2012 Evaluation Visit

March 19-22, 2012

Interviewee: Frank Camacho

Interviewer(s): Milton Higa and Victoria Rosario

Venue: TC Rm#1210

Other Participants: None

1. What are GCC’s plans for the LRC’s labs?
	* Upgrades are being done on a 3-year replacement cycle and are only conducted when funding is available.  This plan covers the LRC labs and this replacement cycle is stated in our EA/ITSP documents.
2. How many open labs does GCC have?
	* We have 3 open labs available for the whole day or during GCC’s official business hours, and we have a few that are open only during certain times of the day when they are not in use for classes, especially our Mac labs at the Technology Center.  The 3 open labs are the 2 adjacent open labs at the LRC and 1 at the Student Center.
3. How many labs do you have and how do you support those labs now?
	* GCC’s definition of labs also include mini-labs with 5 or more computers and standard labs are those consisting of 20 or more computers.  On campus and inclusive of high school satellite labs, we now have 60+ computer labs.  For support, we have two Computer Technicians and one Computer Operator and they are primarily responsible for both on-campus and satellite labs.  We also use Work Study students and we currently have two of them.  As additional support and only during peak usage, the remaining seven MIS personnel will sometimes pitch in to help out with basic lab support.  Although we provide support of these labs, we do not and cannot keep any MIS staff situated fulltime in any lab during its open hours, whether it’s an open lab or an instructional lab.  This is because we have over 1,000 computers in all, and we still have to complete submitted work orders, provide support for our ERP, network, legacy systems, WiFi, servers, networked printers, etc..
4. How does GCC go about technology upgrades?
	* All workstations to include employee offices and labs’ computers are on a 3-year replacement cycles, with servers at 5-year cycles, and are conducted depending on funding availability.  Primary funding source for the majority of labs come from the Student Technology Fee and some areas use grants or departmental budget.  The MIS and the CTC will develop and recommend computer standards that will then be used as bid specifications.  The bid is conducted and awarded and units are procured and installed according to the most feasible and least disruptive schedule.  Other specifications are drafted and additional bids for all other types of information technology items such as servers, network equipment, specialized applications/software, technical services, Internet bandwidth, etc. are mostly managed by MIS and if not an operational matter and necessary, are channeled into the CTC agenda for discussion, approval, and recommendation.
5. How are you licensing the software for your computers?
	* As part of the standards and as part of bid specifications, licenses are procured together with the equipment.  Depending on number of licenses, upgrade requirements, software type, and whenever necessary, we also procure volume licensing and/or site licenses of software for computers.
6. What funding is in place to ensure upgrades are done?
	* The primary funding source is the Student Technology Fee for most technology upgrades, especially for labs, network, Internet bandwidth, and software purchases that impact student learning outcomes and administrative unit outcomes.  For our Enterprise Resource Program (ERP), majority of funding for upgrades, when available, come from appropriated funds or existing associated grants.  For newer types of technology or systems, the college seeks new grants and sometimes use foundation money.
7. Do you have computer standards?
	* Yes, we do and we evaluate and, if necessary, update them every six months.
8. What types of backups do you do and do you do them daily, and where do you store them?
	* We have tape backups and on-disk/online backups.  We conduct daily backup, full system backups on a monthly basis, and we use Oracle’s RMAN for on-disk/online backups of our databases which we then backup to tape.  We store our backups off-site at a bank’s vault and we keep them there with additional tapes being sent every week.  The latest backup is always onsite.
9. Are you planning on doing off-island or cloud-computing backups?
	* We have looked into this and at this time, the cost to implement is just not feasible.  This is due to high bandwidth requirements and the infrastructure to put this in place is not financially feasible for the college, especially if the service is off-island.
10. Is GCC doing any type of cloud computing now?
	* Yes, we do but limited due to bandwidth availability.  A few of our cloud computing environment include Software as a Service (SaaS) for our Library Portal Dynix/Symphony, Plato Online Math, TouchNet Gateway and Hosting services for PCI compliance, and our Acalog for our online Catalog system.  Coming up next is our public website, [www.guamcc.edu](http://www.guamcc.edu), which is being upgraded and under development.  This site is expected to be ready by June and will be hosted outside our network.
11. What do you have in place for disaster recovery or continuity of operations?
