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Standard Seven

Library and Information Resources

The Information Environment at the University of Connecticut

Organizational Environment

The information technology environment at the University of Connecticut is a combination of centralized and decentralized computing in administrative, academic and research applications. There are three principal centralized IT units responsible for managing information resources and providing information technology and services at the University of Connecticut. These are University Information Technologies Services (UITS); the University Libraries (and the libraries at the Law School and Health Center); and the Institute for Teaching and Learning (ITL). In addition, units based in schools, colleges, and departments also provide information technology services.

The Division of Information Technology Services encompasses Connecticut Education Network Advanced Services Center (CEN-ASC) and University Information Technology Services which is composed of several units: Computing Technology Infrastructure Support, Customer Support and Relations, Enterprise Administration Applications, IT Security, Policy & Quality Assurance, and Network Engineering and Telecommunications. The Associate Vice President of Information Services, Michael Kerntke, reports to the Vice President and Chief Operating Officer.

A separate Information Technology Department at the Health Center campus in Farmington is responsible for all information technology services and support for the John Dempsey Hospital, University Medical Group, the Schools of Medicine and Dental Medicine, the Graduate School, and Academic Research and Finance and Administration organizations. The Chief Information Officer, Sandra Armstrong, reports to the Health Center's Chief Administration Officer, who in turn reports to the University of Connecticut's Vice President and Chief Operating Officer. With one hundred and sixty-five employees, the UCHC IT organization consists of Infrastructure and Security; Application Development and Support; Clinical Enterprise Systems; the Project Management Office for Patient Safety System implementation; Telecommunications; and Health Informatics, which includes the Health Center library.

The libraries of the University of Connecticut serve as the primary gateway for the delivery of information resources to the local academic community as well as to the citizenry of the State of Connecticut. The University Libraries (including regional campus and branch libraries) are under the direction of the Vice Provost for University Libraries, Brinley Franklin, who reports to the Provost and Chief Academic Officer. The Associate Dean for Library and Technology at the University of Connecticut Law School, Darcy Kirk, reports to the Dean of the Law School. And the Director of the Library at the Health Center, Evelyn Morgen, reports to the Assistant Vice President of Health Informatics.

The Institute for Teaching and Learning comprises ten units including sub-units that support both faculty (including instructional teaching assistants) and students. Those supporting faculty predominantly in pedagogy are the Instructional Design and Development unit, the Instructional Resource Center, and the Teaching Assistants Program. From a technological perspective, the Video Design Services, Graphics and Photographic unit, and Technological Services provide technology solutions and support to the instructional mission. Students are helped directly through the Learning Resources Center and by tutoring from the writing and Quantitative Centers. The Early College Experience Program provides the administrative structure to support students at the Connecticut High Schools with University quality courses. The director of the Institute for Teaching and Learning, Keith Barker, reports to the Vice Provost for Undergraduate Education and Regional Campus Administration, Veronica Makowsky.

The Health Center's Health Informatics department provides technology support and e-learning services through Faculty Instructional Technology Services (FITS) and Biomedical and Media Communication Services (BMCS). FITS provides services including: e-curriculum projects (interactive media for education); information visualization, animation, and simulation projects; faculty coaching and faculty requested projects; pedagogical support; e-learning assessment; Blackboard Content Management and support; and digitization, media translation, and scanning services. BMCS provides services including film and video development; photography; interactive video facilities and support, interactive CD-ROM projects; video streaming services, classroom media and classroom computer support, classroom equipment training, medical illustration, and graphic design and production. These services report to the Assistant Vice President for Health Informatics.

Additionally, there are a number of other University institutions that are also concerned with information issues. Throughout the university, individual schools provide a myriad of both technical support and advanced information resources. In most cases, these resources are highly specialized and directly related to the support of their individual

missions, and are thus better suited to decentralized support. These decentralized technology resources take a number of forms, from simply providing more personalized support for students and faculty to implementing cutting-edge technology solutions that serve as a test bed for possible University-wide implementations. Each of these schools and colleges has technology support staff that is loosely integrated with the central IT organization through a series of governance committees. (For examples, see Exhibit 7.1)

Information Literacy, Computer Literacy, and General Education

As is more fully discussed in Standard 4's General Education section, all undergraduate students must fulfill the University's General Education requirements, which mandate successfully completing coursework in certain "competencies," including computer competency and information literacy. The Vice Provost for Undergraduate Education and the General Education Oversight Committee is in charge of assuring that coursework in these competency areas is offered and that all students fulfill the requirements. (7.8; 4.6)

