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## EXECUTIVE SUMMARY

Information technologies will dramatically change the ways in which knowledge and information is obtained, transforming the instructional process at CSU. Every student and faculty member will have, at their fingertips, the ability to retrieve, display, and manipulate a vast array of recorded knowledge and information. Students and faculty will be able to interact with each other and with a body of knowledge in ways previously unimagined. The physical location of the student or faculty member will cease to be a barrier to teaching or to information access. This level of electronic information transfer will be supported by a revolution in consumer computing which will place affordable information processing in the hands of the entire campus community.

The potential for information to be digitized and available in electronic form at any time and place, will serve distant as well as local users. With greater reliance on digital information, telecommunications, and electronic media retrieval and storage systems, radical change will be possible in the way the university acquires, processes, stores and distributes information. .

Nowhere will this transformation be more important than in CSU's libraries. The library, whose traditional mission as a place where physical collection, storage and access of recorded knowledge was coupled with professional expertise in the effective uses of new and emerging information and knowledge, will be able to carry out this mission in both a "real" or physical space, and "virtual" (or electronic) space. By taking advantage of technological capabilities being developed worldwide— creating networks linking students, faculty, and other users on and off campus, and integrating this technology with other academic and instructional activities— the library of the 21st Century will be at the center of the 21st Century university.

A fundamentally new way of thinking about library facilities will be developed. Libraries will continue to be the "intellectual heart" of the campus. They will also become an even more important place for work and study— with teleconferencing and high technology media, computing, and other related facilities for use by both students and faculty, individually and collectively.

In collaboration with discipline-based faculty, CSU library faculty will play an integral role in the use of information resources in the instructional process. The growing sophistication of information technology will allow them to concentrate their instructional efforts on the critical thinking skills required to review and select recorded knowledge and information relevant to their needs. Library faculty and staff will continue to be responsible for management of the university's knowledge and information resources, and will complement systemwide coordination of acquisitions with selection of resources that support local programs. They also will be linked, through integrated professional partnerships, with computer, media, telecommunications, and other information specialists to assure that available technologies effectively enhance the teaching and learning processes.

This Strategic Plan presents a vision for the CSU Libraries. It foresees the transformation of the university library role and structure to a teaching and knowledge center integrated

with the technology available to support and enhance the learning process. Their mission— independently on each campus and in collaboration with other libraries and library systems— will be to provide services which encompass physical collection, storage and information access and greatly enhanced teaching and learning activities required to support a student body with widely diverse learning styles and economic ability to gain access to available services and technology.

The Plan outlines specific goals and strategies for achieving them, which will affect the administration, staffing, allocation of resources, and facilities design of the libraries of the future. These goals and strategies focus on the following six areas:

## INFORMATION RESOURCES

Achieving the vision of this plan will require the CSU libraries to provide students, faculty, and other users equal access to information resources in support of their learning and intellectual needs, regardless of location, learning style or economic circumstances.

While remote access to library materials, services, and other information resources will be common, the “virtual library” will not obviate the need for development of core collections in a variety of formats and utilization of all available technologies to access those resources.

The explosion of technology will require new approaches to copyrights and protection of intellectual property; but proliferation of publishing will require maintenance of and addition to print collections. Libraries will need to support use of materials in different formats and for widely diverse access and user requirements.

The strategies proposed within this goal area focus on development of shared information resources within CSU and with other institutions. They emphasize networking, development of electronic access to text and sound images, and universal access to collections wherever they are physically located. Collaborative initiatives are recommended to integrate information resources with emerging instructional technologies, and to join national efforts to develop new copyright guidelines appropriate for a National Information Infrastructure.

## INSTRUCTION

Collaborating with CSU discipline-based faculty, library faculty will provide instruction, training, and assistance in developing information competency necessary for teaching, learning, and scholarship.

CSU librarians will need to play an even more important role in the teaching and learning process. Their knowledge and technological skills will be of enormous value to information users who will require more concentrated instruction and training in the utilization of increasingly complex information resources and technology.

Strategies within this goal area focus on comprehensive integration of the information processes necessary to enhance teaching and curriculum design through application of technologies for accessing and utilizing information resources in all formats— whether in the classroom or distant learning

environments. They include development of specific instructional modules or courses, continuing education, and development of information competency standards.

## HUMAN RESOURCES

The overriding goal is to strengthen the ability of library faculty and staff to effectively use new and emerging information, networking and instructional technologies to meet the information and learning needs of an increasingly diverse student population.

The wide range of instructional modes needed to accommodate the diversity of learning styles and needs among students and faculty will require expanded skills of library professionals and related technical specialists.

Strategies outlined in the area of human resources emphasize staff development to expand skills needed to effectively utilize emerging instructional and information technologies; increased collaboration with faculty, computing, multi-media, telecommunications, and other specialists; and development of networking tools to enable librarians to facilitate collaboration in the design and delivery of services.

## INFRASTRUCTURE

The goal is to provide a facilities infrastructure that will support the physical and access requirements of students and faculty in the 21st century.

While the characteristics of library facilities will change dramatically, the requirement for a physical “place” will become more important as an academic and intellectual center to facilitate interaction between faculty, students, professional staff and other information users.

Such an infrastructure will require development of prototype facilities which will house workstations for information access and research; space and equipment to support full utilization of print, recordings, graphic, and other electronic resources— including reference collections, audio-visual materials and journals in multi-media formats.

Key strategies focus on establishment of complete connectivity between a central campus library facility and all users of its information services— on campus or at remote sites— provided through integrated networks and development of a universal workstation.

## ADMINISTRATION

On each campus and at the CSU system level, a common agenda for library and information services will be developed and implemented.

Successfully establishing a common agenda will require creation of organizational and management structures which emphasize collaboration on each campus— within all information technology service units, among CSU campuses, and with other institutions— to form an interconnected system fully utilizing the combined resources.

Recommended strategies include establishment of communication and consultation mechanisms to coordinate or consolidate related functions such as computing, telecommunications, audio/visual media, and library services; development of specific on-going roles for the Council of Library Directors and the Office of Library and Academic Information Services; and establishment of an organizational entity to initiate and implement external partnerships and strategic alliances with public institutions or private industry to share information resources, technology and services.

## FUNDING

To provide appropriate funding for the library of the future, the CSU system and each campus will implement initiatives to establish a broader base of resources, characterized by multiple and diverse funding sources.

Specific strategies are recommended to re-examine traditional formula-based funding, and develop a new model for State funding; create strong linkages on each campus for coordination and implementation of fund-raising initiatives; and explore uses of locally-generated funds to leverage system-wide and external fund sources for facility development and technology improvements.

## Implementation

The Council of Library Directors (COLD) believes that this strategic plan proposes a realistic vision and a clear mission for the CSU libraries of the future, and that it presents specific goals and strategies to move the CSU system and each of the campuses toward that vision. The underlying trends, issues, and basic principles of the plan have undergone extensive review over a period of 18 months, through extensive consultation with faculty, students, staff, and administrators on the campuses and at the system level. The process also involved a search and review of international literature on trends in academic libraries, and the involvement of external consultants with expertise in this area.

While this document articulates COLD's view of the future library and the role of the librarian in that future, it's intent is to address broad direction and policy concerns, and is not an operational plan. To facilitate the transition from broad goals and strategies to realistic operational actions, a concurrent implementation plan has also been developed by COLD, which is described in a separate document.

The implementation plan recommends a set of actions for each of the thirty-one strategies outlined in the Strategic Plan, and the involvement of specific groups and individuals within the CSU community to coordinate those actions. The plan also proposes a timeline for completing key activities and provides a preliminary assessment of resource impacts. Finally, It recommends priorities for major goals and strategies in terms of immediate, short-term, and long-term time frames.

While the Strategic Plan provides direction-setting principles and guidelines, the Implementation Plan will of necessity be a dynamic, changing document. That is because the feasibility of specific strategies, identification of alternatives, and determination of

resource requirements will be an outcome of the on-going consultation and communication process inherent in each of the recommended actions.

Implementation of the recommended strategies described in this plan will require the commitment of individual campuses and the CSU systemwide administration to new initiatives, including: significant reallocation of resources; rethinking the role of professional librarians, staff, and their relationship to faculty and students; new concepts for facilities and the functions they house; and new and diverse funding initiatives to support the significant changes proposed. Information technologies will dramatically change the ways in which knowledge and information is obtained, transforming the instructional process at CSU. Every student and faculty member will have, at their fingertips, the ability to retrieve, display, and manipulate a vast array of recorded knowledge and information. Students and faculty will be able to interact with each other and with a body of knowledge in ways previously unimagined. The physical location of the student or faculty member will cease to be a barrier to teaching or to information access. This level of electronic information transfer will be supported by a revolution in consumer computing which will place affordable information processing in the hands of the entire campus community.

The potential for information to be digitized and available in electronic form, at any time and place, will serve distant as well as local users. With greater reliance on digital information, telecommunications, and electronic media retrieval and storage systems, radical change will be possible in the way the university acquires, processes, stores, and distributes information.

Nowhere will this transformation be more important than in CSU's libraries. The library, whose traditional mission as a place where physical collection, storage, and access of recorded knowledge was coupled with professional expertise in the effective uses of new and emerging information and knowledge, will be able to carry out this mission in both a "real" or physical space, and "virtual" (or electronic) space. By taking advantage of technological capabilities being developed worldwide—creating networks linking students, faculty, and other users on and off campus, and integrating this technology with other academic and instructional activities—the library of the 21st Century will be at the center of the 21st Century university.

A fundamentally new way of thinking about library facilities will be developed. Libraries will continue to be the "intellectual heart" of the campus. They will also become an even more important place for work and study—with teleconferencing and high technology media, computing, and other related facilities for use by both students and faculty, individually and collectively.

In collaboration with discipline-based faculty, CSU library faculty will play an integral role in the use of information resources in the instructional process. The growing sophistication of information technology will allow them to concentrate their instructional efforts on the critical thinking skills required to review and select recorded knowledge and information relevant to their needs. Library faculty and staff will continue to be responsible for management of the university's knowledge and information resources, and will complement systemwide coordination of acquisitions with selection of resources that support local programs. They also will be linked, through integrated professional partnerships, with computer, media, telecommunications, and other information specialists to assure that available technologies effectively enhance the teaching and learning processes.

This Strategic Plan presents a vision for the CSU Libraries. It foresees the transformation of the university library role and structure to a teaching and knowledge center integrated with the technology available to support and enhance the learning process. The CSU Libraries mission—independently on each campus and in collaboration with other libraries and library systems—will be to provide services which encompass physical collection, storage, and information access and greatly enhanced teaching and learning activities required to support a student body with widely diverse learning styles and economic ability to gain access to available services and technology.

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Strategies within this goal area focus on comprehensive integration of the information processes necessary to enhance teaching and curriculum design through application of technologies for accessing and utilizing information resources in all formats—whether in the classroom or distant learning environments. They include development of specific instructional modules or courses, continuing education, and development of information competency standards.

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While the characteristics of library facilities will change dramatically, the requirement for a physical “place” will become more important as an academic and intellectual center to facilitate interaction between faculty, students, professional staff, and other information users.

Such an infrastructure will require development of prototype facilities which will house workstations for information access and research; space and equipment to support full utilization of print, recordings, graphic, and other electronic resources—including reference collections, audio-visual materials, and journals in multimedia formats.

Key strategies focus on establishment of complete connectivity between a central campus library facility and all users of its information services—on campus or at remote sites—provided through integrated networks and development of a universal workstation.

### ADMINISTRATION

On each campus and at the CSU system level, a common agenda for library and information services will be developed and implemented.

Successfully establishing a common agenda will require creation of organizational and management structures which emphasize collaboration on each campus—within all information technology service units, among CSU campuses, and with other institutions—to form an interconnected system fully utilizing the combined resources.

Recommended strategies include establishment of communication and consultation mechanisms to coordinate or consolidate related functions such as computing, telecommunications, audio-visual media, and library services; development of specific ongoing roles for the Council of Library Directors and the Office of Library and Academic Information Services; and establishment of an organizational entity to initiate and implement external partnerships and strategic alliances with public institutions or private industry to share information resources, technology, and services.

### FUNDING

To provide appropriate funding for the library of the future, the CSU system and each campus will implement initiatives to establish a broader base of resources, characterized by multiple and diverse funding sources.



Specific strategies are recommended to re-examine traditional formula-based funding, and develop a new model for State funding; create strong linkages on each campus for coordination and implementation of fund-raising initiatives; and explore uses of locally-generated funds to leverage systemwide and external fund sources for facility development and technology improvements.

## IMPLEMENTATION

The Council of Library Directors (COLD) believes that this Strategic Plan proposes a realistic vision and a clear mission for the CSU libraries of the future, and that it presents specific goals and strategies to move the CSU system and each of the campuses toward that vision. The underlying trends, issues, and basic principles of the Plan have undergone extensive review over a period of 18 months, through extensive consultation with faculty, students, staff, and administrators on the campuses and at the system level. The process also involved a search and review of international literature on trends in academic libraries, and the involvement of external consultants with expertise in this area.

While this document articulates COLD's view of the future library and the role of the librarian in that future, its intent is to address broad direction and policy concerns, and is not an operational plan. To facilitate the transition from broad goals and strategies to realistic operational actions, a concurrent implementation plan has also been developed by COLD, which is described in a separate document.

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Implementation of the recommended strategies described in this plan will require the commitment of individual campuses and the CSU systemwide administration to new initiatives, including: significant reallocation of resources; rethinking the role of professional librarians, staff, and their relationship to faculty and students; new concepts for facilities and the functions they house; and new and diverse funding initiatives to support the significant changes proposed.

## A. BACKGROUND

In January 1993, the Council of Library Directors (COLD) developed a paper entitled Planning for the Future of CSU Libraries for the Commission on Learning Resources and Instructional Technology (CLRIT). That paper described the current environment for library development, the status of CSU library technology, and the trends in development of universal workstations and digitization of recorded information which are fundamentally changing the availability of and access to information.

All twenty CSU campuses have been actively developing and implementing significant electronic information access and delivery systems. Online catalogs are fully functioning at all campuses, and a wide range of advanced technological services are available at most, including electronic access to indexed periodical literature using CD-ROM, searching capability through use of networks, and linkages to national or international databases and full-text services.

The dramatic changes that are expected during the next few years, driven both by technological advancement and limits on the availability of resources, require that comprehensive planning take place to assure the coordinated development of information resources, human resources, and infrastructure, and to establish appropriate resource allocation strategies that can support such development.

To implement the formal planning required, COLD and CLRIT agreed to begin development of a strategic plan for CSU libraries “that looks carefully at the environment, analyzes future user needs, and dynamically sets goals that can be implemented throughout the system.”