	* Currently, we fully rely on our systems’ tape backups stored at the bank’s vault.  If any catastrophe should occur and our server room is completely destroyed, we will have to restore the tape backups into a compatible system either on- or off-island and make it accessible to our users over the Internet.  The main issue we have with this is not having a readily available site to do exactly this; however, we have attempted a bid in the past to create a redundant systems and network environment, but unfortunately the submitted bids were beyond the available budget and it was cancelled.  We have not completely abandoned the project as it is now part of the five-year initiatives, as stated in our EA/ITSP documents.
12. Will you be using cloud computing for your ERP?
	* This is another one of those systems environment we have looked into, and again at this time, the cost to implement is just not feasible.  Similar to my answer before, this is, again, due to high bandwidth requirements and the infrastructure to put this in place is not financially feasible for the college., especially if the service is off-island.
13. How is your systems environment now?
	* Integrated and much more stable than 6 to 8 years ago.  We now have an integrated database management system between different functional areas of the college with BANNER and a Self-service system through MyGCC / LUMINIS portal for students and employees to allow them, among many other things, to either register and pay for classes, check grades, use e-mail, see announcements, view payroll checks and related employment information, respectively.  We have a more stable and secure network environment than ever before with the implementation of switches, routers, firewalls, and network monitoring systems.  Our WiFi is being expanded and we have a total of 30Mbps Internet bandwidth from two different ISP’s, compared to a 1.544Mbps leased line from a single ISP from long ago.  We have more up-to-date computer hardware and software.  We have virtualized our ERP servers and looking to do the same with our legacy servers.
14. What are we doing to secure our system?
	* Our systems are secured via unique usernames and passwords.  For systems requiring additional security we also implement VeriSign’s Secured Socket Layer certificates.  In areas where security is not a high risk, such as in open or instructional labs, systems and their desktops are readily accessible without the use of unique logins and passwords.  However, when accessing the MyGCC portal, e-mail, or other secured systems, unique logins and passwords are in place.
15. What does GCC have to protect its systems?
	* We have authorized personnel access only to server rooms and MIS offices; surveillance cameras in offices and labs;  Uninterruptible Power Supply for protection against unstable electricity; secured computerized rooms; use of IDs; asset tagging and inventory; and, real property insurance, etc..
16. What have you done to determine your level of security?
	* We implemented various physical and digital security measures based on internal system reviews and testing.  We have also conducted systems and network penetration testing and successfully resolved minor security risks.  We have implemented firewall security, enterprise antivirus systems, anti-spam systems, content filtering, active network and systems monitoring, hardened servers, expanded surveillance systems, and have a fulltime personnel also charged with access security.
17. What is your security or password policy?
	* For our ERP/MyGCC portal, we have a 6-month password expiration policy that requires a minimum number of characters to be used along with a digit and special characters.  Immediate past passwords are also not allowed.  Other ERP systems can also be directly accessed with unique usernames and passwords that can be optionally setup to expire.
18. How do you manage authentication of networked resources?
	* Depending on the networked resource, the most common authentication method is simply a unique username and password.  For WiFi, it is mostly open access, but future measures are being drafted to provide more security for our wireless resource.  For e-mail systems, users can optionally authenticate directly to the mail server via their MyGCC portal access, or, if using standalone clients they can use secured SSL ports.  For labs’ computers, open access to the desktop is available since it is not a high security risk.
19. What policies do you have in place for technology?
	* We have an e-mail directive (policy), online policy and procedures, and distance education policy.
20. How is the College Technology Committee working out and who is represented?
	* It’s working out great.  Faculty, staff, and administrators are represented.  Students are also invited and we used to have one attend the meetings, but now students are not present at meetings.  We discuss technology issues, plans, and work towards either resolving issues or solidifying technology-related plans and making recommendations to the President via the CGC.
21. How does your area stay current with new technology?
	* We stay current with technology when funding is available and we get approval for the procurement of new equipment, software, services, and/or subscriptions, and formal training.  We go online and search the WWW for new things related to technology and also conduct self-training activities.
22. Are your staff members sufficiently trained to fully support your users?