Planning and Oversight

University-wide Information Technology at the University of Connecticut is managed through three main governance groups: the IT Steering Committee, which is responsible for strategic planning, prioritization, and IT policy approval; the Technology Planning Committee which is responsible for campus-wide communication and coordination, IT policy recommendation and review; and the Technology Implementer Group, a hands-on-working group responsible for implementing decisions and performing tasks associated with campus-wide IT initiatives. (7.1)
In August 2004 a committee was charged with beginning an IT strategic planning effort to develop a strategic plan to prioritize the University's IT directions and investments in a manner that would maximize deployment of current technologies while ensuring that those technologies were fully integrated with, and supportive of, the academic and research plans of the University. This effort began with the formation of several task teams, each of which was to examine a specific need and/or opportunity for technology. The recommendations of these teams were then consolidated, synthesized and presented to the University community for feedback. (7.1)

The goals of the IT Strategic Plan (see Appendix 2.3 or http://www.itsp.uconn.edu/) are to:

- provide the technological tools to enable faculty, staff and administration to perform their tasks and roles well and efficiently through the provisioning of an Integrated Technology Environment;
- provide the technological tools to enable students to efficiently and effectively access information and university services;
- provide a mechanism to reduce duplicate efforts, streamline work processes and commit to continuous quality improvement efforts;
- provide the infrastructure that facilitates the sharing of ideas/content, and allows for virtual gatherings;
- provide the faculty with the tools necessary to prepare students for evolving, technology-driven work by exposing them to diverse technologies;
- provide adequate training for faculty, staff, students, and administration on evolving technologies;
- leverage the University's investment in technology to promote and support scholarly communications and research; and
- provide a secure, responsive, reliable and redundant technology infrastructure to the UConn community.

There are currently twenty-six University policies that apply to Information Technology. All of these polices are maintained within the University's Policy e-Library (http://www.policy.uconn.edu/pages/main.cfm) and are accessible either directly or from several web sites including UITS' Policy site (http://itpolicy.uconn.edu). These policies cover appropriate use (Individual Responsibilities with Respect to Appropriate Use of IT Resources) and other IT-related issues. All of the IT-related policies clearly state the consequences for non-compliance. (7.6)

In addition, UITS provides guidelines, standards and recommendations covering such topics as: fair use of copyrighted works, individual workstation security, managing e-mail, password requirements, etc. These guidelines are reinforced from other web sites, including the UITS Network and Security web page (http://security.uconn.edu/), the Library's web page (http://www.lib.uconn.edu/using/tutorials/LILT/htmls/fairuse.html), etc. The UITS Policy page also contains the University's procedures for handling DMCA complaints as well as procedures for ensuring that all data on computers or electronic storage devices (including but not limited to desktop, laptop, server, or handheld devices) are erased permanently prior to transfer or surplus. The UITS Policy page also provides an Information Security Awareness training module. (7.6)

University Information Technology Services

UITS is physically located in three places: the Math Sciences Building, the basement of the Homer Babbidge Library, and two building at the Depot Campus. It provides 24/7 operation and management for a number of University systems, including the mainframe, midrange and small server environments used by the administrative and Enterprise Resource Planning systems (Student Administration, Human Resources, and Financial) as well as various departmental systems. These smaller servers – for systems such as trouble ticket management, ADASTRA classroom scheduling, and ePortfolio – are clustered and centrally managed. UITS is also responsible for supporting the University's Course Management system (WebCT/Vista) and both the employee e-mail (Exchange) and the student e-mail (HuskyMail) systems. Appendix 7.1 is the latest publication from UITS which aims to provide insight to the division as a whole and highlight the services they provide to assist the faculty and staff at the University. (7.11) Exhibit 7.2 provides a detailed description of the campus network and of the organizational sub-unit of UITS. Exhibit 7.3 describes the organizational sub-units of UITS.

Staffing
For fiscal year 2005-2006, central UITS employed one hundred and fifty-three permanent full-time staff while seeking to fill seven additional vacant positions. This is an increase of nineteen positions, or approximately thirteen percent, from the staffing level of fiscal year 2001-2002. In addition, central UITS is supported by fifty student employees. (7.4)

Financial Support
The central UITS budget for fiscal year 2005-2006 was $29,350,000. This breaks down as follows:

Operating expenses:			$19,250,00
	Salaries and Fringe Benefits:	$14,150,000	
	Contractuals:	$4,200,000	
	Commodities:	$150,000	
	Additional Project Money:	$750,000	
Capital expenditures:			$3,000,000
Telecommunications:			$7,100,000

The budget has been increasing modestly over the last two years after a decrease the previous year because of budget rescissions and early retirement. (7.2)

Appraisal

Over the past ten years, the University has addressed, or is in the process of addressing, several of the issues identified in the 1996 NEASC Self-Study Report.