## B. PLANNING PROCESS

This planning document describes the results of a strategic planning process that began in March 1993 with the selection of consultants to facilitate the planning process, identify and evaluate trends and issues, and assist in the drafting of planning documents. The selected consultants were:

- Peter Lyman, Director of Libraries of the University of Southern California—nationally known for his expertise on technological changes affecting academic libraries—was retained to participate in the planning process and provide advice to COLD members on national trends likely to have impacts on the planning strategies developed by CSU libraries.
- The firm of Moore Iacofano Goltsman, Inc. (MIG) was retained to facilitate the planning process. Leading the effort was Daniel Iacofano, who has extensive experience in facilitating and coordinating planning efforts for higher education institutions and local and state governmental agencies and organizations.
- Rod Rose, Director of Strategic Planning for JCM Group. As a planning director for more than 17 years in the UC system, Mr. Rose was responsible for developing specific library plans for UCLA and other colleges and universities.

The planning process, established with the continuing involvement of COLD members and a Strategic Planning Subcommittee of COLD, included more than 30 focus groups of faculty and students on 15 CSU campuses, and group interviews and meetings with librarians representing all campuses. In addition, individual and group interviews or meetings were held with leaders of the Academic Senate, Academic Vice Presidents, Deans, Executive Council of Presidents, Information Resource Managers, Student Body Presidents Council, the Chancellor, Vice Chancellors, and others. These groups and many others will be consulted further to assure full discussion of the Plan’s key elements and facilitate implementation of its recommended strategies.

A chart illustrating the overall planning process is provided on the following page.

## C. ORGANIZATION OF THE PLAN

The Plan establishes six primary goal areas: Information Resources, Instruction, Human Resources, Infrastructure, Administration, and Funding.

Within each of these areas, specific goals and strategies are outlined. These were developed by task groups established within COLD. Specific strategies are further supported by analyses of trends and issues derived from focus groups and interviews, a review of national and international literature, and comprehensive discussions involving librarians, COLD members, CLRIT members, and others.

The COLD task groups began the process of planning for implementation by outlining potential resource impacts and preliminary timelines, and by proposing a mechanism for implementation planning, monitoring, and evaluation.

## VISION

In the 21st Century, CSU students and faculty will interact with each other and with information in ways unimaginable today. Ubiquitous technology will enable every student and every faculty member to access, retrieve, display, and manipulate a vast array of recorded knowledge and information. Barriers of space—physical location of student, faculty member, or information—will disappear, as will barriers of time.

The 21st Century campus library will be the hub of a full-service information and instruction network, designed to facilitate the delivery of recorded knowledge and information. This transformation will change teaching, styles of learning, and modes of scholarly communication even as California becomes an increasingly multicultural society. Through the CSU libraries, every student will be able to take full advantage of the electronic age without regard to background or economic status.

The role of CSU campus librarians and staff—selecting, organizing, and providing instruction in the use of recorded knowledge and information—will be central to a successful learning experience for many of California's least advantaged youth. CSU students will succeed in learning and in life because they will be information-literate. They will know how to access, retrieve, analyze, and select information to meet their needs as scholars, as workers, and as citizens.

CSU's campus library facilities will be "intelligent" structures; their rich technical infrastructures will support on-site and remote use of recorded information and knowledge. They will utilize a variety of storage techniques appropriate to the variety of formats of recorded information and knowledge.

## MISSION

The 21st Century CSU library will carry out its role by:

1. Providing access to recorded knowledge, information, and data.

The library will be the campus entity responsible for acquiring, cataloging, preserving, and providing access from any location to recorded knowledge, information, and data in all formats. It will be responsible for insuring equity of access to all students, regardless of their learning styles or economic circumstances.

2. Providing instruction and assistance in the use of recorded knowledge and information, and in the design of curriculums and instructional methods.

Working in concert with professional and technical staff in the allied fields of computing, media, and telecommunications, the librarian will be responsible for providing instruction in the use of recorded knowledge and information. The librarian's role in the educational process will be to assist each user in the selection, classification, assimilation, and critical thinking about the recorded knowledge, information, and/or data that the library provides or to which it gives access.

The librarian may also play a key role in the educational process by working collaboratively with discipline-based faculty as they design course materials and methods of instruction that take advantage of emerging instructional and telecommunications technologies as well as recorded knowledge and information that is accessible through the library system and its networks.

The essential characteristic of their role is that it will be carried out both in real space and in computer (or virtual) space. The real-time and real space characteristics of the future library will provide the place that preserves an intellectual center of the campus and a primary locus of interaction for faculty, students, and others who require interpersonal instruction and research relationships, and who study archival materials. Integrated into the main fabric of the University's educational delivery process, the library's roles enhance and support the importance of the physical university campus in a world dominated by electronic technology.

The virtual space characteristics of the 21st Century library will provide an electronic environment or process for teaching, learning, and accessing information wherever it is located or needed. Students need not be geographically or financially disadvantaged if technologies work for them as "the equalizer."

The mission of the CSU libraries, carried out in two simultaneous environments, delivered to the largest multicultural student body in the country, will position CSU as the leader in providing and delivering the highest quality educational products and services.

## MAJOR TRENDS AND ISSUES

### INTRODUCTION

search of international literature, combined with interviews and focus groups of faculty, students, and librarians on all CSU campuses, has provided a picture of current and expected trends in library development and some consensus on the impacts of information technology advancements on teaching and learning. Following is a summary of major trends, nationally and within the CSU system, in the six major goal areas.

## INFORMATION RESOURCES

### National Trends

An increasing proportion of library budgets is being allocated to library automation as libraries increase their dependence on remote access. Students, faculty, and other users will have access to university library computers from their home or office.

Enhanced search, retrieval, and delivery services will enable librarians and faculty to increasingly access information customized to their needs rather than relying on their library's collection of printed journals. Key environmental factors influencing these changes include:

- Rapidly increasing production of information in all formats, but especially of new journals;
- Increasing cost of all library materials, especially journals, which has exceeded the inflation rate for all other services and commodities purchased by higher education institutions;
- Cutbacks in subscriptions and in the purchase of new monographs in all academic libraries;
- Availability of personal computers and networked terminals has changed the campus information environment, and, in turn, faculty and student attitudes about electronic document delivery and their expectations about the materials the library should acquire versus those that should be merely accessible.

Issues related to multiple copyright formats (eg; books, articles, databases, images in artwork, content of letters and memorabilia, etc.) must also be addressed in an electronic information environment. Academic institutions across the country are working individually and in collaborative relationships to redefine the rights and interests of authors, while enhancing and promoting learning and the democratic uses of knowledge in an environment in which creation and distribution of information occurs in unprecedented ways.

### CSU Trends

CSU student, faculty, and librarian focus groups indicated strong support for remote information access, improved interlibrary loan services, standardized access protocols, and current and accurate databases and information resources. Key observations and concerns of these groups include:

- Provide increased accessibility to workstations on a 24-hour basis, either from on-site or from home or office.
- Standardize online databases, protocols, and interface technology and design to be user-friendly.
- Provide accessibility to at least one comprehensive set of source materials, but not necessarily on campus.
- Build a specialized collection of core materials on each campus, based on academic programs, combined with sharing of resources among campuses.
- Ensure that the majority of collections are online and fully integrate information and technology throughout the campus.

Key trends in California which support these views include the following initiatives which are either in development or are already being implemented:

- California is involved in a long-term effort to achieve seamless cooperation among libraries in all sectors: the State Library; city and county libraries; junior college, college, and university libraries; K-12 educational resource collections and institutional and corporate libraries.
- The CSU libraries have been active participants in the statewide multitype library networking efforts. A representative of the Council of Library Directors sits on each of the major governing bodies of the Multitype Networking Task Force. Most CSU Library Directors have been actively involved in the planning process.
- All CSU libraries are key providers to the community libraries in their regions.
- The CSU libraries have been instrumental in networking county libraries, K-12 institutions, and junior college libraries (as in Sonoma and Mendocino Counties) to the Internet, and in providing K-12 educators with valuable resources (as in the California Technology Project).

## INSTRUCTION

### National Trends

More and more colleges are requiring all students to own their own computers. The Library has a critical role in facilitating the use of information technology in the classroom. Library user education programs offer instruction on use of information tools, bibliographic file management, and end-user searching. Such programs include library-sponsored training in searching techniques, development of tutorial modules, use of vendor-provided software packages, and provision of user consultants in searching and text/file management.

### CSU Trends

In the interviews with faculty, students, and librarians, a number of comments and observations emphasized the importance of the library's instructional role:

- The library should also be a “producer” of information—text, bibliographies, and other materials for instructional use.
- Faculty and students want comprehensive training in the use of technology.
- Involvement of librarians in instructional design and delivery methods is important to faculty.
- Faculty are willing to change teaching methods and curriculum design to take advantage of technology.
- Librarians should facilitate information access, providing direction and support to the learning process.

- Librarians are recognized as academic information specialists, and are counted on as primary consultants regardless of their location.

## HUMAN RESOURCES

All levels of library staff are adapting to an explosion in the quantity of available information, to the proliferation of its formats, and to the information and learning needs of an increasingly diverse student population. Their adaptations have been impeded by a funding environment which precludes the addition of staff to respond to increasing needs.

While the environment of accelerating change and fiscal stringency is unlikely to improve in the foreseeable future, new technologies in networking, information access, telecommunications, and the delivery of instruction provide opportunities for enhancing the librarian's role in the teaching and learning process. Among these technologies are two-way interactive video, teleconferencing, interactive computer-assisted instruction, and wide area and local area computer networks.

Strengthening the librarian's role in instruction, and enhancing the effectiveness of all library personnel requires ongoing education and training. New and emerging technologies can provide increased opportunities for this essential staff development. Librarians, paraprofessionals, and support staff can all benefit from systemwide cooperative continuing education and training programs which can be delivered electronically. Continuing education and training are essential ingredients in developing the library's human resources, its most important and expensive asset, to meet the changing demands of the academic community it serves.

### Key Trends:

- Increasing diversity in the cultural and academic backgrounds of students calls for a broader range of means of imparting information instruction.
- Librarians are coping with increasing demands for information instruction and consultation.
- Telecommunications and computer workstation planning in the CSU is aimed at establishing an environment which will permit the implementation of innovative means of providing library services and information instruction.
- New initiatives in the delivery of instruction through technology will increasingly require a team approach in which faculty will work with librarians and computing and media specialists in the design of courses and process of instruction.
- Models for staff development and training for diversity in the workplace already exist in California and across the country.
- CSU has made a commitment to serve the increasingly diverse population in California and has adopted systemwide goals and objectives that individual campuses can use as models.
- The CSU has a major responsibility to conform to the requirements of the federal Americans with Disabilities Act (ADA). Especially important is training in the use of new technologies for meeting the needs of students and faculty with disabilities.

- As a means of increasing faculty diversity, the CSU has established incentives for existing personnel to attain higher degrees to prepare for teaching in the CSU. These incentives should be extended to staff who wish to become librarians.
- Flexible staffing models are being increasingly used in the private sector to enhance efficiency, contain costs, and motivate employees. Strategies such as use of temporary employees, outsourcing of services, and alternative work arrangements can be examined for their applicability for each area of library operation.

## INFRASTRUCTURE

The library will become the locus of all knowledge and information services to students and faculty through networking capability for all users. These services will acquire, list, preserve, and give access to recorded knowledge, information, and data in all formats. The facilities for such services will be places where instruction and assistance in the use of recorded knowledge and information to all kinds of users can be provided.

The infrastructure necessary for these knowledge and information services will consist of: central facilities for housing information resources and human resources; places on and off campus at which knowledge and information services are delivered (classrooms, offices, dormitories, homes, and other distant locations); hardware and cabling to facilitate utilization and communication; and networks to libraries and resources.

## National Trends

- Networks are developing rapidly in diverse industries; for example:
  - California Research and Education Network (CALREN), scheduled to be operational in the Bay Area in late 1993 and in Los Angeles in early 1994, will allow hospitals, pharmacies, labs, corporate medical departments, insurance companies, and HMO's to access information and share data resources. The network will allow for electronic delivery of radiographic images, three-dimensional imagery, remote health care through monitoring techniques, and telecommuting.
  - Pacific Bell will have a full communications superhighway available to nearly half of all Californians by 2003, and to all California homes by 2015.
  - The U.S. Office of Science and Technology Policy has a lead role in facilitating the development of a National Information Infrastructure that will link computers, computer data banks, telephones, fax machines, and video displays via high-speed telecommunications. The technology that makes this possible is improving at an unprecedented rate.
  - Computing trends are moving towards computing devices that will be universally affordable by students (under \$500).
  - Some work on the software side of a universal information workstation has already been done (e.g., CSU's Guide and Notis' ProPack).

## CSU Trends



Focus groups and interviews with faculty, students, and librarians resulted in strongly held views for creating and maintaining a central facility where the technological capability of searching, accessing, and retrieving information can be integrated with training in use of access technologies and interaction with others. Such views are highlighted by the following comments from the interviews:

- It is essential to maintain the library as a “place”, promoting human interaction regarding course material, use of access technology, etc.
- An environment for individual and group study should be provided on campus. This is particularly important for commuting students or distant learners who require places to interact with other students when they come to campus.
- 24-hour accessibility should be provided to all services, either on-site, or from home or office.

## ADMINISTRATION

### National Trends

Re-organization and consolidation of functions not usually part of the traditional library is occurring more frequently in academic institutions. Activities such as academic computing, audio-visual services, and computer laboratories have been placed under the administrative responsibility of library directors. In other institutions, consolidation of these functions and others, including archives, telecommunications, and even bookstores, has been placed under the administrative direction of individuals who have management or other expertise in non-library areas. Organizational consolidation is driven by the need to coordinate and provide a central focus for instruction and use of information, and to place the responsibility for such functions where they can best serve the teaching and research requirements of faculty and students. The managers of newly consolidated functions will be less involved with hardware and facilities elements and more involved with the beneficial use of such hardware to serve the academic mission effectively.

### CSU Trends

There are a variety of organizational arrangements among the CSU campuses for library services, computing services, telecommunication services, media services, instructional technology support services, and instructional design and development services. Consolidation of administration of the library and related functions, including computing, telecommunications, and A/V and media services, is already occurring at a number of CSU campuses. Some of these organizational alignments are reporting to library directors.

Comments and observations from the focus groups and interviews with faculty, students, and librarians regarding such organizational issues included the following:

- The faculty strongly support creating organizational units which will facilitate sharing of resources, including technology, instructional materials, and collection materials.
- Involvement of librarians in instructional design and delivery methods is important to faculty and students.
- Librarians will be active participants in changing technology.

## FUNDING

### National Trends

Dramatic increases in the cost of higher education and reductions in budgets have had far-reaching and long-term effects on colleges and universities and their libraries. A growing number of universities have begun major restructuring, consolidating administrative functions and reducing or eliminating programs. Many are moving away from an overemphasis on research and toward improvements in teaching. And most are implementing new technologies to improve teaching and disseminate information.

But new sources of revenue are also being generated through innovative partnerships and new ties to industry. Key trends include:

- Costs of information resources will increase above the low rate of inflation.
- Private sources of revenue will comprise a larger proportion of funding for institutions, especially large research institutions.
- Libraries will be pressed to maintain their present share of the institutional budget.
- Government funding will not increase and limited resources will continue to hamper growth.

