Administrative Services
Annual Program Review Report – 2009

I. Mission and Vision of the Program:

Computing Services is a service-oriented department that provides high quality technical support, computing systems and network infrastructure for credit, non-credit and extramural programs within the Maui Community College tri-island community.

Computing Services plans, obtains funding for, acquires, installs, and supports the appropriate/necessary equipment, software and communications for the education, training and use of suitable computer applications for instructional, academic, administrative and student support for the college's tri-island community.

Computing Services provides computing hardware and software management in support of the daily operation of the college. Functions include hardware and software support services, network infrastructure and Internet access support, computer and peripheral installation and repair, institutional research support, computer programming support, and server & maintenance support for departmental and campus unit systems. Additional functions include instructional and consultation services for computer hardware and software, network infrastructure design, and training and information technology implementation services to assist faculty and staff in the use of software/hardware and new computing systems. (See attached for Functional Statements)

II. Year's goals, plans and accomplishments

   A. Goals:
      1. Reorganize college IP addresses for initial adoption of Ipv6 (ongoing). (SP G1, O1, O2; G2, O2)
      2. Commence implementation of IPv6 standard. (SP G1, O1; G1, O2; G2, O2)
      3. Replace Maximo work order system with Maximus WebEX system. (SP G1, O1; G2, O2) Develop preventative maintenance module listings for each department (ongoing). (SP G1, O1; G2, O2)
      4. Decommission legacy DEC VAX equipment. (SP G2, O2)
      5. Purchase/Install NetEnforcer or similar device to monitor and manage network traffic to insure quality of service.

B. Additional goals and objectives for this year:
6. Commence planning and preparation to upgrade campus wireless network encryption standards from WEP to WAP for added network security. (SP G2, O2)
7. Install, configure, and place into service media server for video streaming. (SP G2, O2; SP G3, O1)
8. Complete Library building upgrade – new Ethernet cabling, upgrade of wireless access. (SP G2, O2; G5, O2)
9. Install additional wireless AP units towards goal of ubiquitous wireless network. (SP G2, O2; G5, O2)
10. Begin implementation from standard telephone network to VoIP system.
11. Combine Computing Services and Media Center into a single organization unit headed by IT/Telecom administrator.
12. Reduce turn around time for work orders to FY2005-2006 statistics (2.7 days).

A. Accomplishments:
1. Reorganized college IP addresses into subnets (ongoing).
2. Commenced implementation of IPv6 standard (ongoing).
3. Computing Services is using a modified version of the Maximo work order system until O & M deploys Computing Services module into the Maximus work order system. Computing Services is assisting with development of work order modules for Maximus implementation (ongoing).
4. Decommission of legacy DEV VAX on hold until Maximus work order system is implemented (see #3).
5. Installed Sun 2100 network traffic analyzer to monitor and record network traffic.

B. Additional goals and accomplishments for this year:
6. Preparation ongoing for transition from WEP to WAP wireless encryption standards.
7. Installed and configured a new digital media content server. Allows departments to build a digital content repository for course instruction.
8. Installed 15 additional wireless units. Campus now approximately 95% wireless complete.
9. In coordination with UHCC system, Computing Services is currently testing an upgraded telephone system (VoIP) for eventual UHCC system-wide implementation.
10. Completed Library building network upgrade.
11. Completed upgrades of new and/or refurbished computers to nine labs – Kupa'a 203 & 204, Ka'a'ike 107, 108, & 219, Kalama 209, and the three Skybridge studio/classrooms on Lanai, Molokai, and Hana.

12. Commenced initial phase of MCC Netbook Project.
13. The average work order turn-around time decreased from 3.8 to 3.5 days.
14. Integrating Computing and Media Services into one organization. Currently implementing projects integrating IT, Research Support, Media Production staff and clerical services.

III. Analysis of quantitative and qualitative data.

    A. Quantitative Data.

        The number (FTE) of technical staff remained at five. Work orders increased by approximately 25%. Work orders outstanding at the end of 2009 increased from 169 to 864. Upon inquiry, it was discovered a majority of the outstanding work orders were completed, but not 'closed'. This practice has been corrected. Categories C thru E show a marked increase of between 45-50% in each category. Category F increased by approximately 20%. The average number of work orders completed per technical staff increased by approximately 30%. There was also an increase in the number of computers per technical staff of 30 units. Average work-order turn-around time decreased from 3.8 days to 3.5 days.

