



Rio Hondo Community College

**Information Technology Strategic Plan
FY 2006-2009**

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Executive Summary

Technology Vision Statement

The Rio Hondo Community College strives to offer excellent and innovative educational opportunities to its students to participate in research activities, to develop collaborative skills and to pursue technology enabled creative activities. It will also seek to provide quality technology information, technology assistance and integrated information services for all faculty, staff and students in support of learning objectives and lifetime career paths.

Introduction

In the workplace of today and the rapidly changing future, today's student will need to acquire information processing skills, develop creative presentations of their work, use online collaborative tools with ease and utilize their advanced technology skills in every aspect of their work and personal lives. With the emergence of an ever changing, fluid information society and world wide connectivity being made available to all individuals, it is a necessity that all students, faculty and staff feel at ease with the new information and technology tools that will be required in their present and future activities. Educating our students for the world of tomorrow necessitates that the Rio Hondo Community College acquire and appropriately implement these technologies.

It is our task to ensure that these technology projects are designed, coordinated and implemented in a timely and systematic manner in order to serve and facilitate the teaching and learning mission of the Rio Hondo Community College. A timely, seamless implementation of these major technology projects is needed in order to enhance and expand technology-enabled learning for all the constituents involved—faculty, staff, community and most importantly the students served--while reducing costs by the efficient installation and effective implementation of these technologies.

Summary

As the Rio Hondo Community College struggles to deal with the pressures of rapidly evolving information technologies, the need for continuous innovation, and the pressures of technology funding priorities it is imperative that the college use its available resources to install, and implement its core infrastructure to ensure connectivity in every classroom to the Internet, to integrate campus wide administrative systems and to establish effective security systems of the campus wide infrastructure. This expenditure often involves the purchase of various assets, i.e. mainframes, servers, operating software, communication systems; cabling and connectivity; as well as funding of technology personnel. This core will provide students with an electronic and information based infrastructure, faculty with effective administrative systems, and the Information Technology department the ability to assure on-going maintenance and security of these assets.

In addition, technology implementation should then expand out to the individual classrooms, computer labs and specific buildings that will provide the instructional tools (i.e. presentation equipment, networked personal computers, etc.) and resources for faculty, staff and students. These technologies will provide the basis for an enhanced learning environment, better communication and the development of competitive, marketable job skills for the college's students.

Furthermore, no technology implementation would be completed without the concurrent as well as ongoing professional development of faculty and just-in-time training of staff. The development and integration of the following skills i.e. E-mail, Internet usage, word-processing software, database software, publishing applications, Web Protocol, and online data analysis are essential. If the college is to improve student learning outcomes and productivity gains for staff. Research studies have stated and proven that just-in-time support and ongoing training improves the overall adoption of new technologies and eases the integration of instructional technology practices into the curriculum.

With a timely implementation, concurrent, ongoing monitoring and evaluation of technology milestones in the college's strategic technology plan. We can meet our ultimate instructional goals as outlined in this document.

Rio Hondo College has been successful in implementing technology for many years. Our major goal in technology implementation is: "To meet the changing technological needs required to support the educational process and to enhance student access and success".

Our challenge in technology planning for the next 10 years is to consolidate and build on the achievements already made. Our technology priority are now being given to planning with knowing that it encompasses the facilities master plan, the educational master plan, Bond building program and the technology plan.

We have also been working with Vantage Technologies our IT consultant to develop and define new Technology Standards for the new and remodeled buildings. This will help ensure future technology development is compatible with the college current technologies.

Technological Learning Environment:

The success of an academic technology plan can be measured by the effective use of resources to support successful learning outcomes for students. With this goal in mind, close attention to project costs, seamless implementation and project management of technology resources are key factors in obtaining the desired end result.

By fiscal years 2009/2010 technology at Rio Hondo Community College should support our learning environment with the following characteristics:

- All course management activities (e.g., rosters, prerequisite checks, testing, grading) are supported by the new Banner/AccessRio course management systems.
- Faculty and students have access to technology tools which assist in measuring student progress against learning objectives throughout the semester.
- State-of-the-art teaching and learning technology for students and faculty includes online web access to computing, communication, and collaboration tools are currently available.
- We have implemented a new Blackboard Web accessible distance learning software and it is hosted off campus for 24/7 access and support.
- Information literacy is embedded throughout the curriculum to build students' critical thinking skills and to ensure a skill-set that will assure successful careers for our graduates.
- Students, faculty, and staff currently have access to technology training, help-desk support, and other technology-enabled support services.
- Network connectivity is enhanced so that data, voice, and video can be delivered to classrooms or individuals, and campus-wide wireless connectivity is available in many locations across the campus.
- A wide variety of networked library/information/learning resources including published electronic text and testing materials are made available from local, regional, national, and international sources.
- Faculty and staff have real-time and accurate data access to appropriate individual student information allowing a better understanding of student progress and facilitating quality advising, i.e. with new Banner/AccessRio MIS system.
- All campus classrooms are networked and have appropriate electronic display and presentation equipment.
- Teaching computer labs are available to faculty for instruction and course development.
- Assistive technologies campus-wide should be acquired and implemented to increase access to learning opportunities for our students regardless of their disabilities.
- A secure Wireless system is currently accessible in all buildings, around buildings, quads and student gathering areas.

Technological Learning Environment –cont-:

- Access Control System for buildings – Our current one card ID system is being upgraded and implemented so we can have ID card access to doors as new buildings or remodel building come on-line.
- Security – Camera Surveillance system are being implemented as new and remodeled building come on-line.
- Student, staff and faculty self service access to personal data is available with our new Banner/AccessRio or AccessRio MIS system.
- We have created a video projector and AV standard for campus-wide implementation.

I. Integrated Administrative Systems (MIS):

The Rio Hondo Community College has engaged in a system-wide project to replace campus legacy administrative systems with an enterprise-wide best practices solution for student fee processing, human resources, and student administration. This solution will improve the collection, information processing and retrieval of all data pertinent to the college's financial, human resources and student administration needs.

A. Enhance Student Experience with Self-Service Access to Information and Services

Web based self service allows students to conduct administrative activities such as registration, fee payment, and personal information updates in a timely, efficient manner. Rather than visiting a number of offices on campus during business hours, completing forms, and obtaining signatures, they can complete these administrative tasks anytime (24/7), anywhere, and therefore streamline the registration process. These changes allow the student to focus more of their time on learning activities as opposed to time consuming administrative tasks, will reduce the paperwork processing workload of administrative staff and streamline the registration process. Real-time access to student data information and services provided, such as degree audit, help students make appropriate decisions to more effectively and efficiently move them through their academic career choices and outcomes.

Strategy

- Implement Banner/AccessRio Information System including the following modules:
 1. Academic Advising - degree audit, transcripts, advising
 2. Financial Aid - applications, status, awards
 3. Student Records - online web registration, student services
 4. Admissions - online applications, transcripts, transfers, test scores, online catalog
 5. Student Financials - fees, account status, fee payment
 6. Implement a Human Resources and Financial Aid systems to aid the information processing and decision making needs of the administration, faculty and staff.

Performance measures

- Integrated support modules
- Distance Learning – Virtual College
- Student Satisfaction and Success
- Ease access to data and information

Projects Accomplished

- Review current Santa Rosa MIS (Complete)
- Define manual processes which need to be automated (Complete)
- Define system inadequacies (Complete)
- Modified Santa Rosa MIS system to accept Electronic Signature on-line (Complete)
- Rewrote Santa Rosa MIS to accept PFN and the key field not the SSN (Complete)
- Made major modification to our Santa Rosa MIS Max Hours report and other FTES programs (Complete).
- Start design and training of the new Banner/AccessRio MIS (On-going)
- Develop and train User Area's on the new Banner/AccessRio system (On-going)
- Evaluate and write current MIS business rules (BPA) Complete)

- Develop Banner/AccessRio Data Standards (Complete)
- Data Migration to the Banner/AccessRio system (Complete)
- Define and write Banner/AccessRio functional user interface projects (In Progress and 50% Complete)
- Develop Banner/AccessRio User Access Security Team to determine who can access certain data (Complete)

Recommendations

The following are some of the steps we have followed in our evaluation and potential system integration: (All items below in this Recommendation Section have been completed):

- County PeopleSoft Accounting and Payroll Systems
- County HR and College HR interface systems
- FAM Financial Aid System – (Scheduled for replacement in 2010)
- Escape Purchasing System
- EPOS Touch-tone Registration system, now Tier Technologies (Being phased out)
- EPOS On-line Student Support system (Being phased out)
- Eliminate as many scanning applications as possible under Banner/AccessRio (Scanning for Administration of Justice and Community Services)

Note:

The SAFER Financial Aid System runs on the HP3000 will be used until Banner/AccessRio Fin Aid is implemented. Integration will have to be with the Regent Financial Aid Management (FAM) system. We will replace it with the new integrated Banner/AccessRio Financial Aid in Spring 2010.

The touch-tone and web systems will not be evaluated for integration. These systems are specifically written for the Rio Hondo's Santa Rosa MIS. This system will be phased out with the implementation of the new Banner/AccessRio MIS.

- Performed site visits and interviewed clients to see if the system actually delivers all that it promises (on-going)

New MIS Selection to Implementation (All these activities have been completed):

- Determined the MIS applications or modules to be replaced.
- Established college evaluation committee
- Established college evaluation committee
- Considered ease of integration with the following systems:
- The Evaluation Committee agreed on at least two vendors and makes recommendations
- Vendor Contract Negotiated
- Board Approved purchase of SunGard's Banner/AccessRio software
- Determined Database Management System, i.e. Oracle
- Determined HP hardware platform & maintenance requirements
- Started implementation Process
- Hire Project Manager to coordinate the software implementation process
- Determine key users for the implementation
- Hire back-fill staff for key positions during implementation
- Database training and implementation
- Started Training on HR, Fin Aid and student modules (Scheduled for June 2010)

- The Mock implementation processing under Banner/AccessRio begins in May 2009 (On Target)
- Human Resources Banner/AccessRio module go live date is Summer 2009
- Student Banner/AccessRio module go live date is October 2009
- Fin Aid Banner/AccessRio module go live date is June 2010

B. Assure faculty have the most efficient administrative tools to support students

It is essential that faculty have consistent and accurate information for advising students and managing courses. Student biographic and demographic data provides faculty and department chairs with information to effectively structure programs and courses to meet student demand. While this information has always been collected, immediate access to student data, facilitated through the power of technology, (i.e. integrated enterprise-wide information systems) will empower educators to target instruction to areas of students' greatest need. This data accessibility will increase the quality of academic advising as well as student assessment, tracking and grading. The time that would otherwise be spent on these administrative tasks will allow for improved curriculum outcomes.

