



# Victor Valley College Technology Master Plan

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12 Aug 2012

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## I. Executive Summary

C. This is a living document. It will be amended as the committee determines it needs to be. The committee is currently considering revising the document to include an Instructional and Non-Instruction section since the needs of the two areas differ in many ways. Section VI is the beginning of the Instructional area and is currently under construction. This section will determine the needs of computers in instructional areas such as classrooms, labs, and instructor's offices, as compared to the non-instructional program requirements. Some of the considerations will include platforms such as Mac and Linux OSes, technologies that balances academic freedom with management requirements within instructional environments, and software and hardware requirements

### D. Introduction to Mission

The mission and goals of the technology committee is a function of the colleges' mission, goals and ILOs (Instructional Learning Objectives). We will use these as a starting point for all work done by the technology committee.

#### Victor Valley College Mission

As the region's largest, public higher education institution, the College has a tremendous responsibility to provide quality education, exemplary transfer academics, relevant workforce preparation, and a wide range of life-long learning opportunities to a diverse student population—from new high school graduates, to working adults, to persons with disabilities, to potential future students within local K-12 systems. The College understands its importance to the community as well as to local employers, and earnestly seeks to be responsive to needs as they arise.

The area served by the College encompasses approximately 2,200 square miles and service area includes communities of Adelanto, Apple Valley, Victorville, Helendale, Hesperia, Las Flores, Lucerne Valley, Oro Grande, Phelan, Pinon Hills, Summit Valley, Victorville, and Wrightwood.

To effectively serve such a large area, the College must work in partnership with other educational institutions, businesses, and community groups. For example, through its relationships with area Regional Occupational Programs and other career technical preparation or "Tech Prep" efforts, the College has contributed to the expansion of technical training opportunities for potential future students in the region. In addition, area employers look to the College in their workforce development efforts: Faculty and staff of the College are regularly called upon to assume leadership roles in area chambers of commerce, city task forces, community-based organizations, and regional advancement initiatives.

In addition to meeting the educational and training needs of community members, the mission of the College also includes enhancing High Desert community life by providing some of the finest performing and cultural arts presentations in the region, and ample athletic and recreational events.

Victor Valley Community College Mission Statement:

Cultivate intellectual growth, social responsibility, environmental stewardship, cultural enrichment, and economic development.

Create exceptional and accessible lifelong learning opportunities that afford students within our expanding communities the attainment of knowledge and skills necessary for success in the global economy.

Embrace difference in our communities by integrating their wealth of multicultural knowledge and wisdom into a cohesive and resourceful learning environment for all.

Inspire innovative teaching and service with imaginative uses of collaboration and technology, fostering vibrant programs that are measurably effective in addressing student learning and community needs.

Empower each student to learn by modeling academic integrity, democratic citizenship, and meaningful contribution to society.

## II. Technology Committee Mission

### A. Mission

The mission of the Master Technology Plan at Victor Valley Community College (VVCC) is to establish strategies to facilitate the creation of goals, guidelines, standards, and policies for the acquisition, use, management, and maintenance of technology used by students, faculty, administration and staff. In recent years, technology growth, specifically computer and network technologies, at Victor Valley College Community College has accelerated at an exponential pace. This document will provide a strategy guideline for the acquisition, distribution, use, and maintenance of the technological resources at VVCC used to facilitate student learning. This document is not static and will be extended to include any new technology that may affect current systems as well as new systems employed to perform the mission of Victor Valley College.

This document is meant to provide a campus wide strategy to meet the growing technological needs of the campus community. Alignment with the VVC Mission, Educational Master Plan, and Facilities Master Plan is imperative in order to consider the technology plan and its implementation a success.

This document will also provide the guidance for the alignment of technology goals with the goals of the district and will serve as a guideline for budgetary decisions. The cost estimate model for this plan is based upon a Total Cost of Ownership (TCO) model, which includes not only hardware and software but also the vital related components of support staffing and staff development (human resources). This plan is also intended to provide a template to establish policies and procedures for those areas that acquire, use, and manage technology.

### B. Mission Statement

The mission of the technology committee is to guide Victor Valley College in providing the technological environment required by students to achieve successful learning outcomes.

### C. Purpose:

In the Victor Valley College Educational Master plan, the word technology is mentioned 137 times in 215 pages. Technology is obviously important to the college. The purpose of the Victor Valley College Community College Master Technology Plan is to provide guidelines for the acquisition, management, ongoing use, and integration of information technology at Victor Valley Community College (VVCC). The planning process will result in a plan that will reflect the needs and developments anticipated by the campus constituency. There must also be a mechanism that allows all customers to provide input to the strategic technology plan. This plan is both a product and a process. The product is the plan itself and the process will be a cyclic in nature and will establish goals and metrics for evaluation to define where the district intends to be in the long term.

### D. Definition of Technology

The Oxford Dictionary defines technology as the application of scientific knowledge for practical purposes, especially in industry.

In this document technology will be defined as follows:

Technology is software, hardware, and infrastructure that either directly or indirectly affect instruction, learning outcomes, and services within the Victor Valley College campus community.

#### E. Guiding Principles

Guiding principles are concerned with answering the question. What do we want to do with technology?" Decisions regarding the successful application of technology at VVC will. . .

1. Facilitate measurable student learning outcomes. (Commitment, Student Learning Outcomes, Organization)
2. Support the college mission. (Commitment)
3. Support student learning programs and services and improve institutional effectiveness. (Evaluation, Planning and Improvement, Institutional Integrity, Organization)
4. Provide all students access to technological resources across social, economic, and physical barriers. (Institutional Commitment, Student Learning Outcomes, Dialogue, Institutional Integrity)
5. Encourage and support creative and innovative uses of technology. (Commitment, Evaluation Planning and Improvement)
6. Require collaborative input in technology decision-making. (Dialogue, Institutional Commitment)
7. Efficiently utilize resources to provide for reliable, accessible, and serviceable technology systems . (Institutional Commitment, Dialogue)
8. Be implemented along with appropriate technical support staff to meet the demands of the new technology resources and programs. (Institutional Commitment)
9. Support the economic and workforce development goals of the college. (Institutional Commitment, Institutional Integrity)
10. Provide quality training and support opportunities for faculty and staff to effectively use and integrate technology on campus. (Institutional Commitment, Institutional Integrity, Dialogue) \*\* Accreditation recommendation.
11. Maintain, monitor, and manage technology performance standards to meet the infrastructure needs of the college community (Evaluation, Planning and Improvement; Institutional Commitment, Organization).
12. Encourage ethical best use policies and procedures regarding the acquisition and use of technology. (Institutional integrity)

#### F. Vision Statement

Advance the effective use of technology at Victor Valley College thereby becoming the preeminent leader in the high desert in all aspects of education.

G. Vision

Technology is mainstream to every aspect of life. No matter what field our students are preparing for, they will need to know and understand a variety of technologies to be successful. Victor Valley College attracts students from the high desert and beyond because we are a college that places students and student learning first. Our reputation is built upon the quality of our programs. We hold both ourselves and our students to high standards of achievement. Faculty, staff and administrators are committed to this aspect of student success. Victor Valley College will continue to provide the technical resources and learning environment to prepare our students for the future.

H. The committee's technology vision:

1. Provide the campus with a plan for implementing current and future technologies.
2. Provide campus staff with training that allows them to meet the needs of the campus.
3. Provide our students with the technical resources required for them to succeed with their educational goals.
4. Make a positive impact on our community.
5. Provide universal accessibility to technological resources for our constituents.

I. Goals

Goals are specific areas where the application of technology has been identified as an essential part of achieving measurable and effective student learning outcomes as well as providing the technology necessary for people to effectively perform their jobs. Goals require current assessment and the establishment of objectives and strategies for meeting the identified objectives. The following are the goals identified for the VVC district:

1. Student Access: Provide access to learning opportunities and college support services through the use of technology.
2. Information Services (MIS): Maximize MIS services to meet current and future needs for student, faculty, and facility information.
3. Instruction: Increase the use of technology in the classroom.
4. Professional Development: Ensure the successful use of technology through the promotion of ongoing staff development for all employees.
5. Assessment and Planning: Ensure efficient and effective use of technology and IT staff resources through planning.
6. Technical Support: Provide high quality technology support for all instructional programs and administrative services.

7. Network Infrastructure and Services: Leverage network resources and services to meet current and future technology and information needs.
8. Computer Labs: Provide and support computer labs to meet student needs.
9. Equipment: Provide technology equipment to meet the needs of VVC.
10. Community and Collaboration: Promote a sense of community on campus through the use of technology.
11. Outreach: Collaborate and share technological resources with the outside community
12. Policy and Procedure Guidelines: Establish Policy and Procedure Guidelines
13. Standards: Where applicable, demonstrate complicity with industry standards
14. Technology Convergence: Establish guidelines for convergence of technology (i.e. voice and data)
15. Technology Sustainability: Establish guidelines, explore and develop innovative revenue streams, and develop processes for sustaining technology.

### III. CHALLENGES

#### A. Demands:

Demands for technology will continue to make availability and accessibility a differentiator for potential students, faculty, and staff. The Internet will continue to be utilized by students, faculty, and staff. Using the Internet will increasingly become a skill necessary for occupational and citizenship skill. There will continue to be an increased demand for the integration of technology in teaching.

