

LOS ANGELES CITY COLLEGE

**Strategic Plan for Technology
2003-2008**



**LOS ANGELES CITY COLLEGE
STRATEGIC PLAN FOR TECHNOLOGY 2003-2008**

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LOS ANGELES CITY COLLEGE

Dr. Mary Spangler, President

Members of the Instructional Technology Committee, 2002-2003

A Subcommittee of the Education Master Planning Committee

Arnel Pascua, Dean of Educational Technology, *Co-Chair*

Patricia Schmolze, Coordinator, Staff & Organizational Development, *Co-Chair*

Pamela Atkinson, Teaching Learning Center

Kathleen Beaufait, AFT & IDWG 4

Dana Cohen, Academic Senate, Chair of Chairs & IDWG 2

Gary Colombo, Academic Senate President & IDWG 4

Chris Jillings, Academic Senate & IDWG 1

Allison Jones, Dean, Academic Affairs

Andrzej Mezynski, Library & IDWG 3

Roger Wolf, AFT & IDWG 1

Arlene Zimmerly, Academic Senate & IDWG 1

Strategic Plan for Technology 2003-2008

Edited by Arnel Pascua, Patricia Schmolze, and Pamela Atkinson,

This plan is a document of the Instructional Technology Committee (ITC). The ITC is a subcommittee of the Educational Planning Committee. We would like to acknowledge the foundational work of the committee members in developing the 1997-2002 Strategic Plan for Information Technology under the leadership of Dr. Mary Spangler. We would also like to acknowledge the research and data gathering efforts as well as the written reports provided by Dr. Casey Green of the Campus Computing Project under the leadership of Dr. Jackie Ireland.

PREFACE

Los Angeles City College is an urban oasis of learning that educates minds, open hearts, and celebrates community.

Three of the institutional priorities that enable Los Angeles City College to achieve our vision as an urban oasis of learning are particularly relevant to technology. The College is committed to efforts and initiatives that will:

- foster a culture of academic excellence by systematically strengthening the educational program and the quality of teaching that lead directly to greater student success;
- develop and implement plans to enhance the efficient allocation of resources that support the college's vision and priorities; and
- collect and use data systematically to make informed decisions that lead to continuous organizational improvement.

Technology is a resource that can be utilized strategically to foster a culture of academic excellence. An essential step in the process of articulating the college's strategic, technology-related priorities include an assessment of our technological strengths and weaknesses. These issues are addressed in the *Strategic Plan for Technology, 2003-2008*.

As the College fuses the planning and budgeting process as a means to address the institutional priorities, it is vital to understand the technological needs of the campus as well as the costs associated with meeting these needs. The *Strategic Plan for Technology 2003-2008* identifies the college's priorities for the role of technology in the coming years. The plan will facilitate informed decision-making on these issues, leading to continuous organizational improvement and also providing the basis for wise resource allocation to meet LACC's technology needs. A companion document "*LACC Technology Policy, Guidelines, and Fact Book*," will supplement the information found in the *Strategic Plan for Technology*.

The *Strategic Plan for Technology 2003-2008* was developed under the auspices of the college's Instructional Technology Committee. The *technology plan* builds on two recent (and key) documents prepared by the college:

- The new LACC strategic plan, *Creating an Urban Oasis of Learning 2002-2008*
- *The Educational Master Plan, 2002-2008*.

The *technology plan* draws on the forums, interviews and other activities sponsored by ITC during the 2001-2002 program year. Some of these forums were facilitated by Tech Ed Strategies, the technology consulting arm of the Community College Foundation and the Rand Organization and some of these forums and interviews were conducted by Casey Green of the Campus Computing Project. This provided a focused effort to poll LACC students, faculty, and staff about the key IT challenges confronting the college in the coming years.

For the purpose of this plan, the term "technology" is twofold. Technology refers to instructional technology, including the need for the college to turn its "attention to the formidable challenge of integrating technology with the curriculum we teach." (2003-2008 *Educational Master Plan*) and "technology" refers to management information technology including planning research, student services and administrative activities.

Instructional Technology Committee

1. INTRODUCTION

1.1 Background

Los Angeles City College took the first steps toward developing a strategic plan for Information Technology in 1995. As reported in the college's 1997's *Strategic Plan for Information Technology 1997-2002*, the arrival of 125 new desktop computers for one department served as the catalyst for the Academic Senate and the AFT College Guild to determine that the college "needed a master plan for Information Technology" (p. 1).

Over the past five years, computers and Information Technology have become ubiquitous on the college campus and across virtually all sectors of America life and the American economy: regardless of age, prior technology experiences, or current technology skills, there is little question that today's students now come to LACC both to *learn about* and also to *learn with* technology.

The *learning with* technology factor represents a significant change in the student experience over the past decade. Indeed, in 1997 the conversation about and the counseling for technology skills would have focused on computer and technology skills in the context of employment and career goals. However, today the conversation and counseling also emphasizes the need for technology skills as essential for academic survival and success across all areas of the LACC curriculum. Students need technology skills to do well in class, to serve and support their career goals as well as to address the expectations and demands of the labor market.

Admittedly, much has changed since the arrival of those 125 computers in 1995 and the development of the college's first strategic plan for Information Technology in 1997. The College has made great progress on a wide range of IT issues and initiatives over the past five years.

1. Every member of the LACC community has access to a computer, the Internet, and a campus email account.
2. The college recently installed a state-of-the art Voice-Over-IP phone system.
3. The college also installed a unified messaging system that integrates email, voice mail and fax messaging into one interface, Microsoft Outlook.
4. LACC's computer-equipped facilities (including the off-campus locations) provide student access to and training on a variety of software products that serve students in the context of both their academic programs and also their job goals and objectives.
5. The 2000 Student Survey indicates that 80 percent of LACC's students "agree/ strongly agree" that computers are available for use on campus when I need them.

Other significant gains in the area of technology over the past five years are also cited in the LACC *Educational Master Plan, 2002-2008* (p. 3).

1. LACC installed a fiber-optic backbone for the campus network. The fiber backbone sets the stage for future technologies that will support the deployment of technology resources in LACC classrooms, across the LACC curriculum, and for online student services.
2. On-campus computer access is now available to *all* full-time and part-time faculty.

3. The college created the Teaching Learning Center to support instructional course development and also opened a computerized assessment center.