Strategy

- Implement new Student Administration Banner/AccessRio (MIS), including the following modules:
- Academic Advising - degree audit, transcripts, advising
- Student Records - online grading, student services and fees
- Web-enabled data/information access and reporting
- Web-enabled grading
- Provide faculty and department chairs with an improved picture (demographic data) of their students

Performance measures

- Faculty satisfaction and student success
- Augment student assessment with direct data analysis and support resources.
- Student's progress toward completion

Projects Accomplished

- Complete new Banner/AccessRio MIS software implementation (80% Complete)
- The design and training on the new Banner/AccessRio MIS with Mock student registration scheduled for May 2009 with the Go Live date of Oct 1, 2009 (Complete).

Recommendation

- All major components of the new Management Information System (MIS) have been purchased.
- Continue the timely implementation of the New Banner/AccessRio (MIS) system. (The Human Resources and Student modules have been completed and the Fin Aid is scheduled to Go Live Spring 2010).

C. Assure staff have access to effective and efficient administrative systems to support the campus mission

Recognizing the value of staff resources and their importance to the campus mission, more efficient administrative tools will be implemented to ensure all administrative functions (i.e. Human Resources, Student Service's support and financial processing, etc.) have the tools they need to effectively do their jobs. In addition, a training program will be developed with specific department areas to improve the skill sets of all staff and provide for improved workplace processes.

Strategy

- Implement Human Resources (Human Resources, Financial Aid and other software modules within the new Banner/AccessRio MIS system. This system's implementation will enable the streamlining of work processes, provide real-time data for decision making, and facilitate internal administrative tasks (In Progress).
- Web-enabled data/info access and reporting (Complete)
- Continued operation of stand-alone admissions front-end to Student Information Systems for prospects and applicants and evaluation of future options
- Provide campus personnel tools to view and update their personal information
- Implement a program of training and certifying all office support staff on core (productivity) software (MS Office, Outlook, Excel, PowerPoint) and other software specific to their departments

Performance measures

- Availability
- Staff, faculty and student satisfaction
- Increased access to data
- Streamlined work processes and procedures

Projects Accomplished

- Implementing new Banner/AccessRio MIS software (Complete)
- Standardized the network technology so that the same version is used throughout the network (Completed).
- Standardized the version of Microsoft Suite applications used on the network so users can share files without compatibility problems. (Continually being reviewed and updated)

Recommendations:

- Annual review of the College's Technology and user needs (On-Going).

D. Support institutional knowledge management for effective decision making

Information based decision making requires an integrated data environment at every level of the organization. The long term needs of the campus have been identified to include both historical reporting and analytical (decision support) capabilities. These needs require integrating data from multiple sources and utility of campus-specific subsystems i.e., with data from other applications (e.g., cashiering, EOPS, Disabled Students, etc) into a unified campus MIS reporting environment. In addition, all integrated networks need to comply with major security protocol guidelines in order to assure systems stability and security.

Strategy

- Customize standard reporting solution to meet campus specific needs
- Develop campus specific views of reporting data for faculty and staff
- Develop views of management data that measure institutional performance to improve executive decision making
- Provide accurate and timely information to the Board in order to support policy and data driven decision making

Performance measures

- Improved institutional effectiveness and productivity
- Seamless integration with campus MIS sub-systems

Projects Accomplished

- Started Banner/AccessRio MIS software implementation in September 2007 (Complete with Oct 2009 Go Live for Student and started Phase II implementation).
- As of March 2009 the Banner/AccessRio design and user training is on complete, with the Student module training on-going for students.

Recommendation:

- Continue the MIS development under the new Banner/AccessRio system under Phase II.

E. Assure the maintenance of a secure infrastructure to support the integrity of information assets

The Rio Hondo Community College strives to offer excellent and innovative educational opportunities to participate in research and creative activities. The availability and stability of network and computer resources are critical in meeting these goals as increased accessibility to information technology resources also raises the danger that these resources may be infringed upon or compromised.

In addition, all integrated networks need to comply with major security protocol guidelines in order to assure systems security in a consistent and efficient manner. Also all new technology implementation must follow the technology standards recent developed by Vantage our IT consultant and agreed upon the college's technology users.

Strategy

- Follow new technology standards
- Develop campus wide security strategic plan
- Establish security policies and procedures

- Coordinate the remodel of the Computer Center
- Provide security awareness and training for faculty, staff and students
- Incorporate system security issues in curriculum development
- Improve facilities to provide physical security to information assets
- Establish proactive monitoring and auditing of system security
- Conduct periodic vulnerability assessment of system security
- Review, develop plans, and make adjustments necessary to improve the effectiveness and efficiency of the college's technology plans and implementation
- Maintenance of the technology infrastructure

Performance measures

- Improvements in infrastructure and network security
- Implementation of technology standards
- Implementation of operational practices
- Implementation of security policies and procedures (i.e. intrusion detection, timely incident response, adherence to security protocol, etc.)
- We have established a quarterly evaluation process to ensure the latest and more efficient technology is being used.
- IT meets with infrastructure experts regularly to investigate and evaluate new technology
- Plans have been developed to upgrade various components of our network as needed.
- When new servers are added to our network we ensure that their performance is efficient and they operate effectively on the network, i.e. Banner/AccessRio software (23) new servers, Financial Aid's new Scholarship, and the Health Center new MedPro server, etc.
- Set-up a virtual network in the new LRC and Data Center.

- **Infrastructure/Network Upgrade**

Project Title	Activity	Start Date	Status
Network Security Review	Hired consultant to review the college's network security. Many short-comings were found and recommendations were made to improve our network integrity campus-wide.	12/2003	Completed as of 12/30/07
Firewall Upgrade	Installed a network Firewall to provide anti-virus, anti-spam, and anti-spyware capability.	03/2004	Completed as of 12/30/07
Networking Filtering	Worked with consultant to improve network security by filtering different unauthorized user log on.	10/2004	Completed as of 12/30/07
Air Conditioning upgrade	Added Air Conditioning to the Computer Center to provide adequate cooling for our Server Farm.	10/2004	Completed as of 12/30/07
Power Backup Upgrade	Based on consultant review, we provided cleaner and more backup power for the network servers and data equipment.	10/2004	Completed as of 12/30/07
Network Switch Upgrade	We Upgraded our 15 year old network hubs with improved programmable switches in all buildings.	11/2004	Completed as of 12/30/07
Intrusion Detection System	Worked with a consultant to install Intrusion Detection Systems that monitors malicious network traffic that can impair network operations.	11/2004	Completed as of 12/30/07
Data Closet Upgrade	Re-cabled all data closets with a cable management system for growth and management of our network connections.	07/2005	Completed as of 12/30/07
SAN Storage System	Worked with consultants to install a large centralize storage system (SAN) to better management of all servers and applications.	11/2006	Completed as of 12/30/07
Email Server Upgrade	Replaced our e-mail system with a larger, more robust server and latest version of Outlook. We are working with a consultant to improve the reliability of our email application and to set-up a cluster of servers.	12/2005	Completed as of 12/30/07
Emergency Broadcast System	Installed and currently testing the college's Emergency Broadcast System. This is a network managed system that will simultaneously broadcast to speakers, computers and telephones campus-wide.	12/2005	Completed as of 12/30/07
LRC Workaround	We plan to install over (3000 ft) of fiber-optic cable to the lower campus because when the Putnam Center is removed it will cut off our network path to the lower campus.	02/2006	Completed as of 12/30/07
Desktop Computer Management	Purchased, installed and implementing the LANDesk software that will manage all desktops connected to the network to insure proper updating of security software.	01/2006	Completed as of 12/30/07
Voice-over-Network	We have upgrading our network to support telephone over the network. Phase I of three phases has been completed. Phase II will start with the new remodeled buildings, i.e. Applied Technology, PE Complex; and Phase II will start with the occupancy of the new LRC building.	02/2006	Phase II is Complete as Sept. 2008
Data Backup System	Working with consultant to develop a method of data backup that will extend the backup window to around-the-clock. This system will back-up all data stored on the College's network. We currently back-up our data only nightly.	02/2007	Completed as of 12/30/07
Air Conditioning Upgrade	Soliciting Bids to upgrade the Computer Center's Air Conditioning to support our current and next 5 years network equipment needs.	02/2006	Completed Jan 2009
Power Generator	A generator system is currently being installed that will provide critical backup power to the Computer Center's network.	10/2007	Completed as of 1/30/08
UPS Upgrade	Currently awaiting Computer Center Power upgrade.	02/2007	Completed as of 12/30/07

Project Title	Activity	Start Date	Status
Campus-wide Infrastructure	The campus-wide Infrastructure projects is 90 % completed and it contain the Fiber Cables the technology communications backbone.	10/2006	Completed Mar. 2009
Campus-wide Wireless Network	A secure campus-wide Wireless solution is currently being installed.	08/2007	Completed 12/30/07
Messaging System	The Berbee Emergency Messaging System was upgraded and tested	10/2/2008	Completed 1/10/09
Business Building Network	The Switches in the Business Building containing 300 voice and data ports was replaced	10/2/08	Completed 1/10/09
CAD/GIS Network	The Cad/GIS network was upgraded with new cabling plan and network switch	9/1/2008	Completed May 2009
Business Building N	The Network switches in the Business building that supports 300 computers has been replaced with the latest technology	8/1/2008	Completed April 2009
Virtual Network	Wev have set up a Virtual Network for security and reducdacy	8/1/2008	Completed Jan 2010
Secondary Network	We have created a secondary network in the new LRC building for back-up and network security.	8/1/2008	Completed Nov 2009

Recommendations:

- Ensure network connectivity is in place for the Banner/AccessRio MIS hardware - Completed
- Intrusion Detection / Intrusion Prevention in regularly monitored -Ongoing
- Network Traffic Flow in monitored - Ongoing
- Continue network upgrade and security enhancements.
- Develop user security standards for the Banner/AccessRio software access – Completed).