#### B. Usability:

Move towards more intuitive interfaces in all aspects of computer information system usage.

#### C. Usage:

Academic usage will require the most capacity that can be delivered. Students are becoming more sophisticated users of technology and it is assumed that this trend will continue.

#### D. Sustainability of technology infrastructure:

Sustainability is a major challenge facing higher education institutions in the 21st century. Decisions to replace obsolete infrastructure will be weighed with initial cost, TCO, and potential savings. There is also the challenge of ensuring that the underlying technologies of system wide projects are sound and compatible with future technology directions.

#### E. Technology support and staffing:

Infrastructure means more than just computers, routers and wiring. There must be support of the technical environments or the result will be networks and computers that fail and faculty, students, and staff who do not know how to use them even when the equipment is working. The plan will include providing permanent, qualified support staff on a full-time basis.

#### F. Security:

Security is the freedom from danger, risk, or doubt. (SIGUCCSS) Information security is going to continue to be a challenge in the foreseeable future. It is assumed that as more administrative usage of computer technology becomes the accepted norm, there will need to be more sensitivity to the security and the integrity of data and the communications technology used to service data.

#### G. Funding:

The Total Cost of Ownership (TCO) model assumes a relationship between computer hardware/software and support. It is a method of determining the full cost associated with owning and using information technology in an educational environment. Though TCO can always be reduced by sacrificing end-user service, careful planning can reduce the costs without sacrifice. The TCO model adopted in this plan will only be concerned with direct costs associated with technology acquisition and technology used in the delivery of instruction. Direct costs are manageable and can be charged accordingly whereas indirect costs cannot be directly managed and allocation costs to obtain results are seldom of managerial utility.



#### IV. Current Assessment

##### A. Environmental Analysis:

The current assessment is an environmental analysis. The analysis is required in order to assess strengths, weaknesses and the current operation.

##### B. Policies and Procedures:

The campus has formalized policies and procedures for technology acquisition, use, and maintenance. Exceptions can be handled by going through the appropriate chain of command.

##### C. Internal Standards:

Standards provide efficiency for planning and maintaining technology. There will be unique circumstances where exceptions must be considered. Guidelines to implement these requirements will be outlined later in this document.

##### D. Training:

Although flex time is no longer required, it is recommended that some method of staff development and/or flex time be considered. Some combination of training such as online, internal, or external, will minimize security problems and improve employee performance. Continued professional development is necessary for institutional effectiveness. Technology training funds will continue to be requested using departmental P.R.A.I.S.E. reports.

##### E. Access:

Voice and data have become an integral part of the campus system. The new generation of technology requires that access to critical components of the system be provided to those individuals that have the necessary training and knowledge to handle the equipment.

##### F. Technology Convergence:

Technology convergence and trends in the industry will significantly change the way business is conducted: Not only by the administration and faculty, but also by the student population. Anticipating and preparing for the coming changes is critical for the College as it establishes formalized policies and procedures.

##### G. Wi-Fi and Remote Accessibility:

The campus Wi-Fi is continually re-evaluated and upgraded to provide increased coverage as needed. Internal learning and meeting spaces are the priority. We have good coverage in most internal areas and deficiencies are being reviewed during remodeling and new construction. External open areas have lower priority because of the cost vs. benefit in support of instruction.

## V. STRATEGIES

### A. Student Access

1. Provide personalized online access to Student Services (SS) via increased automation.
2. Provide an email communication system to reach all students.
3. Provide student ID cards that can be used for multiple purposes and access to support services.
4. Expand wireless access campus-wide for student access.
5. Utilize technology to provide instructional materials and student services for students with disabilities. (ADA)

### B. Instruction

1. Infuse technology into the traditional classroom and laboratory setting to support enhanced student learning.
2. Improve distance learning opportunities.
3. Provide opportunities for students to achieve an appropriate skill level in information and technology competence.
4. Encourage the effective use of technology to support instruction.
5. Inform the VVC community of the technology used and required in courses.

### C. Professional Development

1. Provide basic technology orientation and training for new employees and ongoing technical training for current employees.
2. Increase the number and types of technology training opportunities.
3. Provide faculty training on the best pedagogical use of instructional technology.
4. Provide discipline-specific technology training.

### D. Planning

1. Develop and implement operational plans as needed to achieve the goals and strategies of this Technology Master Plan.
2. Improve the planning process for technology infrastructure for new and renovated facilities.
3. Develop a plan for more effectively managing and staffing computer labs.
4. Create a centralized academic lab utilized for multiple disciplines in the TC.
5. Develop a plan for more effectively managing and staffing the technology center (TC).
6. Develop an annual review process to continually assess the current and future needs of technology of VVC linked to the P.R.A.I.S.E. Report.
7. Different labs may develop unique or additional policies which do not conflict with AP 3720 (a) (b).

8. Develop and update technology use policies for faculty, staff and students as needed.
  9. Improve administrative services and processes through new applications of technology such as SharePoint.
  10. Identify and implement ways to conserve energy for technology use.
  11. Provide adequate and stable funding for technology.
  12. Explore alternate funding, such as grants, for sustaining technology in the technology center (TC).
- E. Technical Support
1. Provide live call-in technical support at the Help Desk.
  2. Create a multi-faceted technology support system.
  3. Better utilize students to provide an overall technical support system.
  4. Define the roles and relationships of VVC technology and District technology staff positions.
  5. Keep job descriptions and compensation up to date to reflect changing technologies.
- F. Network Infrastructure and Services
1. Keep website current to meet the changing needs of VVC.
  2. Upgrade network to support high bandwidth applications.
  3. Provide streaming audio/video and desktop videoconferencing services.
  4. Provide organized file services for individuals and organizational units.
  5. Establish an information security task force to improve network security.
  6. Provide a web-based course development and archival system of all course outlines.
  7. Explore employee options for access to information resources for telecommuting.
  8. Explore universal mailbox services for potential use by the campus community whereby email, voicemail, and faxes go to one location.
- G. Computer Labs
1. Ensure open computer labs have software installed that meets the needs of students.
  2. Optimize lab operations and hours to match program requirements and student needs.
  3. Provide access to assistive technology for students with disabilities in computer labs and in the library.
  4. Communicate current information about technology services and lab hours to all students.
- H. Equipment
1. Develop plans for the systematic addition and replacement of technology equipment.
  2. Provide appropriate technology to stay current with industry practices and transfer institutions.
  3. Maintain up-to-date hardware and software standards.

4. Improve multimedia resources in student open labs.
  5. Improve multimedia resources in classrooms.
- I. Community and Collaboration
1. Use technology to improve communication between part-time instructors and the college community.
  2. Build a VVC online community with content that is useful, informative, engaging, easy and fun.
  3. Provide intranet resources for students, staff and faculty.
- J. Outreach
1. Develop a one-stop interface with the business community to facilitate training and re-training, internships, and entry level jobs for VVC technology students.
  2. Encourage collaboration with other educational institutions to share technology expertise and resources. Cal State for example.
  3. Leverage new technology resources through industry partnerships.
  4. Conduct community outreach for VVC technology programs.

## VI. Academic/Instructional

- A. Computer / Information and Instructional Technology Resources. Departments with specific technology requirements will develop a unique technology plan to be included as appendices.
1. Current Assessment.
    - i. Student Access to Instructional Technology
    - ii. Baseline Systems – Standard Configurations
    - iii. Use of VLAN technology in specific departments to allow departments with specific technical requirements more leeway with less monitoring overhead.
  2. Servers
  3. PC
  4. Macintosh
  5. Notebooks
  6. Tablets
  7. PDAs
  8. Printers
  9. Other Devices (scanners, CD writers, digital cameras)
    - i. Distribution
    - ii. Duplication (Software Images -- Ghost, DriveImage, ???)
    - iii. Access
    - iv. Hardware Inventory
    - v. Software Licensing and Inventory
    - vi. Desktop Security
    - vii. Virus Protection
    - viii. Data Security
    - ix. Protection from Interlopers
- B. General/Open Computing Facilities. Each of these areas has unique requirements that need to be addressed. Each of these centers will or can submit a unique technology plan for acceptance by the IT department.
1. Learning Center
  2. ASB
  3. Basic Skills ???
  4. Computing Facilities for Specific Disciplines
  5. Art and Design / Photography

6. Administration of Justice
  7. Allied Health
  8. Academic Commons
  9. Business Administration
  10. BET
  11. Business Real Estate
  12. Chemistry
  13. CIS
  14. CIDG
  15. Computer Animation / Graphics
  16. Construction Technology
  17. Electronics
  18. Library
  19. ESL classrooms
  20. Music
  21. Math labs
  22. ESL labs
  23. Writing Center
    - i. Multi-Media (Smart) classrooms
    - ii. Internet Access
    - iii. Web-based Distance Education
    - iv. Operational Support
    - v. Personnel
    - vi. Funding – Acquisition and Operational
- C. Cost estimate for the Total Cost of Ownership model: \$3,506 per PC per year.
1. Goals and Objectives
  2. Evaluation
- D. Accessibility and Assistive Technology
1. Current Assessment
  2. Goals and Objectives
  3. Evaluation

E. Facilities

1. Current Assessment
2. Security
3. Monitoring
4. Goals and Objectives
5. Advanced Technology Center
6. Security - Key Cards
7. Evaluation

F. Support

1. Current Assessment
2. Help Desk
3. Goals and Objectives
4. Evaluation

G. Repair and Maintenance

1. Current Assessment
2. Goals and Objectives
3. Evaluation

**VII. Policy and Procedure Guidelines**

A. See Appendices

1. Standards

- i. Technology Convergence
- ii. Technology Sustainability

B. Develop a Computer Distribution Cycle

1. Prioritization/Ranking of Strategies

- i. This is currently being developed. A complete inventory is being conducted and future thin-client technologies will also play a role in this prioritization/ranking. All appropriate personnel will be consulted at this is developed.