These metrics, that were first articulated as institutional goals and objectives in the college's *Strategic Plan for Information Technology 1997-2002*, document significant gains in the kind, quality, and availability of technology resources for members of the LACC community over the past five years.

1.2 Identified Challenges

The LACC community recognizes that it cannot rest on these achievements. Despite the previously cited gains over the past five years, the college confronts several critical IT challenges. Identified challenges include the following:

1. the need to improve technology coordination, planning and governance especially in light of the college's plans for new construction, facility renovation, and satellite campuses.
2. the absence of financial plans and financial resources to support the routine replacement of aging computers and other technology resources including hardware and software.
3. the need for adequate assessment/training and user support for students and faculty including the support for distance education to facilitate the optimum use of technology resources for teaching, learning, and instruction.
4. the need to systematically provide adequate and appropriate curriculum resources that will help foster the integration of technology into instruction.
5. the need to effectively use technology resources in ways that will enhance campus planning, operations, and services.
6. the need to have a secure network, to establish and enforce policies on the acceptable use of computers and the computer network, and to develop a disaster recovery plan.

1.3 Organizational Charge

The *Strategic Plan for Technology 2003-2008* reflects the campus priorities articulated in the College's new strategic plan, *Creating an Urban Oasis of Learning 2002-2008*, and the new *Educational Master Plan, 2002-2008*. Both documents identify technology as an institutional priority and resource. As stated in the college's new strategic plan, the college seeks to "advance the use of technology in instruction with a specific focus on improved student learning outcomes" (Priority 1.5).

Affirming the institutional priority, Goal 3 of the LACC *Educational Master Plan 2002-2008* focuses on the "integration of educational technologies across the curriculum." The *Educational Master Plan 2002-2008* acknowledges "significant progress toward the goal of transforming LACC into an 'electronic campus.'" The *Educational Master Plan* states that the college "must now turn its attention to the formidable challenge of integrating technology with the curriculum we teach. The *Educational Master Plan* continues, "Our faculty need the tools, expertise, and leadership required to help them bring their classes up to the 21st century standards" (p. 23).

During the Spring of 2003, as part of the reorganization process of the Shared Governance Council, and in order to more effectively meet the above goals, the Information Technology Committee was renamed Instructional Technology Committee and made a subcommittee of the Education Planning Committee.

1.4 Defining Technology at LACC

Over the past two decades, a wide variety of academic and professional associations have issued guidelines and recommendations regarding the role of computing and instructional technology in

higher education. These groups and guidelines have wrestled with the evolving notions of computer literacy, technology literacy, and information literacy. They have also attempted to define *technology* in the context of the postsecondary educational experience in the United States in the mid-late 1990s and early 21st century.

For the purpose of this plan, the term “technology” refers to instructional technology as well as management information technology. *Instructional technology* is the technology integrated into teaching that helps achieve learning outcomes. Various forms of technology are now being used in the instructional programs including but not exclusive to television, videocassette recorder (VCR), overhead projector, liquid crystal display (LCD) projector, computer hardware and software, teleconferencing, and wireless devices. There are other forms that need to be promoted to the faculty including the use of satellite technology, videoconferencing, and Internet Protocol Television (IPTV). *Distance education* as used in this plan is defined in a broad sense to include anything from teaching a course entirely online to integrating information technology to improve student learning outcomes. *Management information technology* includes technology that facilitates research, development, and planning activities. It also includes online access to the following services; class schedules, registration, grades, library resources and student support services.

Therefore, this updated strategic plan for technology at LACC addresses the goal of students, faculty, staff, and administration utilizing technology to facilitate their communication in classrooms, labs, libraries, learning resource centers, offices, and the workplace and/or the home. Not limited to just computers and the Internet, the technology definition offered above is broad and encompassing of many kinds of instructional technologies.

The college affirms the concept of technology offered by The Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges (ACCJC) in the Commission’s new guidelines, *Accreditation Standards: Shaping the Dialogue*.¹ As defined in Standard III.C of the new ACCJC standards affirmed in June 2002, technology resources should be used to support student learning and to improve institutional effectiveness:

Technological resources are used to support student learning programs and services and to improve institutional effectiveness. Technological planning is integrated with institutional planning.

1. The institution assures that any technological support it provides is designed to meet the needs of learning, teaching, college-wide communications, research, and operational systems.
 - a. Technological services, professional support, facilities, hardware, and software are designed to enhance the operation and effectiveness of the institution.
 - b. The institution provides quality training in the effective application of technology to students and personnel to meet the changing needs of the institution.
 - c. The institution systematically plans, acquires, maintains, and upgrades or replaces technological infrastructure and equipment to meet institutional needs.

¹ ACCJC 2004 Standards for Accreditation, adopted June 9, 2002 ([http://www.accjc.org/New_Folder/ACCJC Accreditation New.pdf](http://www.accjc.org/New_Folder/ACCJC_Accreditation_New.pdf))

- d. The distribution and utilization of technological resources support the development, maintenance, and enhancement of its programs and services.
2. Technological planning is integrated with institutional planning. The institution systematically assesses the effective use of technological resources and uses the results of evaluation as the basis for improvement. (Standard III.C – Technological Resources; p. 18)

The new ACCJC standards recognize and affirm the role of technology as a resource for both student learning and faculty development as well as institutional effectiveness – the integration of appropriate and useful technology resources for both teaching, learning, and instruction and in institutional operations and decision-making. The college shares and affirms these technology goals and objectives.

1.5 The Financial Challenges

The above goals and objectives are ambitious given the IT funding challenges that confront LACC and other community colleges in California because of the state's current severe budget problems.

California's current budget deficit and accompanying financial problems highlight the need for LACC to identify and secure supplemental sources of financial support for a wide array of IT initiatives that will upgrade, enhance, and expand access to IT resources for members of the LACC community. During the booming economy of the 1990s, California and other states provided significant financial resources for technology to K-12 schools and to colleges and universities, including community colleges. Currently, it is clear that other issues on the state and federal budgetary agendas will compete with technology for funding.

Additionally, state officials in California and elsewhere typically view IT expenditures as a capital expense as opposed to an operating expense. Even absent the state's more than \$30 billion budget deficit, it would not be surprising for public officials to turn their attention to other competing demands in the education and social policy agenda (e.g., K-12 class size reduction and student assessment) following the commitment to increased support for technology initiatives during the mid- and late 1990s.