Recommendation for FY 2008-2009:

- **Server Virtualization:** This technology has been available the last ten years and many Fortune 100 companies are now relying on server virtualization. It provide us the ability to combine 10 servers into 1 physical box can save substantially not just on hardware cost, but power and air conditioning needs as well. Virtualization really shine when it comes to backup and redundancy and server malfunctions because other servers can take on the role of the downed server (Complete).
- **Network Upgrade:** Our plan is to purchase 10 gigabit speed switches which can be used as a single port to connect for both VoIP phone and desktop computers. We plan to upgrade areas of the College with larger concentration of computers to the new speed gradually. Since the price for 10 gigabit switch speeds is still high, we will phase in as the need for higher bandwidth arises (Complete)..
- **Virtual Desktop:** We are gathering information on how we may create a new computing environment for students. We would like to assign each and every student when they register a virtual desktop computer. This is taking the idea of a personal email account and expanding it to an entire desktop environment. This is a personal computer they will be able to access from anywhere permissible on campus and possible from off-campus. The virtual desktop computer can be designed to use any lab on campus with physical access. This is a way to assign a computer to each student without having it physically sit in one place (On-Going).

II. Electronic Learning Infrastructure

A. Provide software, hardware, and networking support for faculty, staff, and students

Support faculty, staff, and students to ensure they are able to effectively utilize desktop and personal computing technologies to meet academic goals.

Strategy

- Provide a help desk single point of contact for all areas of software and hardware technical support
- Provide effective repair and maintenance of campus computing equipment by providing ongoing on-site technical support
- Implement best practices for online documentation and resources
- Implement best practices for support using both traditional and new technologies, e.g., call routing and real-time and asynchronous online support and resources
- Support distance and online education through enhanced support including special evening hours help desk support
- Provide specialized support for assistive technologies
- Provide IT support to faculty and staff
- Support students via 24 hour access to support services, via the help desk (Pending staff augmentation).
- Provide a robust and secure e-mail system for electronic communication with students and faculty

Performance measure

- Faculty, staff, and student satisfaction and success
- Help desk response time
- Service request time is monitors
- 24/7 distance learning support for faculty and students

Projects Accomplished

- In years 2004-2008 we upgraded our network, installed more fiber and Cat 5 network cables, purchased new software, i.e. network, security, computers, email, software and infrastructure)
- In 2007-2008 we upgraded and purchase additional network technology to support the college's on-going needs.
- In 2008-2009 we upgraded the network switches in of Business and CAD/GIS areas. These areas support around 450 student computers.
- On Distance Learning WebCT software was considered obsolete and the College moved to Blackboard , IC a remote hosted solution on-line system
- In 2008-2009 we upgrade our email system to a new more robust software and larger server.
- In 2008- 2009 we move the IT department Helpdesk to the technician area for faster access and service to the college's computer user community.
- In 2008-2009 we purchased and installed around 185 new PC, MAC, laptop computers and various printers and scanners.
- In 2008-2009 we renewed our software support agreements with Microsoft, Mc Afee Anti-virus and other major system campus-wide to stay abreast of the latest technologies.

- In 2009 we implemented the technology in the new LRC building and added 500 PC & MAC computers.
- In 2009 we completed the technology component in Phase I and Phase II for the remodeled Applied Technology building and started the network design for Phase III the final building.

Recommendation

- Continue to evaluate College's network technologies
- Continue evaluating the College computer operation and support
- Continue to upgrade software campus-wide to the latest versions to ensure better service to our staff, faculty and students.

B. Assure faculty, staff, and students have access to secure and maintainable networked personal computers

With software development driving desktop configurations at an ever-increasing pace, a systematic approach to providing adequate desktop computers to all faculty and staff is required. To provide needed functionality and reduce the total cost of ownership, a desktop refresh cycle that guarantees an adequate and secure computing device must be implemented. Older machines which cost significantly more to maintain, are less functional, and they threaten network security or the security of confidential data must be removed from the network.

Strategy

- Continue the annual review of the computers status campus-wide and follow the established computer upgrade and replacement plan that reflects a secure and supportable computing environment.
- Ensure all new computers acquired are purchased with a three-year warranty
- Develop clear standards for supported versus non-supported hardware and software
- Computer inventory procedures are in place and the database is updated regularly
- Machines that compromise the college's network, systems, or confidential data are removed from the network
- Develop a desktop computing environment which allows rapid, central updating as required to maintain security

Performance measures

- Percentage of computers are updated or replaced regularly
- Support the College's licensed PC software (Microsoft & Macintosh) and update it as needed
- Implement Total cost of Ownership measures to include purchase, help desk support, and On-going maintenance costs
- Faculty and staff satisfaction

Projects Accomplished

- Network Installed CASE software for network monitoring and updating of all PC.
- We have develop a computer database, inventory and computer effectiveness plan to helps us determine when a College computers needed to be replaced. We implemented 1500 computers in 3 phases as listed in chart, plus new PC were purchased and installed in the new LRC building

- **Computer Upgrade/Replacement**

Phases & Process	Activity	Completion Date
Phase I	Develop a database to determine the campus computers that need to be replaced.	Jan 2004
(750) Computers	Develop computer replacement specifications	Mar 2004
	Review & finalize departmental computer needs	Apr 2004
	Present Phase One computer purchase plan to Board as a information item	May 2004
	Present PO and//or Bid document to Board for approval	Jun, 2004
	Purchase (550) Gateway PC's, (60) Gateway laptops, (60) CAD) and (80) MAC computers and (14) servers	Jul , 2004
	Completed Phase I computer installation	Completed Nov. 2004
Phase II Replacement of (750) Computers	Develop a database to determine the campus computers that need to be replaced.	Mar 2004
	Review & finalize departmental computer needs	Apr 2005
	Present Phase Two computer purchase plan to President's Cabinet	Apr 2005
	Present Phase Two computer purchase plan to Board as a information item	Jun, 2005
	Present PO and//or Bid document to Board for approval	Jul 2005
	Purchase (506) Dell PC's (64) Gateway laptops, (100) CAD) and (80) MAC computers and (11) servers	Completed Aug 2005
	Completed Phase II computer installation	Mar 2006
Future Computer Replacement Plans	The ITS department based on a complete inventory of all college computers determined that every 3-4 years our computers may need to be upgraded or replaced.	Phase Three Upgrade planned for Aug. 2008
Process	The ITS department performed an inventory of all computers on campus and determined their upgrade or replacement status.	Apr 2008
Phase III	We replaced (185) computer, printers and others related equipment	Completed Dec. 2008
LRC Computers	We install 500 new PC & MAC computers in the new LRC building as part of our upgrade plan.	Completed Nov. 2009
Applied Technology Computers	We plan to install over 200 new computers in the remodel Applied Technology Building .	Scheduled for Mar 2010

Recommendations

- Annually review personal computers and software to determine if upgrade or replacement is needed
- Implement security measures such as encryption for sensitive data transported using public lines
- Ensure the instructional/student computers are our highest priority for are upgrading or replacement.

C. Assure effective use of both centralized and decentralized computer labs

Student computing labs are an essential and expensive part of the campus learning infrastructure. Given the growing cost constraints on college and Information Resources budgets it is imperative that expenditures in this area provide the most cost effective student learning environment possible. To assure the wise use of our limited student technology dollars we will implement the following.

Strategy

- Analyze the current computer inventory and usage by students
- Seek ways to share existing labs
- Seek ways to reduce hardware and software costs by combining labs and leveraging our purchasing power
- Analyze opportunities to share lab management
- Review the role of general versus discipline-based student computer labs
- Assess the equipment needs of computer labs which may include the following:
Designated computer labs will have the following equipment which may include, but not be limited to a computer, projection device, interactive whiteboard, printer, projection screen, TV, CD-ROM/DVD-ROM drive, speakers, sound recorder and other emerging technologies.

Performance measure

- Quality of access, as defined by staff, faculty and student satisfaction.
- Ensure campus computer labs meet the needs of the curriculum

Projects Accomplished

- The college's computer labs have been updated with the latest hardware and supportable software. The last update was 2009.
- 1500 new computer were installed in 2004 and 2009 in phases. Phase II was completed in 2009
- Over 550 new computers and 30 printers were purchased and installed in the new LRC building in 2009h
- In 2009-10 60 new computers were purchased for our CAD/GIS labs.

Recommendation

- Continue to monitor and support the computer needs of our (19) computer labs, computer driven classrooms and staff and faculty.

D. Continued expansion and development of the college's voice and video Telecommunications Infrastructure

Our current Ericsson telephone is capable of supporting the college until the new and remodeled buildings are completed, thus we developed telephone replacement process in three phases. Another important factor is the VoIP system will become the front end of our telephone operations, meaning it will be the callers' first contact to the college and then it will connect to the older Ericsson phone system until it's phased out. This will provide for uninterrupted telephone service and easy installation of the new VoIP telephones.

With the new Voice-over-the network (VoIP) emerging and the college to add more staff and faculty and the new building program the need for improved and expanded voice and video technologies is here. A strategy for building and maintaining an infrastructure based on a utility model is an absolute requirement. The network infrastructure must provide adequate network pathways telephone and other communications devices to meet the needs of faculty, staff, and students.

Strategy

- Meet future communications demands with a complete build out of the campus phone system
- Provide effective and efficient network services for voice, and video technologies by utilizing the rebuilt network infrastructure
- Modernize the current telephone infrastructure to reduce costs and enhance service
- Continue development of a network infrastructure to accommodate the needs of remote and mobile (wireless and wired public access point) users

Performance measures

- Improved availability and performance
- Ensure that our network communication ports meet our baseline standards
- Reduced costs of telephone service through voice over IP
- Ensure our wireless access is meeting the needs of students, staff and faculty

Project Accomplishment

- In 2007 (77) VoIP phones were installed in Phase I and other VoIP telephones.
- In 2008 Phase IIa over 100 VoIP phones were installed in various areas around campus due to movement of existing and new staff.
- In 2009-10 Phase IIb (200) VoIP phones are planned for the new LRC building and the remodeled Applied Technology and PE complex.
- In 2000 our new AV standard was created and we purchased and installed over 30 new projectors and 10 new projector/PC standalone podiums in our new LRC building.