### CSU Trends

- Five years ago CSU libraries spent less than \$400,000 for access to online and CD-ROM resources; in 1992 expenditures totalled more than \$1,231,000, an increase of nearly 68%.
- Five years ago library staffing numbered 1,515 throughout the CSU system; by 1992-93, staffing had been reduced to 1,216, a decrease of 19.7%.
- Five years ago the average cost of a journal for academic libraries was \$142.13; today the average cost is \$219.58, an increase of 35.2%.
- Five years ago the number of journal titles subscribed to by the CSU Libraries was 67,914; last year the number subscribed to was 57,324, a reduction of 10,590, or 15.6%. Yet the number of journal titles being published continues to increase. Some CSU libraries have not subscribed to a new journal title in over three years.
- Five years ago the average cost of a book for academic libraries was \$40.52; today the average cost is \$47.48, an increase of 14.6%.
- Five years ago the number of books purchased by the combined CSU Libraries was 322,756; last year the number purchased was 251,100, a reduction of 71,656 volumes or 22.2%.
- Five years ago the average cost of a serial for academic libraries was \$225.21; today the average cost is \$301.17, an increase of 25.2%.

Clearly the combination of budget reductions and unrelenting inflation during this five year period dictates the need for developing multiple fund sources for library resources and services.

## Goal Area A INFORMATION RESOURCES

### Goals

- Provide CSU students with access to recorded knowledge and information in support of their learning and intellectual needs, whether the students are in the library, elsewhere on campus, or off campus.
- Provide CSU faculty with access to recorded knowledge and information necessary for their teaching and scholarship, whether the faculty members are in the library, elsewhere on campus, or off campus.
- Facilitate access to recorded knowledge and information for all residents of the community, region, and state.

### Key Strategies

- Strategy 1: Universal Online Bibliographic Access
- Strategy 2: Integration of Information Resources with Emerging Instructional Technologies
- Strategy 3: Increased Access to Knowledge and Information Resources Outside the CSU
- Strategy 4: Copyright Leadership
- Strategy 5: Digitizing and Imaging of CSU Print Resources
- Strategy 6: Institutional Collaboration
- Strategy 7: Organizing Effective and Efficient Access to Electronic Resources

Strategy 1      Universal Online Bibliographic Access  
Provide all library users with standardized online bibliographic access to all items in all CSU collections and collections of other participating academic institutions.

To assure equity of access to all students, regardless of learning style or economic circumstances, it is essential that the CSU explore alternatives for providing each of them with access to personal computers.

The non-compatibility of multiple command languages required for end-user searching of today's systems represents an equity issue in itself due to differential preparation of information competency skills at the high school and community college levels. However, recent networking and software developments have made it quite feasible for a single search for a subject or author to locate books in online catalogs, journal articles in

computerized indexes, and full-text in distant electronic databases, if these databases use the same standard search protocol (e.g., the internationally recognized standard, Z39.50).

CSU Libraries will upgrade their online catalogs to support a standard search protocol. They will cooperatively purchase and make available electronic indexes, text, and image-based materials from vendors that use the standard protocol.

The CSU Libraries will also provide links to other major regional and national resources that use the same standard (for example, Melvyl at the University of California, and the major bibliographic utilities, OCLC and RLIN). Any CSU user, working from a networked personal computer, will be able to use a single technique for obtaining comprehensive bibliographic information on the topic of their inquiry. The result of the search could be a call number order list of books and journals at the local campus, an automatic request for similar materials available at another CSU campus, or the immediate interactive display or transfer of the text of materials available in digital formats. Successful systemwide adoption of a common automated search standard will make all CSU information resources easier to use, and this will increase utilization.

Strategy 2      Integration of Information Resources with Emerging  
Instructional Technologies  
Collaborate with faculty to incorporate access to information resources  
and other library services into technology-based instructional delivery.

CSU has undertaken a major strategic planning initiative, called Project DELTA (Direct Enhancement of Learning Through Technology Assistance and Alternatives). It is aimed at enhancing teaching and learning and increasing access to higher education through technology, and is based on the premise that emerging telecommunications and computing technologies can provide a learning environment designed to accommodate the unique education needs of individuals without constraints of time or place.

Critical to the success of the DELTA initiative is the provision of academic support services to students receiving instruction via technology. In some cases, these students may be located at sites remote from the campus; in other cases, students might be unable to use on-campus services due to circumstances such as disabilities or work schedules. Regardless of their circumstances, these students need access to information resources and other library services as part of their instructional program.

Librarians, working in collaboration with faculty and staff in other disciplines, will enhance the development of information resources and emerging technologies by developing databases and other network-based resources which are integrated into the teaching and learning process.

Strategy 3      Increased Access to Knowledge and Information Resources  
Outside the CSU  
Increase the provision of access to knowledge and information  
resources held by libraries and other information suppliers outside the  
CSU. Establish an economic basis for this resource sharing. Use all  
available methods—interlibrary loan, document delivery, and  
other alternatives.

The Electronic Access (EA) Committee, the Interlibrary Loan and Document Delivery Librarians and Staff, and the Collection Development Librarians will conduct a needs assessment, project traffic and cost, and investigate user-initiated interlibrary loan and document delivery. They will design and implement a retrieval service, using all the appropriate human resources of the CSU Libraries, to provide assistance in locating and obtaining materials that are difficult to obtain through the usual ILL procedures. They will look at the implications of cost recovery for students and faculty, as well as legal and policy issues (related to Strategy 3).

Strategy 4      Copyright Leadership  
Actively participate in the national discussion of copyright issues and take a leadership role in the education of the CSU community with regard to copyright and intellectual property issues.

CSU is joining with other universities and systems of higher education in funding research and legal fees for the firm of Dow, Lohnes & Albertson to file joint comments in the Patent and Trademark Office's National Information Infrastructure intellectual property proceedings.

The intent of this initiative is to represent the concerns of higher education relative to copyright laws in an age of digital transmission of information. Of prime concern will be a request for clarification of educational uses of copyrighted works on the National Information Infrastructure. The comments will address the need to exempt not only "certain transmissions," but recording and distribution of those transmissions. The comments will stress the need for new copyright standards and guidelines for educational uses of information.

Strategy 5      Digitizing and Imaging of CSU Print Resources  
Cooperate with the national effort to digitize and deliver print and graphic resources. Work on cooperative efforts to "image" print resources. Select print materials in CSU collections for digitizing and imaging.

Many current print and graphic resources will be converted to digital format. Where these converted electronic resources are available, the CSU will seek to acquire them as described in Strategy 2.

This strategy seeks ways of converting CSU resources that are not readily available in digital format and sharing these resources across the national networks. Examples of these resources include special collections of manuscripts, photographs, and printed works. Other candidates for conversion may include major collections with a nationwide appeal such as retrospective congressional hearings.

CSU's role in this strategy must be viewed as part of a nationwide effort to convert valuable print and graphic resources to digital format. This strategy's action plan must address a methodology for identifying candidate materials, technologies for scanning and indexing materials, and techniques for storing and sharing materials. The strategy would build upon existing technologies for converting printed text and graphics to digital formats, such as the "Electronic Reserve Book Room" at San Diego State University.

Strategy 6 Institutional Collaboration  
Take an active part in California statewide multitype library network efforts. Collaborate with other educational institutions (K through Grad) in providing access to recorded knowledge and information in multiple formats.

The CSU will pursue an increased role in planning and implementing the statewide multitype library network. CSU Library Representatives will continue to advocate electronic networking and to provide leadership in regional network groups, especially to organize the State's approach to obtain federal NREN funding for K-12 and public library electronic networking. The CSU Libraries will expand their efforts to collaborate with other consortia and systems of academic libraries to increase the sharing of resources from outside the CSU.

Strategy 7 Organizing Effective and Efficient Access to Electronic Resources  
Make maximum use of all appropriate national standards, protocols, and practices relating to electronic knowledge and information resources. Participate in the national effort to develop national policies and practices for the use of those electronic resources, addressing such issues as confidentiality, security, equal access, etc. Participate in and, where appropriate, lead the effort to ensure comprehensive access to networked resources, concentrating on those resources available in the CSU. Work with CSU entities and other state, national, and international entities to ensure such access.

CSU cataloging librarians and those responsible for maintaining databases; CSU systems librarians; and specialized Computing Center personnel (i.e., Gopher Designers, Mosaic Specialists, etc.) will identify and study standards and draft standards for bibliographic control of electronic documents and services. CSU libraries will use current standards and will make every effort to have input into the development of new standards. All cataloging librarians will be instructed in the nature and use of search and delivery applications for electronic resources (e.g., Gopher, Mosaic). CSU librarians will also investigate ways in which existing products and protocols can be adopted by the CSU or, in special cases, adapted to CSU needs. They will study the work of national bodies in the field of electronic documents and services and the policy implications of all national decisions on the availability of electronic resources as they affect the CSU. CSU will participate as appropriate in all relevant national efforts.

## Goal Area B INSTRUCTION

### GOALS

- Provide CSU students with instruction and assistance enabling them to use recorded knowledge and information as an integral part of their university education.
- Collaborate with CSU faculty to provide training and assistance in the use of recorded knowledge and information necessary for their teaching and scholarship.

### Key Strategies

Strategy 1: Information Competency

- Strategy 2: Instructional Modules or Courses
- Strategy 3: Continuing Education For Discipline Faculty
- Strategy 4: Course Design
- Strategy 5: Institutional Collaboration For Information Competency

Strategy 1 Information Competency  
 Establish basic competence levels in the use of recorded knowledge and information and processes for assessment of student competence.

Library faculty, discipline-based faculty, and professional and technical staff in many disciplines will collaborate to determine the information competence needs of CSU graduates. After surveying current and developing methodologies for instruction in information literacy, strategies will be recommended to the Academic Senate of CSU to assure that each CSU graduate is competent in basic information skills. Finally, library faculty, discipline-based faculty, and professional and technical staff in media, computing, and telecommunications will cooperate to propose standards for competence and recommend to the Academic Senate CSU strategies for the assessment of student competence.

Strategy 2 Instructional Modules or Courses  
 Provide instruction to ensure that basic competence levels are reached by each CSU graduate.

CSU library faculty and discipline-based faculty will cooperate to design and implement instruction for information competence, and to develop a new set of basic instruction modules. Modules for basic competence levels will be taught in a variety of formats, and options will be analyzed for offering such courses for credit.

Strategy 3 Continuing Education For Discipline Faculty  
 Provide opportunities for all discipline faculty to update their library and research skills.

In the past, both library faculty and discipline-based faculty shared common research skills. It has always been one of the basic tasks of discipline-based faculty to see that university students graduated in possession of those research skills. Some CSU faculty are not comfortable with electronic research, and they do not possess the skills needed for research using electronic resources. It will be important to provide discipline-based faculty with training opportunities that are specific to their discipline groups and curricular interests.

Strategy 4 Course Design  
 Collaborate with discipline-based faculty in the design of courses on discipline-specific skills and critical thinking skills that apply to the selection of sources of information.

Together, discipline-based faculty and library faculty will investigate the available methodologies for teaching integrated information-seeking and critical thinking skills; for example, compressed video and integrated document delivery. They will collaborate with

interested individuals and groups within CSU and elsewhere in California to adopt new instructional methodologies where appropriate. The library faculty will organize CSU's approach to request federal and/or state funding for library instruction via electronic networking.

Strategy 5      Institutional Collaboration For Information Competency  
Increase institutional collaboration in the delivery of instruction for information competency.

It will be essential to monitor and evaluate the new methodologies after their adoption. Those methodologies that work can be shared with others, while those methodologies that fail must be modified or abandoned. Identifying, developing, and refining modes of instructional delivery will require increased collaboration among CSU campuses and with other educational institutions.

Collaboration will also provide a mechanism for identifying technology and prototype initiatives under development in a variety of educational environments, and for diverse groups of students and/or other learners. With the additional assistance of software manufacturers, telecommunications specialists, or other expertise from private industry, CSU will be able to better organize and appropriately allocate the resources necessary to develop state-of-the-art learning modules and integrate them into instructional programs.

## Goal Area C HUMAN RESOURCES

### Goals

- Expand the role of the librarian in the teaching and learning process through the use of new information, networking, and instructional technologies, and through increased collaboration with discipline-based faculty.
- Develop human resources in CSU libraries to assure effective functioning in the evolving information and technological environments.
- Ensure that library staff are responsive to the increasingly diverse cultural and learning needs and circumstances of the library's users.

### Key Strategies

- Strategy 1:      Role of Librarians
- Strategy 2:      Networking Librarian Expertise
- Strategy 3:      Staff Development — Information and Technology
- Strategy 4:      Staff Development — Diversity
- Strategy 5:      Organization of Staffing

Strategy 1      Role of Librarians



Strengthen the role of librarians as knowledge and information resource specialists through increased collaboration with faculty, and computing and multimedia specialists.

With the explosion of available information and the increasingly diverse tools for access to that information, students' need for instruction on gaining access to and using information is becoming ever more critical. This strategy seeks to develop an expanded role for librarians which can meet this need through the use of emerging information and instructional technologies and through greater collaboration with discipline-based faculty and other specialists involved in the design and delivery of instruction.

Remote access to information resources and new telecommunications and networking technologies offer librarians opportunities to redefine how information instruction is imparted to students, and computing technology offers new interactive learning tools which can greatly enhance the librarian's ability to deliver basic instruction in information literacy. In addition, librarians can become full partners in the instructional teams which design and deliver instruction electronically on or off campus.

All librarians—those who organize information for access as well as those who teach courses—have important roles to play in information instruction under this new model of delivery. The full range of instructional modes needed to accommodate the diversity of learning styles and needs among students calls for the special skills of the full range of library professionals. The integration of related activities will bring together librarians, faculty, and others involved in the design and delivery of instruction in a team effort to find ways to more effectively meet the needs of students facing the complexities of the Information Age.

#### Strategy 2 Networking Librarian Expertise

Develop networking tools to enable librarians to share their subject, language, technological, and reference and collection development expertise, and to facilitate collaboration in the design and delivery of information instruction and other services for students and faculty.

Collectively the librarians in the CSU possess an enormous range of subject, language, and technological expertise. The breadth of that expertise may be seen in the pages of the Personnel Roster published annually for CSU libraries by the Chancellor's Office. More than 180 subject specialties are represented, ranging from administration of justice to science fiction, and 28 languages are listed. In addition, 21 library specialty areas such as computerized reference, media, and government publications are represented.

The value of this breadth of expertise among librarians has been recognized for many years, and formal and informal sharing via telephone and meetings has been common. Emerging networking and telecommunications technology, however, holds the potential for much greater collaboration among librarians, collaboration which can directly benefit students and faculty seeking information or instruction.

The sharing of expertise is likely to become even more important for librarians as the increasing diversity of the student population creates a more complex educational environment, and as the explosion in the quantity of available information and the diversity of its formats creates a more challenging information environment.