The college's technology needs versus the available funding resources to meet these needs, pose a significant challenge to LACC's technology aspirations and vision.

2. TECHNOLOGY VISION, MISSION AND GOALS OVERVIEW

2.1 Background

The current members of the Instructional Technology Committee spent the Fall 2002 semester aligning the rationale, guiding principles, and conceptual framework for the Strategic Plan for Technology with LACC's Strategic Plan and Educational Master Plan.

2.2 Vision Statement

Los Angeles City College is a leader in encouraging, empowering, and supporting the college community in the effective use of instructional and information technologies.

2.3 Mission

LACC's mission for technology is to provide

- access to current technologies;
- the technology skills and knowledge needed by each member of the college community, and
- the opportunity to expand and apply that knowledge in teaching, learning, and working.

2.4 Assumptions

- A. The greatest technology challenge at LACC is to integrate and support technology in instruction to improve student learning outcomes.
- B. Distance learning and alternative forms of instruction need long-range campus planning and support.
- C. The notion of a "digital divide" is real, and minorities, in general, do not have access to computers in their homes. (American Dream Makers: Facts and Figures About L.A.'s Latino Emerging Majority, United Way, 2000)
- D. Students matriculating through LACC will increasingly need basic computer literacy both to further vocational goals and to benefit from further educational opportunities.
- E. Categorical funding for technology will continue – although sporadically – into the future. (The State of California Community Colleges Fall Leadership Conference, September 28, 2000, Thomas J. Nussbaum)
- F. The expenses of technology may require adjustments or shifts in college priorities and resources. Developing outside sources of funding, including partnerships with companies for equipment and resources, will be essential. It is expected that limited or no additional funding will be available from the state in the next few years.
- G. The need for equipment, access to it, personnel, support services, and training will increase with time and be critical to a functional plan. This support includes the professional staff to install, maintain, and repair equipment, to train faculty and staff, to assist in developing instructional materials, and to supervise computer laboratories.
 - H. The use of computers and the Internet have facilitated and created new ways of delivering and accessing information.

In addition to using technology in the classroom, technology can and should be used dynamically to improve the cost-effectiveness of key institutional operations related to serving an increasing number of students (Campus Computing 2000: The Campus Computing Project, Kenneth C. Green, March, 2001).

2.5 Goals Overview

The LACC technology goals have been aligned with the goals articulated in the *LACC Strategic Plan (SP) 2002-2008* and in the *Educational Master Plan (EMP) 2002-2008*.

- GOAL 1:** Improve the Technology Coordination, Planning, and Governance.
SP Priority 7, EMP Goal 3.4
- GOAL 2:** Support the Maintenance, Replacement, and Acquisition of Technology Resources Including Appropriate Assistive Technology.
SP Priority 7, EMP Goal 3.6-3.7
- GOAL 3:** Increase the Computer Proficiency of the Campus Community.
SP Priority 1, EMP Goal 3.2
- GOAL 4:** Foster the Instructional Integration of Information Technology.
SP Priority 1, EMP Goal 3.1-3.3
- GOAL 5:** Expand the Use of Management Information Technology in Campus Planning, Research, Student Services, and Administrative Activities.
SP Priority 1 & 2, EMP Goal 5.1-5.7
- GOAL 6:** Protect and Secure the Integrity of the College's Computing Resources. SP
Priority 2 & 7, EMP Goal 4.5-4.7

2.6 Strategic Principles

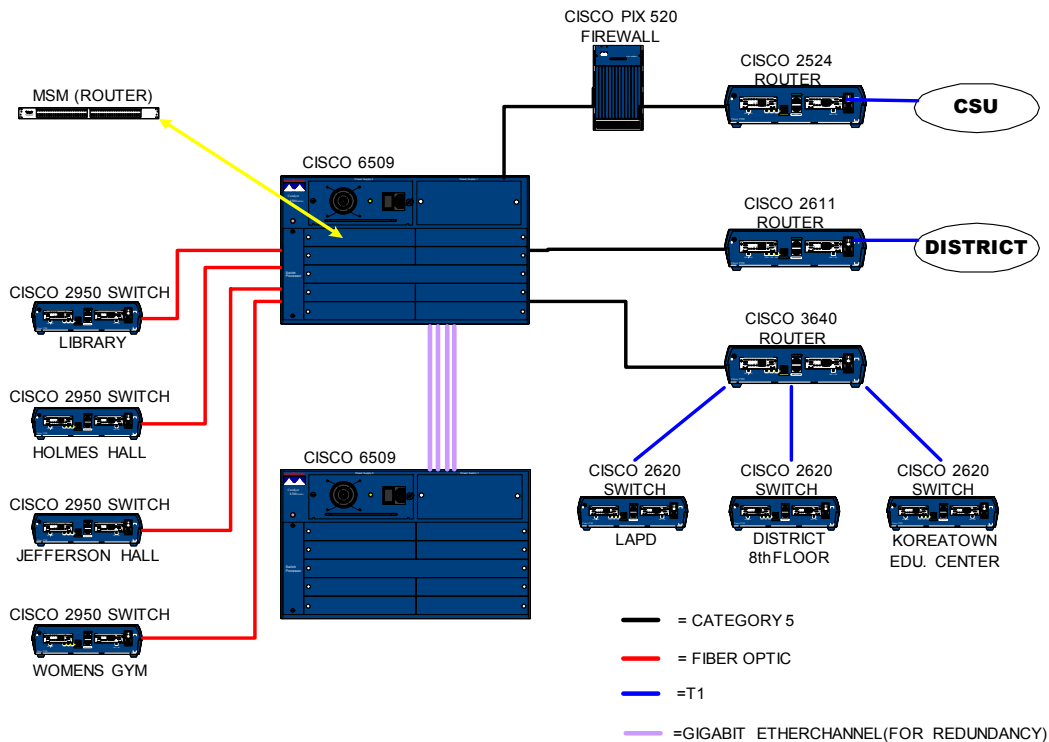
LACC's utilization and management of its technology resources will be guided by a set of principles meant to accomplish the goals and objectives as successfully as possible.