Most significantly, perhaps, the University has taken advantage of UCONN 2000 funds to make significant improvement to information-technology infrastructure. (See Exhibit 7.4 for an enumeration.) The strategic direction

has been to eliminate traditional mainframe infrastructures and migrate the services running on those infrastructures to a more diverse infrastructure based on UNIX, Linux and Windows technologies. UITS has invested in training its staff members to ensure the necessary skill sets to implement and support these new systems.

Recent changes to improve information technology at the University of Connecticut include:

- Consolidation of the University's once disparate e-mail systems into two University-wide systems: Microsoft Exchange for faculty and staff and I-Planet for students.
- Migration from the WebCT (Web Course Tools) Campus Edition online course management system to WebCT Vista, an academic enterprise system utilizing the Oracle database service. This migration should be complete within the next fiscal year.
- Implementation of a web-based information management tool (e-Portfolio) that provides faculty, students, and staff with a secure web site for saving, organizing, viewing, and sharing personal information and records.

In the fall of 2002, UITS undertook an examination of its business operations, services, and administrative functions with the goal of identifying and resolving problems related to the delivery of information technology services. As part of that effort, Pappas Consulting Group was engaged to review quality-assurance functions and processes (project management, standards and procedures, and production turnover processes) in order to identify current weaknesses and recommend future directions. Many of the recommendations from the report issued in November 2002 have since been adopted. (See Exhibit 7.5) In June of 2003, the Pappas Consulting Group reported its findings on opportunities for administrative restructuring and for synergy between the main campus at Storrs (including the various regional campuses) and the University of Connecticut Health Center (UCHC) in Farmington. Several of the findings involved recommendations affecting UITS, and these have either been implemented or are in the process of being implemented. (See Exhibit 7.5)

Currently, UITS staff is housed in three different locations: Math Sciences Building, Homer Babbidge Library, and Chaplin Cottage (Depot Campus). None of these facilities alone is adequate to meet the needs of the entire staff.

Projection

In order to bring together disparate databases and to make portions of that information more accessible to faculty and staff, the University is moving to new Enterprise Resource Planning systems. UITS has already implemented a PeopleSoft student system that integrates student records, student financials, and financial aid into a central database. This system organizes and distributes student information to assist departments in providing a wide array of services to students and is the repository for storing records of student academic achievement. Much of the future focus of this system will be to extend its reach within the University and to provide direct access to many of these service functions to students via the Internet. These "self-service" operations will change the very nature of administrative services to students, and will help improve the overall student experience at the University. (7.9) In addition, UITS is currently engaged in replacing an aging human resources system with a PeopleSoft Human Resources Management System. We have also implemented several "datamarts" to facilitate querying and reporting capabilities for the University community. Over the next several years we will be continuing these efforts to expand and enhance our data warehouse efforts and to provide more "self-service" operations to faculty, staff and students.

More broadly UITS anticipates the following changes to the technology environment at UConn over the next ten years:

- A convergence of voice and data networks
- Increased use of video over IP for teleconferencing
- A role-based technological provisioning system (Identity Management)
- Expanded implementation of open source software
- A portal environment that utilizes a single ID/sign-on
- Better data warehousing that provides improved backend data integration
- A continuing refinement to the centralized/decentralized model that we have adopted

These goals will require adequate budgetary resources.

The University of Connecticut is actively discussing a more efficient location and physical configuration for various information technology services. It is anticipated that by the time of the next decennial review, these issues will be resolved.

University of Connecticut Libraries, Law School Library and Health Center Library

The mission of the University of Connecticut Libraries is the following:

The University of Connecticut Libraries provide high quality collections and information services in support of the University's educational and research missions. The Libraries also contribute to meeting the information needs of citizens of Connecticut and the scholarly community worldwide.