**VIII. Total Cost of Ownership**

*Table 1- Total Cost of Ownership, per computer) per Year (FY 2012)*

Total Cost of Ownership, per computer) per Year (FY 2012)	
Approximate number of Desktop/Laptop Computers	1803
Approximate Cost of Computers *	\$ 1,000
Approximate Cost of Support Resources Per Year **	\$ 2,038
Approximate Total Cost Of Ownership	\$ 3,038

\* Based on the cost of 1 PC (Non-Apple)

\*\* Included all systems operating costs, personnel support costs. Does not include the initial purchase cost of equipment.

**IX. Faculty, Staff and Administration (operational computing)**

A. Computer Resources

1. Baseline Software Systems

Currently the campus maintains a Microsoft Campus Agreement that supports a large part of the software used by instructional and operational programs at Victor Valley College. In addition to this agreement, a number of other software needs are provided by an annual agreement or purchased for instructional needs by Information Technology.

*Table 2 - Current Campus Software Agreements*

<b>Software</b>	<b>Type of Software</b>	<b>Used By</b>	<b>License Type</b>
Microsoft Campus Agreement	Desktop Productivity	Instructional and Operational Programs	Campus
Adobe ELA Agreement	Various Adobe development and productivity software	Instructional and Operational Programs	Campus
Datatel Colleague	Student Information System	Staff, Faculty and Students	Campus

B. Campus Network Systems

The campus infrastructure consists of approximately 150 virtual servers within 10 hosts servers blades, and approx. 10 Physical servers, 100 managed network switches. The network switches are primarily Cisco Catalyst 3750X, with the remaining networks switches being Cisco Catalyst 3550 which are at least 10 years old and no longer supported.

The primary hosting environment for the servers is VMware ESXi and VMware Vcenter

The core infrastructure consists of the following:

- VSS Core using Cisco Catalyst 6509, HP BladeCenter c7000 enclosure with HP Proliant 460 servers and EMC NS-120/Cx-4 Storage.
- A backup storage system is located at the Regional Public Safety Training Center (RPSTC). The backup system consists of an EMC NS-120 Storage array of disks connected to the VVC network. Its primary purpose is to fulfill backup requirements of the VVC Data Center. It also used to provide storage for RPSTC servers, including video surveillance and instructional video.

### C. Email and Calendars

#### 1. Electronic Mail

- Faculty and Staff: E-mail is provided to all faculty and staff. The primary e-mail system is Microsoft Outlook/Exchange services. A migration to Microsoft Outlook/Exchange from Novell GroupWise was conducted during April 2011 and completed on 30 June 2012 with the removal of all Novell applications. Access to email off campus can be accomplished through a variety of applications using secured protocols and via the Outlook Web Access.
- Official Student E-mail: The campus is moving toward implementing a Microsoft based email system as the official system for student email. The choice to use Microsoft based email is based on the availability of resources to support the product and the fact the campus has moved to a Microsoft standard. A few functional areas prefer Google as an email platform for students. The final migration to the student e-mail is based on the time of other projects, namely the migration from Datatel Colleague UniData to a SQL based system and the migration of student accounts into Microsoft Active Directory.

### D. Hardware Inventory

- The campus has an open environment for most computing devices for which there is a demonstrated need. The campus has standardized on HP brand hardware for servers and Dell and HP for desktop and laptop systems.
- Apple Desktop/Lab equipment is also used in specific areas based on a demonstrated need for these products. This is primarily due to the increased Total Cost of Ownership (TOC) and a limitation of resources to support Apple products. Current estimates indicate Apple desktops consist of about 5% of the total desktop inventory. Due to this TOC, a careful review of needs and justification is required prior to purchase.
- The campus has moved to virtual technology, standardizing on HP servers. Other stand-alone servers may be used based on the application, server, and functional requirements.
- Currently the campus has approximately 2100 desktop systems in operation within the campus and at remote sites. An inventory is constantly ongoing, with efforts to lower the TOC by using automated inventory systems rather than performing a manual inventory.

### E. Desktop Security

- Currently using Sophos Anti-virus and WebSense to provide desktop software and application security.
- There are no current plans to change these systems.

### F. Training

- Training is provided as new systems/applications are obtained and installed. Regular scheduled training for basic computers usage such as Outlook and Network usage, but has not generally been well attended in numbers that would permit us to expend resources on a regular scheduled basis.

## G. Technical Support

Help Desk provides level 1 support for staff/faculty and students. Level 2/3 support is provided by Computer, Network, Media Services, and Management Information Technicians. Support can be acquired by contacting the Help Desk by phone or walk-up, or by submitting incidents through LiveTime (the campus technical incident reporting system)

## H. Personnel

### 1. Current Organizational Structure

The faculty, staff and students (indirectly) receive support from Information Technology and Media Services for computer technology and media related issues. These support services are under the direction of the Executive Dean, Technology and Information Resources Technologies. Campus labs provide direct user/student support with lab personnel and in-house staff and faculty.

### 2. Current Staffing

- Administration

The Executive Dean, Technology and Information Resources is the administrator in charge of the Information Technology, Management Information Systems, and Media Services Departments, and oversee all technology and media support for all faculty staff, student support and technical issues.

The Information Technology Department is responsible for the planning, design, implementation, and maintenance of the college network. It is responsible for the installation and maintenance of all computing hardware including but not limited to servers, workstations, printers, scanners, and other peripherals. It is also responsible for the installation of software and provision of end user support.

*Table 3 - Current IT/MIS/IMS Personnel*

<b>IT/MIS Administrative Office</b>
Executive Dean of Technology and Information Resources
Director of Management Information Systems
Total technology administration = 2
<b>Technical Support Personnel Functional Areas</b>
Desktop/Network (Field) (4)
Network Manager (2)
Media Services (2)
Management Information Services (6)
Senior Systems Analyst (2)
Senior Programmer/Software Developer (2)
Database Administrator (1)
Web Master (1)
Help Desk (4)
Help Desk Technician (2)
Senior Instructional Assistant (1)
CMS Administrator (1)
Total technical staff = 18
<b>Administrative Support Personnel</b>
Administrative Secretary II (1)
Clerical Technician II (1)
Total administrative staff = 2
Total = 22

3. IT Goals and Objectives

- Acquire an IT Manager to manage and coordinate the day-to-day Information technology, Media Services projects and immediate day-to-day campus technology support needs.

- Acquire additional Management Information Systems support, Web Site Support, and other key personnel based on needs. These needs are still being evaluated.
- Information Technology Obstacles
  - Additional management support for day-to-day operations needed
    - Provide daily operational support, and coordinate technical activities and maintain satisfactory support levels within all IT/MIS/IMS departments.
  - Applications Programmer/Asst. Web Master/Portal and SharePoint Admin
    - Provide support for IT, support Website and Portal operations.
- 4. Management Information Systems Obstacles
  - Lack of available time for projects without negatively effecting instruction or operations. Management Information Systems Needs and Obstacles
  - Customer Support Liaison needed
    - Provide consistent interface between technical staff and end user needs
  - Webmaster/SharePoint Developer needed
    - Provide support for Website and Portal operations due to increased need for support and integration with other campus systems
  - Acquire stable management and adequate contracted support for MIS Department
  - Maintaining forward movement with major projects without negatively effecting operational needs.
- 5. Repair and Maintenance
  - Repair and maintenance is conducted on a daily basis. The process of repair is started by contacting the Help Desk or entering an incident into LiveTime (the campus technical incident reporting system). A Service Level Objective is being developed to help determine the priorities for repair and maintenance.
- 6. Accessibility and Assistive Technology
  - ADA Support and Compliance

Support for ADA, and Section 508 compliance are reviewed on a regular basis. A number of classrooms and labs have a minimum level of compliance that will be enhance as a need is identified. Support and services in this area are based on the following criteria:
  - Adjustable Workstations

Workstations should be at least 28 inches deep by 36 inches wide. Ideally, they should include separate adjustable surfaces for the keyboard and display screen. If you intend to mount the computer below the workstation, be certain that the computer is reachable by students in wheelchairs. Your High Tech Center should include at least one "sit/stand" workstation which can be adjustable for use by students who prefer standing while working. Adjustable workstations can be electrically or manually powered.