- A. LACC will strive to provide, to the best of its ability, a rich array of information resources and instructional uses of technology for all who need and can benefit from them.
- 1) LACC will regard funding for technology as an integral part of its planning process and be part of the final budget.
- B. To optimize the investment and deployment of technology, LACC will promote efforts to coordinate campus-wide planning while recognizing the specialized needs of individual departments and academic programs with regard to curricula. The planning, purchasing, and deployment of institutional IT resources will be coordinated using the shared governance process.

3. THE PHYSICAL, FINANCIAL AND HUMAN RESOURCES

3.1 Physical Resources

LACC has an integrated and converged network. The administration building is the hub of the network that is physically laid out as a star. The cabling is designed to host multiple systems such as data, voice, video, safety/security, and energy management systems. Fiber optics cable is used for the backbone (to connect the other buildings back to the administration building) and copper cable is used for the distribution inside buildings. Below is a diagram of the college network.



The Local Area Network (LAN), or simply the college network, uses an Ethernet cabling scheme that provides a switched 100 Mbps data transmission rate. However, recent improvements in technology now permit transmission rates of 1 Gbps. The college network is linked into a Wide Area Network (WAN) that includes the district office and the other campuses using point-to-point T1 frame relay lines. The college network is linked to the Internet via 4CNet (also known as CSUnet, the California State University network system) using two (2) point-to-point T1 lines. The Internet T1 lines have a data transmission capacity of 1.45 Mbps each, but are scheduled to be upgraded to a single DS3 line in Spring 2003 thereby giving the college network a data transmission capacity of 45 Mbps. The college has three satellite education centers that are connected to the main campus via T1 lines.

The distinct characteristics of the college network are as follows.

- High bandwidth and fast access
- A converged network with the ability to transfer data, video, audio, and graphics

- Easy-to-use but secure environment
- Access to online, real-time data
- Office productivity tools
- Applications that improve the workflow at reduced costs

The college's converged network provides many advantages and benefits. First, it provides an infrastructure that minimizes cabling requirements and enables the college to transmit voice, video and data over the same wire. Second, it is capable of adding new technology as the needs dictate, while integrating existing equipment. Third, the installed infrastructure allows the system to evolve without the need to install a completely new system.

Due to the converged network infrastructure, the college now has a unified messaging system that combines electronic mail, voice mail and fax services into one system. Furthermore, the college network is able to provide videoconferencing services direct to desktop computers.

The college also has a robust and secure intranet thereby providing access to online data, office productivity tools and applications that improve workflow. New online applications have been developed with a web browser "look and feel," because Microsoft's Windows software has become the dominant desktop operating system. For example, electronic mail can now be accessed using a web browser from home or anywhere in the world. There are also administrative applications such as those used for personnel assignment processing and time reporting which are accessible via a web browser from any computer on campus.

The results of the computer hardware inventory and assessment in December 2002 are shown in the companion book, titled *Los Angeles City College Technology, Resources, Policies, and Guidelines*. In order to "maintain state-of-the-equipment ..." (EMP 3.7), best practices suggest an optimal replacement cycle of three years for desktop computers. However, the actual replacement will be dependent upon available funding.

I. ACADEMIC COMPUTER FACILITIES AND HARDWARE

Current inventory show 43 labs containing 1,125 computers for the following uses; classroom, departmental lab, open lab (All College Lab & library), and other (Assessment Center & Teaching Learning Center). Currently 13 of these labs reported having assistive technology resources available. The assistive technology hardware may include ergonomic furniture and chairs, scanners, trackballs, Maltron keyboards, and headphones.

II. FACULTY COMPUTERS

As of December 2002, every member of the LACC faculty has access to a computer, the Internet and an email account. Current inventory shows 197 computers in faculty offices.

III. ADMINISTRATOR AND CLASSIFIED STAFF COMPUTERS

As of December 2002, all members of the LACC administrative & clerical staff have a computer and access to the Internet and an email account. All other classified staff members have access to computer resources. Current inventory shows a total of 179 computers in administrative use.

IV. LICENSED SOFTWARE

In an effort to reduce costs for software and use existing resources efficiently, it is the intention of the Dean of Education Technology to maintain a database of licensed software and

implement the idea of ‘softwarehousing.’ Softwarehousing is best implemented after a determination of the software needs of the campus. The college should then negotiate for site licensing prices from a reseller or the software developer. This may require a contract between the college and the reseller/software developer.

At present, the college has site licensing agreements with Computerland for Microsoft software, Network Associates for virus protection software, Bardon Data Systems for the WinU desktop protection software, Altiris for the Lab Expert imaging software and Vision remote control software. The reseller or software developer delivers to the college a complete set of documentation, diskettes, or CDs with the product. No successive purchases are required for a license to install the product on more workstations. The college just needs to keep track of how many licenses are available and in use. This approach saves redundancy in product and should result in a lower unit price. As more workstations come online, the networks will deal with the distribution and variety to some extent. Furthermore, most site licensing agreements have a maintenance provision that allows the college to upgrade the licensed software to a new version at no additional cost. The need for a centralized effort is very apparent with regard to record-keeping of site licenses, ordering, updating, and distributing products as new versions are released.

The results of the computer software inventory and assessment in December 2002 are shown in the companion book, *Los Angeles City College Technology, Resources, Policies, and Guidelines*.

V. TECHNOLOGY SERVICES

A. Servers

The college web servers host the LACC home page as well as web sites for instructors, departments and offices. The college email servers provide college faculty, staff and students with email accounts. Remotely hosted servers are also provided by contract for online course hosting.

B. Email, Voice Mail and Fax Services

E-mail, voice mail and fax services are available for all faculty and most staff. This is a unified messaging system that combines electronic mail, voice mail and fax services into one system and access is provided through Microsoft Outlook.

C. Smart Card

The college issues a smart card to all faculty, staff and students. The card is a form of identification, and provides access to parking areas, copiers, library services and some rooms such as the Faculty and Staff Lounge. As part of the planning for Proposition A buildings, the usage of the smart card will be expanded to include building/room access, small bookstore purchases and vending machine purchases.

D. Student Service Kiosks

The LACC Intranet is in place to support kiosks and student-accessible stations for general information, admissions, guidance, and locations of resources.