In fulfilling this mission, the Libraries select, acquire, organize, preserve, and provide access to collections in a broad range of formats; facilitate access to collections owned by other institutions; serve as a gateway and contributor to global networked information resources; provide assistance and education in information retrieval utilizing current technologies; and provide facilities conductive to learning and research. *("Strategic Initiatives: University of Connecticut Libraries")*

The mission of the University of Connecticut School of Law Library is the following:

The University of Connecticut School of Law Library's mission is to develop a collection that will support the curriculum and research needs of its primary patrons and provide outstanding information services to those primary patrons in support of their teaching, study, and scholarly endeavors. The library's primary patrons are the faculty, students, and staff of the University of Connecticut School of Law. The library's resources also are available to the remainder of the university community, lawyers, scholars, and the general public.

Resources for Academic and Research Programs, Collections and Services
The Libraries consist of the following branches and regional libraries, although most of the resources are concentrated in the Homer Babbidge Library on the Storrs campus: (7.1, 7.2)

Storrs	Homer Babbidge Library
	Art and Design Library
	Map and Geographic Information Center
	Music and Dramatic Arts Library
	Pharmacy Library
	Thomas J. Dodd Research Center (Archives & Special Collections)
Groton	Avery Point Campus Library
Stamford	Jeremy Richard Library
Torrington	Torrington Campus Library
Waterbury	Waterbury Campus Library
West Hartford	Harleigh B. Trecker Library

Libraries of professional schools and programs:

Farmington	Health Center Library
West Hartford	School of Law Library

The University of Connecticut Libraries (servicing Storrs and the regional campuses) belongs to the Association of Research Libraries which annually compiles an index ranking based on five variables. The overall ranking of the University of Connecticut Libraries is 50th among 113 libraries.

VARIABLE	RANK
Volumes Added	50th
Total Library Expenditures	51st
Volumes in Library	53rd
Current Serials	26th
Professional & Support Staff	71st

The Libraries is the 2nd largest research library collection in Connecticut, with 3,168,617 volumes held across all libraries.

The Thomas J. Dodd Research Center houses the collections of Archives & Special Collections and two academic centers: the Human Rights Institute and the Center for Judaic Studies and Contemporary Jewish Life. It also houses a collection of documents from the African National Congress of South Africa. The Dodd Research Center provides vital public space and programming for the entire university campus.

The Homer Babbidge Library is open one hundred and fourteen hours per week during the academic year and provides quiet research and study space twenty-four hours per day during finals weeks. (See http://www.lib.uconn.edu/using/finding/guides/factsandfigures.doc and the Library brochures in Appendix 7.1) Although service hours at other libraries are less extensive, they are generally regarded as adequate.

Access to a wide range of information is provided by the following networked services and access tools:

- HOMER is the Libraries' primary information resource, supporting acquisitions, cataloging, circulation, and public catalog functions. The public aspect of this system consists of: the libraries' catalog, containing over three million records. HOMER was accessed over two million times during fiscal year 2005-06. HOMER is the Endeavor Voyager system implemented in fiscal year 2000.
- SPIRIT is the Libraries' web-based information server, which distributes library-related information and serves as a gateway to databases supported or created by the Libraries.
- MAGIC is the Map & Geographic Information Center, which provides the ability to display and manipulate various types of geo-spatial data via the web.

In addition, recent software tools have been added that provide for better management of Library resources:

- ContentDM is a software package that allows for management and delivery of digital content to users
- SFX is a link resolver that is updated daily and allows users to access national resources such as Google Scholar at the title level
- Electronic Resource Management helps the Libraries manage internally information on electronic resources such as copyright restrictions, licensing, title changes, etc.
- VDX is a software management system used to seamlessly request and deliver interlibrary loan materials to users

The University of Connecticut School of Law and the Law Library are accredited by the American Bar Association. During the accreditation process (which occurs every seven years), the Law Library produces a thorough self-study document. The School of Law was last accredited in 2004. The Law Library belongs to the Association of Research Libraries, which annually ranks academic law libraries in six categories.

VARIABLE	RANK
Volumes Added	35th
Total Library Expenditures	20th
Volumes in Library	37th
Current Serials	33rd
Professional & Support Staff	35th
Total Electronic Materials	35th

The Law Library holds more than 525,000 volumes, and operates 86.5 hours per week during the academic year (104.5 hours per week during exam period).

Access to a wide range of information is provided by the following networked services and access tools:

- The Law Library's system, developed by Innovative Interfaces, supports acquisitions, cataloging, circulation, serials, and web OPAC functions. The public aspect of this system consists of the libraries' catalog, containing over 88,000 bibliographic records. The catalog hosts approximately 120,000 searches each year.