- Adaptive Computer Software
  - Screen Reader(Voice Output) - JAWS for Windows (currently available on campus)
  - Screen Magnification - Zoomtext (currently available on campus)
  - Scan/Read - Kurzweil 3000 (currently available on campus)
  - Voice Dictation - Dragon NaturallySpeaking (status to be determined)
  - Various other options available through computer operating system
  - Accessibility options in Windows.
  - Support for applications and operational needs provided by DSP&S.
  - Live and Prerecorded Media Captioning is supported by DSP&S

## X. Operational Planning Section

### A. Computer Acquisition and Replacement

- The campus consists of approximately 1803 computers which range in age of 1 to 10 years. These systems are used for administrative and instructional activities. Replacement is currently based on specific needs of each program and functional area. A systematic approach is needed to provide a constant infusion of new equipment each year and a plan for the best use of the new equipment. This would require an annual evaluation of all equipment and a determination of equipment replacement based on objective criteria. These criteria should consist of the following:
  - Age of equipment
  - Functional need (Demonstrated/Documented)
  - Equipment will be rotated through various department/programs. This will allow the most efficient use of the equipment over the life cycle of the equipment and reduce the TOC.
  - All equipment must be returned to the campus computer inventory when purchasing new replacement equipment. Categorical/Special funded equipment will be returned to the campus inventory to be re-inventoried and redistribution per categorical/special funding requirements.
  - All used computer equipment will be returned to the campus inventory and will be assessed as follows:
    - Placed back into service based on functional status of equipment to meet a demonstrated need.
    - Any systems designated at surplus but placed back into service within categorical programs will not be supported for replacement parts by the campus information technology.
    - Entered into surplus and cannibalized for parts to reduce the TOC for other campus systems
    - Any equipment, identified at surplus will no longer be supported by campus information technology.
    - Equipment reuse will be based on the most effective use of the equipment and will only be considered based on demonstrated/documentated needs of campus departments and programs.
    - Computer replacements will not necessarily be with new equipment, if a suitable replacement is available that will meet the needs of the functional area.
    - Equipment purchased through categorical/special funding may be exempt from these criteria and requirements base on requirements of the categorical/special program.

### B. Replacement Costs:

- The current estimated cost for replacement of the current computer inventory is approximately 1.8 million dollars. With a 6 year rotation plan the average cost for



computer replacement would be about \$308,666 a year. This is based on a consistent replacement plan of approximately 300 computers a year. The replacement schedule is dependent primarily on the funding and resources available in any given year. The current replacement number each year based on age ranges from 8 to 894 computers in a given year. In time, with proper funding, the campus should be able to stabilize the number of replacement computers each year to about 300 or \$308,666 a year. Stabilizing the computer replacements will provide for more predictable funding and support requirements.

FY	Number of Computers	Replacement Cost
2013	303	\$ 303,000
2014	894	\$ 894,000
2015	8	\$ 8,000
2016	404	\$ 404,000
2017	243	\$ 243,000
Total	1803	<b>\$ 1,852,000</b>

C. Replacement Options

In 2014, 894 computers are due to be replaced based on a yearly replacement schedule of computers at a cost of approximately \$894,000. Information Technology is currently piloting a solution for providing virtual desktops, thereby reducing the overall cost for replacing computers in the next 5 years. There are several options for replacing desktop computers with thin-client technology as follows:

- Re-purposing the current computers and providing virtual desktops. This will reduce the cost of replacing systems and extend the useful life by about 3 – 5 years, delaying the purchase of thin-client desktop technology. There would be no ongoing electrical savings with this plan until desktops are replaced with thin-client technology.
- Replace up to 80% of the campus computers with thin-clients as soon as possible. This option will allow for a substantial savings in the electrical costs for future years, creating a lower Cost of Ownership. However, this will require a substantial front loaded investment.
- Replace systems as they reach the end of their functional use and are surplus candidates. Will provide some electrical savings and not require a front-loaded investment.
- A 100 user pilot will help in determining the best and most efficient use of the deployment of virtual desktops based on the functional needs of the campus.

D. Computer and Equipment Baseline Standards

*Table 4 - Computer and Equipment Baseline*

<b>Equipment Type</b>	<b>Primary</b>	<b>Other Brands Used</b>
Desktop Computers	Dell	HP, Apple, other
Laptop Computers	Dell	HP, Apple, other
Printers	HP	Dell, other
Wireless Network	Cisco	other
Network Infrastructure	Cisco	Others, based on need
Network Appliances	Based on need	

E. Computer and Equipment Needs

- Current Equipment needs can be found in the Information Technology Praise Reports and Budget Worksheets. The Praise Reports are evaluated each year through a campus process that untimely provides prioritization based on the campus Mission, Goals, and Objectives.

F. Media Equipment Standards

A primary centerpiece to the campus media are Smart Classroom which consist of a lectern, projector, computer and a control unit. The management of the Smart Classrooms is in the process of being centralized in order to monitor lamp usage and provide remote support to the main campus and remote locations. Many Smart Classrooms also have a Smartboard that is connected to the classroom media computer. However, these are in the process of being replaced by interactive projectors that provide the same benefit at a lower overall Total Cost of Ownership.

*Table 5 - Media Equipment Baseline*

Equipment Type	Primary	Other Brands Used
Projectors	Boxlight	HP, Apple, other
Computers	Dell	HP, Apple, other
Control Devices	Extron	
Monitors	Dell	
Lecterns/Podiums	Various	
DVD (Blue Ray)	Various	
VCR	Various	

G. Media equipment Needs

- The campus is constantly in need of replacement equipment and supplies to support instructional needs. In FY 2012, many projectors on campus were replaced with newer interactive models. These projectors use what is called a “lamps for life” program that requires the purchase of a bulb only once. From that point on, the lamp is provided free of charge when it needs replacing. Without this program, generally it would cost about \$500 per bulb. Over the estimated life of a projector (5 years) that equals a saving of about \$1,500 per projector. A recent replacement of 40 projectors is estimated to save about \$63,000 over 5 years.
- Other basic replacement parts, such as projector screens, computers, mice and monitors is an ongoing effort year round.
- Current Equipment needs can be found in the Instructional Media Services Praise Reports and Budget Worksheets

*Table 6- Management Information Systems Baseline*

Enterprise Systems	Primary	Other Brands Used
Datatel Colleague	Datatel	N/A
Datatel/SharePoint Portal	Datatel and Microsoft	N/A
Student FAQ System		

H. Management Information Services (MIS) Needs

- MIS is constantly looking for ways to streamline the process of supporting the Student Information System and other systems used by students, faculty and staff. The biggest issue is locating qualified personnel to hire in support of MIS projects and objectives.
- Current Equipment needs can be found in the Information Technology Praise Reports and Budget Worksheets

I. MIS Goals and Objectives

- Perceptive: Increase automation and availability of documents through a document imaging and workflow solution
- Schedule 25: Improve scheduling process and increase the usage of facilities
- SQL Migration: Improve performance, availability of Datatel
- Report Repository: A centralized source of reports accessible by staff and downloadable as Excel spreadsheets

- COTOP: Revamping the collection of fee owed to the District for several years
- Datatel SharePoint Portal: A central point of access for students to all District services using a single set of credentials
- Course Repeatability correction: Fixing student transcripts for accurate GPA calculation
- Security Class review: To increase integrity and security on the Datatel Colleague system
- TracDat/SharePoint integration: To facilitate the input and presentation of accreditation information
- Student email system

## **XI. Infrastructure and Facilities**

### **A. Ellucian Colleague Student Information System**

- The private website (Ellucian Portal and MS SharePoint) contains information that is for internal use and requires authorization to access the information for the most part.
- Web Services are provided from a public site for general information about application to the college, classes, registration, and other related activities. The public web site also contains links to a variety of other student services
- The portal is designed to provide restricted access by authorized students and staff. Currently the portal is in development, but expected to be rolled out to the campus within the next six month. The site will be used to provide access to student and class information.
- SharePoint is designed to provide single sign-on for all campus personnel and students. The portal will be the starting point to gain access to internal documents and the front door to the portal. The intent of the portal is to provide seamless access to all services at Victor Valley College for registered students and employees. SharePoint is currently being used by the campus employees for project, sharing of information, and documentation of committee meetings.

### **B. Information Security**

- Information security remains a primary concern with regards to technology usage. The IT staff is striving to provide an adequate level of security, while not impeding the operational and instructional use of the systems.

### **C. Data Storage**

#### **1. Shared Storage**

- The campus provides network storage for all campus staff/faculty to meet operational needs. It is not recommended to store any critical or confidential information on local desktop or personal storage devices. The network shared resources are backed up on a regular basis, while local storage and personal storage devices can be used at the risk of the end-user.

#### **7. Disaster Recovery**

- The campus uses a storage array located at the RPSTC for disaster recovery in the event of a catastrophic failure at the Main Campus. Current plans are to have designated vital systems restored within 24 to 48 hours. Datatel Colleague is currently running on a standalone platform that is backed up daily. Plans to integrate Datatel Colleague in the existing backup plan are scheduled after the migration to SQL is completed. The estimate for complete migration will be approximately Q3 of 2013.

#### **8. Security, Monitoring, and Control Systems**

- Securing Victor Valley College information resources presents the challenge of balancing the need for access with the need to support the administrative and instructional environments on the campus. There needs to be a balance

established that is based upon a responsible approach to reducing risk of unauthorized intrusion. The following key baseline systems are in place:

- Firewall (Layer 7)
- WebSense (Layer 7)
- Virus Protection

Current Anti-Virus protection is provided from the network and desktop. This protection is updated daily and provides a great deal of protection. Some security gaps have been identified, mainly with wireless access and student owned computers. Efforts to solve these gaps are being reviewed on a regular basis

#### 9. Remote Access

- Currently, we are using an HTTPS based VPN system for remote access to campus systems by employees that have approval and a verified need.