E. Library Automation

The Library Automation Project is complete. During 1996, a contractor converted the card catalog information from the nine college libraries into computer form. The “union” database is complete and was loaded into the DEC Alpha computer following the installation of the DRA system. The contractor

also printed bar-code labels for each book in the collection. The library staff completed the placing of bar-codes on the books during Summer 1996. The bar-codes identify each item in the system for the inventory and circulation system. The Library also provides access to select journal citation indexes as well as online databases and periodicals ranging from Lexis-Nexis to databases that provide health and medical resources. For more information, go to <http://www.lacitycollege.edu/resource/library/periodic.html>.

F. ETUDES

ETUDES is course management software adopted by the LACCD in the 2002-2003 program year. LACC faculty use ETUDES to create entire courses online or to complement a classroom-based course. (Prior to June 2003 LACC employed the WebCT course management system.) ETUDES resides on a server that is administered by the Foothill Community College. LACC has a software licensing contract with ETUDES through June 30, 2004 renewable annually.

G. SARS Grid System

To assist counselors in scheduling counseling, assessment and orientation appointments, the college implemented the SARS grid system. The software will provide the ability to schedule and monitor appointments easily as well as to generate statistical reports.

H. 4Faculty.org – Online Professional Development

As described in the Online Professional Development brochure, 4Faculty.org is an online professional development network of resources and learning designed specifically for the needs of community college faculty. This site was created for faculty to share ideas and acquire new tools for teaching. It is updated regularly with new materials and ideas. More than 200 faculty, administrators and technical staff from different institutions have contributed to this project. The program will be officially launched at LACC in Spring 2003 to serve the needs of full-time and adjunct faculty.

I. CCCSAT Satellite Downlink

CCCSAT is a statewide initiative established by the California Community College Chancellor's Office to advance distance learning and support the mission of the California Community College system. CCCSAT is physically domiciled at Palomar College - Educational Television. LACC is able to access CCCSAT programming for live or archived broadcasts.

J. Instructional MultiMedia Center (IMMC)

The Instructional Multimedia Center (IMMC) provides the faculty of Los Angeles City College with multimedia services ranging from video and audio equipment to portable computers and sound systems. Instructional equipment and materials are available to faculty and staff for presentation or classroom usage. These include a video and film library, video players, monitors and projectors, computers on wheels (COW), and audio systems. For further information, go to <http://www.lacitycollege.edu/resource/immc/aboutus.html>.

K. Satellite Downlink

The Instructional MultiMedia Center (IMMC) currently has two (2) satellites. One dish receives approximately 75 channels including AMC, Animal Planet, BBC, C-SPAN, Discovery, World Link, TECH, TNN and more. The other dish receives links from Europe, Asia, South America. Both receivers can store 40 hours of programming for viewing at a later date.

L. Videoconferencing and Teleconferencing

The Faculty and Staff Center has been equipped with a large projection screen, sound system with microphones and speakers, projector and a codec to facilitate videoconferencing. In addition, there is also portable videoconferencing equipment available for a small group. Furthermore, the college network is capable of sending the videoconference program to any

desktop computer that is capable of accepting the video/audio stream. The minimum computer requirements are a network card, fast video card, speakers, and high resolution monitor. The teleconferencing device is available for use from Technology and Systems Support (TSS).

M. High Technology Center

The High Technology Center in the Office of Special Services provides access to adaptive computer modifications and computer training allowing full participation in all college programs on campus. Its services include providing students with adaptive computer program access, adaptive computer equipment access and alternative text format access.

VI. DISTRICT PROVIDED RESOURCES

A. The District Web Site

The district web site provides access to a variety of resources including online admissions and registration system, online faculty and counseling resources, and administrative information systems. For further information, go to <http://www.laccd.edu>.

B. Protocol Academic & Room Scheduling System

The district purchased *Protocol* in Winter 2003 to facilitate and improve class-scheduling. Future *Protocol* usage will include assistance with the production of the annual catalog, linking the schedule and catalog production to an up-to-date course outline database. It will also facilitate the scheduling of other campus events. In the future this system will provide essential FTES and budget data to be utilized in the scheduling process.

C. Electronic Request for Personnel Action (eRPA) and Position Control System (PCS)

The district implemented a web-based system for electronic processing of personnel assignments (eRPA) that is integrated with position control.

D. Systems, Applications and Products (SAP)

The LACCD embarked on a Systems Modernization Project in late 1999. The project has the following components:

1. Implementation of SAP software for financials and procurement
2. Interim payroll improvements with minimal changes to existing systems
3. Implementation of SAP software for personnel-payroll
4. Selection and implementation of new student/curriculum software

3.2 Financial Resources

Funding for computers, infrastructure and training is supported in several different cost centers which include individual instructional and administrative departments, Technology & Systems Support, Teaching Learning Center, and Instructional MultiMedia Center. Each cost center deals separately with the budget process and manages its affairs individually. Additionally, money in the form of a grant, special programs, or district project has been made available sporadically for computing equipment. These programs include TTIP (Telecommunications Technology Infrastructure Program), SIEF (State Instructional Equipment Funds), Staff Development, and VTEA (Vocational Technology Education Act). The college has made a significant financial commitment to information technology in order to improve services to faculty, students, staff, in the area of information technology.

CURRENT FUNDING SOURCES

Program 100 (College Budget)	\$1,999,439
Technology & Systems Support/ACCL (Dept. Total)	\$1,627,325
Recurring Annual Expenditures	
\$160,685 Software site licenses (major contracts are listed below)	
Microsoft Campus Agreement (\$42,821)	
Network Associates Virus Protection Package (\$27,351)	
Altiris Deployment Software (\$4,876)	
Bardon Data Systems WinU Software (\$25,938)	
\$435,918 TSS Salaries	
\$142,421 ACCL Salaries	
\$144,127 Data communications	
\$265,288 Telecommunications	
\$1,148,439 Total	
Teaching Learning Center	\$85,223
Recurring Annual Expenditures	
\$61,777 Salaries	
Instructional MultiMedia Center	\$185,751
Recurring Annual Expenditures	
\$98,923 Salaries	
State Instructional Equipment Funds	\$ 0
CCC Telecommunications Technology Infrastructure Project (TTIP)	\$134,137
\$ 84,800 Internet connection (DS3)	
\$ 12,300 Videoconferencing connection (T1)	
\$ 37,037 Library Automation	
Staff Development	\$ 0
Vocational Technology Education Act (VTEA)	\$557,797
Other Funding Sources	variable
Program 100 instructional departments with equipment funds	
Specially Funded Programs	
Grants	
Donations	
LACC Foundation	

Recurring expenditures are already part of the college's annual budget. Projected annual expenditures of staffing, equipment and supplies, and maintenance and service are currently not funded. The approximate additional amount necessary to fund the unfunded projected expenditures for information technology resources for each of the next four years is \$1.3 million.

