campus, a final candidate design will be chosen over the summer. Fine tuning should begin in early Fall.

2017-18

The redesigned website was rolled out in July 2017 and was generally well received. The design and information architecture was accomplished with a big assist from Promet. However, the technical execution of the website, and the back end programming necessary to make it work, was left to us.

Like any major technological change, this has not been without its problems. Any website redesign, particularly when new software is involved, means ongoing testing and detection of bugs. Some unexpected behaviors are inevitable, and are dealt with as they arise.

The new responsibility for web content has been a major concern of faculty and staff. The department is making every effort to make this transition as easy as possible, while maximizing the user experience. Training/retraining of faculty and staff in the updating of content will be ongoing, and is now undertaken by the entire ICS department, thus allowing us to train more staff members. Furthermore, development of a more understandable, easier to use back end interface is ongoing.

2018-19

It was expected that this year would be spent with minor refresh (e.g., update the “look”, keep the site “fresh” and dynamic). This has now developed into a “major-minor” tune-up, including the organization of information on the website. For example, we have had some requests to restore the dynamic menus. While the trend in web design has been away from this feature, research is ongoing as to its feasibility and efficacy.

Most important is the tuning of the website’s information architecture based on the latest stakeholder input. Focus groups of each stakeholder contingency were held in mid to late 2017. When data from these groups has been aggregated, this will guide us in such areas as: what is the most important information for each group; where and how often to present this information; and changes that should be made to the website’s layout in order to make this information more accessible.

Work will also continue on essential features such as a news center page and an updated, in-template calendar. As more users are trained in content management, we will also begin hearing back from them regarding enhancements that they would like to see on the website’s back end.

We will also begin initial planning for the next major upgrade. Based on suggestions from the focus groups, there are areas of the homepage in particular that will be redesigned, when appropriate.

2019-20

It is expected that this would be a website upgrade next year. Not only will the website’s appearance be overhauled; content management systems will be examined, and tested as appropriate.

Three-year Summary Analysis

The last major website overhaul did not mean the end of the website development process. The department has continued to improve the website on a number of fronts. Most notable changes included the rollout in mid-2018 of our new Campus Calendar. This is a marked improvement over the previous one, as it is integrated with the rest of the website. An event entered on the website automatically appears on the calendar, as opposed to the old system requiring multiple entries. The calendar is stable and development is ongoing.

Other improvements included major adjustments to the website's mobile display. Google Analytics now shows that the majority of off-campus website visits now come from a mobile device. The major hurdle to a mobile site—technical issues in the theme—were fixed in late 2017, which enables continuous improvement.

Other challenges include accessibility and search functions. The former has improved tremendously, through use of the Bootstrap design framework. However, the objective is for the entire website to be as fully accessible as possible. As for the search function, this is an ongoing endeavor.

The redesign has pointed out some flaws in our data model; i.e., the way information is organized for display. While this is not easily remedied on the current site, it serves as a pathway for the upcoming upgrade. Furthermore, training is of paramount importance, in the way of training content editors across the college on the various functions of the website.

In short, the website redesign has been a learning opportunity for all involved, and both our successes and challenges will assist in moving the college forward into next iteration of the website redesign.

Overall Summary/Conclusion

In all, technology across the college has evolved, which has been grounded in districtwide efforts. Over the past few years, the district has concentrated on updating its Enterprise Resource Planning system in the form of PeopleSoft. This has provided a platform for the College to grow in the subsequent years to come. For instance, Campus Solutions has just come online and its related auxiliary applications such as CCCApply and SSO proxy, if approved, will allow the college to better collect data in meeting student need.

Statewide efforts such as Guided Pathways, Student-Centered Funding Formula, Vision for Success, and Student Equity and Achievement Programs (SEAP), are requiring colleges to examine the student experience as it relates to operations. Technology will play a key role in this major transition in the form of integrated systems. Moving forward, this will require increased collaboration between SDMC and the district.

Appendix

Appendix A: Resources and References

Accreditation Technology Standards

III.C.1

Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services.

III.C.2

The institution continuously plans for, updates and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs, and services.

III.C.3

The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security.

III.C.4

The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.

III.C.5

The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.

Appendix B: PPIS Technology Spending

PPIS Projections for upcoming years[1]:

BRDS - IELM Allocation	1637								
Accelerated Conservative - Consistant Funding For All									
		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Reserve		96,257	0	0	0	0	0	0
IELM		50,131	400,000	420,000	586,666	200,000 *	200,000 *	200,000 *
Total		146,388	400,000	420,000	586,666	200,000	200,000	200,000
Reserve	0.00%	0	0	0	0	0	0	0
Technology Resources	80.00%	117,110	320,000	336,000	469,333	160,000	160,000	160,000
Library Resources	20.00%	29,278	80,000	84,000	117,333	40,000	40,000	40,000
Total	100.00%	146,388	400,000	420,000	586,666	200,000	200,000	200,000

* Estimated State Allocation

PPIS Spending Plan for FY 2018-2019

1	Microsoft Dreamspark/Imagine	1	$320.00
2	Sassafras K2 Keyserver	1	$3,623.40
3	Windows Remote Desktop	50	$1,390.50
4	Wmware-VShpere VCenter	8,1	$3,905.94
5	Veem	8	$3,360.96
6	Vmware-Workstation-Fusion	4,4	$960.34
7	PRTG	1	$1,468.80
8	HP DL380-G7	3	$3,512.16
9	HP DL380-G8	1	$787.32
10	Dell Equallogic	4	$4,989.60
11	Dell M620	1	$1,458.00
12	Nutanix 1065-G4, NX-1350	2	$13,186.80
	TOTAL		$38,963.82

Please note, this plan is very preliminary and subject to change.