#### 10. Remote Locations

- Hesperia High School
- Regional Public Safety Training Center
- Silverado
- Downtown

#### 11. Training

Group training is conducted based on request generated by end-users. Attempts to schedule training on an ongoing basis has proved inefficient due to the lack of personnel that attend the schedule trainings.

## **XII. IT/MIS/IMS Projects (Current/Future)**

### A. Major Information Technology Projects Completed or in Progress for 2011 - 2012

- Outlook Training for Employees – 100% complete
- Tape Drive for archival of campus files and emails – 100% complete
- PCI Compliance (Phase I) – 100% complete
- Replacement of Uninterruptable Power Supplies (UPS) for networks systems- 100% complete
- Memory Upgrade for campus network servers – 100% complete
- Migration from Novell to Microsoft for all operational areas of the campus – 95% completed
- Granicus - Board Room Video – 50% complete
- Public Safety Training Center Equipment – Complete
- Access Control Server (ACS) -50% complete
- Safe-Connect – 95% complete
- Wireless Network Upgrade (Inside) – Complete
- Integrated Library System Migration – Complete
- Bandwidth Management – 90% complete
- LAN Management Solution (LMS) – 25% complete

- Desktop Computer Replacements or replacement solution – 10% complete
- B. Future Infrastructure Upgrades and Additions under Consideration
- Digital Signage – FY 2013
  - Wireless Network Upgrade (Outside) – FY 2013
  - Call Center – FY 2013
  - Phase II switch replacement – FY 2013
  - Fiber Infrastructure Replacement/Repair – FY 2014
  - Fax Server Solution – FY 2013
  - Replacement vehicle for campus and remote site support - \$18,000, (FY 2013) – Also identified in M&O Praise Report
- C. Major Management Information Systems Projects Completed or in Progress for 2011 - 2012
- Early Use of Authorization Codes – 100%
  - Web Advisor Upgrade – 100%
  - Upgrade of Blackboard – 100%
  - Faculty Blackboard Training – 100% complete
  - Transcript/Credentials Online Request – 95% complete
  - ASB Student Optional Fees – 95%
  - HigherOne – 95%
  - SharePoint for Employees – 90% complete
  - Degree Verify – 95%
  - Address Changes in Web Advisor – 90%
  - Course Repeatability Correction – 50%
  - Transfer Equivalency – 50%
  - Security Class Review – 30%
  - GoverNet Colleague/CurricUNet Integration – 15% complete
  - Image Now – 50% complete
  - Schedule 25 – 50%
- D. Future Management Information Systems upgrades and Additions under Consideration
- New Priority Reg. Process
  - Deregistration
  - Online Refund Policy
  - Document Imaging Solution
  - Transfer Equivalency
  - Non-course Work Process (NONC and NEQV)
  - Revise PERC Process - I Counseling wants inquiry only
  - Web Advisor Enhancement
- E. Major Webmaster Projects Completed or in Progress for 2011 – 2012



- Online Transcript Ordering System setup/configure - 100% complete
- Setup Employee SharePoint 2010 system - 100% complete
- Online Student Orientation Process - 100% complete
- Online Assessment Test Appointment Scheduling - 100% complete
- Online Web Advisor Video Tutorial System - 100% complete
- Social Media Publishing System for Marketing Dept. - 100% complete
- Online Video Tutorials for CMS - 100% complete
- Migrate Live Time from Novell to Microsoft Directory Authentication - 100% complete
- Setup new Web Advisor application server – 100% complete
- Create HTML layout for outlook email signature ( w/logo) – 100% complete
- Setup Accreditation 2011 Site Visiting Team website w/team bios and web calendars – 100% complete
- iTunesU channel for Nursing 221 lectures – 100% complete
- Setup Daily Clinical Evaluation form for Public Safety students to use on-site – 100% complete
- Create Badges/Graphics for 2010 Wrestling State Championships (we hosted @ VVC) – 100% complete
- 50 yr. alumni showcase page - 100% complete
- PRISM system import file format for bookstore batch course request (textbook ordering) - 100% complete
- Paramedic Academy Online Application and Online Skills Labs Forms – 100% complete
- Financial Aid TV – integrate videos across their website – 100% complete
- Setup SLO webpages for Academic Senate in CMS – 100% complete
- Academic Senate – setup online voting for officers in SharePoint – 100% complete
- Tech-X 2011 and Senior Career Launch 2011 Online Registration Process – 100% complete
- Setup Certification Pass Rates web page to meet state and federal requirements – 100% complete
- Setup Gainful Employment web page to meet state and federal requirements – 100% complete
- Veterans website with custom FAQ channel and student club info. – 100% complete
- Counseling custom FAQ channel – 100% complete
- Secure Nursing feedback process – 100% complete
- ASB website CMS integration and user training – 100% complete
- Administrative Services Internal Master Calendar system (GroupWise and Web) – 100% complete
- Ultimate Textbook Giveaway online contest for students with RAMS Bookstore – 100% complete
- Secure Campus Web Services w/SSL encryption (Servers: PORTAL/CALENDAR/WEBADVISOR/ WEBUI/CPG/APPOINTMENTS/RDIR) – all 100% complete but one server at this point (95%)
- ADA 508 and Accessibility Compliance for VVC Web Presence – in progress (80%)
- eSARS appointment scheduling for Orientation – in progress (75%)

- Online Technical Training RSVP events (for reserving seats, creating attendee lists) – in progress (75%)
- Migrate main WWW.VVC.EDU website from NetWare/Apache to Windows/Apache – in progress (75%)
- Social Media plan and sites/pages customization and website integration for Marketing – in progress (75%)
- New Online Calendar System (Active Data Exchange) including branding and training – in progress (75%)
- Implement MS Student Email system – in progress (75%)
- Online, editable faculty and staff profile web page templates – in progress (75%)
- CMS/Website Integration and enhancements (templating, profiles, RSS, new sites) – in progress (75%)
- Setup all Accreditation SharePoint sites and subsites – in progress (completed in SP07, but not used by campus) (50%)
- Office Web Apps for SharePoint 2010 configure/setup – in progress (50%)
- Design and Development of VVC Mobile website(s) – in progress (50%)
- Capacity/Performance planning for production SharePoint 2010 farm – in progress (50%)
- eSARS Appointment scheduling for Counseling – in progress (50%)
- Library website re-design/templating and CMS integration/training – in progress (50%)
- Upgrade LiveTime to new HTML5/Mobile view version – in progress (50%)
- Backup/Recovery and Administration planning for SharePoint 2010 – in progress (25%)
- Setup all Committee workspaces in SharePoint – in progress (25%)
- SCVNGR – campus online/smartphone hunt with RAMS Bookstore discount rewards – in progress (20%)
- Setup SharePoint department sites for Admin Services and sub departments with master, shared calendar – in progress (20%)
- WWW Website Content Inventory and Strategy for structural re-design – in progress (20%)
- Athletics website integrated into web CMS – in progress (15%)
- Datatel Portal / SharePoint 2010 Implementation – in progress (10%)
- Responsive Layout (desktop/tablet/smartphone) design from single website for WWW – in progress (5%)
- Master Calendar system integration between Outlook/SharePoint/ADX Calendar – in progress (5%)
- Search Center (indexing file stores, websites, digital assets for search) – in progress (5%)
- Document Center (for quick access to all district documents in one place) – in progress (5%)
- Business Intelligence and Reporting Center – in progress (5%)
- Online workflow-driven electronic student travel submission process – in progress (5%)
- Admissions & Records forms (convert to online forms) – in progress (5%)
- CalWORKs forms (convert to online forms) – in progress (5%)

- Datatel Portal Mobile Online Access (MOX smartphone app) setup – in progress (5%)
- SharePoint/Portal Branding – in progress (completed in SP07, will re-do in SP2010)

### **XIII. Appendices**

Appendix A -- Victor Valley College Library – Information Technology Plan 2010-2015  
(Document is attached)

Appendix B -- Victor Valley CIS Department Technology Plan 2012  
(Document is attached)

Appendix C BP 1200 PDF Download  
District Vision, Values, Mission & Goals  
[http://www.vvc.edu/offices/Board\\_of\\_Trustees/Board\\_Policy\\_Manual/BP\\_1200.pdf](http://www.vvc.edu/offices/Board_of_Trustees/Board_Policy_Manual/BP_1200.pdf)

Appendix D BP 4030 PDF Download  
Academic Freedom  
[http://www.vvc.edu/offices/Board\\_of\\_Trustees/Board\\_Policy\\_Manual/BP\\_4030.pdf](http://www.vvc.edu/offices/Board_of_Trustees/Board_Policy_Manual/BP_4030.pdf)

Appendix E AP 1201 PDF Download - SHARED GOVERNANCE STRUCTURE &  
RESPONSIBILITIES  
[http://www.vvc.edu/offices/Board\\_of\\_Trustees/Board\\_Policy\\_Manual/AP\\_1201.pdf](http://www.vvc.edu/offices/Board_of_Trustees/Board_Policy_Manual/AP_1201.pdf)

Appendix F AP 3720A PDF Download  
Computer Use – Computer and Electronic Communication Systems  
<http://www.vvc.edu/offices/president/docs/ap/AP%203720.pdf>

Appendix G AP 3720B PDF Download – Computer Use – Email Procedures  
<http://www.vvc.edu/offices/president/docs/ap/AP%203720b.pdf>

Appendix H List of online resources - ACM SSIG CSS [www.siguccs.org](http://www.siguccs.org)

A photograph of the Victor Valley College Library building, a large, modern structure with a prominent red-tiled roof and a central tower. The building is situated behind a body of water, with reeds and other vegetation in the foreground. The sky is clear and blue.