To the extent that this amount is available from sources other than Program 100, the college budget will not be impacted. The gap between what is funded through other sources and what is recommended as necessary to accomplish this plan's objectives should be met by Program 100. Currently, the budget for TSS, TLC and IMMC represent 4.08% of the total college budget. Consequently, the college's Operational Plan (based on \$49 million) could include 5% of the planning budget as a line item for technology expenditures and be funded annually.

3.3 Technology Human Resources

Background

As a general criterion, the ratio⁴ of support staff to technology users depends on the level or type of use required by the user. Users are divided into three broad categories. The ratio for “power users”—those who develop their own applications and always need the newest and fastest—is 1 (support staff):30 to 50 (users). The ratio for “middle-of-the-road users”—those who use a common suite of applications or use servers for database decision-support or work-group support—is 1:60 to 100. The ratio for “general office workers”—those who use a standardized suite of applications, need access to file and print servers, and use host-based legacy applications—is 1:125 to 300.

As stated in the 1997-2002 Strategic Plan for Information Technology, a reasonable level of staff support to meet student, faculty, staff, and administrative demand can be based on Full-Time Equivalent Student (FTES) for students and Full-Time Equivalent (FTE) for faculty, staff, and administration. The ratio of 1:300 is used as a measure of need, because of the range of abilities, access needs, and application uses among all potential users. For this model, the 2002-2003 headcount data was used.

Student users	= 17,095
Faculty users	= 594 (258 full-time + 336 adjunct)
Staff users	= 313
Administrative users	= <u>22</u>
Total potential users	= 18,024 ÷ 300 = 60 optimum staffing

The Instructional Technology Committee proposes another model which determines staffing needs based on the number of computers supported. This model uses a ratio of one support staff per 30 computers. In our environment there are 43 student labs averaging 26 computers per lab, open labs need at one lab assistant present during all open hours. These labs also have high levels of usage requiring a significant degree of technical support. In addition support is needed for faculty and administrative staff computing.

Student computers	= 937
Faculty computers	= 236
Administrative & staff computers	= <u>270</u>
Total computers	= 1443 ÷ 30 = 48 optimum staffing

Whether we choose the former or latter model, current support staff is not adequate.

Current Organizational Structure

The faculty, staff and students currently receive support from three different sources: Technology & Systems Support (TSS), the departmental labs, and the Teaching Learning Center (TLC).

⁴ The network support staffing ratios are recommended by Gartner Group, an international information technology consulting service.

Current Staffing

ADMINISTRATION

The Dean of Educational Technology supervises the Technology and System Support (TSS) department and oversees the technology and procurement and contracting. The TSS 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 end user support.

Total technology administration = 1

TECHNICAL SUPPORT PERSONNEL

The following TSS personnel provide technical support.

- (2) – Senior Computer & Network Support Specialist
- (2) – Computer & Network Support Specialist
- (2) – Asst. Computer & Network Support Specialist
- (2) – Computer Technician
- (4) – Instructional Assistant for IT

In addition to the above responsibilities, TSS is also responsible for the management of two computer labs – the Multimedia Computer Lab (FH 104) and the All-College Computer Lab (FH 201). To assist and supervise the students in the lab, four Instructional Assistants for IT (two in each lab working in two shifts) were hired.

Total technical staff = 12

TEACHING LEARNING CENTER (TLC)

The TLC is supervised by the Director (currently vacant) and staffed with one computer and network support specialist. The TLC is a multifunctional site that provides training and support including multimedia technology development, the use of the Internet, and the use of software (including course management software). The TLC is the center of technology training activities for both faculty and staff.

Total technical staff = 1

INSTRUCTIONAL MULTIMEDIA CENTER (IMMC)

The IMMC is supervised by a Senior Instructional Media Specialist and staffed with one Instructional Media Assistant.

Total technical staff = 2

DEPARTMENTAL STAFFING

Departmental computer-equipped facilities are staffed as follows based on information provided in December 2002. This includes 36 of departmental labs staffed by 15.4 FTE (This represents the FTE for all classes of instructional assistants) of staff reporting to academic departments.

Total departmental lab support staff = 15.4

TOTAL COLLEGE TECHNICAL SUPPORT = 31.4

4. GOALS AND PLAN OF ACTION

4.1 Background

The previous chapters described the current physical, financial and human resources for technology at Los Angeles City College. Chapter 4 reflects the IT goals and action plans for 2003-2008.

The implementation of the goals and objectives outlined in this document will follow the policies and procedures of LACC's Shared Governance and Budget Review processes. General oversight for the implementation of these goals and objectives, including the task of establishing priorities and implementation timelines, resides with the Instructional Technology Committee, which is a subcommittee of the college's Educational Planning Committee. Additional information about the Action Plan, including operational responsibilities for the various IT objectives listed below, is presented in the Implementation Matrix that appears as a separate document.

4.2 Goals and Action Plans

GOAL 1: Improve the Technology Coordination, Planning, and Governance.

The Instructional Technology Committee at Los Angeles City College is a subcommittee of the Educational Planning Committee. While specific campus IT policies are set within this framework, it is important to note that many of the planning and operational policies are centralized at the LACCD. Part of the challenge of campus IT planning is to make optimal use of campus and district IT resources.

Technology is integrated into almost every aspect of college operations. There is a need to coordinate strategic planning, development of instruction technology policies, and management of information resources within the organizational structure of the campus.

Construction, facility renovation, and satellite campuses require coordination and planning as technology issues will play a key role in many of the decisions about these facilities. The *Educational Master Plan 2002-2008* states, the "unique opportunity to change the physical face of the campus also provides an opportunity to enhance support for the instructional program." Accordingly, campus officials will be involved in "selecting new technologies and introducing them into new and renovated facilities to enhance instructional support" (Goal 4.3, *Educational Master Plan, 2002-2008*). It is important to employ a "campus-wide" perspective about IT policies and priorities given the financial pressures on the college.