    B. Qualitative Data.

        A user survey was performed this year. Data is included in the attached table. Data reflects satisfactory performance in the following categories:
Staff courtesy: *89.3%* satisfactory rate
Access to campus Internet system: *84.9%* satisfactory rate
Computer classrooms/labs adequate: *86.1%* satisfactory rate
Software in classrooms/labs adequate: *77.4%* satisfactory rate
Campus system: (website, email, etc): *91.5%* satisfactory rate

IV. Next year's goals, plans and objectives.

    A. Goals:
        1. Begin implementation of remote access management services campus-wide (Active Directory).
(SP G2, O2; SP G3, O1)
        2. Replace Maximo work order system with Maximus WebEX (AiMS) system. Currently assisting Operations & Maintenance

with deployment of Computing Services module (ongoing). (SP G1,O1; G2, O2)

3. Decommission legacy DEC VAX equipment. (SP G2, O2)
4. Install an upgraded bandwidth management solution to monitor and manage network traffic to insure quality of service. (SP G2, O2; G3, O1)
5. Reorganize college IP addresses for initial adoption of Ipv6 (ongoing). (SP G1, O1, O2; G2, O2)
6. Commence implementation of IPv6 standard. (SP G1, O1; G1, O2; G2, O2)

B. Additional goals and objectives for this year:

7. Implement Kupa'a Math Lab redesign – new Ethernet cabling, upgrade electrical system, add approximately 75 workstations to rooms 101, 102, & 203. (SP G2, O2; G5, O2)
8. Implement roll-out of Netbook Initiative. (SP G2, O2)
9. Install additional wireless AP units towards finalizing ubiquitous wireless network. (SP G2, O2; G5, O2)
10. Commence upgrade from Office 2000 to 2008 for all labs and classrooms. (SP G2, O2)
11. Commence migration from XP to Windows 7 for all labs and classrooms. (SP G2, O2)
12. Implement additional data and cyber security measures. (SP G2, O2)
13. Commence planning and implementation of virtualization project. (SP G2, O2)
14. Research viability and/or need to implement a campus-wide Internet filtering project. (SP G2, O2)
15. Implement campus-wide e-mail alert notification system. (SP G2, O2; G5, O2)
16. Plan and prepare for wireless upgrade from current system to proposed wireless N system, modeled after UH Manoa's recent system upgrade. (SP G2, O2)
17. Combine Computing, Media and Telecommunications into a single organizational unit headed by IT/Telecom administrator.

V. Resource needs and priorities.

A. Needs:
1. Implement remote access management services campus-wide. This would allow remote access to classroom and lab computers for on-going management, security audit, scanning and assessment of workstations.

2. Implement WAN/LAN optimization program. This ensures mission-critical applications run smoothly at all times without interference. Allows precise depiction of bandwidth utilization in real-time and over time. Allows network manager to optimize network performance by allotting bandwidth for prioritizing applications.

3. Hire MCC webmaster/programmer to ensure MCC website is fully operational, with up-to-date content information. Computing Services support and daily operations has been affected due to this vacancy.

4. Increase in staff. A 1.0 FTE IT Specialist (casual) for evening and weekend frontline support should be considered. This position would assist students and faculty with user-name and password access issues, wireless access, personal laptop configuration, and assisting faculty and staff with trouble-shooting and IT support for classroom instruction. As noted in attached table, the need for faculty, student, and staff software and user support increased in FY 08. If this position were added, evening computer support would promote user satisfaction, increase evening campus infrastructure support, and assist with the increase in demand for user services. (SP G2, O2)

5. Equipment & support requirements:

   - Remote Access Management
     This would allow for remote inventory management of computers, from initial deployment to ongoing management to eventual retirement of workstations. This would also allow for remote access for software installation, installation of security patches, and updates for the OS, including disk imaging, imaging of the OS, network OS installs, and system repair and recovery. If desired, remote backup of devices can also be accomplished.

   - Server Virtualization
     An investment into a blade server or similar device would allow for implementation of a virtualized server. This would eliminate approximately eight older PC/servers currently in use, reducing staffing resources, electricity consumption and air conditioning requirements. As back-up drives are a key component of virtualization, disaster recovery is an additional advantage.

- Network WAN/LAN Upgrade
  Additional equipment to optimize network data should be purchased. This would allow network traffic to be tracked and integrated into quantifiable data. This data can then be used to optimize network traffic and plan for future growth.

- Application Upgrades
  A campus-wide upgrade to specific applications and software is recommended to improve student learning. These upgrades would include migrating from XP to Windows 7. Windows 7 offers improved bandwidth management and network security. We also recommend the campus transition from Office 2000 to Office 2008 in all labs and computing classrooms.