[1] These are estimates based on past data trends. Contingent upon actual state funding and technology trends.

ICS Recurring Costs

Item	Quantity	Cost	Total		
Sassafras	1460	$ 2.30	$ 3,358.00		
Microsoft Dreamspark	1	$ 320.00	$ 320.00		
Nuance Paperport Pro	1	$ 96.00	$ 96.00		
Safaribooks online	1	$ 421.00	$ 421.00		
VMWare VSphere Enterprise 8-Core	8	$ 356.00	$ 2,848.00		
VMware VCenter Server Standard	1	$ 619.00	$ 619.00		
vWorkspace Premier + Enterprise	400	$ 22.50	$ 9,000.00		Renewal cost per license
Equallogic CV8M9Z1	4	$ 944.00	$ 3,776.00		
Nutanix	4	$ 2,396.67	$ 9,586.67		
HP DL380G74	4	$ 800.00	$ 3,200.00		
Veeam Maintenance	8	$ 300.00	$ 2,400.00		Complete estimate
			$ -		
			$ 35,624.67		

BRDS 2017-18 AV Prioritization Classroom Upgrades

ROOM NUMBER	SCHOOL	BRDS PRIORITY 2017-18	BRDS PRIORITY 2017-18 Funded	AV NOTES
H210	Liberal Arts	7	$8,316.00	PHASE 2 REPLACE PROJECTOR AND BLU-RAY PLAYER
I105/106	Liberal Arts	9	$8,727.91	NEEDS FULL UPGRADE
I108/109	Liberal Arts	10	$10,038.72	NEEDS FULL UPGRADE
A220	Public Safety	11	-	
S5-207	MBEPS	12	$10,584.90	NEEDS FULL UPGRADE
S5-206	MBEPS	13	$10,584.90	NEEDS FULL UPGRADE
I125	Liberal Arts	14	$8,663.02	NEEDS FULL UPGRADE
I123	Liberal Arts	15	$8,663.02	NEEDS FULL UPGRADE
I124	Liberal Arts	16	$8,663.02	NEEDS FULL UPGRADE
		TOTAL	$74,241.49	

BRDS 2018-19 AV Prioritization Classroom Upgrades

ROOM NUMBER	SCHOOL	BRDS PRIORITY 2018-19	BRDS PRIORITY 2018-19 Funded	AV NOTES
A-221	Public Safety	5	15123.23	FULL UPGRADE
A-222	Public Safety	9	15485.27	FULL UPGRADE
A-226	Public Safety	1	15330.39	FULL UPGRADE
H-103	Liberal Arts	1	3518.94	PARTIAL UPGRADE
H-104	Liberal Arts	2	3518.94	PARTIAL UPGRADE
H-106	Liberal Arts	4	3518.94	PARTIAL UPGRADE
H-112	Liberal Arts	3	3518.94	PARTIAL UPGRADE
H-201	Liberal Arts	7	3777.70	PARTIAL UPGRADE
H-203	Liberal Arts	3	3777.70	PARTIAL UPGRADE
H-205	Liberal Arts	15	3777.70	PARTIAL UPGRADE
H-207	Liberal Arts	7	3777.70	PARTIAL UPGRADE
H-208	Liberal Arts	14	3777.70	PARTIAL UPGRADE
H-209	Liberal Arts	8	3518.94	PARTIAL UPGRADE
H-216	Liberal Arts	5	3518.94	PARTIAL UPGRADE
J-224	Exercise Science	8	13077.22	FULL UPGRADE
L-302	Liberal Arts	11	3518.94	PARTIAL UPGRADE
L-303	Liberal Arts	6	3518.94	PARTIAL UPGRADE
M-101	Business	2	8244.96	PARTIAL UPGRADE

M-102	Business	6	8244.96	PARTIAL UPGRADE
M-108	Business	13	8244.96	PARTIAL UPGRADE
M-110	Business	10	8244.96	PARTIAL UPGRADE
S5-102	MBEPS	12	11565.34	PARTIAL UPGRADE
S5-104	MBEPS	4	13407.00	PARTIAL UPGRADE
S5-208	MBEPS	1	11270.77	PARTIAL UPGRADE
S5-212	MBEPS	1	10687.78	PARTIAL UPGRADE
		Total	$185,966.86	

Appendix C: Technology Plan Rubric for Ranking RFF's

This rubric illustrates the general process by which the Technology Committee and support departments will review and rank funding requests. Budget and Resource Development utilizes its own rubrics which are not repeated here. For instance, Safety or Certification issues are dealt with at BRDS.

	High	Medium	Low	Should Fund	Should Not Fund
Scope of impact					
Can be funded/provided through other means?					
Critical in nature?					
Discussed in Program Review					
Feasibility				n/a	n/a

	Description
Scope of impact	Does this item impact or benefit the entire campus, or a portion?
Can be funded/provided through other means?	Can other sources of funds be used? Can the need be handled by existing equipment (such as roll-down) or resources?
Critical in nature?	Are there repercussions for not funding this that are significant?
Discussed in Program Review	Is the request discussed in a program review?
Feasibility	Is it likely to succeed or fail based upon realistic staffing/funding expectation? "Should/Should Not" fund is not an appropriate score for this item.