# Victor Valley College Library

## Information Technology Plan

2010-2015

Submitted by: John

Akins  
Systems Librarian

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# Victor Valley College Library

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## Five-Year Information Technology Plan: 2010-2015

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### Introduction

Over the last two decades, libraries have been transformed from brick and mortar buildings housing books and microforms, to digital technology centers that now address the organization, retrieval, storage, and delivery of information resources in all formats. Libraries have become multi-modal in their mission to provide both print and electronic resources to meet the information needs of students and faculty from any place at any time.

### 1. College Mission Statement

The mission of Victor Valley Community College is to:

Cultivate intellectual growth, social responsibility, environmental stewardship, cultural enrichment, and economic development.

Create exceptional and accessible lifelong learning opportunities that afford students within our expanding communities the attainment of knowledge and skills necessary for success in the global economy.

Embrace difference in our communities by integrating their wealth of multicultural knowledge and wisdom into a cohesive and resourceful learning environment for all.

Inspire innovative teaching and service with imaginative uses of collaboration and technology, fostering vibrant programs that are measurably effective in addressing student learning and community needs.

Empower each student to learn by modeling academic integrity, democratic citizenship, and meaningful contribution to society.

### 2. Library Technology Mission and Vision Statement

#### Technology Mission Statement

Victor Valley College Library is committed to being a learning-centered facility for a diverse community by providing physical and online access to quality print, electronic, and multi-media resources. The library faculty strives to promote academic excellence and student success regardless of physical location by emphasizing skills in library research and information competency. Through encouraging independent thinking and lifelong learning,

the library helps facilitate the encompassing goals of Victor Valley College. With this purpose, the library is committed to the following mission:

Adopt the latest in technological innovation to provide timely and reliable information resources to the VVC community;

Promote the VVC Library as the focal point of quality information resources that students and faculty will view as their first choice for research both on and off- campus;

Provide quality instructional services and programs in the use information resources in support of student learning outcomes and the college curriculum;

Encourage and facilitate information competency, critical thinking, intellectual independence, and lifelong learning skills in all students, regardless of their education goals;

Provide optimum services to distance learners and users with special needs;

Promote a common shared vision and expectations among students, faculty, and administration relating to the use of educational technology;

Administer fair and objective service policies that affirm the vision and mission of the Library and Victor Valley College as outlined in the Educational Master Plan and the Accreditation Self Study.

### **Technology Vision Statement**

Victor Valley College Library will be faculty and students first resort for access, instruction, and assistance with research and online information resources to support curricular and educational goals.

## **3. Informational Resources**

### **Integrated Library System (ILS)**

The library's core technology is the integrated library system (ILS), SirsiDynix. The system has been in use since June 1997 (then known as Sirsi) when it was purchased through a RFP during the construction of the current library building. Since then SirsiDynix has grown significantly and currently ranks as one of the largest vendors of library automation. The company provides services to over 1,000 academic institutions worldwide, from Stanford University, California to Peking University, Beijing, China. SirsiDynix's upgrade policy includes technical support for the current and previous two



system versions. The vendor introduces new versions every one to two years (with intermediate patches) and libraries that fail to upgrade must contract for consultant services to bring their systems up-to-date. Upgrade software is included in the annual maintenance contract but the actual upgrades are the responsibility of the institution – at VVC the upgrades are maintained by the systems librarian. The library completed its latest upgrade during summer 2009. The system is currently running Symphony version 3.2.1 (see Appendix A, “ILS Server and Software Upgrade Timeline”). The ILS runs on a dedicated HP 9000 rp3440 server and HP-UX 11i v1 operating system. The server is physically located in the Technology and Information Systems (I.T.) Department (Building 21) and is connected to the campus network, firewall, and uninterrupted power supply. Data backups are scheduled to run daily and a member of the I.T. staff assists with changing the backup tapes on the server. The systems librarian runs full-system backups on a routine basis and as necessary during upgrades and other procedures.

The ILS is the backbone of all daily operations throughout the library. The system is comprised of seven primary modules: Administration, Cataloging, Circulation, Instructor reserves, Reports, Serials, and Online Public Access Catalog. Upgrades to the ILS are generally designed to introduce system-wide enhancements executed through the modules. Incorporating new enhancements into library operations requires configuring the modules of each staff client for the specific needs of all departments (Circulation, Reserves, Serials, and Technical Services). In-house staff training is coordinated allowing time for departments to become familiar with new features and testing them in daily operations.

### **Library Website and Electronic Resources**

Whereas the ILS supports the daily functions for managing internal operations, the library’s website is the information portal for external access to library resources. The library designed and implemented the website in 1997, prior to the introduction of VVC.edu. The website remained autonomous until fall 2005, when it was redesign and incorporated into the VVC.edu template by the library. The site provides access to the online catalog, 17 full-text subscription databases, research guides, links to Web resources, and general library information. Students can search the library catalog for books, instructor reserves, and media materials, as well as access full-text article databases and subject specific online sources. In addition to being an information portal, the sites’ design and content supports the research strategies taught in the library’s Information Competencies program.

The library purchases database subscriptions through the Community College Library Consortium (CCLC) to take advantage of consortium prices. Besides negotiating prices with vendors, CCLC also reviews databases for accessibility and usefulness to community college curriculum. In Fall 2010, the library subscribed to 17 online databases, all but 2 purchased through CCLC (see Appendix C, “Library Subscription Databases”). Databases are accessible campus-wide and the library provides off-campus access through a password authentication system managed by the staff. Usage statistics are maintained on all products.

## **Cooperation with Other VVC Departments and Third Party Vendors**

The library relies on the services of other VVC departments and third party vendors to support its technology plan:

### **Technology and Information Services (I.T.)**

The I.T. department maintains library access to instructional and administrative networks on campus as well as network support and maintenance for all library technology (PCs, printers, etc.). The I.T. department also assists the library with maintaining daily backup tapes on the ILS server. The college Webmaster provides access to the Web server and supports the library in maintaining its own Web pages.

### **Management Information Service (MIS)**

Throughout the academic year, the MIS department provides the library with student record files extracted from Datatel. The files are loaded into the ILS and used by the library for student record management.

### **Online Computer Library Center (OCLC)**

The library is a member of the Online Computer Library Center (OCLC) which is a nonprofit organization providing resource sharing for locating, acquiring, cataloging, lending, and preserving library materials. The library primarily utilizes the service for shared bibliographic records when cataloging new materials, and when requesting inter-library loans for students and faculty.

### **Community College Library Consortium (CCLC)**

As noted above, the library participates in the CCLC electronic database program to take advantage of multi-institutional pricing for annual database subscriptions.

### **Midwest and Baker & Taylor Book Vendors**

By utilizing book vendors, the library takes advantage of consolidating orders with one or two vendors as opposed to ordering from individual publishers. Besides convenience, the library also benefits from special discounts, delivery costs, and other incentives.

## **4. Instructional Resources**

### **Information Competency (IC)**

In 1996, the Academic Senate for California Community Colleges passed Resolution 16.2.0 recognizing the importance of Information Competency skills to lifelong learning. The core competencies identified by the Chancellor's Office include:

States a research question, problem, or issue.

Determine information requirements in various disciplines for the research questions, problems, or issues.

Use information technology tools to locate and retrieve relevant information. Communicate using a variety of information technologies.

Understand the ethical and legal issues surrounding information and information technologies.

Apply the skill gained in information competency to enable lifelong learning.

In Fall 2005, the VVC library adopted the Chancellor's recommended Information Competencies as the core of its IC program. In Spring 2006, Information Competency was formally made a graduation requirement for all students receiving a degree from VVC. During the same year, the Chancellor's Office revised the Community College General Education Requirements making college level English (English 101) mandatory for all Associate Degrees.

The Information Competency program at VVC is a collaborative effort between the library and the English Department. All students enrolled in English 101 are required to complete a library instructional component consisting of a class orientation (conducted in a classroom equipped with a workstation and data projector) and a 40-question workbook. The IC Standards are accomplished through the combination of the library orientation, workbook (designed to teach and strengthen Web based and traditional research skills), and the English

101 curriculum. IC Standards are included on a secondary level through course specific library instruction sessions across the curriculum and instructional pages on the library's website. During the 2008-2009 academic year, 1,332 students completed the IC requirement.

## **5. Infrastructure and Support Services**

In addition to the ILS, other library technology includes 9 staff and 5 public service workstations, 34 student-use research workstations, 1 DSPS workstation, and 4 network laser printers (see Appendix B, "Library Hardware Inventory"). All workstations run Microsoft Windows XP Professional. The I.T. Department maintains all hardware and access to instructional and administrative campus networks. (Refer to I.T. Department's technology plan for campus-wide network protocols, specifications, and configurations.)