- The Law Library's web site disseminates library-related information and serves as a gateway to databases.
- All faculty and students at the Law School have access to the Westlaw and Lexis electronic legal databases, which are the backbone on which all legal research is presently conducted nationwide.

The Health Center Library serves the University of Connecticut Health Center in Farmington. This includes the School of Medicine, the School of Dental Medicine, the Graduate Health Programs, the John Dempsey Hospital, and the Research departments. In addition, this library has an active consumer health program called Healthnet that serves Connecticut residents and public libraries. The Health Center Library holds more than 300,450 volumes. These include electronic and print resources and databases. There are 119,834 unique titles within the 300,000 volumes. The library is open and staffed ninety-four hours per week. It is staffed by 29 FTEs. A 24/7 Study Area was added in 2005, providing access to networked library services to students when the library is closed.

The Health Center Library completed a major renovation of its main floor in 2005 that includes additional study areas, updated HVAC systems, new wiring and network connections, and new furniture. This was accomplished within the original footprint of the library.

The Health Center Library is included in the accreditation process of the Liaison Committee on Medical Education of the Association of American Medical Colleges. It submits statistics to both the Association of Research Libraries and to the American Association of Health Sciences Libraries.

Financial Support for Scholarly Support Services
The collections budget of the University of Connecticut Libraries has been allocated from both tuition and bond sources. Between 1999 and 2004, the University provided a five percent annual increase to the bond portion of the budget to respond to double-digit inflation in costs. The percentage of the acquisitions budget devoted to monographs has declined while the percentage devoted to serials and electronic resources has increased. For fiscal year 2005, UCL's acquisitions budget totaled $5,390,298, of which $833,938 went to monographs, $4,059,678 to serials and electronic resources, and $496,682 to other library materials and resources. If a journal is available in both print and electronic, electronic has become the preferred format. (7.2)

In addition to resources purchased by the University on behalf of its patrons, the State of Connecticut provides the citizens of Connecticut with access to over $1.4 million worth of electronic resources through its Connecticut Digital Library Program, iConn. This has allowed the Libraries to target and purchase specialized materials of use to academic and professional researchers. (7.2)

The Law Library's collections budget has also been allocated from both tuition and bond sources. Between 1999 and 2004, the University provided a five percent annual increase to that budget to respond to double-digit increases in costs. Nonetheless, the Law Library has tried to maintain or increase expenditures for monographs. For fiscal year 2005, the Law Library's acquisitions budget totaled $1,218,129 of which $79,632 was expended for monographs, $979,351 for serials, and $159,146 for electronic resources. As often as is practicable, electronic resources are purchased in lieu of print resources. (7.2)

Staffing
The number of permanent staff at the University Libraries (Storrs and Regional Campus Libraries) is 113 Full Time Equivalents (FTE), down from one hundred and twenty-one in fiscal year 2001. The number of professional librarians has remained constant over this period, now comprising forty-eight percent of the total library staff. Although the number of staff has decreased, the number and percentage of staff from underrepresented classes has increased over the same time period and is now thirteen percent of all permanent staff. Approximately fifty-two FTE student staff work in the University Libraries, forty-one percent on federal work-study grants. (7.4)

The number of permanent staff at the Law Library is twenty-four Full Time Equivalents (FTE), down from twenty-five in fiscal year 2001. The number of professional librarians has decreased by two over this period, and professional librarians make up forty percent of the total permanent library staff. Here too the number of permanent staff has decreased while the percentage of permanent staff from under-represented classes has increased (to twenty-one

percent of all permanent staff). Approximately 3.4 FTE student staff work in the Law Library, including the Law School computer labs, more than forty-nine percent on federal work-study grants. (7.4)

Training and Support in Use of Resources
The University Libraries provides instruction in the use of library resources by individual consultation and class instruction, and have three electronic classrooms devoted exclusively to library and/or information literacy instruction. In 2005, the staff of the Libraries conducted 1,141 sessions, with 12,889 participants. The Libraries are leading the University's new general education requirement in information literacy by working with academic departments on the creation of information literacy modules. (7.5, 7.8) The Law Library also provides instruction in the use of library resources by individual consultation and class instruction. In fiscal year 2005, its staff conducted eighty-three instructional presentations, with 483 participants. (7.5, 7.8)

Ownership and Access
The University Libraries recognizes that it is economically constrained from purchasing all materials desired by its patrons. The Libraries have joined consortia in order to provide access to materials it does not own and became a member of the Boston Library Consortium in 2002. Exhibit 7.3 details ownership and access initiatives by University Libraries, the Law Library, and the Health Center library.