Action Plan

In order to improve the technology coordination, planning, and governance, LACC will:

- A. Coordinate strategic planning, development of instruction technology policies, and management of information resources within the organizational structure of the campus and develop clear lines of accountability for technology support.
- B. Promote the active dialog concerning IT decisions in resources, policy, and training among administrative and academic departments, the IT subcommittee, and the EPC, a subcommittee of Academic Senate.

- C. Recognize and centralize the role of IT planning and deployment in the college's current plans for new facilities, facility renovation, and satellite campuses.
- D. Coordinate scheduling and support for the college's 42 separate academic computer equipped facilities, including hardware, software, network services and security, personnel, and professional development of lab personnel.
- E. Hire a director to coordinate the activities in the TLC including faculty and staff hardware, software, and systems training. The director will assist faculty in the use of course management systems and the development of distance education programs and courses.

GOAL 2: Support the Maintenance, Replacement, and Acquisition of Technology Resources Including Appropriate Assistive Technology.

According to the current inventory, Los Angeles City College operates and maintains 42 computer-equipped facilities. These facilities include open labs, departmental labs, and computer-equipped classrooms as well as the Teaching Learning Center and the Assessment Center. In order to "maintain state-of-the-equipment ..." (EMP 3.7), best practices suggest an optimal replacement cycle of three years for desktop computers. As the college plans for and realizes technology growth, an updated inventory is essential in assessing needs and determining the maintenance and replacement priorities. Furthermore, "to ensure that computer facilities conform to the legal standards for assistive technologies" (EMP 3.4), the college will continue to evaluate needs as well as acquire and install assistive technology.

As mentioned in the resources section (Chapter 3), in an effort to reduce costs for software and use existing resources efficiently, it is the intention of the Dean of Education Technology to maintain a database of licensed software and implement the idea of 'softwarehousing.'

At present, the college has several site licensing agreements including a contract with Computerland for the Microsoft software and Network Associates for virus protection software. For optimal coordination and cost effectiveness, the standardized usage of the site licensing process is encouraged.

Action Plan

In order to support the maintenance, replacement, and acquisition of technology resources including appropriate assistive technology, LACC will:

- A. Maintain an accurate inventory of all computing equipment.
- B. Establish a three year acquisition and replacement cycle for hardware.
- C. Coordinate usage of site licensing process in procuring, updating, and distributing educational software.
- D. Continue to acquire and install assistive technology in computer labs to meet federal ADA guidelines of 10% availability in each facility.
- E. Equip additional classrooms with smart technology as part of the Prop A building and renovation.

- F. Integrate the technology resource information collected as part of program review with campus-wide technology planning.

GOAL 3: Increase the Computer Proficiency of the Campus Community.

As stated in the Educational Master Plan, LACC will foster a culture of academic excellence by

- Explore best practices in teaching at LACC and at other colleges (collaborative learning, critical thinking, electronic instruction) using them as the basis for professional development activities (EMP 2.2)
- Offering faculty enhanced opportunities for learning how to use computer-assisted instructional activities (EMP 3.1)
- Strengthening the role of the TLC—including determining its leadership structure—in assisting faculty to explore various other delivery strategies and incorporating technology into the classroom (EMP 3.2)

The employee training program at LACC will ensure that employees will be comfortable using computers to perform routine tasks according to their job descriptions. Training will be implemented concurrently with the adoption of new equipment and software so that, where necessary, employees will be able to utilize the appropriate software/hardware to perform specialized functions. Training will increase the proficiency of faculty & staff in performing tasks such as checking e-mail, finding resources electronically, and using the computer to prepare documents.

The training program will consist of scheduled workshops on a variety of topics, the subject matter being decided by responses to departmental and organizational requests, including needs assessments and surveys. These workshops will be supplemented by desk-side assistance and by departmental and workgroup trainings on specific topics. One-on-one tutorials are scheduled by appointment to acquire specific competency.

Training is provided for both administrative and instructional staff. This training will include email, document preparation, and using resources on the Internet. As new technologies are adopted by the college, training in the use of these technologies will be integrated into the existing training program.

Training will consist of on-campus trainers, faculty sharing their expertise, vendor sponsored training, and outside trainers brought in to address specific needs not met by the preceding. Additional resources utilized will include the California Virtual Campus Professional Development centers, the @one project, Merlot, and other collaborative opportunities.

Action Plan

Key efforts of the enhanced and expanded user support services at LACC are to:

- A. Encourage and support faculty to integrate technology in their classroom instruction.
- B. Assist and provide guidelines for faculty in the development of Web pages for their classes.
- C. Utilize the Teaching Learning Center as a collaborative environment that promotes the development and assessment of new teaching strategies.
- D. Provide IT personnel professional development opportunities that update and enhance their technology skills.

- E. Work within departments to communicate the various forms of technology that are available to them.
- F. Ensure that all course outlines are accessible online.
- G. Provide a help desk for students for technical questions.
- H. Provide training on newly-adopted applications and systems such as Etudes course management system, eRPA/PCS and SAP.
- I. Explore options for a student technology assistant (STA) program that would train and deploy LACC students to provide personalized assistance for faculty who are eager to develop IT skills but who feel they would benefit from individualized instruction and tutoring.

GOAL 4: Foster the Instructional Integration of Information Technology.

The college acknowledges the challenges of enhancing and expanding the role of instructional technology in the curriculum. The college seeks “to advance the use of technology in instruction with a specific focus on improved student learning outcomes.” (SP 1.5) As stated in the *Educational Master Plan 2003-2008*, LACC is fully committed to supporting efforts to “integrate technology into the curriculum we teach” (Goal 3, Educational Master Plan). Innovation and the willingness of faculty to explore options in their instructional and scholarly activities are key elements in the process of integrating technology into the instructional environment.

The faculty members need access to and assistance with various kinds of content and curriculum resources. LACC needs to enhance and expand the current investment in IT curriculum resources across all disciplines and across all the college’s academic and vocational programs.

Action Plan

To foster the instructional integration of information technology, LACC will:

- A. Expand efforts to promote LACC’s online resources to students, faculty, and staff;
- B. Collaborate with publishers in generating course materials in electronic format, assist faculty to utilize available resources in their courses
- C. Sustain efforts at the Teaching Learning Center and elsewhere at LACC to identify and promote key resources across the curriculum for use by LACC students, faculty, and staff.
- D. Appoint a permanent director of the Teaching Learning Center (TLC).
- E. Enhance efforts to coordinate software and access to online instructional and library resources to support teaching, learning, and instruction.