Aside from sharing expertise, collaboration among librarians via technology can yield benefits in the avoidance of duplicated efforts in such areas as design of computer-assisted library instruction. Multicampus teams sharing their talents can design instructional

modules responsive to the full range of student needs and backgrounds. Traditional classroom instruction can benefit from this technology as well; a guest lecture by a subject specialist from another campus, for example, could be integrated into a bibliographic instruction course or into a course designed for electronic delivery.

### Strategy 3 Staff Development — Information and Technology

Develop human resources to ensure that library faculty and staff, as well as professional and technical staff in disciplines such as media, computing, and telecommunications, are fully able to effectively tap the multitude of networked resources and to utilize emerging instructional technologies.

As technologies are integrated into each campus, the interaction of library personnel and other professional and technical staff with information seekers will be expanded and new skills will be necessary.

Technical orientation which has been increasingly necessary will be critical so that librarians can effectively and efficiently navigate the information highways and instruct and direct information seekers. Individual skills involving adaptability, flexibility, problem solving, and evaluation of information sources will be increasingly important, as it seems likely that the networked world of information will be unorganized, chaotic, and rapidly changing during the next decade and beyond.

Understanding the implications of laws pertaining to copyright and intellectual property is also important in the evolving information environment, requiring ongoing staff development within this area as well.

This complex information environment will require librarians to build on and strengthen their abilities to view sources of information from a holistic, interdisciplinary perspective, and to build on their traditional service orientation to meet the needs of students and faculty.

### Strategy 4 Staff Development — Diversity

Develop human resources in CSU libraries to respond to the increasing diversity of the learning needs and circumstances of students and faculty.

The CSU is committed to providing access to higher education to all academically qualified Californians regardless of their backgrounds or personal circumstances. The State's rapidly changing demographics yield projections of a highly diverse student population. Minority groups, which have been historically underrepresented in the CSU, are collectively becoming the majority population in California. In addition, increasing numbers of older students and students with disabilities are enrolling in the CSU.

The acceptance of diversity as a strength and an asset needs to be demonstrated throughout the CSU. Personnel at all levels will also need to reflect the diversity of the student population and society as a whole and, because of their direct interaction with students, will play an important role in successfully educating students of all backgrounds. Also, the presence of role models within the library will serve to motivate and enrich the educational experience.

Faculty and staff must be trained not only in how to use technology and information resources, but also in how to respond to the instructional needs of a student population

reflecting a wide range of learning styles and academic backgrounds. This requirement applies equally to designers of computer-based library instruction and those who teach in classrooms.

#### Strategy 5 Organization of Staffing

Organize library staffing to achieve maximum effectiveness and flexibility to achieve the goals of the strategic plan.

CSU should take the lead from models already established by many large employers to initiate flexible staffing and alternative scheduling strategies to optimize productivity and effectiveness of staff at all levels and to better respond to the needs and circumstances of individual employees. Four powerful forces are moving employers toward such staffing strategies: economic and competitive pressures, the need to contain costs, a shrinking labor pool, and a more diverse work force. Flexible staffing helps organizations transform fixed costs into variable costs; flexible work arrangements help attract and retain qualified employees.

Flexible staffing and alternative scheduling may be selectively used by a library as determined by local circumstances and policies. Flexible staffing includes use of temporary employees, independent contractors, outsourcing, and employee leasing services. Alternative scheduling techniques include use of part-time staff, flex-time (variable work schedules), compressed work weeks, job-sharing, and work-at-home programs.

#### Goal Area D

#### INFRASTRUCTURE

#### Goal

- Provide an infrastructure that will support the physical and access requirements of the students and faculty of the 21st Century. That infrastructure will: (i) house all needed collections and resources; (ii) house the training and instructional activities of the library; (iii) provide adequate functional space and resources for the human resources of the library; (iv) provide access to all collections, resources, training, and assistance for all library users; and (v) integrate all current, new, and emerging technologies for the use of recorded knowledge, information, and data.

#### Key Strategies

Strategy 1: Development of Campus Prototype Facilities

Strategy 2: Connectivity Through Networking

Strategy 3: Universal Workstations

#### Strategy 1 Development of Campus Prototype Facilities

Future facilities will be planned to provide each campus with a central physical infrastructure that supports the coordination of library, media services, computing, and telecommunication functions.

The term “library” may be too limiting in terms of its historic and traditional perception to describe the facility into which it must be transformed to meet the comprehensive educational goals of future CSU students and faculty. The 21st Century library must be an integrated facility capable of and responsible for acquiring, listing, preserving, and giving access to recorded knowledge, information, and data in all formats and for providing training and assistance in the use of recorded knowledge and information. Its central role in the education process will be to enable each student to assimilate, select, classify, and think critically about the information and data that the library either provides or to which it provides access.

To carry out this role effectively in the future, the library will require an infrastructure consisting of facilities, equipment, and networking capability that enhances and maintains the library role as an important intellectual center of the campus for students and faculty. The facilities infrastructure will have the following principal characteristics:

- Functional space for librarians and staff to train and assist students and faculty in their use of recorded knowledge, information, and data.
- Space to house the library’s locally held collections and the workstations and other hardware needed for access to electronic recorded knowledge, information, and data. Diverse learning styles must be accommodated through collections in all formats. The infrastructure should be hospitable to each of those formats and should support the full exploitation of print, recorded sound, graphic, and electronic resources.
- Space for individual and team study areas to facilitate collaborative study and interaction between students, faculty, and library staff.
- Workstations for students, faculty, or other library users, and space for providing appropriate levels of assistance and guidance to individuals using them.
- A training center that includes facilities for video and teleconferencing and links the library and its resources with the classroom, dormitory, office, and/or the distant learner.
- Space for librarians, media staff, computing designers, and others to meet with faculty to develop bibliographic, audio/visual, or other materials to assist in the development of new curricula or teaching aids.

#### Strategy 2      Connectivity Through Networking

Establish complete connectivity between the central library building and all users of the knowledge and information services on and off campus. Provide the highest possible level of service by linking resources, students, faculty, and other library users and librarians and other library staff who provide the services.

The libraries on each campus will link the campus with CSU-sponsored networks and other regional, State, and national information networks. The CSU telecommunications network will be completed and other networks will be developed that will link all online catalogues and other online resources of the CSU Libraries.

It is also important for CSU to assert leadership in developing linkages and networks with public libraries, community colleges, and public schools throughout the State. Such linkages will provide an essential framework for educational and informational continuity, and will facilitate the goals of information access equity that are essential to the needs of

diverse communities and students. Private educational institutions should be encouraged to collaborate or participate in these networks as well.

#### Strategy 3 Universal Workstations

Ensure that each information user can gain access to all necessary electronic resources at a single, fully functional workstation.

The publishing industry, through a variety of vendors, is beginning to provide a significant subset of the journal literature in electronic form. At the same time, a number of public access databases at universities and government offices are becoming available over the Internet. This availability of electronic journals and other sources of electronic information presents opportunities and challenges for the CSU Libraries. The opportunity is to provide information that is not restricted by location or time of day. Information that is always available, not at the bindery or restricted to one user at a time. One of the primary challenges of this developing array of electronic information is to provide the end user with a tool to read, view, listen, and manipulate the information.

Consumer technology is moving in the direction of distributed electronic information resources. This strategy mirrors the growth of this technology by working with vendors of hardware and software to develop general specifications for information retrieval, manipulation, and display functions. Meeting these specifications will open the window for students and faculty to access information from many locations. It is expected that the workstations performing these functions will include personal workstations ranging from hand-held to conventional microcomputers and University-owned workstations, including those located in the library.

The CSU has the responsibility to conform to the Americans with Disabilities Act (ADA). Access to workstations and to electronic information must be provided in a manner which meets the needs of CSU students and faculty with disabilities.

### Goal Area E

#### ADMINISTRATION

##### Goals

- Develop and implement a common agenda for Library and Information Services and Technology for each campus and at the CSU system level.

##### Key Strategies

Strategy 1: Mechanisms and Processes for Establishing a Common Agenda

Strategy 2: Coordination and/or Functional Consolidation of Information-Related Areas

Strategy 3: Ongoing Role of the Council of Library Directors (COLD)

Strategy 4: Ongoing Role of the Office of Library and Academic Information Services (LAIS)

Strategy 5: Establishment of an Action Entity

Strategy 1 Mechanisms and Processes for Establishing a Common Agenda

Establish mechanisms and/or processes for achieving agreement on a common agenda for each campus and for the CSU system.

The organizations on every CSU campus that are involved in providing library, computing, media, printing, and related services have all been affected in radical ways by technological changes. These units increasingly use the same means to deliver their services—digitization of text and images for storage, retrieval, and transmission via ubiquitous networks and affordable computing. Given the convergence of these technologies, it is essential that each campus achieve agreement on a single “information agenda.” Similarly, collaboration among systemwide groups is necessary to develop a single agenda for appropriate systemwide issues.

#### Strategy 2      Coordination and/or Functional Consolidation of Information-Related Areas

Achieve coordination and/or functional consolidation of functions among computing, instructional research services, telecommunications, library services, and audio/visual media.

Establishment of a common agenda for each campus and for the CSU system will suggest ways to achieve appropriate organizational coordination and consolidation of the functions and units involved in providing library and media services, computing and instructional resource services, telecommunications support, and printing and graphic services. A common agenda is the plan; coordination is essential to carrying out the plan.

#### Strategy 3      Ongoing Role of the Council of Library Directors (COLD)

In collaboration with other campus-based and systemwide groups, COLD members will facilitate the identification of common issues and alternative approaches for all campuses and make recommendations for system level implementation.

The Council of Library Directors (COLD) has a long and successful history of intercampus communication on policies and issues of common interest. Through the establishment of consultation mechanisms such as special task groups or other communication techniques appropriate for each campus, COLD will identify those elements common to the agenda of all campuses and make recommendations for appropriate system level initiatives. Participants will include such groups as the EAR Committee, AIRC, IRMC, CLRIT, Academic Senate committees, and professional and technical staff of computing, media, telecommunications, and related disciplines.

#### Strategy 4      Ongoing Role of the Office of Library and Academic Information Services (LAIS)

LAIS should be empowered to act as the primary agent for coordinating implementation of the recommendations developed by COLD in consultation with other relevant groups.

The Office of Library and Academic Information Services (LAIS) is the appropriate primary point of contact at the Chancellor’s Office for campus libraries. LAIS has played an integral role as part of the inter-campus consultation process coordinated by COLD, and is linked with other information technology efforts involving disciplines such as computing, telecommunications, and media. Thus, it is in the most advantageous position to serve as the lead agent of implementation for systemwide initiatives which are undertaken.

Establishment of a copyright specialist position within LAIS will be important as well for coordinating the exploration and implementation of alternative solutions to copyright and intellectual property issues.

#### Strategy 5 Establishment of an Action Entity

Establish an entity (e.g., joint powers organization or nonprofit organization) at the system level which can enter into contracts and agreements with public and private parties to implement partnerships, form strategic alliances, and exchange capital resources.

A “vehicle for action” will be established which will be able to receive and disburse assets, enter into contracts, and otherwise enter into partnerships and alliances with public and private institutions, agencies, and organizations to facilitate achievement of the “information agenda.” The entity established will be of the legal form best suited to its role; it may be a not-for-profit corporation or a joint entity with other segments of California higher education.

### Goal Area F FUNDING

#### Goals

- Establish a stable foundation of multiple and diverse funding sources for information resources and services.

#### Key Strategies

Strategy 1: Diversity of Revenue Sources

Strategy 2: Funding Linkages

Strategy 3: Alternatives for State Funding

Strategy 4: Funding Leverage

Strategy 5: Systemwide Funding

Strategy 6: Overhead Recovery

#### Strategy 1 Diversity of Revenue Sources

Develop more diverse revenue sources to fund CSU Libraries.

CSU has had a long tradition of formula-based funding. This method of funding provided a percentage of the campus allocation for library purposes. While local campus administration could alter the initial allocation, libraries generally received a close approximation that the formula provided. Increased competition for a shrinking base of funds has precipitated a need for libraries to look beyond CSU and campus funding allocations. As previously indicated, the downward trend of funding has already begun as evidenced by the 20% difference (i.e., \$61 million) between what was appropriated for CSU Libraries and the actual allocation for a three-year period between 1991-92. The Chancellor's Office has made it clear that CSU cannot rely solely on state revenue sources. It is similarly clear that CSU Libraries must look to other revenue sources as well. The

most recent annual report reflects that a bare 1.29% of the funds spent by the CSU Libraries came from non-state funding sources.

COLD members, working in collaboration with their campus constituencies, will identify and develop campus-specific targets of opportunity for fund-raising and staff-funding initiatives. For example, CSU-wide targets of opportunity for fund-raising and strategies for improving staff-funding will be explored; COLD subcommittees and development staff will identify private foundations interested in funding public sector information activities; and charge-back methods, such as tiered access or community access services, will be analyzed.

#### Strategy 2 Funding Linkages

Create linkages on campus for coordination and implementation of fund-raising initiatives.

COLD members, campus development officers, Presidents, and Vice Presidents of Academic Affairs will develop campus-based working groups to coordinate fund-raising initiatives. They will consult with Deans of schools and colleges on program needs and potential collaborative activities.

#### Strategy 3 Alternatives for State Funding

Take the lead role in developing a new model for State funding of operating and capital needs of libraries.

The CSU should take the lead role in developing a new model for State funding of operations and capital needs of libraries. The library of the 21st Century will be integrated inexorably with academic programs and technical service providers, making traditional funding paradigms obsolete.

The COLD subcommittee, LAIS representatives, vice presidents, vice chancellors, CLRIT members, and staff will develop alternative funding models for discussions at campus and systemwide levels. They will develop discussion papers for meetings with Department of Finance/Legislative Analyst staff.

#### Strategy 4 Funding Leverage

Use local funds to leverage systemwide and other fund sources for facility development, i.e., capital needs.

COLD members, campus vice presidents, and development staff will analyze matching fund requirements for Foundation grants, Federal programs, etc., to determine the ability of campus operating budgets or foundation to support matching fund requirements.

The success of a strategic plan depends largely on its ability to direct the change process—specifically, changes in resources (funds, equipment, facilities), staffing, management, or organizational structure. The extent to which strategies can actually be implemented will determine whether the plan's goals, and eventually its vision, can ultimately be achieved.

Implementation of this Strategic Plan will require significant re-thinking of resource requirements, operating and capital budget planning criteria, development of new cost models, and exploration of revenue and cost-sharing opportunities. By analyzing the



implications of the strategies outlined in this Plan and integrating them with other planning initiatives of the CSU, opportunities for shifting of costs, joint development and fund-raising ventures, database production and distribution, and other innovations are possible.

To begin the transition from broad goals and strategies to actions, the Council of Library Directors has developed a plan for implementation, which is described in a separate document. This plan recommends specific activities, analyses, and studies that should be conducted for each of the thirty-one strategies proposed in this Plan. For most strategies, those activities will involve additional consultation, including establishment of appropriate groups or committees. The outcome of these discussions will be a determination of feasible alternatives, specific resource requirements, and more realistic schedules for completion of requisite activities.