Recommendation

Continue the review, evaluation, development and implementation of the new telephone technology (VoIP) and integrating it into the new or remodeled buildings come on line.

- Continue upgrading our Video technology to the desktop
- Continue expanding of VoIP telephone system campus-wide
- Continue to upgrade and improve access to our Wireless technology campus-wide

E. Assure access to appropriate classroom technology

Faculty and students are increasingly reliant on the Internet and computers as part of their learning environment. To accommodate access to these resources during class, the majority of classrooms on campus must be equipped with network access and either built-in display technology or accessible portable equipment. Classrooms require ongoing funding for cyclical replacement of software and hardware and support/maintenance of existing classroom equipment.

Strategy

- Ensure that the new Technology Standards are part of all current and future classrooms
- Meet the campus need for classrooms that include a minimum of data projection equipment and a dedicated, centrally supported computer
- Support department-specific versions of classrooms where the computing environment is supported by the college
- Develop and implement an efficient, sustainable plan for classroom support
- Continue to seek new computing, and networking solutions to assist classrooms instruction
- Continue to purchase equipment, update software, and provide support for classrooms
- Provide selective wireless connectivity for portable and hand-held devices in classrooms as needed
- Redesign the college portal to most effectively provide information to faculty, staff, students, prospective students, parents, alumni and the community and enhance their perception of the college

Performance measures

- Faculty and student satisfaction
- Number of Smart Classrooms as a percent of total centrally scheduled classrooms
- Our network infrastructure has been upgrade to support the college's computer hardware and software needs; and the network performs at a seed that is above 50% capacity.

Projects Accomplished

- Since upgrading of network is an integral component of College's communication infrastructure. We have developed a computer hardware and software upgrade plan, including our new classroom Technology Standards and wireless communication implementations.
- In 2009 we have incorporated our new Audio Visual, Network, Wireless and Smart classroom standards into the planning. Thus, in 2009-10 we implemented our Virtual Network and add an additional 1GB Internet line. for the new and remodeled LRC, Applied Technology, PE Complex and AJ Administrative buildings.

Recommendation

- Continue the evaluation of these technology components as part of the ITS department's annual review.

F. Provide an online interface to campus services, transactions, resources, and systems

The Rio Hondo Community College website and Luminis portal will complement one another by providing access to both general and personalized online services. The portal allows students and faculty to get information and complete transactions with different computer platforms without going through separate sign-on processes. The implementation of Student AccessRio system will facilitate the move to the Colleges new Luminis portal which integrates seamlessly with enterprise wide management information systems.

Strategy

- Continue to develop and improve our virtual college (distance learning) environment
- Single common user interface to applications, information, and services
- Transparent integration and seamless interaction between faculty and students, and the AccessRio system
- Continue to improve the campuses communication tool, i.e. Internet, email, MIS, etc.
- Platform for accessing personalized relevant information and managing information overload
- Promote student self-service technologies to reduce college costs; and was made easier with the implementation of our AccessRio system.
- Redesign the college portal to most effectively provide information to faculty, staff, students, prospective students, parents, alumni and the community and enhance their perception of the college

Performance measures

- Seamless integration of systems
- Increased faculty adoption of on-line teaching
- Accurate and reliable support for learning and on-line teaching
- Ease and reliable student Web access their personal information
- User satisfaction

Projects Accomplished

- On-line instruction is an integral part of our new Banner/AccessRio software implementation, and with the purchase and implementation of Blackboard, Resources25, Luminis, CurrluNet and other 3rd party software we will have in place a user friendly Web accessible AccessRio system for staff, faculty and students.
- In 2007 the College purchased the Blackboard on-line instructional software and contracted with them Host it via the Web for faculty and student access. In 2009 we upgraded our Blackboard hosted system to support more user storage and teacher accounts.
- In 2009 we create a new Virtual College lab in the LRC to train and assist faculty with their on-line teaching development.

Recommendation

- Continue the evaluation and development of these components as part of a College-wide on-line teaching curriculum.

G. Develop an enterprise-wide learning management system

The current learning management system provides a number of learning tools (e.g., content management, communication, assessment, etc.) and supports minimal integration (receipt of user, course and enrollment information) with the student information system. Future generations of the learning management system will see improvements to course tools and more comprehensive reporting of learning activity data to allow continued enhancement of the educational experience.

Strategy

- Continue to support a learning management system as part of the portal and eventually integrate with the new Banner/AccessRio student system
- Ensure faculty and students obtain maximum value from the new Blackboard learning management system by providing the resources and technical support
- Develop a vision for our second generation learning management system that will best support faculty and students and provide analysis of online learning, i.e. Blackboard.

Performance measures

- Ease of use for faculty to design courses
- Ease of use for students in their course work
- Decreased required administrative tasks required of faculty and students
- Increased faculty and student satisfaction

Projects Accomplished

- Will become an integrated component of new Banner/AccessRio MIS system and Banner/AccessRio's Luminis self service portal. This project is scheduled for Aug 2010 implementation.

Recommendation

- Ensure these needs are reviewed and integrated into the Banner/AccessRio MIS implementation

III. Technology-Enabled Teaching and Learning

A. Use technology to refocus resources on learning

Reduce the time students, faculty, and staff are required to spend on non-learning activities by utilizing improved processes and learning management tools. Also, combine changes in instructional methods with course software to improve the quality and quantity of education delivered.

Strategy

Ease student clerical and administrative burdens through

- Technology to improve time management (integrated course calendars, assignment alerts,
- Technology to reduce time required by non-learning activities (registration, advising, etc.)

Ease faculty clerical and administrative burdens through

- Reduction of “technological overhead” (classroom setup, course material preparation, etc.)
- Use of technology to reduce clerical burdens (setting up course rosters, grading, etc.)
- Making instructional technology seamless and ubiquitous

Ease staff clerical and administrative burdens through

- Self-service Web transactions for many faculty, staff, and student processes
- More efficient transactions through technology and process redesign

Increase learning effectiveness with:

- Course management software that more accurately tracks individual student progress providing better assessment and accountability
- Improved student outcomes through the use of technology to compress the learning cycle (e.g., using and creating models, simulations, and new testing apparatus to reduce set-up time and increase active learning time)
- Combination of changes in instructional methods and technology to manage increased numbers of students in certain kinds of classes while maintaining quality
- Refocusing of human resources on faculty-student contact and communication time

Performance measures

- Faculty, staff, and student satisfaction
- Measurable increases in learning outcomes (e.g., drop, withdrawal, failure (DWF) rate)
- Demonstrated cost savings (e.g., reduced printing costs)
- Utilization of online learning tools (e.g., online syllabus, automated testing and scoring)

Projects Accomplished

- We are implementing the new Banner/AccessRio MIS system with the “Go Live” dates of:
 - Human Resources – June 2009- completed
 - Student – October 2009 - completed
 - Fin Aid – June 2010
 - Luminis – July 2010
- The New Distance Learning system is a remote hosted system called Blackboard and it was purchased and implemented in Dec. 2007 and our Blackboard storage capacity was increase in 2009 so more classes could be added and developed.

Recommendations

- Ensure these needs are reviewed and integrated into all new technology implementation including our new Banner/AccessRio MIS system and its Luminis Portal Interface.

B. Train faculty, staff, and students on new technology hardware and software

The rate of technological change requires a continuing investment in faculty, staff, and student training. All faculty, staff, and students must have access to up-to-date training in the use of all appropriate technologies from office tools to courseware. Faculty will need training in order to incorporate best practices for technology-enabled instructional methods into the curriculum, staff will need training in technology solutions that improve and facilitate their job related activities and students will need training to enhance their learning experience as well as develop specific job related skill sets.

The Rio Hondo Community College will be committed to provide professional development based on staff needs to (1) increase productivity, (2) improve communication, and (3) integrate technology into the curriculum.

Strategy

- Provide faculty and staff training programs that meet the diverse needs of individuals. Programs should combine traditional workshop training, just-in-time training, and self-service resources
- Complement existing academic courses with online information, just-in-time workshops and point of need instruction to improve information and computing literacy
- Make available Staff Development funding for technology training

Performance measure

- Faculty, staff, and student participation
- Faculty, staff, and student satisfaction
- Funds are available for the high-cost technology training.

Projects Accomplished

- We are using the College's Technology Training whenever possible to train our faculty and staff on many applications, i.e. Outlook, Microsoft applications, WebPages development, WebCT support, and other applications.
- We also have programmers and technician available to train staff and faculty on as new software applications are implemented, i.e. Log In (Student Lab Tracking); Deep Freeze (Lab Computer Restore Software); Red Canyon (Help Desk system), etc.
- Much of the staff and faculty have implemented their own software applications and received training as part of the purchase, i.e. Med Pro (Student Health Center); Scholarship system (Fin Aid); Math and other instructional applications.

Recommendations

- Ensure technology training is part of the college's Staff Development Program whenever possible.
- Ensure a training component is part of all departmental software purchases.

C. Promote the successful integration of instructional methods and technology

New technology expands learning opportunities; however, it also requires new pedagogical approaches to improve learning outcomes. Therefore, implementation of any technology plan requires the dissemination of successful technology-based and instructional method models to assist faculty in incorporating these models into the curriculum.

Strategy

- Provide continuous opportunities for training on the successful application of technology in teaching and learning
- Encourage collaboration to identify and share best practices in teaching and learning with technology
- Support technology integration through the provision of grants and funding for such efforts whenever feasible.
- Communicate and diffuse successful technology integration efforts through various channels

Performance measures

- Faculty and student satisfaction
- Utilization of appropriate technology
- Increased use of best practice learning models
- External recognition of Rio Hondo Community College best practices learning models

Projects Accomplished

- On-going IT department's involvement when requested

Recommendations

- Assist the various instructional areas in developing technology integration plans on program by program bases.