GOAL 5: Expand the Use of Management Information Technology in Campus Planning, Research, Student Services, and Administrative Activities.

It is essential for LACC to streamline a wide range of operational processes and procedures by the effective use of technology. To be responsive to the ever-changing technology environment it is

necessary to adopt the most efficient methods and techniques in the areas of planning, research, and administrative and student services; this will entail continuous scanning of the environment for changes in technology and improved communication about the technology changes at the college.

Action Plan

To enhance operational efficiency and effectiveness, LACC will:

- A. Promote the usage of the district's web based faculty services including accessing current class rosters, using online exclusion, and online grade submission.
- B. Expand the district's web based faculty services to include student email, home address and phone number.
- C. Promote the usage of the SARS (Scheduling and Reporting System) Grid System to assist counselors in scheduling appointments and preparing Student Educational Plans.
- D. Implement matriculation data collection software that will track students from entry to exit to assist in the college's planning
- E. Increase the number and strategically place the student information kiosks.
- F. Fully integrate the Protocol Academic & Room Scheduling System.
- G. Promote a paperless work environment by providing web-based applications such as online forms, electronic distribution of campus communications, electronic processing of personnel assignments (eRPA) that is integrated with a position control system (PCS), and an online database for creating, updating and viewing course outlines that is integrated with the class scheduling and catalog generating process.
- H. Explore the implementation of a workflow system that allows electronic approval of submitted forms.

Goal 6: Protect and Secure the College's Computing Resources.

Los Angeles City College operates and maintains 42 computer-equipped facilities. There are a total of 1100 computers in these facilities. Adding 197 faculty and 186 staff computers would make that total number as 1483 computers. Organizations of all sizes are constantly being plagued by viruses and hackers. Local area networks (LAN) require network policies that are designed, implemented, and enforced to maximize network performance and reduce exposure to the inherent security flaws in computers.

Action Plan

To establish and enforce policies on acceptable use of college computers within a secure and reliable environment, LACC will;

- A. Maintain web links to current policies and procedures including policies on copyright and intellectual property accessible to students, faculty, and staff.
- B. Encourage faculty to incorporate the LACC computing policies and guidelines in their course syllabus.
- C. Develop a standardized computer usage agreement form to be used college wide.

- D. Standardize virus protection software on all computers and implement automated methods of updating the software and virus data definition file;
- E. Check advisories on product vulnerabilities and security threats and publish these advisories to encourage vigilance and ensure that the applicable security patches are implemented as soon as the security bulletin is published;
- F. Implement effective intrusion detection and protection systems like firewalls, Ethernet switch access policies, network sniffer system.
- G. Maintain regular backup of critical data on servers. Provide training to faculty and staff to backup their own data.
- H. Maintain emergency battery backup power for critical servers.

APPENDIX

IT Goals and Objectives as Identified in LACC's Strategic Plan for Information Technology, 1997-2002.

LACC's first formal statement of goals and objectives for the campus in the context of the new technologies that emerged over the past decade were initially articulated in 1997 as part of the College's *Strategic Plan for Information Technology, 1997-2002*. The goals and objectives defined in 1997 are listed below. Chapter 2 of the *Tech II Plan* (May 2002) provides a detailed assessment of the progress on these initial goals and objectives.

GOAL 1: To obtain, develop and/or expand, as appropriate, the necessary components of the information delivery system [at LACC].

Objective	Description	Progress as of March, 2003
1a	Conduct an inventory of all college computers and their instructional uses	Completed
1b	Draft a strategic plan for future deployment of campus computer stations.	In updated plan
1c	Renovate and expand the Library into a technologically advanced, attractive learning resources center	Library remodeling scheduled
1d	Support the district-wide Library Automation [project] and develop access to library resources using technology, such as Internet access and multimedia.	Completed
1e	Identify resources to upgrade and maintain the All-College Computer Lab.	Completed
1f	Develop recommendations and a schedule to implement email Internet access, voice mail, and additional FAX machines to explore alternate forms of information delivery.	Completed
1g	Explore the possibilities and develop recommendations for offering courses via Distance Learning and/or the Internet, including creating and equipping a location for video conferencing and upgrading the College's satellite downlink capability.	Completed
1h	Provide every student with the opportunity to have email and access to the Internet from different locations on campus.	Completed

GOAL 2: To ensure that all components of system are current, fully functional, secure, equitable, cooperative, collaborative, and multidisciplinary.

Objective	Description	Progress as of March, 2003
2a	Develop a replacement schedule for all computers.	In updated plan
2b	Assess personnel needs for current and future computer labs.	In updated plan
2c	Develop recommendations to provide support personnel for administrative and academic/instructional computing facilities.	In updated plan
2d	Standardize – to the extent feasible – [computer] hardware and software across campus.	Ongoing
2e	Provide instructional technology for classroom presentations to enhance the teaching/learning process.	In updated plan

GOAL 3: To extend both the breadth and the quality of student learning by accommodating the wide range of abilities and interest in using computers for instructional applications and by developing skills necessary for utilizing information technology [resources in instruction].

Objective	Description	Progress as of March, 2003
3a	Provide faculty access to training and support to redesign curricula and teaching styles and to develop new approaches to utilizing technology [in instruction].	Ongoing
3b	Support the Staff Development program as a critical component in preparing faculty and staff to apply the capacities of technology to enhance teaching and learning.	Ongoing
3c	Provide regular access to the most current information and training to key personnel with administering responsibilities for the college's information technology resources.	Ongoing

GOAL 4: To encourage LACC students to develop supportive relationships with faculty, staff, and fellow students and to engage them actively in the learning process.

Objective	Description	Progress as of March, 2003
4a	Provide students with a carefully planned and implemented "learning community" to reap [the] benefits from information processing technology.	Ongoing
	Provide students lacking sufficient personal	Completed

4b	resources to purchase home computing systems with access to public computing facilities.	
4c	Focus on <i>learning</i> with technology rather than teaching with technology (original emphasis).	Ongoing

source: LACC Strategic Plan for Information Technology, 1997-2002, pp. 8-10.