The following sections suggest ways in which potential resource impacts of the recommended strategies might be examined, and reasonable timing objectives are outlined. Finally, an evaluation and monitoring mechanism for tracking all aspects of the Strategic Plan is proposed.

## RESOURCE IMPACTS

### Information Resources

1. **Universal Online Bibliographic Access**  
Standardized search protocols, cooperative purchase agreements, and links to regional and national resources will result in a more comprehensive array of resources for individual campuses and for the CSU system. Costs can be estimated within a short time.
2. **Extended Access to Resources Outside CSU**  
More effective interlibrary loan and document delivery strategies will enhance the value of acquisition investments.
3. **Copyright Leadership**  
Innovative approaches to copyright for electronic material will facilitate accessibility and sharing of materials worldwide, resulting in significant service enhancements from on-site collections and acquisitions.
4. **Digitizing Print & Graphic Resources**  
Conversion of current print and graphic materials to digital format will facilitate sharing across national networks. CSU can provide revenue-generating services to offset technology costs.
5. **Institutional Collaboration**  
Collaboration will increase sharing of resources within CSU, with other consortia and systems of academic libraries.
6. **Integrating Library Support and Instructional Delivery**  
Will provide opportunities for organizational consolidation, sharing of technical and support staff and equipment, and innovations in budgeting and allocation of resources.
7. **Organizing Access to Electronic Resources**  
Participation in national databases, protocols, and standards will reduce need to invest in system or campus-specific programs.

## Library Instruction

1. Information Competency  
Competency standards, integrated into curriculum requirements, will add value to undergraduate degrees and recognition of CSU's educational quality.
2. Development of Basic Courses  
Will offer opportunities for increased collaboration within and among CSU campuses and faculty; common course modules can be shared. Common design will save resources systemwide.
3. Continuing Education for Teaching Faculty  
Will increase effectiveness of teaching faculty and enhance learning environment for all students.
4. Course Design  
Will provide incentives for external funding from federal, State, or corporate sources through marketing innovative instructional methodologies.

## Human Resources

1. Role of Librarians  
Increased role for librarians can increase the value of instruction, improve learning methodologies, and increase opportunities for revenue sharing.
2. Networking Librarian Expertise  
Will help to avoid duplication of effort in designing instructional modules through use of multicampus teams.
3. Staff Development—Information and Technology  
Will increase staff productivity.
4. Staff Development—Diversity  
May result in increased costs in the short run for increased staff development programs, but will increase staff effectiveness and productivity in the long run.
5. Organization of Staffing  
Significantly increased productivity.

## Infrastructure

1. Development of Campus Prototype Facilities  
Will offer opportunity to share space by integrating functions that have been traditionally separated.
2. Connectivity Through Networking  
Will increase resource-sharing opportunities and increase teaching effectiveness through access to users at campus and distant locations.
3. Universal Workstations  
Would permit the system to offer standardized equipment configurations, opportunities for purchase/lease agreements, and cost-effective vendor

support services.

#### Administration

1.     **Mechanisms and Processes for Establishing a Common Agenda**  
Will increase collaboration among campuses and the CSU Chancellor's Office and will provide opportunities for resource sharing.
2.     **Coordination and/or Functional Consolidation of Information-Related Areas**  
Enhances information services through increased organizational coordination.
3.     **Ongoing Role of the Council of Library Directors**  
Will provide an ongoing evaluation and monitoring mechanism and management oversight.
4.     **Ongoing Role of LAIS**  
Provides single point of contact for implementing recommendations, and negotiating purchase agreements, alliances, etc.
5.     **Establishment of Action Entity**  
Development of external partnerships will provide revenue enhancement opportunities; can also result in promoting vendor purchase agreements to benefit all campuses.

#### Funding

1.     **Diversity of Revenue Sources**  
Can reduce dependency on State funds; provide opportunities for charge-back and alternative revenue mechanisms to pay for specific service levels.
2.     **Funding Linkages**  
Can provide opportunity to link campus fund-raising initiatives for libraries with other academic areas; attract corporate and foundation interest in new technologies, instructional methodologies, etc.
3.     **Alternatives for State Funding**  
Will provide opportunities to develop new funding formulas for State funding for library as well as academic support requirements.
4.     **Funding Leverage**  
Will allow development of alternative fund sources and matching funds for facility development, special equipment, and technology initiatives, etc.
5.     **Systemwide Funding**  
Will articulate division of responsibility and criteria for campus and systemwide budgeting for relevant functions and services.
6.     **Research Overhead Recovery**  
Will provide opportunity for developing new models for overhead allocation and rate negotiation with contract and granting agencies.

## TIMING

### Overview

Estimates of the time required for implementation of most strategies will be determined as an outcome of additional consultation processes and/or as feasibility analyses are completed. However, COLD's assessment of the relative urgency and complexity of issues involved in moving forward on specific actions has resulted in a set of recommended priorities for key strategies. These have been categorized according to three time frames: Immediate, Short-Term, and Long-Term.

## PHASE I: IMMEDIATE

### Universal Online Access

Conduct an assessment of current technologies and standards that may be employed to provide access to collections at CSU and other participating institutions from any networked station, and develop a plan and funding model to support implementation of recommended approach.

### Integration with Delta Project

Collaborate with discipline-based faculty and information technology specialists to develop plans and projects for incorporating innovative uses of educational technology in the classroom and in distance learning.

### Instruction

Collaborate with discipline-based faculty, students, and other appropriate groups to evaluate and recommend information competency needs and methodologies for establishing norms or standards which can be incorporated into curriculum requirements.

Initiate pilot instructional programs on information competency through collaboration among CSU campuses, and with participants from other institutions.

### Human Resources

Conduct an assessment of skills, knowledge, and organizational support necessary to respond to emerging instructional and information technologies, and develop a model of academic librarianship to emphasize their expanding role in the teaching and learning process.

Develop multicampus or systemwide cooperative continuing education and training programs which will facilitate development of professional and technical staff resources able to effectively utilize the multitude of available networked resources.

### Infrastructure

Continue Task Force work to more fully develop and recommend specific planning parameters for new library facilities and additions or renovations to existing buildings. These will incorporate coordinated technologies required to connect information resources required for teaching and learning.

#### Administration

Evaluate existing campus organizational relationships, roles, and responsibilities of participating units. Develop communication mechanisms that facilitate identification of short-term, intermediate and long-term goals; resource allocation priorities; functional responsibility and accountability; and a common agenda.

#### Funding

Evaluate options for leveraging local campus and systemwide funds for facility and technology improvements, including network development and workstation upgrading. Develop a new model for allocating indirect costs from contracts and grants to information services support.

### PHASE II: SHORT-TERM

#### Information Resources

Design and implement enhanced interlibrary loan and document delivery mechanisms which increase access to information resources outside the CSU.

Collaborate with other California institutions (including K-12) to increase resource sharing and the planning and development of the statewide library network.

#### Instruction

Develop pilot projects for design and implementation of instructional modules or courses in basic information competence. Evaluate specific needs, funding, and training requirements for discipline-based faculty and other professionals who will provide instruction, and identify lead campuses for pilot projects.

#### Human Resources

Identify and develop networking tools for sharing library faculty expertise and develop a plan for multicampus collaboration to deliver classroom instruction and establishment of instructional modules.

Evaluate and implement strategies to optimize staff productivity and effectiveness.

#### Infrastructure

Identify and adopt standard network interfaces that will assure complete connectivity between the library and all of its users. Identify and develop plans to address financial, management, technical, and network protocol issues that will support the wide range of resource access.

#### Administration

Identify and implement roles and boundaries of responsibilities, and initiate mechanisms to achieve optimal coordination among participating units.

Establish an entity at the system level which will enter into contracts and agreements with public and private organizations to implement partnerships, form strategic alliances, and share capital resources.

#### Funding

Begin new initiatives to diversify fund sources, including evaluation of fee-based services, development of collaborative grant proposals for private and public agency funding consideration, and creation of linkages on campus to coordinate fund-raising efforts.

Develop alternative State-funding models for review by appropriate campus and systemwide offices and subsequent presentation to Department of Finance and Legislative Analyst staff.

### PHASE III: LONG-TERM

#### Information Resources

Develop and implement a plan for proactive participation in resolving issues relating to copyright and intellectual property rights. Collaborate with UC, SUNY, and other consortia and systems to assimilate information, identify issues and priorities, and provide support.

#### Instruction

Provide ongoing continuing education opportunities for all discipline-based faculty and other professionals to upgrade information technology skills.

Collaborate with other institutions to offer instructional programs on information competency. Initiate collaborative funding proposals for State and/or Federal funding for library instruction via electronic networking.

#### Human Resources

Implement systemwide activities, including distance delivery of library education, which will assist libraries in achieving recruitment, hiring, and retention goals reflecting the diverse learning needs and circumstances of students and faculty.

### MONITORING AND EVALUATION

The goals and strategies outlined in this Strategic Plan provide a framework within which significant changes in direction for CSU Libraries and the role of librarians will take place. Bringing about such change will require establishment of mechanisms for coordination, evaluation, and monitoring of the specific tasks or actions necessary for implementation.

While there are currently organizational entities on each CSU campus and within the Chancellor's Office which have oversight or management responsibility for most of the areas impacted by the recommended strategies, successful implementation will require focused responsibility for coordination, recommendation of resource allocation priorities, and assignment of responsibility for required analysis or actions.

In order to facilitate implementation of this Plan, CLRIT requested at the joint COLD/CLRIT meeting of January 27, 1994:

1. that the Council of Library Directors (COLD) be asked to develop specific implementation plans, following consultation with all relevant groups on each campus and within Systemwide administration, and with a subcommittee of the Chancellor's Commission on Learning Resources and Instructional Technology (CLRIT);
2. that specific Systemwide staff support for the Office of Library and Academic Information Services (LAIS) be established with responsibility for coordination and oversight of specific elements of the implementation process;

3. that the implementation plans provide specific recommendations for resource allocation strategies, assignments of responsibility, coordinating mechanisms, and priority-setting criteria.

The implementation plan requested by CLRIT and prepared by COLD is contained in a separate document.

#### APPENDIX A:

#### Participants

#### Members of the Council of Library Directors (COLD)

Rodney Hersberger  
Director of Libraries  
University Library  
CSU Bakersfield

Bill Post  
Director of Library Collections  
CSU Chico

Carolyn Dusenbury  
Director of Library Services  
CSU Chico

Betty J. Blackman  
Dean, University Library  
CSU Dominguez Hills

Michael Gorman  
Dean of Library Services  
CSU Fresno

Richard C. Pollard  
University Librarian  
CSU Fullerton

Noreen Alldredge  
Director of the Library  
CSU Hayward

Rena Fowler  
University Librarian  
Humboldt State University

Jordan M. Scepanski

Director, Library and Learning Resources  
CSU Long Beach

David Wilkinson  
Interim University Librarian  
CSU Los Angeles  
Sue Curzon  
Dean, University Library  
CSU Northridge

Harold B. Schleifer  
Director  
California State Polytechnic University Pomona

Charles Martell  
Dean & University Librarian  
CSU Sacramento

Johnni Ann Ralph  
University Librarian  
CSU San Bernardino

William Aguilar  
Vice President, Information Technology  
CSU San Bernardino

Don L. Bosseau  
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San Diego State University

Eric Solomon  
Interim Library Director  
San Francisco State University

James Schmidt  
Library Director  
San Jose State University

David B. Walch  
Dean of Library Services  
CSU San Luis Obispo

Marion T. Reid  
Dean of Library Services  
CSU San Marcos

Susan C. Harris  
Library Director  
Sonoma State University

John K. Amrhein  
Dean of Library Services  
CSU Stanislaus



COLD Project Staff

Douglas A. Davis  
Associate Dean, University Library  
CSU Northridge

Focus and Interview Groups

CSU Executive Council

Statewide Academic Senate

California State Student Association

Deans of Continuing Education

AIRC/IRMC, Instructional Media and Computer Center Directors

Academic Vice Presidents

Board of Trustees

Library Affairs Committee of the California Faculty Association

IRM Council

Faculty and student groups at:

CSU Fullerton  
Cal Poly Pomona  
CSU Bakersfield  
Humboldt State University  
CSU San Marcos  
CSU Northridge  
CSU Los Angeles  
Cal Poly San Luis Obispo  
CSU Chico  
CSU Long Beach  
CSU Dominguez Hills  
San Jose State University  
CSU Stanislaus  
CSU Sacramento  
CSU Hayward

Library staff focus groups representing northern and southern California campuses

CSU Systemwide Administration

Barry Munitz

Chancellor  
Office of the Chancellor

Molly Broad  
Executive Vice Chancellor  
Office of the Chancellor

Thomas W. West  
Assistant Vice Chancellor  
Information Resources & Technology

Gordon Smith  
Associate Director  
Division of Library &  
Academic Information Services

Evan Reader  
Associate Director  
Division of Library &  
Academic Information Services

Penelope Crane  
Associate Director  
Director of Library &  
Academic Services

COLD members on national trends likely to have impacts on the planning strategies developed by CSU libraries.

- The firm of Moore Iacofano Goltsman (MIG) was retained to facilitate the planning process. Leading the effort was Daniel Iacofano, who has extensive experience in facilitating and coordinating planning efforts for higher education institutions and local and state governmental agencies and organizations; and Rod Rose, Director of Strategic Planning for JCM Group. As a former planning director for more than 17 years in the UC system, Mr. Rose has been responsible for developing specific library plans for UCLA and other colleges and universities as well.

The planning process, established with the continuing involvement of COLD members and a Strategic Planning Subcommittee of COLD, included more than 30 focus groups of faculty and students on 15 CSU campuses, group interviews and meetings with librarians representing all campuses. In addition, individual and group interviews or meetings were held with leaders of the Academic Senate, Academic Vice Presidents, Deans, Executive Council of Presidents, Information Resource Managers, Student Body Presidents Council, the Chancellor, Vice Chancellors, and others. These groups and many others will be consulted further to assure full discussion of the plan's key elements and facilitate implementation of its recommended strategies.

## C. ORGANIZATION OF THE PLAN

The plan establishes six primary goal areas: Information Resources, Instruction, Human Resources, Infrastructure, Administration, and Funding.

Within each of these areas, goals and strategies have been outlined, developed by task groups established within COLD, to focus on the key elements of each goal area. Specific strategies are further supported by analyses of trends and issues derived from focus groups and interviews, a review of national and international literature, and comprehensive discussions involving librarians, COLD members, CLRIT members, and others.

The COLD task groups began the process of planning for implementation by outlining potential resource impacts and preliminary timelines, and by proposing a mechanism for implementation planning, monitoring, and evaluation.

## VISION

In the 21st Century, CSU students and faculty will interact with each other and with information in ways unimaginable today. Ubiquitous technology will enable every student and every faculty member to access, retrieve, display and manipulate a vast array of recorded knowledge and information. Barriers of space - physical location of student, faculty member, or information - will disappear, as will barriers of time.