- Ancillary Air Conditioning Unit
  A self-contained air conditioning system should be added to the Ka'a'ike server room as soon as possible. The current cooling system is operating at maximum capacity and can no longer keep the room within optimum operating temperatures. This unit is required to ensure safe operating temperatures of delicate computer equipment now in service, as well as additional cooling capacity for the foreseen increase of computer and auxiliary equipment. Also, in the event of the campus cooling system failure, the ancillary cooling unit can be employed to insure adequate cooling until the main system is back on line.

Functional Statements

1. Implement the Computing Plan of Maui Community College.

2. Facilitate, locally, plans of the University of Hawaii Information Technology Services and IT Offices of the other colleges in the UH system.

3. Assess college computing needs.

4. Obtain funding for software, equipment and program support through budget requests and grant proposals.

5. Acquire and install software and equipment necessary for college computing infrastructure, including network and central servers for file service and printing.

6. Configure and maintain/repair network and server equipment/software that is required for infrastructure, including wireless network and college web site.

7. Provide programming services to create unique systems or tailor purchased systems for campus-wide or system-wide use.

8. Provide advice and assistance in purchasing departmental and campus unit software, computers and peripherals.

9. Install and configure departmental, campus and outreach unit software and hardware.

10. Provide programming and server support/maintenance for departmental or campus-unit systems, such as Compass, Skills Bank, and student digital media file access.

11. Maintain and repair departmental, campus and unit computing equipment and peripherals.

12. Inform and train faculty and staff in the use of software/hardware and new systems.

Quantitative Data:

COMPUTING CENTER	FY2005	FY2006	FY2007	FY2008	FY2009
A # of Work orders completed.[1]	1252	1293	1798	1415	2010
B # of Work orders outstanding at year-end.	12	12	22	169	864
C # of Requested data uploads/downloads completed.	253	252	272	330	689
D # of Computer installations completed.	48	106	153	293	569
E # of Other hardware installations completed.	56	61	65	189	460
F # of Software installations for faculty, staff, asst.	439	167	251	482	587
G # of Software installations for classrooms/labs	1072	1742	3493	1829	2792
H # of workstations on campus at end of the year.	1167	1196	1248	1306	1480
I Computing Center technical staff FTE.[2]	4.5	4.6	6.3	5.0	5.0
J # of Work orders completed per technical staff	278.2	281.1	285.4	283.0	402.0
K # of workstations on campus per technical staff	259.3	260.0	189.1	261.2	296.0
L Average days to complete a work order	3	2.7	3.2	3.8	3.5
M # of Student UH account problems resolved.	328	311	201	192	198
N Computing Center non-technical staff FTE.	0.5	0.5	0.625	0.0	0.5
O Computing Center Budget[3]	$248,431	$258,972	$492,800	$576,980	$528,723
P % Comp Ctr Budget/Overall College Budget	0.80%	1.15%	1.00%	1.00%	1.82%

[1] Workorders account for approximately 45% of Computing Services work and exclude those of Webmaster starting FY07.

[2] Technical staff includes Webmaster starting FY07 & Computing Coordinator prior to 10/01/06; FY2006-07 includes Computing Coordinator before retirement and part time 1/01-6/30/07, and technician overtime.

[3] Beginning FY07 the budget includes Computing Coordinator's pay and Infrastructure Upgrade funds.

Quantitative Data:

Staff is courteous and helpful

33.0% completely agree
50.0% agree
5.3% disagree
1.1% strongly disagree
10.6% no opinion
(94 respondents)

Access to campus Internet system is adequate

29.8% completely agree
52.1% agree
8.5% disagree
2.1% strongly disagree
7.4% no opinion
(94 respondents)

Computers in labs and classrooms are adequate

25.5% completely agree
59.6% agree
7.4% disagree
1.1% strongly disagrees
6.4% no opinion
(94 respondents)

Software in labs and classrooms is adequate

22.6% completely agree
54.8% agree
9.7% disagree
2.2% strongly disagree
10.8% no opinion
(93 respondents)

Campus systems (website/email, etc.) are adequate

30.9% completely agree
60.6% agree
2.1% disagree
1.1% strongly disagrees
5.3% no opinion
(94 respondents)

Comments:

1. Wi-Fi is clunky. Would be nice to log into a secured UH Wi-Fi instead of having to set up, I tried set—up on Tuesday and I was blocked. My laptop is Wi-Fi pre-installed.

2. Excellent service. Keep it up!

3. Access for wheelchair users is inadequate with computers.

4. No comments.

5. More computers is always good.

6. It would be helpful if there were more wireless Internet areas. It would also be helpful to have a map or list of locations where these areas are posted somewhere where all students have access to this information.

7. N.A.

8. The administrative staff are every wonderful. They put a lot of hard work and dedication in everything they do.

9. More software needed for ABIT upper level classes.

10. The campus Internet system is a little too complex to get started on a laptop.