D. Create a strong connection between classroom and online learning environments

The college classroom will continue to be the primary location for face-to-face, faculty-student interaction. The use of online technologies and resources can flourish if they are accessible both in and outside of the classroom. Thus, effective utilization of digital technology in classroom communication is critical not only to learning within the classroom, but providing continuity outside the classroom as well. In addition, classroom communication can be enhanced by allowing students access to an instructor's web pages in order to share information, provide course syllabi, and other instructor generated information.

Strategy

- Provide tools that allow faculty members to easily bring material from their desktop computer, learning management systems, and the Web, into classroom presentations and discussions
- Demonstrate the effective use of online technology in the classroom
- Allow students to better communicate with each other and access electronic resources in and outside the classroom

Performance measures

- Increased use of online and digital technology in the classroom
- Faculty and student satisfaction and success
- Enhanced student faculty communication

Projects Accomplished

- IT is a member of the Virtual College and Web Committees where these projects are addressed
- Information Technology Department's programming and technical staff are regularly involved
- Is heavily involved with supporting the college's Distance Learning faculty and staff; and is an integral part of the Virtual College technology planning and Implementation.
- In 2007 and upgraded in 2009 - the college purchased Blackboard an on-line instructional system that's Web Hosted.
- We are creating the new Smart Classroom model and have implemented it in our new and remodel buildings in 2009. This technology is utilizes a high-end fixed projector system with built-in podium with a laptop or desktop computer with document imaging hardware enclosed; and other remote devices.

Recommendation

- Develop plans or program wherever possible to integrate the distance learning components within the Banner/AccessRio MIS system. Complete Fall 2009.
- Continue developing the Smart Classroom.

E. Support and sustain a distributed learning environment

A distributed learning environment opens up new opportunities for both on- and off-campus students. This environment includes online, partially online, and Web-enhanced classes. The college will need to implement the tools that will enable this type of learning environment by investing in technologies that enable distance learning.

Strategy

- Encourage the successful use of synchronous and asynchronous Internet tools. Tools include learning management systems and synchronous class participation tools (i.e. web pages)
- Archive existing courses. Course presentations can be stored and made accessible for planned and unplanned asynchronous viewing
- Develop online courses. The development of fully asynchronous courses requires not only the availability of tools, but faculty and staff development time.
- Weave various technologies into an integrated learning environment

Performance measures

- Increased options for local and remote students
- Increased numbers of non-classroom-based students
- Faculty and student satisfaction and success
- Increased student and faculty communication of learning objectives.

Projects Accomplished

- Information Technology Service's Web Developer is the co-chair of the College's Web Site Committee where some of these projects are addressed. IT also has several staff members supporting our distance learning area.
- The college has contracted with Blackboard Learning to host our distance learning program.
- The Information Technology Department's programming staff is routinely involved in supporting this environment, by ensuring the computers, Internet, network and Web access remains updated..

Recommendation

- Develop plans on program by program bases to integrate or interface the Web processes into out new Banner/AccessRio software utilizing the Lumnus software module we purchase with the SunGard system.

IV. Information Literacy

Information-literate students have the following characteristics:

- They recognize the need for information and formulate that need into a question
- They identify and prioritize resources available to answer the question
- They access and use online and offline resources effectively to find information they need
- They evaluate information they find and draw effective conclusions
- They use a variety of technology tools to communicate what they have learned
- They understand many of the ethical issues surrounding the use of information and use information ethically and legally

A. Assure all students receive an introduction to basic information literacy concepts and skills

Students come to the Rio Hondo Community College with diverse skill levels in using information technology and information resources. A common experience in basic skills ensures that students will have a common skill set early in their academic experience to carry into more advanced coursework.

Although this is not primarily an Information Technology (IT) process IT can and will become involved whenever possible.

Strategy

- Investigate strategies that introduce students to basic technology and information-seeking skills without duplication
- Provide instruction by librarians as add-on or paired with English courses, or other large-enrollment general education course(s)
- Provide self-paced information literacy training through Web-based tutorials to ensure point-of-need instruction
- Provide point-of-use/time-of-need library reference services available in the library and on the Web
- Investigate strategies to ensure all students learn and demonstrate mastery of the characteristics of information literacy at appropriate times during matriculation

Performance measures

- Use a variety of appropriate outcome measures, such as portfolio assessment, oral defense, quizzes, essays, direct observation, anecdotal- peer- and self-review and experience
- Focus on student performance, knowledge acquisition, and attitude appraisal

Projects Accomplished

Provide assess both product and process:

- IT is a member of the Virtual College Committee where these projects are addressed
- Information Technology Department's Web Developer is regularly involved with College's Web Site Designer and development and is working on the Luminis portal implementation under our Banner MIS.
- Academic Senate has established an Information Competency sub-committee

Recommendation

- To develop plans on a program by program bases.
- Move toward establishing an Information Competency component for Gen Education

B. Assure all students develop knowledge of information content and use for their major and chosen field.

Students need to build on their basic skills as they progress through the curriculum. Just as they master increasingly advanced content, they must also master the literature and information resources in their fields and be able to find and evaluate information and synthesize it efficiently. The college will seek to implement these technology tools to enable our students to acquire these job relevant skills.

Strategy

- Introduce students to discipline specific information tools and resources in required courses in the major or the Writing Proficiency courses
- Tie information literacy to research methods courses or offer separate courses in disciplinary information literacy
- Provide industry specific hardware and software in related fields

Performance measure

- Faculty or faculty/librarian assessments of student ability to retrieve, evaluate, and synthesize information into knowledge about the chosen field
- Create an option for a Standard Information Competency opt-out exam

Projects Accomplished

- We interact with faculty on regular bases to assist them with technology implementation in the classroom or to provide student technology access tools, i.e. Internet, Web, Computer set-up, etc.
- Customized library orientations are available for discipline-specific topics, including hands-on instruction
- We have upgraded our college book catalog system with a new SIRSI hosted Library system.

Recommendation

- Develop plans on program by program bases.

C. Assure the campus community understands the ethical aspects of knowledge and information dissemination

With the proliferation of information available via the internet and other electronic sources the campus community needs awareness of the principles of academic honesty and potential copyright infringement in the use of and dissemination of information resources. A clear understanding of intellectual property rights as well as the distribution of original content and author's rights will ensure the appropriate use of information and electronic resources.

On a regular bases inform the College's network users of their responsibility to use the technology made available to them in the proper manner.

Strategy

- Provide active programs throughout the curriculum to educate students about the principles and requirements of ethical information use, including appropriate citation use and plagiarism
- Provide professional development workshops to discuss the appropriate dissemination of information materials, publication, etc.
- Facilitate a campus effort to implement an honor code
- Provide uniform enforcement of academic honesty and intellectual property issues across campus
- Develop campus procedures on intellectual property and the rights of use and ownership

Performance measure

- Faculty surveys of student understanding of and respect for academic honesty
- Satisfaction of the Rio Hondo Community College and faculty that these issues are readily addressed

Projects Accomplished

- We implemented network security standards
- Implemented a campus-wide Audio Visual Standards
- Technology Standards for the college were developed by Vantage Technology in conjunction with IT.
- Develop network security sign-on verification.
- Implemented a Virtual network to ensure adequate growth and back up security for our network.

Recommendation

- Continue to evaluate and revise all technology security/usage procedures and standards.

V. Electronic Resources

A. Provide access to electronic lectures, simulations, images, video, audio, etc.

The Rio Hondo Community College must enable faculty to easily create, store, and locate relevant media content which can then be linked to their courses to enrich the learning environment. State-of-the-Art video and imaging equipment as well as presentation equipment must be made available to enhance learning objectives. In addition, appropriate software and hardware tools need to be integrated with the existing infrastructure to enable the rapid delivery of this media as well as the security of information use.

Strategy

- Assist faculty in the selection of externally provided online learning materials
- Provide faculty with a searchable media database system that supports multiple formats
- Create processes that allow faculty to easily create and add media to the database and attach it to course materials
- Support and enable faculty to create online presentations
- Provide presentation tools for classroom instruction
- Create learning media locally when appropriate
- Upgrade the current projector system standard

Performance measures

- Faculty and student satisfaction and success
- Utilization of resources

Projects Accomplished

- IT audio visual and computer technicians are regularly involved.
- We have implementing a Campus-wide Wireless system for ease network access for faculty, staff and students.
- We have upgraded our network so voice, data and video are integrated and easily accessible.
- The new Banner/AccessRio MIS system will include a document imaging system that is integrated with our student and fin aid system.
- In 2008-2009 we created an Audio/Visual equipment standard, This ensures that all new projector and AV equipment purchased follows the established standard.

Recommendation

- To assist faculty and staff on an as needed bases.
- Continue developing the Smart classroom with (built-in projector systems, laptop computers and the latest presentation software).

B. Provide access to online books, journals, indexes, and abstracts

These resources are increasingly popular among students and are more important in an online environment where they are offered 24 hours a day, 7 days a week. Access to these library resources will be a constant challenge as the publishing industry adjusts to the new electronic environment and the cost of information continues steep escalation. However, with new document management and document imaging technologies that enable improved retrieval, dissemination and cataloging of resources much of the labor intensive work will be reduced providing the opportunity for greater information sharing and access to quality publications.

Strategy

- Assure access to electronic indexes and abstracts that support learning and inquiry
- Seek out and acquire access to electronic information with content that matches the college's collection needs
- Integrate electronic information content and formats (e.g., documents) as appropriate into the staff and curriculum
- Upgrade the college's on-line catalog system and develop other on-line Internet sources of information.

Performance measures

- Faculty and student satisfaction surveys
- Use document imaging wherever feasible.

Projects Accomplished

- Library provides access to 12 high-quality subscription electronic databases, with 24/7 access
- Document Imaging was implemented on campus 6 years ago, 1998 and is currently used by (10) departments to store and back-up critical documents.
- We upgraded our software in (2005) and purchased (25) simultaneous user licenses because the college use is grown yearly.
- In 2009 we will upgrade and integrate our current document imaging system to Envisions under the new Banner/AccessRio system.
- The Library implemented in 2009 a new SIRSI book catalog system.

Recommendation

- Continue enhancing the Document Imaging hardware and software
- Work with other departments on the benefit of archiving their paper documents.
- Continue adding – as funding allows – additional databases

C. Provide pathway/portals that guide users to relevant library and Internet resources

The exploding number and type of resources available over the Internet is a boon to research and a challenge to the user seeking specific information. Mechanisms need to be developed to guide students to research materials appropriate to their course work.