Configuration of the staff workstations supports the processes of each department. Software includes specialized library programs (ILS client interface and OCLC client) and the

## Appendix A – Victor Valley College Library – Information Technology Plan

standard programs used college-wide (Microsoft Office 2003, Groupwise, Sophos, Datatel, Financial 2000, etc.). The library conforms to relevant data standards used in academic institutions for bibliographic control – AACR2 for MARC records, LCSH for authority subject headings, Z39.50 linking standards, HTML standards, and TCP/IP standards. Workstation peripherals include barcode readers, 2 receipt printers, and 3 network laser printers.

The 34 student-use research workstations run Firefox Web browser, Adobe Acrobat Reader, and Bardon Data Systems WinU security software to control access to the desktop and files. The workstations are designated for library research (word processing and other related activities are available in the ATC Building). Students with personal laptop computers can access library Web resources via the campus wireless LAN. The DSPS workstation's

adaptive technology software includes ZoomText Xtra screen enlarger, Kurzweil 3000 reader station, and Jaws for Windows screen reader. One network laser printer is available for all student-use workstations. Student printing remains free at this time.

## 6. Library Technology Goals and Strategies

### 6.a Goal for Information Resources

*Develop and implement through continuous evaluation and adaptation, a program of electronic resources and support that effectively meets the information needs of the Victor Valley College community regardless of time or location.*

#### Strategies:

Continue to maintain ongoing upgrades to the library's ILS (SirsiDynix) and to incorporate new enhancements into daily library operations.

Migrate to SirsiDynix's newest public Web search interface, E-Library. Continue to develop and enhance the library website to support access, instruction, and services.

Continue to collaborate with the California Community College League to expand current online database offerings.

Ensure issues of confidentiality, security, and equal access to electronic resources.

#### Action Plan:

Work within the VVC budgetary process to secure funding for the continuation and expansion of online database subscriptions.

Complete E-Library configuration and customization training in preparation for migrating to the new ILS search interface.

#### Comments:

Funding from the Telecommunication and Technology Infrastructure Program (TTIP) has been available to support library technology in California Community Colleges for over 15 years. During the latter half of this period,

the program designated approximately \$36,000 per college annually for the purchase of electronic database subscriptions. VVC library has depended solely on TTIP funding but due to the State budget crisis, support ended in

2009-2010. At this point, it is unclear when and if similar funding will ever become available.

The president of the college (Dr. Silverman) signed an amendment to the SirsiDynix annual maintenance agreement that commits the college to the vendor for the next five years (effective 2010-2011). The amendment places a

cap on annual increases, and provides free migration and training for the new

ILS Web interface, E-Library.

**6.b Goal for Instructional Resources**

*Provide students with assistance and instruction, enabling them to integrate objective information competencies into their educational goals. Collaborate with faculty to enhance training and assistance for the integration of information competencies into the curricular goals.*

**Strategie**

**s:**

Continue to expand and improve how the library provides instruction and assistance with teaching information competencies to a diverse student population.

Continue to expand and improve how the library collaborates with faculty to provide assistance with the integration of information competency standards across the curriculum.

Continue to enhance the library's website to support students and faculty in distance education programs.

**Action**

**Plan:**

- Develop an electronic module for the English 101 information competency workbook to support online and off-campus class sections.
- Provide faculty with training and assistance for integrating information competency across the curriculum.
- Develop Web-based tutorials and research guides that address all levels of curriculum including special needs and basic skills.

**6.c Goal for Infrastructure and Support Services**

*Provide an appropriate infrastructure to support library operations and electronic access*

*to library resources for students, faculty, and staff.*

**Strategies**

Collaborate with the I.T. department to ensure that staff and student workstations, printers, etc., remain upgraded or replaced in a timely manner.

Implement an automated verification process for student remote access to subscription databases.

Implement the use of student email accounts for sending library notices and communications.

Investigate options for replacing an “end-of-life” ILS server.  
Continue to collaborate with the I.T. department to maintain a stable and updated infrastructure in the Library including wireless connectivity.

Continue to investigate pay-for-print systems for student workstations. Ensure that third-party vendor software is maintained and upgraded.

### **Action Plan**

Collaborate with college administration and I.T. to secure funding to replace the ILS server in the next 2 to 3 years.

Collaborate with I.T. to include subscription database authentication into the new campus Enterprise Portal.

Collaborate with I.T. and MIS to provide uniform emails for student record files used in the ILS.

Continue to collaborate with the I.T. department to include the library in a campus-wide solution for “pay-for-print” on student workstations.

### **Comments**

The library purchased the ILS server in 2005 and it will need replacing in the next 2 to 3 years. The system currently runs HP-UX requiring the purchase of another HP server. SirsiDynix now supports Linux/Oracle that will run on most any server but requires the cost of data migration between the two operating systems. Another option is SirsiDynix’s hosting service, SAAS (Software as a Service). This would eliminate the need for a server but would increase the annual costs of operating the system.

### **6.d Goal for Human Resources**

*Expand the role of the librarian in the instruction process to achieve the goals of Information Competency standards. Develop human resources in the library to ensure effective functioning and services in an evolving information technology environment.*

### **Strategies**

Collaborate with faculty to incorporate information competency standards across the curriculum.

Ensure library staff receives training on ILS upgrade enhancements and incorporating new features into daily operations.

Ensure library staff is current with third-party vendor programs, national bibliographic standards, and campus-wide program applications.

Support conference attendance and training seminars in emerging technologies for librarians.

### **Action Plan**

Develop strategies to expand information competency standards across the curriculum, realizing that information retrieval and evaluation skills apply to faculty as well as students.

Ensure that staff members receive ongoing training to utilize and incorporate developing library technologies into daily operations.

Ensure that library staff is responsive to diverse cultural and learning styles within the VVC community.

### **Library ILS Server and Software Upgrade Timeline**

1/1997: Purchased HP Netserver Pro server running SCO-UNIX OS for the new ILS.

1/1997-6/1997: License agreement signed with Sirsi based on RFP. Process for implementation completed, including system configuration, data conversion, library policies and configuration, client software installation, public workstations installation, and training in all modules.

8/1997: Library's new Sirsi ILS fully implemented running Unicorn 97 client software.

**6/1999: Upgrade from Unicorn 97 to Unicorn 99 completed.**

6/10/1999: In-house training completed and staff begins using new client features.

**5/27/2003: Upgrade from Unicorn 99 to Unicorn 2002 Completed**

6/6/2003: In-house training completed and staff begins using new client features.

5/25/2005: HP 9000 server purchased from STA.

2/10/2006: Migration from SCO Unix to HP-UX completed and new HP 9000 rp3440 server brought online.

**2/2/2007: Upgrade from Unicorn 2002.0.18 to Unicorn 2003.1.4.5, including upgrade to a new client interface, Workflows (WF), completed.**

2/8/2007: In-house training completed and staff begins using new client interface and features.

3/09/2007: Sirsi DST Patch installed.

3/13/2007: HP-Server DST Patch PHCO\_36097 installed.

4/27/2007: 2<sup>nd</sup> DST Patch installed (U2003.5.1009).

1/11/2008: Sirsi ISBN Patch for new 12 digit barcodes installed.

**2/01/2008: Upgraded from 2003.1.4.5 to GL3.1.2.5 (Patch Cluster 5D), including upgrade to new client, WFJ (Workflows Java) 3.2.1.2.39.**

7/10/2008: In-house staff training completed for new WFJ client and full implementation.

3/21/2008: UGL3.1.3.544 DST patch installed.

6/19/2008: GL3.1 Patch Cluster 5E Install.

7/02/2009: Server kernel configuration changed for Symphony 3.2.1 upgrade specifications.



**7/31/2009: Upgraded from GL3.1.2.5 to Symphony 3.2.1.05 through Patch 5), including upgrade to new client, WFJ 3.2.1.2.39.**

8/3/2009: In-house training completed and staff begins using new WFJ enhancements and changes.

12/21/2009: Halt/Intil/Run wrapper script setup and installed on the server to run nightly via Cron.

7/3/2010: Training, migration, and implementation for new web search interface (Symphony 3.2 “e-Library”) completed.

**4/9/2012: Upgraded Symphony 3.2.1.05 through Patch 5) to Symphony 3.3.1 through Patch 1 (\*Patch 2 not installed due to server limitations). Included WFJ upgrade to 3.3.1.0.2652.12.**

**4/13/2012: Server Migration from HP 9000 to VM Windows 2008 R2 completed.**

## Library Hardware Inventory

### Integrated Library System (SirsiDynix)

Server: Windows Server 2008 R2 (Migrated from HP

4/13/2012) OS: Windows

Client Program: SirsiDynix Symphony, version 3.3.1 (Upgraded

4/2012) Client Interface: Java Workflows WFJ 3.3.1 (Implemented

4/2012)

### Staff PCs

12 Dell Optiplex GX 260 (RAM upgraded to 1GB to support new ILS client) PCs are currently running Windows XP

### Student-Use Workstations

12 Dell Optiplex 5x260

22 Dell Optiplex 745

All workstations are running Windows XP

### DSPS Workstation

1 Dell Optiplex running Windows XP

1 HP Scanjet 6300 scanner

### Network Printers

2 Dell 5200 network printers

4 Dell 5210 network printer

### Receipt Printers

2 Star SP 500 dot  
matrix

## Appendix A – Victor Valley College Library – Information Technology Plan

### Barcode Scanners

- 4 Welch-Allyn Scan-Team 3400
- 6 Welch-Allyn Image-Team 3800

### Photocopy Machines

- 4 Savin 7025 coin/card operated - public use (leased from APS, Inc. for the library.)
- 2 Xerox WC-M20i – staff use (leased through College

agreement.) Hubs: 10 D-Link 10/100 hubs

## **Library Subscription Databases (Spring 2010)**

When available, the library purchases database subscriptions through the Community College Library Consortium (CCLC) to take advantage of consortium prices.