The 21st Century campus library will be the primary hub of a full-service information and instruction network, designed to facilitate the delivery of recorded knowledge and information. This transformation will change teaching, styles of learning, and modes of scholarly communication in a multi-cultural society.

The role of CSU campus librarians and staff - selecting, organizing, and providing instruction in the use of recorded knowledge and information - will be central to successful learning. CSU students will succeed in learning and in life, because they will be information-literate. They will know how to access, retrieve, analyze and select information to meet their needs.

CSU's campus library facilities will be intelligent structures with rich technical infrastructures which will support on-site and remote usage of recorded information and knowledge. They will utilize a variety of storage techniques appropriate to the variety of formats of recorded information and knowledge.

## MISSION

The 21st Century CSU library will carry out its role by:

1. Providing Access to Recorded Knowledge, Information and Data

The library will be the campus entity responsible for acquiring, cataloging, preserving, and providing access to recorded knowledge, information and data in all formats, to any location; and for insuring equity of access to all students, regardless of their learning styles or economic circumstances.

## 2. Providing Instruction and Assistance in the Use of Recorded Knowledge and Information, and with instructional and curriculum design.

Working in concert with professional and technical staff in the allied fields of computing, media, and telecommunications, the librarian will be responsible for providing instruction in the use of recorded knowledge and information. The librarian's role in the educational process will be to assist each user in the selection, classification, assimilation, and critical thinking about the recorded knowledge, information, and/or data that the library provides or to which it gives access.

The librarian will also play a key role in the educational process by helping to design course materials and methods of instruction that take advantage of emerging instructional and telecommunications technologies as well as recorded knowledge and information which is accessible through the library system and its networks.

The essential characteristic of these roles is that they will be carried out both in real space and in computer (or virtual) space. The real-time and real space characteristics of the future library will provide the place which preserves an intellectual center of the campus and a primary locus of interaction for faculty, students, and others who require interpersonal instruction and research relationships, and who study archival materials. Integrated into the main fabric of the University's educational delivery process, the library's roles enhance and support the importance of the physical University campus existing in a world dominated by electronic technology.

The virtuality characteristics of the 21st Century library will provide an electronic environment or process for teaching, learning, and access of information wherever it is located or needed.

These two roles of the library, carried out in two simultaneous environments, delivered to the largest multi-cultural student body in the country, will position CSU as the leader in providing and delivering the highest quality educational product and services.

## MAJOR TRENDS AND ISSUES

### INTRODUCTION

search of international literature, combined with interviews and focus groups with faculty, students, and librarians on all CSU campuses, has provided a picture of current and expected trends in library development and some consensus on the impacts of information technology advancements on teaching and learning. Following is a summary of major trends, nationally and within the CSU system, in the six major goal areas.

### INFORMATION RESOURCES

#### National trends

An increasing proportion of library budgets is being allocated to library automation, as libraries increase their dependence on remote access. "Students, faculty, and other users will ask their own computers to retrieve information from the University's library computers. Rather than traveling to the library during normal business hours, users will have access via computer interface from their home or office at any time."<sup>1</sup>

Enhanced search, retrieval and delivery services will enable librarians and faculty to "rethink their approach to collection development...moving toward increasing access to

(rather than acquisition of) articles in journals.”<sup>2</sup> Key environmental factors influencing these changes include:

- \* Rapidly increasing production of information in all formats, but especially of new journals;
- \* Increasing cost of all library materials, especially journals, which has exceeded the inflation rate for most other services and commodities purchased by higher education institutions;
- \* Cutbacks in subscriptions and in the purchase of new monographs in all academic libraries;
- \* Availability of personal computers and networked terminals has changed the campus information environment, and, in turn, faculty and student attitudes about electronic document delivery and their expectations about the materials the library should acquire versus those that should be merely accessible.<sup>3</sup>

Issues related to multiple copyright formats (eg; books, articles, databases, images in artwork, content of letters and memorabilia, etc.) must be addressed as well in an electronic information environment. Academic institutions across the country are working individually and in collaborative relationships to redefine the rights and interests of authors, while enhancing and promoting learning and the democratic uses of knowledge in an environment in which creation and distribution of information occurs in unprecedented ways.<sup>4</sup> “The practicality of charging for discrete uses of information, through establishment of individual accounts with online database vendors will bring together copyright owners and information users together for marketplace transactions....A shift from ownership to access will not affect the legal position of copyright holders, readers, or library, (but will change) the marketplace in which they meet.”<sup>5</sup>

### CSU Trends

CSU student, faculty and librarian focus groups indicated strong support for remote information access, improved interlibrary loan services, standardized access protocols, and current and accurate data bases and information resources. Key observations and concerns of these groups include:

- \* Increased accessibility to workstations on a 24-hour basis, either on-site or from home or office.
- \* On-line data bases, protocols, and interface technology should be standardized and easy to use.
- \* Accessibility to at least one comprehensive set of source materials, but not necessarily on campus.
- \* Campus specialization of core materials, based on academic programs, combined with sharing of resources among campuses.
- \* The majority of collections should be on-line; and information and technology throughout the campus should be fully integrated.

Key trends in California which support these views include the following initiatives which are either in development or already being implemented:

\* California is involved in a long-term effort to achieve seamless cooperation among libraries in all sectors: the State Library; city and county libraries; junior college, college and university libraries; K-12 educational resource collections; institutional; and corporate libraries.

\* The CSU libraries have been active participants in the statewide multi-type library networking efforts. A representative of the Council of Library Directors sits on each of the major governing bodies of the Multi-type Networking Task Force. Most CSU Library Directors have been actively involved in the planning process.

\* All CSU libraries are key providers to the community libraries in their regions.

\* The CSU libraries have been instrumental in networking county libraries, K-12 institutions, and junior college libraries (as in Sonoma and Mendocino Counties) to the Internet, and in providing K-12 educators with valuable resources (as in the California Technology Project).

## INSTRUCTION

### National Trends

“Coming soon, leading educators say, is a world where college students will buy more computer disks than books and most of the books remaining will be printed just days before class...Assignments will routinely include multimedia projects, mixing words with sound and video.”<sup>6</sup> Supporting this view are impressive statistics: “According to a University of Southern California study, more than 20% of students have their own computers; the figure is far higher at top colleges: 42% at the University of Michigan, 70% at Case Western Reserve University...and more than 95% of colleges and universities have computer labs for students..”<sup>7</sup>

The Library has a critical role in facilitating the use of information technology in the classroom. For example, Brown University Library, in its five-year plan, “Goals and Objectives for the Nineties”, will “redesign the Library’s user education program to provide instruction on use of information tools, bibliographic file management, and end-user searching”.<sup>8</sup> Their program includes library sponsored training in searching techniques, development of tutorial modules, using vendor-provided software packages, and provision of user consultants in searching and text/file management.

### CSU Trends

In the interviews with faculty, students, and librarians, a number of comments and observations emphasized the importance of the library’s instructional role:

\* The library should also be a “producer” of information - text, bibliographies, and other materials for instructional use.

\* Faculty and students want comprehensive training in the use of technology.

\* Involvement of librarians in instructional design and delivery methods is important to faculty.

- \* Faculty are willing to change teaching methods and curriculum design to take advantage of technology.
- \* Librarians should facilitate information access, providing direction and support to the learning process.
- \* Librarians are recognized as academic information specialists, and are counted on as primary consultants regardless of their location.

## HUMAN RESOURCES

All levels of Library staff are adapting to an explosion in the quantity of available information, to the proliferation of its formats, and to the information and learning needs of an increasingly diverse student population. Their adaptations have been impeded by a funding environment which precludes the addition of staff to respond to increasing needs.

While the environment of accelerating change and fiscal stringency is unlikely to improve in the foreseeable future, new technologies in networking, information access, telecommunications and the delivery of instruction provide opportunities for enhancing the librarian's role in the teaching and learning process. Among these technologies are two-way interactive video, teleconferencing, interactive computer-assisted instruction, and wide area and local area computer networks.

Strengthening the librarian's role in instruction, and enhancing the effectiveness of all library personnel requires ongoing education and training. New and emerging technologies can provide increased opportunities for this essential staff development. Librarians, paraprofessionals and support staff can all benefit from systemwide cooperative continuing education and training programs which can be delivered electronically. Continuing education and training are essential ingredients in developing the library's human resources, its most important and expensive asset, to meet the changing demands of the academic community it serves.

### Key Trends:

- \* Increasing diversity in the cultural and academic backgrounds of students call for a broader range of means of imparting information instruction.
- \* Librarians are coping with increasing demands for information instruction and consultation.
- \* Telecommunications and computer workstation planning in the CSU is aimed at establishing an environment which will permit the implementation of innovative means of providing library services and information instruction.
- \* New initiatives in the delivery of instruction through technology will increasingly require a team approach in which faculty will work with librarians and computing and media specialists in the design of courses and process of instruction.
- \* Models for staff development and training for diversity in the workplace already exist in California and across the country.
- \* CSU has made a commitment to serve the increasingly diverse population in California and has adopted systemwide goals and objectives individual campuses can use as models.

\* The CSU has a major responsibility to conform to the requirements of the federal Americans with Disabilities Act (ADA). Especially important is training in the use of new technologies for meeting the needs of students and faculty with disabilities.

\* As a means of increasing faculty diversity, the CSU has established incentives for existing personnel to attain higher degrees to prepare for teaching in the CSU. These incentives should be extended to staff who wish to become librarians.

\* Flexible staffing models are being increasingly used in the private sector to enhance efficiency, contain costs and motivate employees. Strategies such as use of temporary employees, outsourcing of services, and alternative work arrangements can be examined for their applicability for each area of library operation.

### Infrastructure

The library will become the locus of all knowledge and information services to students and faculty through provision of networking capability for all users. These services will acquire, list, preserve and give access to recorded knowledge, information, and data in all formats. The facilities for such services will be places where instruction and assistance in the use of recorded knowledge and information to all kinds of users can be provided.

The infrastructure necessary for these knowledge and information services will consist of: central facilities for housing information resources and human resources; places on and off campus at which knowledge and information services are delivered (classrooms, offices, dormitories, homes, and other distant locations); hardware and cabling to facilitate utilization and communication; and networks to their libraries, resources, or institutions.

### National Trends

\* Networks are developing rapidly in diverse industries; for example:

\* CalREN, scheduled to be operational in the Bay Area in late 1993 and in Los Angeles in early 1994, will allow hospitals, pharmacies, labs, corporate medical departments, insurance companies and HMO's to access information and share data resources. The network will allow for electronic delivery of radiographic images, three-dimensional imagery, remote health care through monitoring techniques, and tele-commuting.<sup>9</sup>

\* "Pacific Bell's goal is to have a fully capable communications superhighway available to nearly half of all Californians within the next decade, and to all California homes by 2015."<sup>10</sup>

\* The U.S. Office of Science and Technology Policy has a lead role in facilitating the development of a National Information Infrastructure, which would "consist of computers, computer data banks, fax machines, telephones, and video displays linked by high-speed telecommunication links capable of transmitting billions of bits of information in a second...The computing and networking technology that makes this possible is improving at an unprecedented rate, expanding both our imaginations for its use and its effectiveness."<sup>11</sup>

\* Computing trends are moving towards computing devices that will be universally affordable by students (under \$500).



\* Some work on the software side of a universal information workstation has already been done (e.g., CSU's Guide and Notis' ProPack).

### CSU Trends & Issues

Focus groups and interviews with faculty, students, and librarians resulted in strongly held views for creating and maintaining a central facility where the technological capability of searching, accessing, and retrieving information can be integrated with training in use of access technologies and interaction with others. Such views are highlighted by the following comments from the interviews:

\* Essential to maintain the library as a "place", promoting human interaction regarding course material, use of access technology, etc.

\* An environment for individual and group study should be provided on campus. This is particularly important for commuting students, or distant learners who require places to interact with other students when they come to campus.

\* 24-hour accessibility to all services, either on-site, or from home or office.

## ADMINISTRATION

### National Trends

Re-organization and consolidation of functions not usually part of the traditional library is occurring more frequently in academic institutions. Activities such as academic computing, audio-visual services, and computer laboratories have been placed under the administrative responsibility of library directors.<sup>12</sup> In other institutions, consolidation of these functions and others, including archives, telecommunications, and even bookstores, has been placed under the administrative direction of individuals who have management or other expertise in non-library areas. Organizational consolidation is driven by the need to coordinate and provide a central focus for instruction and use of information, and to place the responsibility for such functions where they can best serve the teaching and research requirements of faculty and students. The managers of newly consolidated functions will be less involved with hardware and facilities elements and more involved with the intelligent use of such hardware to effectively serve the academic mission.

### CSU Trends

There are a variety of organizational arrangements among the CSU campuses for library services, computing services, telecommunication services, media services, instructional technology support services, instructional design and development services. Consolidation of administration of the library and related functions, including computing, telecommunications, A/V and media services, is already occurring at a number of CSU campuses. Many of these organizational alignments are reporting to library directors.

Comments and observations from the focus groups and interviews with faculty, students and librarians regarding such organizational issues included the following:

\* Strong support from the faculty for creating organizational units which will facilitate sharing of resources, including technology, instructional materials, and collection materials.

- \* Involvement of librarians in instructional design and delivery methods is important to faculty and students.
- \* Librarians will be active participants in changing technology.

## FUNDING

### National Trends

Dramatic increases in the cost of higher education and reductions in budgets have had far-reaching and long-term effects on colleges and universities and their libraries. A growing number of universities have begun major restructuring, consolidating administrative functions and reducing or eliminating programs. Many are moving away from an overemphasis on research and toward improvements in teaching. And most are implementing new technologies to improve teaching and disseminate information.<sup>13</sup>

But new sources of revenue are also being generated through innovative partnerships and new ties to industry. Key trends include:

- \* Increasing costs of information resources above the low rate of inflation;
- \* Private sources of revenue will comprise a larger proportion of funding for institutions, especially large research institutions;
- \* Libraries will be pressed to maintain their present share of the institutional budget;
- \* Government funding will not increase and limited resources will continue to hamper growth.<sup>14</sup>

### CSU Trends

- \* Five years ago CSU libraries spent less than \$400,000 for access to online and CD-ROM resources; in 1992 expenditures totalled more than \$1,231,000, an increase of nearly 68%.
- \* Five years ago library staffing numbered 1,515 throughout the CSU system; by 1992-93, staffing had been reduced to 1,216, a decrease of 19.7%.
- \* Five years ago the average cost of a journal for academic libraries was \$142.13; today the average cost is \$219.58, an increase of 35.2%.
- \* Five years ago the number of journal titles subscribed to by the CSU libraries was 67,914; last year the number subscribed to was 57,324, a reduction of 10,590, or 15.6%. Yet the number of journal titles being published continues to increase. Some CSU libraries have not subscribed to a new journal title in over three years.
- \* Five years ago the average cost of a book for academic libraries was \$40.52; today the average cost is \$47.48, an increase of 14.6%.
- \* Five years ago the number of books purchased by the combined CSU Libraries was 322,756; last year the number purchased was 251,100, a reduction of 71,656 volumes or 22.2%.