	* We provide the best support we can for our users with our current know-how and existing resources.  For technical areas that are beyond our level of expertise, we contract with our ERP vendors, or the technical support of other software/hardware vendors.  We also utilize, as much as possible, warranty or guaranty clauses for products and services to help us in troubleshooting, repairing, or maintaining  software and hardware.    Although I feel we are providing a satisfactory level of technical support to our users, I believe MIS can be more effective if up-to-date training is conducted to improve upon current skill sets, especially in areas that will be highly beneficial to maintain our ERP and in anticipation of what’s ahead as stated in the EA/ITSP documents.
23. How are you supporting your current ERP?
	* Internally, we provide basic user technical and functional support, but for advance technical and/or functional ERP support, we have a high reliance or dependency with ellucian (formerly SGHE) and other third party vendors, like TouchNet. Functional users use ellucian’s CSC site (customer service center website) to submit service requests and trouble tickets, while MIS technical support use ellucian’s SNOW trouble ticketing system (Service Now system).
24. What is GCC doing regarding energy usage of information technology?
	* This is an area we are currently looking into as it is part of our institutional priorities of “greening” our campus.  Part of what we have completed related to this is virtualizing our ERP servers, which resulted in the reduction of power consumption due to the decrease of number of physical servers.  Also, the CTC has approved and passed the laptop initiative to encourage users to procure laptops for the next upgrade of their desktops instead of getting another new desktop.  We have also started discussing the new “Green Data Center” for MIS and we have participated in conferences to learn more about this topic and to gain a better understanding of how to work towards desirable level of power usage efficiency.  Other things we have done is setup computers to automatically shutdown at a certain times if they are left on afterhours.
25. What is your Internet bandwidth now and how do you manage this resource?
	* Our Internet bandwidth now is at a total of 30Mbps.  We do manual load-balancing between two Internet Service Providers (ISP’s) and we proactively monitor usage to determine problem areas and to plan for a more even distribution of Internet traffic or flow, or to start looking at increasing bandwidth resources.  We put in place various system restrictions or mechanisms to reduce unwanted traffic going in or out of our network and the Internet.  Any Internet-related or network traffic that pose a high risk or a high threat to the availability of bandwidth is either restricted or throttled to low speeds or capacity.  We use network software tools such as Solarwinds’ Orion, etc.. and Dartware’s InterMapper to monitor and manage traffic, and in addition we also use the routers’, switches’, or firewalls’ built-in management interface.
26. What are we doing now for DE and do you feel GCC is prepared to support it?
	* Although we have online materials available, a portal, websites, and other mechanisms in place to make us believe we are doing some level of DE, GCC is still behind in achieving a true DE environment.  We have conducted a Technology Audit that has resulted in the EA/ITSP documents which we will use to guide us in moving forward or in making progress with DE.  The DE write-up of the EA/ITSP documents provides us with an idea of the tasks ahead.  So at this time and based also on the EA/ITSP documents, it is my professional opinion that so much more work needs to be done to make DE at GCC fully supported.  Infrastructure, technical support specialists, content specialists, web designers/developer, technical training, hardware, software, network upgrades, marketing and research, as well as funding, are just some of the things that must be addressed and planned for in order for GCC to fully deploy and support DE.
27. What type of studies have you done to determine the demand for DE with GCC?
	* From my department, we have not done studies to determine this demand.  However, based on my reading of many related articles and attendance at conferences, global trends in college-bound students are showing a generation of these individuals will be demanding colleges and universities for more DE offerings.
28. What things did the team want to see or find out about your program, department, or unit?
	* They didn’t ask to see anything and they didn’t even want to visit the server room or our office areas.
29. What issues did they raise?
	* The issues they raised are the questions they were asking and Milton Higa was very concerned about our DE endeavors. One of his concerns is on whether GCC has determined the actual demand and the feasibility of its potential students to acquire an education via DE. Especially if Guam’s own island telecommunications infrastructure may not be that robust or may not completely cover all areas of the island, and if the majority of our student population is not equipped with a home computer with Internet access.
30. What did you not expect from their line of questioning?
	* I was expecting anything.
31. What questions were you unable to answer?
	* I answered every question, however, my answer may just be not be as positive as I would like it to be, especially the last one on DE.  My responses to their questions may also not be what they were expecting or were probably expecting more.
32. What thoughts/suggestions do you have as a result of your interview experience?
	* I think it went well and I met with both Milton Higa and Victoria Rosario, but I didn’t get to see or meet Rhea Riegel.