***Expanded Academic ASAP:*** Magazine and journal articles - Multidisciplinary

***NewsBank Newsfile:*** U.S. and International newspaper articles -

Multidisciplinary

***LexisNexis Academic:***\* Law sources (cases, laws, codes) and news sources –

Law/Business ***Opposing Viewpoints Resource Center:*** Articles on controversial topics -

Multidisciplinary ***CQ Researcher:*** Online version of weekly publication (Current Issues) –

Multidisciplinary ***CQ Weekly:*** Online version of weekly publication (D.C. legislation) –

Political Science/Law ***Biology Journals:*** Scientific journal articles –

Biology/Biochemistry/Biophysics/Botany ***History Resource Center: U.S.:*** Documents,

Web links, and articles – U.S. History

***Health Reference Center:*** Nursing and allied health articles and documents – Nursing/AH

***Health & Wellness Resource Center:*** Consumer health articles and documents-

Nursing/AH ***Access U.N.:*** United Nations documents and publications – Political Science/

Law

***Grove Music:*** Online version of *the Dictionary of Music and Musicians* and *New Grove Dictionary of the Opera*. Also includes articles and Web links. – Music

**Grove Art:** Online version of the *Grove Dictionary of Art*, articles and images. – Art

**Routledge Encyclopedia of Philosophy\*:** Online version of source + Web links –

Phil/Relg **Routledge Religion Resource\*:** Online version of source + Web links. –

Relg/Phil

**Country Watch:** Current data and reports for 191 countries. – Geography/Political Sci./Hist.

**Books in Print:** Book and media publication information and book reviews - Multidisciplinary

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\* LexisNexis is accessible on-campus only.

\* Routledge databases are purchased directly from the publisher.

## CIS Department Technology Plan

### Goals:

The goal of the CIS department technology plan is to identify technology needs and provide a sustainable plan to meet those needs.

### Needs Assessment:

The following needs have been determined to be present for the department to conduct it's leading edge technology education efforts. The department must be able to:

- teach on any Operating System platform
- have the ability to teach multiple OS's in the same lab at the same time concurrently
- have the ability to configure network settings of all types
- be separated from the main campus network for safety of all parties so that our laboratory environment doesn't interfere with the campus computing environment
- have access to many Internet based services including but not limited to: ssh, ftp, http, https, vpn
- provide remote secure computing environment for our students

To accomplish these goals we have developed the following environment.

#### Desktop Computers:

We have desktop computers running on the Mac OS X operating system. This enables us to run virtual machines with any operating system on them.

#### Instructor Laptops:

Instructor laptops are an integral part of our department. Laptops allow instructors to perform additional work and class preparation from any location. This means that we can prepare even when the labs are occupied by other classes. If we don't have this capability then we cannot adequately prepare for our classes and labs.

#### Remote Access Server(s):

We have remote access server(s) running on Linux and providing remote access through NX Server. This is a great economical (free/open source software) way to provide high quality remote desktop environment to our students. Our students can connect from any of the major operating systems (Windows, Mac or Linux).

#### Infrastructure:

We have implemented the following infrastructure to support our department.

- Firewall System running FreeBSD and IPF
- Network switches and wiring to support the internal aspects of our VLAN'ed network
- Mac OS X server(s) that provides:
- Storage server (NAS)
- shared home directories via NFS
- OpenLDAP authentication
- DNS services
- DHCP Services

- Client Imaging services

**Budget:**

In order to maintain our systems the following refresh plan is identified:

- 4 year refresh cycle for desktop machines
- 3 year refresh cycle for servers
- Software upgrades only for the Mac OS and iLife Suite
- Adobe Flash
- MSDN Agreement
- Camtasia (or similar video demonstration software)

**Personnel:**

In order to maintain the lab environments in top working order the department would benefit from a full time IA3 lab position. This IA3 position would be responsible for desktop/application support and user account management as well as maintaining a presence for the open lab environment that we believe is core to building our learning community.

**Maintenance:**

With the machine refresh cycle laid out above the physical maintenance of the machines will be negligible. The main aspect of maintenance will come in the form of user account management and minor day to day software issues.

**Security:**

The infrastructure systems previously mentioned are required in order to maintain a layer of separation between the CIS department activities and the main campus network. This separation is critical for the protection of the campus network infrastructure.

**Evaluation:**

This plan is evaluated on an annual basis by the department to determine if it satisfies the needs of the department to support our departmental goals.

ESL / AENG/ ACOM ED TECHNOLOGY PLAN

VISION:

The ESL/AENG/CITIZENSHIP Program technology goal is to increase technology access and increase ESL student success through technology-mediated instruction.

Goals:

1. Upgrade existing technology in the dedicated ESL classrooms and labs on campus and at the Hesperia site.
2. Upgrade hardware
2. Complete updating course outlines to include technology goals.
3. Increase dedicated ESL classroom by two rooms with software/internet access
  - 4.. Upgrade ESL software at the Hesperia site ESL classroom lab.
  5. Evaluate and implement Web 2.0 and emerging technologies in student learning (wikis, blogs, e-books, podcasts, etc.)
  6. Develop a dedicated ESL Multipurpose Skills Lab
  7. Upgrade faculty/staff technology skills by attending in-service training; workshops, and conferences in Web 2.0 and implementing emerging technologies in the classroom
  8. Hire an ESL Multipurpose Open Lab Coordinator
  9. Establish ESL as its own department with a quasi-function including:
    - a. ESL credit
    - b. AENG (non credit)
    - c. Citizenship
    - d. Technology : ESL Multipurpose Open Skills Lab - Tutoring, Software access, and Internet access; keyboarding; word processing

### CURRENT TECHNOLOGY USED

LEVEL	COURSE	SOFTWARE	WEB BASED	NEEDS UPGRADE	COST	COMMENTS
1	AENG 10.1/ ESL 3	SIDE BY SIDE	YES	YES		Outdated
		OXFORD PICTURE DICTIONARY	YES	NO		
		ROSETTA STONE	NO	YES	16,000	NEW VERSION WEB BASED \$16,000
1	AENG 10.2/ ESL 5	SIDE BY SIDE	YES	YES		Outdated
		ROSETTA STONE	NO	YES		SEE ABOVE
2	AENG 10.4/ ESL13	SIDE BY SIDE	YES	YES		Outdated
		ROSETTA STONE	NO	YES		SEE ABOVE
2	ESL 12A- BASIC COMPUTER	TYPE TO LEARN/ COMPUTER	YES	NO	\$100. MAIN FEE	YEARLY USER FEE \$100.00
		TEKNIMEDIA				\$8,500
2.5 PRE INTER	ESL 12B- INTERMEDIATE COMPUTER SKILLS	TEKNIMEDIA	NO	Yearly software upgrade contract		SEE ABOVE
2.5 PRE INTER	ESL 12C- BASIC INTERNET/EMAI L	TEKNIMEDIA	NO			-
2.5 PRE INTER	ESL23-READING ESL 27A GRAMMAR I ESL27B GRAMMAR II ESL 25 LISTEN SPEAK	VISUAL DICTIONARY  ON LINE LAB	YES	NEW	\$500.0 0	SOFTWARE FOR READING CLASSES
3 LOW INTER MEDI	ESL 30A-PRON ESL30B-PRON	PRONUNCIATION POWER CONNECTED SPEECH	NO	YES	\$2,500	RESEARCH WEB BASED LAB
3 LOW INTER	ESL35A ESL33A ESL37A	FOCUS ON GRAMMAR	YES	NO	-	ONE TIME LICENSE
HIGH INTER 4	ESL35B ESL33B ESL37B	ONLINE LAB & FOCUS ON	YES	NO	NO	NO

Appendix C – ESL Department Technology Plan 2012

		GRAMMAR				
LOW ADV 5	ESL47 ADV GRAMMAR ESL 43 ADV READ ESL 45,45A-ADV SPEAK ESL46 ADV VOCAB	FOCUS ON GRAMMAR  ONLINE LAB	YES  YES	NO	NO	UPGRADES EVERY FEW YEARS ON F.O.G.
HIGH ADV	ESL48-Hi Adv Grammar ESL43BHi Adv Read ESL45B Hi Adv List	FOCUS ON GRAMMAR ONLINE LAB	YES  YES	NO	NO	
WORK FORCE HIGH INTER 4	ENGLISH AT THE WORKPLACE	BUSINESS ENGLISH	NO	YES	\$500.	RESUME BUILDER