Strategy

- Continue to develop the library research web site as the information gateway to the Library
- Consider making full text resources more useful by linking abstracts/citations to the full text
- Link students more directly to course specific materials
- Continue to provide access to information resources on the Web.

Performance measures

- User satisfaction
- Usability testing
- Continuing assessment of other library gateways or new, best practice designs
- Monitoring the use of the library web site

Projects Accomplished

- There has been an on-line Library catalog system in use for 17 years and it has been replaced and upgraded several times.
- The Library web site is comprehensive, dynamic, and fully updated
- Library Subject Guides are librarian-created guides to books, databases, and web sites on specific topics
- In 2009 we will upgrade our current SIRSI Library catalog system to rack most hosted servers system with all student, staff and faculty access on-line.

Recommendation

- Investigate and try to integrate the new Lumnium portal under Banner/AccessRio with our library resources.

VI. Bond Funded Information Technology Projects

A. Technology Infrastructure Project (network upgrade, security and Computer Center relocation):

Infrastructure Upgrade and Network Security:

The major redesign, re-engineering and re-cabling of the current Computer Center and campus network has been in progress over the last three years and will continue as new building/structures and building remodels come on-line. This project involved the evaluation and recommendations of several IT consultants and network engineers. Based on their recommendations and the Information Technology Department's understanding of the needs of the college, we purchased, installed and configured our network with state-of-the-art switches, routers, high-speed hubs and the upgrading of the College's (30) network closets with new network hubs.

This project also included the evaluation, planning, development and implementation of comprehensive secure network, the re-cabling the current Computer Center, which included the purchase and installation of a Firewall, network monitoring/filtering, data, communications, log-on password security, server backups, email system anti-spam, anti virus, etc.

Rio Hondo College's Technology Needs:

On September 15, 2005 Vantage Technology our IT consultant in conjunction with the ITS staff, in coordination with the College's building program management team (RHPMT); Architects, design infrastructure team developed the technology standards for the college new and exiting buildings. Although these standards are state-of-art and utilizes the latest technology that are constantly being reviewed and updated, to keep us abreast of new technologies.

They covered all areas of college and supported the following technology:

1. Communications Cabling Infrastructure (i.e., Voice, Data, and Video)
2. Physical Plant (e.g., inter- and intra-building cabling pathways and equipment rooms)
3. Telephone System (e.g., current system assessment and potential migration to (VoIP)
4. Data Networking (e.g., campus LAN infrastructure and architecture)
5. Video Distribution (e.g., CATV head end, videoconferencing, distance learning)
6. Educational Technology / Audiovisual (e.g., classroom technology)
7. Adaptive Technology
8. Security systems for buildings
9. Parking
10. Campus call boxes / Communications with campus security
11. Interfaces for fire alarm and energy management systems
12. One-card campus ID and access control

Technology Standards:

I. Educational Technology

Approach to Audio Visual Systems Integration

"Equipment Ready" vs. "Equipped" spaces

Media I

Audiovisual Technology

- a) Video (Ceiling Mounted Projector)
- b) Audio (Ceiling Mounted Speakers for audio reproduction)

- c) Source Equipment (computer, CD, DVD, VCR, Doc camera)
- d) Control (Multimedia Control Panel)

Information Technology (Data Connections and Wireless):

Media II

Audiovisual Technology

- a) Video (Ceiling Mounted Projector)
- b) Audio (Ceiling Mounted Speakers for audio reproduction)
- c) Source Equipment (computer, CD, DVD, VCR, Doc camera)
- d) Control (Multimedia Control Panel)
- e) Capture Technology (Interactive white board, Interactive tablet)

Media III

Audiovisual Technology

- a) Video (Ceiling Mounted Projector)
- b) Audio (Ceiling Mounted Speakers for audio reproduction)
- c) Source Equipment (computer, CD, DVD, VCR, Doc camera)
- d) Control (Multimedia Control Panel)
- e) Capture Technology (Camera, Interactive white board or Interactive tablet)

Information Technology (Data Connections and Wireless)

2. Information Technology:

IT Computer center and Communication closets:

- a) The typical BDF room size will be 10'x15' and the typical IDF room size will be 9'x10'.
- b) IT rooms will have dedicated HVAC.
- c) Power in the IDF's and BDF's will consist of (1) 208 circuit and (2) dedicated 120 30 amp Circuits.
- d) UPS devices will be APC 3000 UPS.
- e) The IT Rooms will be dedicated to telecom equipment only; with the exception of security equipment will be allowed to reside inside the IT rooms.

- Distribution Infrastructure

- a) Incoming conduit for each building will be (2) 4" conduits.
- b) The standard conduit size for conduit distribution from outlets will be 1"
- c) Cable tray (wire basket tray) will be used in corridors with accessible ceilings to route communications cable throughout the building.
- d) J-Hooks will be used to route cable from the conduit stubbed from the outlet to the ceiling supporting cabling run to the cable tray. This will occur where the ceiling is accessible.

- Communications Cabling

- a) Rio Hondo will utilize universal cabling. This means that all voice and data outlets will terminate on RJ45 jacks in the faceplate and on RJ45 patch panels in the IT rooms.
 - b) Category 6 cable will be used for horizontal copper cabling.
 - c) Rio Hondo currently uses 66 blocks for telephone backbone cable termination. Voice patch panels will connect back to the BDF and terminate on 66 blocks for cross-connecting.
 - d) The backbone for each building will consist of 36MM 50-Micron fiber, 24 SM fiber (18MM and 12 SM in each direction) and 100 pair cat 3 copper cable
- Communications Outlets
 - a) Universal Cabling - (Standard Outlet 2 Communications jacks)
 - b) Classrooms - (1) Standard outlet on each wall, plus (1) at the Instructor's location, plus (1) at the AV equipment location, plus (1) for the Ceiling mounted projector and (1) for the wireless access point.
 - c) Small offices - (2) Standard wall mounted outlet.
 - d) Large offices - (2) standard wall mounted outlets.
 - e) Deans and VP offices - (3) standard wall mounted outlets.
 - f) Conference rooms - (2) standard wall mounted outlets. In addition there will be a standard floor box centered in the room.

Other major infrastructure/network projects were designed and completed in 2008:

The following are some of the network projects implemented with the dates completed.

Berbee Emergency Notification System:

The Berbee Emergency Notification System was installed campus-wide in Nov 2005. The project gives the College's administration the capability to broadcast messages simultaneously to all computers, 150 speakers and our Voice over Network telephones (VoIP). We conducted the second user training session on the system in November 2006 and followed-up with one-on-one training for selected users in Dec. 2006. The trained Berbee users are: The college's emergency coordinators, Director of Public Safety, Director of Government & Community Relations, Marketing Coordinator, college president's secretarial staff, Director of Facilities and their office staff, Weekend and Evening college coordinator and two members of the IT staff.

Date	Activity
Dec 2005	Started the evaluation of the system
Jan 2006	Software and speaker installation begin
Jun 2006	All 130 speakers were installed and the client software was installed on all 1900 windows PC's on campus.
Jun 2006	Project Completed
Jun 2008	Software Upgraded

Email Spam Filtering Device:

We have installed and configured a new anti-spam system called Barracuda on our network. This device worked inline with our Exchange email system to block spam emails before they reach the servers.

We finished phase-one of the project - customizing, configuration and testing only in the IT department June 2006. Phase-two of the project, the testing of (35) email users were completed July 2006 and the campus-wide roll out of the full system was July 24, 2006.

We had various users acknowledge a considerable amount of spam email was blocked and our spam network report showed 85% of messages considered spam were blocked. However, some users indicated that legitimate emails are also being blocked. These are corrected on an individual bases once notified. We receive roughly 20,000 spam email messages daily and over one million Spam emails are blocked monthly.

Date	Activity
Jun 1, 2005	Investigate new anti-spam Device
Sept 30, 2005	Complete investigation.
Jun 1, 2006	Install Barracuda Device
Jun 5, 2006	Begin 1 st Level Testing w/IT Department
Jul 5, 2006	Begin 2 nd Level Testing w/others
Jul 15, 2006	Final Rollout to Entire Campus
Jul 30, 2006	Project Completed
Jun 2008	Project Upgraded

Storage Area Network (SAN):

We now have in place a robust disk system that provides centralize repository of data for any servers requiring disk space. This project allows data to be placed in one common location for ease of access, redundancy, security and data back-up. This is a Hitachi Data System's (SAN) storage system with 6 Terabytes of disk space. The system can be expanded to 13TB of disk space when needed. Built into the system are measures to ensure all data stored is constantly monitored, easy to back-up and available when the primary operational server fails.

SAN Data Storage Implementation

Date	Activity
Feb 2005	Investigate new SAN system.
Aug 2005	Complete investigation.
Oct 2005	Start install of new SAN system.
Nov 2005	Add storage for Exchange 2003 Server.
May 2006	Install SanGrd iSCSI device option.
May 2006	As new servers are installed on the network they data is added to the SAN
Jun 2006	Project Completed
Jun 2008	Project Upgraded

Email System Update:

We have been in the process of switching over to the new Exchange email system for almost a year. This project was to set up new robust servers to provide redundancy and load balance capabilities to our email system, to help reduce down time. Also, the newest version of Exchange is a more reliable and efficient email system containing many more features for our Web Outlook users.

Date	Activity
Jun 2005	Investigate new email system.
Sept 2005	Complete investigation.
Nov 2005	Start install of new Exchange 2003 System
Dec 2005	Complete cluster configuration.
Aug 2006	Complete moving of mailboxes.
Aug 2006	Configured all staff email boxes
Aug 31, 2006	Project Completed
Jan 2009	Project Upgraded

Server Backup System:

The project was to put in place a backup system with greater backup speed to keep up with the high volume of data being generated from our (50) servers. This project was implemented in conjunction with our SAN Data Storage project to assure data placed on the SAN device was efficiently backed up. Currently, we have (24) servers being backed up on the new system, we will expand to (50) servers when new hardware and additional licenses are purchased. For example, in August 2007, as part of the SunGard software projects we purchased (22) new servers.