\* Five years ago the average cost of a serial for academic libraries was \$225.21; today the average cost is \$301.17, an increase of 25.2%.

Clearly the combination of budget reductions and unrelenting inflation during this five year period dictates the need for developing multiple fund sources for library resources and services.

Goal Area A

## INFORMATION RESOURCES

### Goals

- Provide CSU students with access to recorded knowledge and information in support of their learning and intellectual needs, whether the students are in the library, elsewhere on campus, or off campus.
- Provide CSU faculty with access to recorded knowledge and information necessary for their teaching and scholarship, whether the faculty members are in the library, elsewhere on campus, or off campus.
- Facilitate access to recorded knowledge and information for all residents of the community, region, and state.

### Key Strategies

Strategy 1: Universal Online Bibliographic Access

Strategy 2: Increased Access to Knowledge and Information Resources Outside the CSU

Strategy 3: Copyright Leadership

Strategy 4: Digitizing and Imaging of CSU Print Resources

Strategy 5: Institutional Collaboration

Strategy 6: Making Information Support an Integral Part of Instructional Delivery

Strategy 7: Organizing Effective and Efficient Access to Electronic Resources

Strategy 1 Universal Online Bibliographic Access

Provide all library users with standardized online bibliographic access to all items in all CSU collections, and collections of other participating academic institutions.

Recent networking and software developments have made it quite feasible for a single search for a subject or author to locate books in online catalogs, journal articles in computerized indexes, and full-text in distant electronic databases, if these databases use the same standard search protocol (e.g., the internationally recognized standard, Z39.50). CSU libraries will upgrade their online catalogs to support a standard search protocol. They will cooperatively purchase and make available electronic indexes, text, and image-based materials from vendors that use the standard protocol.



Cooperate with the national effort to digitize and deliver print and graphic resources; work on cooperative efforts to “image” print resources; select print materials in CSU collections for digitizing and imaging.

Many current print and graphic resources will be converted to digital format. Where these converted electronic resources are available, the CSU will seek to acquire them as described in Strategy 2.

This strategy seeks ways of converting CSU resources that are not readily available in digital format and sharing these resources across the national networks. The emphasis should be on undergraduate education, where CSU has a comparative advantage. Examples of these resources include special collections of manuscripts, photographs, and printed works. Other candidates for conversion may include major collections with a nationwide appeal such as retrospective congressional hearings.

CSU’s role in this strategy must be viewed as part of a nationwide effort to convert valuable print and graphic resources to digital format. This strategy’s action plan must address a methodology for identifying candidate materials, technologies for scanning and indexing materials, and techniques for storing and sharing materials. The strategy would build upon existing technologies for converting printed text and graphics to digital formats, such as the “Electronic Reserve Book Room” at San Diego State University.

#### Strategy 5 Institutional Collaboration

Take an active part in California statewide multi-type library network efforts; collaborate with other educational institutions (K through Grad) in providing access to recorded knowledge and information, in multiple formats.

As part of the Strategic Plan, Tom West will meet with Gary Strong, California State Librarian to discuss an increased role for the CSU in planning and implementing the statewide library network. CSU Library Representatives will continue to advocate electronic networking and to provide leadership in regional network groups, especially to organize the State’s approach to obtain federal NREN funding for K-12 and public library electronic networking. The CSU libraries will expand their efforts collaborate with other consortia and systems of academic libraries to increase the sharing of resources from outside the CSU.

#### Strategy 6 Instructional Technologies Integration of Information Resources with Emerging

Collaborate with faculty to incorporate access to information resources and other library services into technology-based instructional delivery.

CSU has undertaken a major strategic planning initiative, Project DELTA (Direct Enhancement of Learning Through Technology Assistance and Alternatives), aimed at enhancing teaching and learning and increasing access to higher education through technology, is based on the premise that emerging telecommunications and computing technologies can provide a learning environment designed to accommodate the unique education needs of individuals without constraints of time, place, or place.

Critical to the success of the DELTA initiative is the provision of academic support services to students receiving instruction via technology. In some cases, these students may be located at sites remote from the campus; in other cases, students might be unable to use on-campus services due to circumstances such as disabilities or work schedules. Regardless of their circumstances, these students need access to information resources and other library services as part of their instructional program.

Librarians, working in collaboration with faculty and staff in other disciplines, will enhance the development of information resources and emerging technologies by developing databases and other network-based resources which are integrated into the teaching and learning process.

#### Strategy 7 Resources

#### Organizing Effective and Efficient Access to Electronic Resources

Make maximum use of all appropriate national standards, protocols, and practices relating to electronic knowledge and information resources. Participate in the national effort to develop national policies and practices for the use of those electronic resources, addressing such issues as confidentiality, security, equal access, etc. Participate in and, where appropriate, lead the effort to ensure comprehensive access to networked resources, concentrating on those resources available in the CSU. Work with CSU entities and other state, national, and international entities to ensure such access.

CSU Cataloging librarians and those responsible for maintaining databases; CSU systems librarians; and specialized Computing Center personnel (i.e., Gopher Designers, Mosaic Specialists, etc.) will identify and study standards and draft standards for bibliographic control of electronic documents and services. CSU libraries will use current standards and will make every effort to have input into the development of new standards. All cataloging librarians will be instructed in the nature and use of search and delivery applications for electronic resources (e.g., Gopher, Mosaic). CSU librarians will also investigate ways in which existing products and protocols can be adopted by the CSU or, in special cases, adapted to CSU needs. They will study the work of national bodies in the field of electronic documents and services and the policy implications of all national decisions on the availability of electronic resources as they affect the CSU. CSU will participate as appropriate in all relevant national efforts.

#### Goal Area B Instruction

## GOALS

Provide CSU students with instruction and assistance enabling them to use recorded knowledge and information as an integral part of their university education.

Collaborate with CSU faculty to provide training and assistance in the use of recorded knowledge and information necessary for their teaching and scholarship.

## KEY STRATEGIES

Strategy 1: Information Competency

Strategy 2: Instructional Modules or Courses

Strategy 3: Continuing Education For Teaching Faculty

Strategy 4: Course Design

Strategy 5: Institutional Collaboration For Information Competency

Strategy 1 Information Competency

Establish basic competence levels in the use of recorded knowledge and information and establish systemwide norms for testing that competence.

Librarians, faculty, and professional and technical staff in many disciplines will collaborate to determine the information competence needs of CSU graduates. After surveying current and developing methodologies for instruction in information literacy, strategies will be recommended to assure that each CSU graduate is competent in basic information skills through the incorporation of information competency in general education requirements established by the academic senate. Finally, library faculty, discipline-based faculty, and professional and technical staff in media, computing, and telecommunications will cooperate to develop standards for competence and establish systemwide assessment of competence, as a requirement for graduation from the CSU.

Strategy 2 Instructional Modules or Courses

Provide instruction to ensure that basic competence levels are reached by each CSU graduate.





Goal Area C  
Human Resources

GOALS

Expand the role of librarian in the teaching and learning process through the use of new information, networking and instructional technologies and through increased collaboration with faculty.

Develop human resources in CSU libraries to assure effective functioning in the evolving information and technological environments.

Ensure that library staff are responsive to the increasingly diverse cultural and learning needs and circumstances of the library's users.

KEY STRATEGIES

Strategy 1: Role of Librarians

Strategy 2: Networking Librarian Expertise

Strategy 3: Staff Development — Information and Technology

Strategy 4: Staff Development — Diversity

Strategy 5: Organization of Staffing  
Strategy 1 Role of Librarians

Strengthen the role of librarians as knowledge and information resource specialists in the teaching and learning process through increased collaboration with faculty, computing and multi-media specialists.

With the explosion of available information and the increasingly diverse tools for access to that information, students' need for information instruction is becoming ever more critical. This strategy seeks to develop an expanded role for librarians which can meet this need through the use of emerging information and instructional technologies and through greater collaboration with faculty and other specialists involved in the design and delivery of instruction.

Remote access to information resources and new telecommunications and networking technologies offer librarians opportunities to redefine how information instruction is imparted to students, and computing technology offers new interactive learning tools which can greatly enhance the librarian's ability to deliver basic instruction in information literacy. In addition, librarians can become full partners in the instructional teams which design and deliver instruction electronically on or off campus.

All librarians — those who organize information for access as well as those who teach courses — have important roles to play in information instruction under this new model of delivery. The full range of instructional modes needed to accommodate the diversity of learning styles and needs among students call for the special skills of the full range of library professionals. The integration of related activities will bring together librarians, faculty and others involved in the design and delivery of instruction in a team effort to find ways to more effectively meet the needs of students facing the complexities of the Information Age.

## Strategy 2

### Networking Librarian Expertise

Develop networking tools to enable librarians to share their subject, language and technological, and reference and collection development expertise, and to facilitate collaboration in the design and delivery of information instruction and other services for students and faculty.

Collectively the librarians in the CSU possess an enormous range of subject, language and technological expertise. The breadth of that expertise may be seen in the pages of the Personnel Roster published annually for CSU libraries by the Chancellor's Office. More than 180 subject specialties are represented, ranging from administration of justice to science fiction, and 28 languages are listed. In addition, 21 library specialty areas such as computerized reference, media and government publications are represented.

The value of this breadth of expertise among librarians has been recognized for many years and formal and informal sharing via telephone and meetings has been common. Emerging networking and telecommunications technology, however, holds the potential for much greater collaboration among librarians, collaboration which can directly benefit students and faculty seeking information or instruction.

The sharing of expertise is likely to become even more important for librarians as the increasing diversity of the student population creates a more complex educational environment, and as the explosion in the quantity of available information and the diversity of its formats creates a more challenging information environment.

Aside from sharing expertise, collaboration among librarians via technology can yield benefits in the avoidance of duplicated efforts in such areas as design of computer assisted library instruction. Multi-campus teams sharing their talents can design instructional modules responsive to the full range of student needs and backgrounds. Traditional classroom instruction can benefit from this technology as well; a guest lecture by a subject specialist from another campus, for example, could be integrated into a bibliographic instruction course or into a course designed for electronic delivery.

### Strategy 3

#### Staff Development — Information and Technology

Develop human resources to ensure that library faculty and staff, as well as professional and technical staff in disciplines such as media, computing, and/or telecommunications are fully able to effectively tap the multitude of networked resources and to utilize emerging instructional and information technologies.

As technologies are integrated into each campus, the interaction of library personnel and other professional and technical staff with information seekers will be expanded and new skills will be necessary.

Technical orientation which has been increasingly necessary will be critical so that librarians can effectively and efficiently navigate the information highways and instruct and direct information seekers. Individual skills involving adaptability, flexibility, problem solving and evaluation of information sources will be increasingly important, as it seems likely that the networked world of information will be unorganized, chaotic and rapidly changing during the next decade and beyond.

Understanding the implications of laws pertaining to copyright and intellectual property is also important in the evolving information environment, requiring on-going staff development within this area as well.

This complex information environment will require librarians to build on and strengthen their abilities to view sources of information from a holistic, interdisciplinary perspective, and to build on their traditional service orientation to meet the needs of students and faculty.

### Strategy 4

#### Staff Development — Diversity

Develop human resources in CSU libraries to respond to the increasing diversity of the learning needs and circumstances of students and faculty.

The CSU is committed to providing access to higher education to all academically qualified Californians regardless of their backgrounds or personal circumstances. The State's rapidly changing demographics yield projections of a highly diverse student population; minority groups which have been historically underrepresented in the CSU are collectively becoming the majority population in California. In addition, increasing numbers of older students and students with disabilities are enrolling in the CSU.

The acceptance of diversity as a strength and an asset needs to be demonstrated throughout the CSU. Personnel at all levels will also need to reflect the diversity of the student population and society as a whole and, because of their direct interaction with students, will play an important role in successfully educating students of all backgrounds. Also, the presence of role models within the library will serve to motivate and enrich the educational experience.



(iv) provide access to all collections, resources, training, and assistance for all library users; and (v) integrate all current, new, and emerging technologies for the use of recorded knowledge, information and data.

## KEY STRATEGIES

Strategy 1: Campus prototype facilities

Strategy 2: Connectivity through Networking

Strategy 3: Universal Workstations

Strategy 1 Develop new campus prototype facilities

Future facilities will be planned as prototypes which will provide each campus with a central physical infrastructure that supports the coordination of library, media services, computing, and telecommunication functions.

The term “library” may be too limiting in terms of its historic and traditional perception to describe the facility into which it must be transformed to meet the comprehensive educational goals of future CSU students and faculty. The 21st Century library must be an integrated facility capable of and responsible for acquiring, listing, preserving and giving access to recorded knowledge, information, and data in all formats and for providing training and assistance in the use of recorded knowledge and information. Its central role in the education process will be to enable each student to assimilate, select, classify, and think critically about the information and data that the library either provides or to which it provides access.

To carry out this role effectively in the future, the library will require an infrastructure, consisting of facilities, equipment, and networking capability that enhances and maintains the library role as the intellectual hub of the campus for students and faculty. The facilities infrastructure will have the following principal characteristics:

- \* Functional space for librarians and staff to train and assist students and faculty in their use of recorded knowledge, information, and data.

- \* Space to house the library’s locally held collections and the workstations and other hardware needed for access to electronic recorded knowledge, information, and data. Diverse learning styles must be accommodated through collections in all formats. The infrastructure should be hospitable to each of those formats and should support the full exploitation of print, recorded sound, graphic, and electronic resources.

\* Space for individual and team study areas, to facilitate collaborative study and interaction between and among students, faculty, and library staff.

\* Workstations for students, faculty, or other library users, and space for providing appropriate levels of assistance and guidance to individuals using them.

\* A training center which includes facilities for video and teleconferencing, and links the library and its resources with the classroom, dormitory, office, and/or the distant learner.

\* Space for librarians, media staff, and computing designers to meet with faculty to develop bibliographic, audio/visual, or other materials to assist in the development of new curricula, or teaching aids.

## Strategy 2

### Networks

Establish complete connectivity between the central library building and all users of the knowledge and information services, on and off campus. Provide the highest possible level of service by linking resources, students, faculty, and other library users (on and off campus), and librarians and other library staff who provide the services.

The libraries on each campus will become the primary hub of networks and networked information, linking the campus with CSU-sponsored networks and other regional, State, and national information networks. The CSU telecommunications network will be completed; and other networks will be developed which will link together all online catalogues and other online resources of the CSU libraries.

It is also important for CSU to assert leadership in developing linkages and networks with public libraries, community colleges, and public schools throughout the State. Such linkages will provide an essential framework for educational and information continuity, and will facilitate the goals of information access equity that are essential to the needs of diverse communities and students. Private educational institutions should be encouraged to collaborate or participate in these networks as well.

## Strategy 3

### Workstations

Ensure that each information user can access all necessary electronic resources at a single, fully functional workstation.