Date	Activity
May 2005	Investigate new system to backup SAN
Aug 2005	Complete investigation.
May , 2006	Start install of backup system.
Aug 2006	We added more servers to the back up system
Aug 2007	21 new servers were purchased for the Banner/AccessRio system
2008- 2009	Various new server are being purchased for the new & remodeled LRC, Applied Technology buildings
Jan 2009	Virtual Network implemented

LRC Workaround Project:

The Putnam Student Center was demolished in April of 2006 and the CDC, Fitness Center and PE complex had their technology communications (Network, Internet) fiber optic cabling running from the Putnam Student Center. The copper cabling feeding these areas was not impacted because they originated from the communications room in the Administration Building. A workaround project to feed fiber optic cables to the CDC, Fitness Center, and PE complex had to be developed prior to the Putnam Student Center demolition to support these buildings and the new LRC. The existing cabling duct bank was re-used and a new trench was dug between the Business Building and various Manholes.

We also ran new optical fiber cabling down Central Drive to the Men's PE, Women's PE and the Child Care Center. We installed new network ports on the network routers in those locations connections to the new fiber cables. Based on the completion the LRC Workaround we now have 100Mbps network speed from these locations back to the Computer Center. Note: Before this project the area had only 10Mbps network connections; that's was basically an extension cord connection.

We installed thousand's of feet of new fiber and connected these three locations to the new fiber links and verified all communication links were working properly before the Putnam Center was powered down. We also dug a trench and installed (4) 6" cabling conduits to the Computer Center to accommodate the LRC and build in the capacity for the planned new and remodeled buildings.

New (18) strand cabling were pulled from the Business Building Data Center. The existing fiber optic cable feeding the CDC, Fitness Center and Gym was pulled out and new (6) strand cables was installed. This new (6) fiber optic cables has been spliced to the (18) strand cables, with all new cabling was terminated at the existing Computer Center.

Date	Activity
Jan 2006	Design for the LRC Workaround project.
Feb 2006	Project Bid
Apr 2006	Started project during Spring Break
Jun 2006	Complete Workaround Project
Aug 2006	Tested all fiber and network connections
Aug 2006	Project Completed
Aug 2008	Project upgraded with new fiber and Data Center connections

Data Closet Upgrade:

We installed new network racks, port devices and (UPS) Uninterrupted Power Source in the (19) data/communications closets in most campus buildings. The racks allowed for proper placement of network equipment within each closet, while the UPS provides for minimal back up power and circumvents failures from power surges.

Date	Activity
Feb. 1, 2005	Walk-Thru of closets.
July 21, 2005	Order parts.
Sept. 5, 2005	Install wall racks.
Sept. 12, 2005	Clean up cabling.
Sept. 26, 2005	Install UPS
Nov 21, 2006	All (19) Network Closets upgraded
Dec 4, 2006	Project was Completed
Aug , 2008	Project upgraded and LRC Building added

Computer Center design and relocation Planning:

Our plan to renovate the Computer Center to function as the network/equipment hub of the College was re-evaluated with a new focus on its design and location. The planning was performed by Vantage Technologies, our IT consultant, reviewed by President’s Cabinet and RHPMT. The new Computer Center project was tabled in lieu of moving the Center to the planned remodeled Administrative Building. To accommodate the College’s current and future building and network infrastructure needs while awaiting the Center’s move the following major utilities upgrades had to be made: air conditioning, cabling, electrical and UPS. This project and the timeline are listed below:

B. Computer Center Cabling, Electrical & UPS upgrades:

Process	Activity	Timeline
Increase UPS Back-up Power Project	The District has asked us to ensure our battery back-up power run-time is at least 2 hours to all network equipment.	Jun, 2004
Investigation:	<p>The College is currently running American Power Conversion (APC) battery back-up equipment. We asked them to come out evaluate and make suggestions on how to upgrade our UPS devices. After checking all 21 building locations where the network equipment is installed, they gathered enough information to recommend the proper upgrade equipment.</p> <p>Other than the Computer Center, Public Services, Business, Science and Admin. 1st. floor, there is no air conditioning in any of the other equipment rooms. Without air conditioning, this limits the amount of batteries due to heat considerations. Some locations have limited space to house large pieces of equipment like both Men’s and Women’s PE. Most Data Closets have the same amount of equipment providing power with the exception of the Science, Business, Administration 1st floor and the Computer Center. These locations will have larger batteries installed because they have adequate Air conditioning.</p> <p>After careful consideration of the physical and environmental factors in all of the Data Closets, APC suggested that 2 hours battery back-ups were not feasible. The batteries would become too hot to operate in an environment without air conditioning. Also, there is limited space in some Data Closets to house the batteries. Even if closet air conditioning was available they must be able to remain operational during a power outage for the batteries to operate properly for 2 hours.</p>	Jun 2004
Evaluation	Determine the electrical and A/C needs of the Computer Center’s network for the next 5 years (2005-2010).	Oct 2004
	Submit the Data center Electrical and A/C requirements to Facilities for review and evaluation.	Nov 2004
	The first A/C unit and duct work was purchased and installed in the Computer Center.	Jan 2005

	The new A/C unit was upgraded to a more powerful unit and additional heat ventilation was installed in the Computer Center.	May 2005
	The electrical requirements for the Computer Center were determined to require an additional Transformer, Power Panel and UPS had to be installed. It was also determined that an on-line back-up generator was needed to be installed.	April 2005
Action	The Facilities Department has contacted vendors to evaluate the current Computer Center's power needs.	Aug 2006
	The requisition for the Computer Center electrical upgrade was processed by the Facilities Department.	Sept 2006
	We processed the requisition for the Computer Center and other Data Closet UPS systems before November 2 nd .	Nov 2006
	Process requisitions for Computer Center Electrical Upgrade	Jan 2007
	Start Computer Ctr. Electrical upgrade and transformer installation	Apr 2007
	AC upgraded to accommodate more equipment	Nov 2008
	Banner equipment installed and configured	Jan 2008
	Data Center remodel Plan reviewed and updated	Jan 2009
	Project on target for completion:	Nov 2012

C. Computer Replacement Project:

In 2005-2006 we developed a computer database showing the operational efficiency and configuration of every computer on campus. Based on our evaluation of the college's computers we determined 1500 personal computers needed to be replaced and a replacement cycle was created. After the completion of Phase I and II of our computer replacement cycle we determined further upgrades were not needed at this time. We will re-evaluate our computer replacement plan every two years, starting again in 2008/2009.

As part of the computer replacement we also replaced printers, servers, laptops, MAC's and high-end CAD/GIS computers. This computer implementation, along with our network upgrade has positioned the college to support a new Management Information System (MIS).

We have develop a computer database, inventory and computer effectiveness evaluation plan to helps us determine when a College computers needed to be replaced. Our plan was implemented for this 1500 computer replacement project and is used annually to determine the status of all college computers. However, in certain situations we replace computers as the need arises, i.e. new faulty or staff, faculty wanting to teach new software grants and new programs requiring the latest high-end computers, etc.

Computer Upgrade/Replacement

Phases and Process	Activity	Timeline
Phase I Computer Replacement	Develop a database to determine the campus computers that need to be replaced.	Jan 2004
(750) Computers	Develop computer replacement specifications	Mar 2004
	Review & finalize departmental computer needs	Apr 2004
	Present Phase One (750) computer purchase plan to President's Cabinet	Apr 2004
	Reviewed Phase one computer purchase plan with Technology Committee	Apr 2004
	Present Phase One computer purchase plan to Board as a information item	May 2004
	Purchase (550) Gateway PC's, (60) Gateway laptops, (60) CAD) and (80) MAC computers and (14) servers	Jul , 2004
	Start computer, printer and server installation	Aug 2004
	Completed Phase I computer installation	Nov 2004
Phase II Replacement of (750) Computers	Develop a database to determine the campus computers that need to be replaced.	Mar 2004
	Develop computer replacement specifications	Mar 2005
	Review & finalize departmental computer needs	Apr 2005
	Present Phase Two computer purchase plan to President's Cabinet	Apr 2005
	Reviewed Phase two computer purchase plan with Technology Committee	Apr 2005
	Present Phase two computer purchase plan to managers and Planning Fiscal Council	May 2005
	Purchase (506) Dell PC's (64) Gateway laptops, (100) CAD) and (80) MAC computers and (11) servers	Aug 2005
	Start installation of (600) computers, (5) printers and (11) servers.	Oct 2005
	Completed Phase II computer installation	Mar 2006
Future Computer Replacement Plans Phase III & on-going	The ITS department based on a complete inventory of all college computers determined that every 3-4 years our computers may need to be upgraded or replaced.	On-going
	The ITS department performs a campus-wide evaluation of all computers to determine their replacement or upgrade status annually.	Apr 2008
	Updated computer database of all college computers	May 2008
	Develop computer replacement specifications	May 2008
	Review & finalize departmental computer needs	May 2008
	Present Phase Three computer purchase plan to VP of Finance and President's Cabinet	Jun 2008
	Reviewed Phase three computer purchase plan with Technology Committee	Jun 2008
	325 replacement computers were purchased & installed	Aug 2008
	Completed Phase III computer installation	Oct 2008
New LRC Building	New LRC Building added 500 new PC & 30 Mac computers	Oct 2009
Remodel Applied Tech	The Applied Tech Building remodel is scheduled for completion in March 2009 with 400 new computers	On-going

D. MIS Software Replacement Project:

This project involves the replacement of our Management Information System (MIS), with the primary components being the modified Santa Rosa student system, SAFERS financial aid system, EPOS Telephone Registration & On-line systems and the in-house developed Human Resources system. There are several other software interfaces and over-layers that allow us to make modification more quickly.

Our MIS system is a customized version of the Santa Rosa software and is written in the COBOL programming language which is time consuming and difficult to maintain. The system lacks flexibility, integration and interfaces with several standalone software applications. It runs on a proprietary HP3000 database mainframe which is now obsolete.

We require a new MIS system with integration of modules and applications, easy user access, reduced data entry, and the availability of student, faculty and staff self service components. The system must address student access and student expectations - our students are much more computer savvy today and they expect instant access to their records. A system that is easily accessible via the Web will aid in course selection and help keep them on track, i.e. web based Ed. plans, etc. Although we do offer some web access in our current system, it's limited and requires an unacceptable timeline to develop. Also the HP3000 mainframe computer that's running the MIS system is obsolete and HP dropped support in 2007.