The publishing industry, through a variety of vendors, is beginning to provide a significant subset of the journal literature in electronic form. At the same time a number of public access databases at universities and government offices are

becoming available over the Internet. This availability of electronic journals and other sources of electronic information presents opportunities and challenges for the CSU Libraries. The opportunity is to provide information that is not restricted by location or time of day. Information that is always available, not at the bindery or restricted to one user at a time. One of the primary challenges of this developing array of electronic information is to provide the end user with a tool to read, view, listen and manipulate the information.

Consumer technology is moving in the direction of distributed electronic information resources. This strategy mirrors the growth of this technology by working with vendors of hardware and software to develop general specifications for information retrieval, manipulation and display functions. Meeting these specifications will open the window for students and faculty to access information from many locations. It is expected that the workstations performing these functions will include personal workstations (hand held to conventional microcomputers) and University owned workstations, including those located in the library.

Goal Area E  
Administration

## GOALS

Develop and implement a common agenda for Library and Information Services and Technology for each campus and at the CSU system level.

## KEY STRATEGIES

Strategy 1: Mechanisms and Processes for Establishing the Common Agenda

Strategy 2: Coordination and/or Consolidation of Information-Related Functions

Strategy 3: On-going Role For COLD

Strategy 4: On-Going Role For LAIS

Strategy 5: Establishment of Action Entity

Strategy 1  
Common Agenda

Mechanisms and Processes for Achieving Agreement on the

Establish mechanisms and/or processes for achieving agreement on a common agenda for each campus and for the CSU system.

The organizations on every CSU campus which are involved in providing library, computing, media, printing and related services have all been affected in radical ways by technological changes. These units increasingly use the same means to deliver their services — digitization of text and images for storage, retrieval, and transmission; ubiquitous networks and affordable computing. Given the convergence of these technologies, it is essential that each campus achieve agreement on a single “information agenda”. Similarly, collaboration among systemwide groups is necessary to develop a single appropriate agenda for systemwide issues.

## Strategy 2 Functions

### Coordination and/or Consolidation of Information-Related

Achieve coordination and/or consolidation of functions among computing, instructional research services, telecommunications, library services and audio/visual media.

The establishment of a common agenda for each campus, and at the system level, will suggest ways to achieve appropriate organizational coordination and consolidation of the functions and units involved in providing library and media services, computing and instructional resource services, telecommunications support, printing and graphic services. The common agenda is the plan; coordination is essential to carrying out the plan.

## Strategy 3

### On-going Role For COLD

In collaboration with other campus-based and systemwide groups, COLD members will facilitate the identification of common issues and alternative approaches for all campuses and making recommendations for system level implementation.

The Council of Library Directors (COLD) has a long and successful history of intercampus communication on policies and issues of common interest. Through the establishment of consultation mechanisms such as special task groups or other communication techniques appropriate for each campus, COLD will identify those elements common to the agenda of all campuses and make recommendations for appropriate system level initiatives. Participants will include such groups as the EAR Committee, AIRC, IMRC, CLRIT, Senate committees, and professional and technical staff of computing, media, telecommunications and related disciplines.



#### Strategy 4

#### On-going Role For LAIS

Because of its systemwide perspective, the role of LAIS in the Chancellor's office should be enhanced to enable it to have primary responsibility for coordinating implementation of the recommendations developed from the COLD and other consultation and advisory groups.

The Office for/of Library and Academic Information Services (LAIS) is the appropriate primary point of contact at the Chancellor's Office for campus libraries. LAIS has played an integral role as part of the inter-campus consultation process coordinated by COLD, and is linked with other information technology efforts involving disciplines such as computing, telecommunications, and media. Thus, it is in the most advantageous position to serve as the agent of implementation for the systemwide initiatives which are undertaken.

Establishment of a copyright specialist position within LAIS will be important as well for coordinating the exploration and implementation of alternative solutions to copyright and intellectual property issues.

#### Strategy 5

#### Establishment of An Action Entity

Establish a system-wide entity (e.g., joint powers organization or nonprofit corporation) responsible for initiating and implementing external partnerships and/or strategic alliances with public and private institutions, agencies or industry to share information resources, technology and services.

A "vehicle for action" will be established which will be able to receive and disburse assets, enter into contracts, and otherwise enter into partnerships and alliances with public and private institutions, agencies, and organizations to facilitate achievement of the "information agenda". The entity established will be of the legal form best suited to its role; it may be a not-for-profit corporation or a joint entity with other segments of California higher education.

Goal Area F  
Funding

## GOALS

Establish a stable foundation of multiple and diverse funding sources for information resources and services.

## KEY STRATEGIES

Strategy 1: Diversity of Revenue Sources

Strategy 2: Funding Linkages

Strategy 3: Alternatives for State Funding

Strategy 4: Funding Leverage

Strategy 5: System-Wide Funding

Strategy 6: Overhead Recovery

Strategy 1 Diversity of Revenue Sources

Develop more diverse revenue sources to fund CSU

Libraries.

CSU has had a long tradition of formula-based funding. This method of funding provided a percentage of the campus allocation for library purposes. While local campus administration could alter the initial allocation, libraries generally received a close approximation that the formula provided. Increased competition for a shrinking base of funds has precipitated a need for libraries to look beyond CSU and campus funding allocations. As previously indicated, the downward trend of funding has already begun as evidenced by the 20% difference (i.e., \$61 million) between what was appropriated and CSU Libraries and the actual allocation for a three-year period between 1991-92. The Chancellor's Office has made it clear that CSU cannot rely solely on state revenue sources. It is similarly clear that CSU libraries must look to other revenue sources as well. The most recent annual report reflects that a bare 1.29% of the funds spent by the CSU Libraries came from non-state funding sources.

COLD members, working in collaboration with their campus constituencies, will identify and develop campus-specific targets of opportunity for fund-raising and staff-funding initiatives. For example, CSU-wide targets of opportunity for fundraising and strategies for improving state-funding will be explored; COLD subcommittees and development staff will identify private foundations interested in funding

public sector information activities; and charge-back methods, such as tiered access or community access services, will be analyzed.

Strategy 2 Funding Linkages

Create linkages on campus for coordination and implementation of fund-raising initiatives.

COLD members, campus development officers, Presidents, Vice Presidents of Academic Affairs will develop campus-based working groups to coordinate fund-raising initiatives. They will consult with Deans of schools and colleges on program needs and potential collaborative activities.

Strategy 3 Alternatives for State funding

Take lead role in developing new model for State funding of operating and capital needs of Libraries.

The CSU should take the lead role in developing a new model for State funding of operations and capital needs of Libraries. The library of the 21st century will be integrated inexorably with academic programs and technical service providers, making traditional funding paradigms obsolete.

The COLD subcommittee, LAIS representatives, vice presidents, vice chancellors, CLRIT members, and staff will develop alternative funding models for discussions at campus and systemwide levels. They will develop discussion papers for meetings with Department of Finance/Legislative Analyst staff.

Strategy 4 Funding Leverage

Use local funds to leverage system-wide and other fund sources for facility development, i.e. capital needs.

COLD members, campus vice presidents and development staff will analyze matching fund requirements for Foundation grants, Federal programs, etc., to determine the ability of campus operating budgets or foundation to support matching fund requirements.

Strategy 5 System-Wide Funding

Assume responsibility for funding networking requirements and workstation improvements. Focus campus responsibility on funding working collections, staffing and operational needs.

The CSU System should assume responsibility for funding networking infrastructure requirements and workstation improvements. Campus responsibility is to be focussed on funding collections, staffing and operational needs.

Strategy 6

Research Overhead Recovery

Establish a basis for allocating appropriate indirect costs from contracts and grants for library and information services support.

The libraries must establish a basis for allocating appropriate indirect cost from contracts for library and information services support.

A COLD subcommittee, along with COLD members, foundation directors, presidents/vice presidents, and budget staff will develop model for overhead allocation based on integrating library services and other related services (telecommunications, academic computing, media, etc.)

MONITORING THE PLAN

V. IMPLEMENTING, MANAGING, AND

- A. Resource Impacts
- B. Timing
- C. Monitoring and Evaluation

## INTRODUCTION

The success of a strategic plan depends largely on its ability to direct the change process - specifically, changes in resources (funds, equipment, facilities), staffing, management, or organizational structure. The extent to which strategies can actually be implemented will determine whether the plan's goals, and eventually its vision, can ultimately be achieved.

Implementation of this strategic plan will require significant re-thinking of resource requirements, operating and capital budget planning criteria, development of new cost models, and exploration of revenue and cost-sharing opportunities. By analyzing the implications of the strategies outlined in this plan and integrating them with other planning initiatives of the CSU, opportunities for shifting of costs, joint development and fund-raising ventures, data base production and distribution, and other innovations are possible.

The following sections suggest ways in which potential resource impacts of the recommended strategies might be examined, and reasonable timing objectives are outlined. Finally, an evaluation and monitoring mechanism for tracking all aspects of the strategic plan is proposed.

## Potential Resource Impacts

### Information Resources

#### 1. Universal Online Bibliographic Access

Standardized search protocols, cooperative purchase agreements and links to regional and national resources will result in a more comprehensive array of resources for individual campuses and for CSU system.

#### 2. Extended Access to Resources outside CSU

More effective interlibrary loan and document delivery strategies will enhance the value of acquisition investments.

#### 3. Copyright Leadership

Innovative approaches to copyright for electronic material will facilitate accessibility and sharing of materials worldwide, resulting in significant service enhancements from on-site collections and acquisitions.

#### 4. Digitizing Print & Graphic Resources

Conversion of current print and graphic materials to digital format will facilitate sharing across national networks. CSU can provide revenue-generating services to offset technology costs.

#### 5. Institutional Collaboration

Collaboration will increase sharing of resources within CSU, with other consortia and systems of academic libraries.

#### 6. Integrating Library Support and Instructional Delivery

Provides opportunities for organizational consolidation, sharing of technical and support staff and equipment, and innovations in budgeting and allocation of resources.

#### 7. Organizing Access to Electronic Resources

Participation in national databases, protocols and standards will reduce need to invest in system or campus-specific programs.

## Library Instruction

### 1. Information Competency

Competency standards, integrated into curriculum requirements, will add value to undergraduate degrees and recognition of CSU's educational quality.

### 2. Development of basic courses

Offers opportunities for increased collaboration within and among CSU campuses and faculty; common course modules can be shared.

### 3. Continuing Education for Teaching Faculty

Increases effectiveness of teaching faculty, enhances learning environment for all students.

### 4. Course Design

Provides incentives for external funding from Federal, State or corporate sources through marketing innovative instructional methodologies.

## Human Resources

### 1. Role of Librarians

Increases value of instruction, improves learning methodologies, increases opportunities for revenue sharing.

### 2. Networking Librarian Expertise

Avoids duplication of effort in designing instructional modules through use of multi-campus teams.

### 3. Staff Development - Information and Technology

Increases staff productivity.

### 4. Staff Development - Diversity

May result in increased costs in short run for increased staff development programs, but will increase staff effectiveness and productivity in the long run.

## 5. Organization of Staffing

productivity. Significant cost savings in personnel, increased

## Infrastructure

### 1. Development of campus library prototypes

Offers opportunity to share space by integrating functions that have been traditionally separated.

### 2. Connectivity through Networking

Resource sharing opportunities, plus increased teaching effectiveness through access to users at campus and distant locations.

### 3. Workstations

Standardized equipment configurations offer opportunities for purchase/lease agreements, and cost-effective vendor support services.

## Administration

### 1. Mechanisms for establishing common agenda

Collaboration among campuses and CSU Chancellor's office provide opportunities for resource sharing.

### 2. Consolidation of Functions

Reduced administrative costs through organizational restructuring.

### 3. On-Going Role for COLD

Provides on-going evaluation and monitoring mechanism, and management oversight.

### 4. On-going role for LAIS



Provides single point of contact for implementing recommendations, negotiating purchase agreements, alliances, etc.

## 5. Establishment of Action Entity

Development of external partnerships will provide revenue enhancement opportunities; can also result in promoting vendor purchase agreements to benefit all campuses.

## Funding

### 1. Diverse Revenue Sources

Reduces dependency on State funds; provides opportunities for charge-back and alternative revenue mechanisms to pay for specific service levels.

### 2. Funding Linkages

Provides opportunity to link campus fund-raising initiatives for libraries with other academic areas; attract corporate and foundation interest in new technologies, instructional methodologies, etc.

### 3. Alternatives for State Funding

Opportunity to develop new funding formulas for State funding for library as well as academic support requirements.

### 4. Funding Leverage

Produces alternative fund sources and matching funds for facility development, special equipment and technology initiatives, etc.

### 5. Systemwide Funding

Articulates division of responsibility and criteria for campus and systemwide budgeting for relevant functions and services.

### 6. Research Overhead Recovery

Provides opportunity for developing new models for overhead allocation and rate negotiation with contract and granting agencies.

## B. TIMING

The charts on the following pages suggest general timing objectives for implementation of the strategies recommended in this plan. The timelines proposed are preliminary only and are not available for some of the strategies. Modification and refinement will be an integral part of the implementation planning which will follow and depend largely on the priorities and commitment of resources available.

## C. MONITORING AND EVALUATION

The goals and strategies outlined in this strategic plan provide a framework within which significant changes in direction for CSU Libraries and the role of librarians will take place. Bringing about such change will require establishment of mechanisms for coordination, evaluation, and monitoring of the specific tasks or actions necessary for implementation.

While there are currently organizational entities on each CSU campus and within the Chancellor's office which have oversight or management responsibility for most of the areas impacted by the recommended strategies, successful implementation will require focused responsibility for coordination, recommendation of resource allocation priorities, and assignment of responsibility for required analysis or actions.

In order to facilitate implementation of this plan CLRIT requested at the joint COLD/CLRIT meeting of January 27, 1994:

1. that the Council of Library Directors (COLD) be asked to develop specific implementation plans, following consultation with all relevant groups on each campus and within Systemwide administration, and with a subcommittee of the Chancellor's Commission on Learning Resources and Instructional Technology (CLRIT).
2. that specific Systemwide staff support for the Office of Library and Academic Information Services (LAIS) be established with responsibility for coordination and oversight of specific elements of the implementation process.
4. that the implementation plans provide specific recommendations for resource allocation strategies, assignments of responsibility, coordinating mechanisms, and priority-setting criteria

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#### Strategy 5 Systemwide Funding

Use systemwide funds for meeting network development costs and workstation procurement and upgrades. (Campus funding is to focus on acquisitions.)

The CSU System should assume responsibility for funding networking infrastructure requirements and workstation improvements. Campus responsibility is to be focused on funding collections, staffing, and operational needs.

#### Strategy 6 Research Overhead Recovery

Establish a basis for allocating appropriate indirect costs from contracts and grants for library and information services support.

The libraries must establish a basis for allocating appropriate indirect costs from contracts for library and information services support.

A COLD subcommittee, along with COLD members, foundation directors, presidents/vice presidents, and budget staff will develop a model for overhead allocation based on integrating library services and other related services (telecommunications, academic computing, media, etc.)