The primary focus of the project is the purchase and implementation of an integrated student, human resources, financial aid and alumni system and the supporting hardware. The new system will also interface with the financial system at the County which was implemented two years ago. The project evaluation and implementation is estimated to take 18 months to 2 years.

In 2007 we purchased a new MIS software called Banner from the SunGard Corporation and the College named it AccessRio. The system has 3 primary modules Student, Human Resources and Fin Aid. We started our implementation of the AccessRio system in 2007 with a projected GO Live date of June- Oct 2009. We completed the Human Resources implementations in June 2009 and the Student module in Oct 2009 and both were placed into production Nov 2009.

We are currently working of the Fin Aid and Phase II AccessRio implementations with a projected completion date of Dec 2010.

MIS/ERP Software Replacement

Phases and Process	Activity	Timeline
Phase I Preparation	Requested approval form VP of Finance to start MIS software replacement project	Sep 2005
	Discussed working with the California Community College Foundation (FCCC) on the MIS project with VP of Finance	Sept 2005
	Reviewed MIS project with IT Consultant and VP of Finance	Nov 2005
	Developed MIS software replacement strategy with IT Consultant	Nov 2005
	Evaluated the FCCC's ERP project proposal and fees	Dec 2005
	MIS project reviewed by Cabinet	Dec 2005
	Project reviewed by Technology Committee	Jan 2006
	President and Cabinet updated of the FCCC's MIS project status	Jan 2006
	Submitted FCCC's MOU to Board for approval	Feb 2006
	Board tabled MOU for more detail technology information	Feb 2006
	Developed Technology information for Board	Feb 2006
	Re-submitted FCCC's MOU to Board for approval	Mar 2006
	Established Software Evaluation Committee	Jun 2006
	Phase II Evaluation, Selection & Approval	Trained Evaluation Committee on how to use the FCCC's knowledge base to evaluate software
Had all committee members work with the FCCC's Knowledge database to develop MIS replacement software requirements		Nov 2006 to Jan 2007
Selected software to be evaluated DataTel , Oracle & SunGard		Jan 2007
Set up MIS software Vendors demonstrations with DataTel & SunGard		Mar 2007
Performed site visits for DataTel & SunGard software with Antelope Valley College and College of the Canyons		May 2007
SunGard software Selection and Contract Negotiations		May 23, 2007 to Jun 15, 2007
Submitted SunGard Banner/AccessRio software recommendation to Board		Jun 2007
Submitted Banner/AccessRio Hardware recommendation to Board		Jul 2007
Phases and Process		
Phase III Implementation Process	Purchased Banner/AccessRio Hardware and network connectivity hardware	Aug 2007
	Submit Rio Hondo College's ERP Project Manager recommendation to Board	Sep 2007
	Determine back fill during Banner/AccessRio software Implementation	Sep 2007
	Hire MIS Project Consultant for the Implementation process	Oct 2007
	Start SunGard Banner/AccessRio Implementation Process	Oct 2007
	Data Conversion from Old Santa Rosa MIS to new Banner/AccessRio software	Dec 2007-May 2009 Completed
	Banner/AccessRio Software User Mock testing and final evaluation	May 2009-Jun 2009 Completed
	Banner/AccessRio Human Resources Module "GO Live" for Summer 2009	Jun 2009 Completed
	Banner/AccessRio Student Module "Go Live" in Oct 2009	Oct 2009 Completed
	Banner/AccessRio Fin Aid Module " Go Live" planned for June 2010	Jun 2010
	Banner/AccessRio 3 rd Party and Phase II projects scheduled for Jan 2009 – Dec 2010	Dec 2010

E. Telephone System Replacement:

Our current Ericsson telephone system was installed in November 1992 along with 500 new phones. The system consists of three telephone units or trunks located in the Administration Building, Science Building and Administration of Justice. All are connected to the College's fiber optic cable backbone.

The Ericsson telephone system did not support any additional telephone instruments, or the expansion in service requirements from the Bond renovation and construction projects. So in 2007 we decided to upgrade or replace the telephone system. With the introduction of Voice over Internet Protocol (VoIP) technologies; there are a number of opportunities for us to consider.

An upgraded telephone system would support the current services and functions, including the existing peripherals, Voicemail, Music on Hold, Call Center and the existing analog and digital instruments. In addition, the upgraded telephone system would support VoIP devices, dedicated telephones, and software applications via our data network. We are worked with Vantage Technologies, our IT consultant, to develop the RFP for the telephone upgrade system to VoIP, in mid 2007.

Our plans were to We purchase the VoIP hardware and application software to support a minimum of 500 users and 500 telephones instruments, with all the latest features; including Voicemail. Our plans were to phase-in the telephone instruments based on the initial procurement of (50) phones (44) staff, (5) manager and (1) operators' console. The new VoIP system connects to our Ericsson telephone system as the front-end for uninterrupted support as we migrated to a total VoIP system.

The plan was in Phase-One, to install (50) phones would address the college's current shortage of 8-10 phones and lines in June 2008. In Phase-Two -2009 we installed (60) VoIP phones in the new LRC building and design a plan to install 50 phones in the remodeled Applied Technology building. In Phase Three we will install the necessary phones for the AJ administration, remodel PE Complex and the Student Services buildings. Phase-Four will address the new and/or remodeled buildings as they come on-line.

The reason our initial plan is not to completely replace the Ericsson telephone system - is most of the existing building are scheduled to be remodeled with new network cabling installed and we don't want to install cables for the VoIP phones and then have to replace the cables during the building remodels.

Additionally, our current Ericsson telephone is capable of supporting the college until the new and remodeled buildings are completed, thus we don't need to replace this system immediately. Another important factor is the VoIP system will become the front end of our telephone operations, meaning it will be the callers' first contact to the college and then it will connect to the older Ericsson phone system. This will provide for uninterrupted telephone service and easy installation of the new VoIP telephones.

VoIP Telephone Project Phases & Process	Activity	Timeframe
VoIP Bid Preparation	Defined the requirements of a new telephone system and outlined the problems with our current telephone system.	Aug 1, 2005
	Submitted VoIP requirements to Vantage IT Consultant for evaluation	Sep 1, 2005
	Repurpose existing Ericsson Telephone Switch and procured a new Voice over the Network (VoIP) system	Sep 12, 2005
VoIP Evaluation	Reviewed Vantage telephone upgrade proposal with VP of Finance	Sep 15, 2005
	Reviewed telephone upgrade proposal with Technology committee	Nov 1, 2005
	Telephone system upgrade is reviewed by VP Business & Finance	Nov 2, 2005
	Presented Telephone project to President's Cabinet	Nov 4, 2005
	Vantage Consultants developed VoIP RFP	Dec 15, 2005
VoIP Purchasing Process	Submitted Telephone RFP to MOT, President Cabinet for approval	Feb 15, 2006
	Submitted Telephone RFP to Board for approval to go out to Bid	Mar. 1, 2006
	Prepared VoIP Telephone upgrade for BID	Apr 1, 2006
	Issued VoIP Bid	Jun 8, 2006
	Processed PO for Network Readiness Assessment	Jun 15, 2006
	Mandatory Bid Job Walk	Jun 28, 2006
	Bidders Questions and Answer posted	Jul 8, 2006
	Bid Submittal/Opening Date	Jul 12, 2006
	Vendor's Bid evaluation, interviews, reference checks	Jul 12, 2006
	Award of VoIP project by RHC Board	Sep 16, 2006
VoIP Implementation	Started VoIP, Phase I installation, testing and staff training. Phase I was the implementation of (50) telephones	Nov 1, 2006
	Final VoIP software and hardware was tested	Dec 15, 2006
Completed Phase I VoIP implementation	The installation of the VoIP telephone system consisted of (50) digital phones (6) analog phones and the operator's console.	Jan 15, 2007 Completed
	Purchase and install new VoIP phones as new staff & faculty are hired, and the older Ericsson phones break. To-date (40) phones have been installed.	June 30, 2008 Completed
	Phase II started as the new LRC and remodeled Applied Technology buildings come on-line.	July 2009 Completed
	Phase III will start as the remodeled PE buildings and AJ Administration buildings come on-line.	July 2009 In-Progress
	The completion of the VoIP telephones system is planned when the Administration building is remodeled.	Pending

F. Campus-wide Wireless Network:

This project provided wireless network access to the entire campus. We set up a secure guest access to our network so student, staff and visitors coming on campus will have at least Internet access.

We evaluated several vendors' Wireless product, i.e. Enterasys, Aruba, Cisco, etc. We also visited and evaluated the following college's Wireless systems; Compton, Irvine Valley and Long Beach because they recently installed state-of-the-art systems.

We worked with the vendor awarded the wireless contract to begin the campus-wide installation in 2007. Additionally, all new or remodeled building are being designed with Wireless capabilities and compatibility to the system we are currently being implemented.

Date	Activity
Feb 2006	Investigate new wireless vendors.
July 2006	Start product demo of various vendors.
Sept 2006	Complete product demo.
Jan 2007	Submitted CMS Wireless recommendation to Board.
Jan 2007	The Board requested we Bid Wireless project
Mar 2007	Vantage Technology prepared Bid specifications
Apr 2007	Wireless Bid was posted
Jul 2007	Bids received
Jul 2007	Bids were evaluated
Aug 2007	Bid approved by Board
Aug 2007	Wireless installation started
Oct 2008	Wireless Project Completed

G. Campus-wide Network Upgrades (See Pages 9-11 of this document for the background information on this project):

Date	Activity	Status
Oct 2008	Installed large 300 port network Switch in Business	Completed
Feb 2009	Installed Blown Fiber Cables campus-wide as infrastructure	Completed
May 2009	Create Secondary Data Center in the New LRC Building	Completed
May 2009	Started Network design for new AJ Admin Building	In-Progress
May 2009	Network upgrade for CAD/GIS in Science Bldg.	Completed
Jun 2009	Started network design for remodeled PE complex	In-Progress
Jul 2009	Network Project for remodeled Applied Technology Building	Completed
Jul 2009	Terminated Campus-wide fiber Optic cables in Data Center	Completed