Appraisal

Resources for Academic and Research Programs
The Library continues to be an important symbolic space on all campuses for the University. Music, Pharmacy, Stamford and Waterbury libraries are new facilities built in the last seven years, and the Homer Babbidge Library has been remodeled and rededicated over that time. Both the Avery Point and West Hartford libraries are scheduled for new facilities within the next ten years. In Torrington, plans are being made to update that facility. The Health Center Library has been remodeled and updated and there is a new library on the Law School Campus.

The 1996 NEASC Reaccreditation Self-Study Report observed that the "interplay between the print paradigm and the electronic paradigm is a dynamic one that will continue to evolve as the development of reliable systems for delivering information matures." This has proven to be right on target, and the Libraries has devoted more and more resources to developing technological means of distributing its resources.

The Libraries continue to seek economies by reducing the number of print serial subscriptions and increasing the number available electronically. In order to accomplish this with shrinking collections dollars, decisions were made to reduce the monographs budget and to reduce duplication. Even with these changes, the Libraries rank 26th and 53rd in the ARL ranking for serials and monographs. The most recent library survey, LibQual+, conducted in 2004, showed that users are generally satisfied with the Libraries' collection of books, journals and electronic resources (http://www.lib.uconn.edu/about/administration/surveys/LibQual2004TeamReport.pdf). In addition, the Libraries have fully integrated electronic document delivery (http://www.lib.uconn.edu/online/services/ill/) and electronic course reserves (http://www.lib.uconn.edu/online/services/reserve/) into its suite of services.

The Libraries has also made much progress in establishing critical partnerships over the past ten years, notably the Boston Library Consortium (BLC), in order to share resources regionally. The BLC Virtual Catalog makes it possible for UConn users to request materials quickly from other BLC libraries. Through use of these partnerships, it is estimated that the average wait time for a resource ordered from another location ranges from as little as twelve hours, to a maximum of three days. See Exhibit 7.6 for a description of consortium and partnership activities.

An exciting new development for the Libraries has been the initiation of an electronic institutional repository, called the Digital Commons (http://digitalcommons.uconn.edu). See Appendix 7.3 for a pamphlet about the Digital Commons. Among other features, the Digital Commons serves a variety of functions in the scholarly communication process. Documents on the Commons include journal articles, theses and dissertations, audio and video files, and conference proceedings by University of Connecticut faculty, staff and students that are searchable by such common engines as Google and Yahoo.

Financial Support for Scholarly Support Services
Since 1997 (with the exception of 2003 and 2005), the budget for library materials has increased five per cent per year while prices for journals have increased at an average rate of 10 per cent annually.

The Libraries purchased a new integrated library system in 1999, and Y2K funding, also in 1999, provided resources to replace computer equipment and add to the installed base. However Capital budgets to support equipment have been uneven in subsequent years. For example, due to the University's need to cut capital budgets in the transitional

years between the end of the UCONN 2000 program and the beginning of 21st Century UCONN, the Libraries did not receive an equipment budget in fiscal year 2006. However, it did receive equipment money in fiscal year 2007, and the University's projected budgets in the future include equipment money for the Libraries. Moving to electronic delivery mechanisms has meant an increase in the number of computer workstations and servers in the Libraries, but the equipment budget has not kept pace. The Libraries has in recent years increased its fundraising activities in order to supplement the budget it receives from the state. The Libraries have been particularly successful in raising money through 50th Anniversary and Senior Class gifts.

The Libraries has made great strides in increasing access to networked resources, especially electronic journals, but the result has been a significant decline in purchasing power because the budget has not been increased at the same rate as inflation. Also, as a cost saving measure, staff vacancies have been used to balance budgets across campus, resulting in delays in hiring vacancy replacement staff. Staff size and operating budgets remained at fiscal year 2002 levels while the size of the student body increased (nine) percent.

The Thomas J. Dodd Research Center and Archival Materials
In 1995, President William J. Clinton presided over the dedication of the Thomas J. Dodd Research Center, a new state of Connecticut-funded archival and research facility. This facility, which focuses a special collection on human rights, has aided greatly the archival function of the University of Connecticut Libraries and the research capabilities of faculty, staff and students. Preservation of archival material in a readable form has been identified as a future challenge, not only to the University of Connecticut Dodd Archives, but generally around the world. With the advent of electronic media as increasingly the primary modality of communication, documentation and expression, it is critical that electronic expression remain accessible in the future. However, due to the rapidity of technological evolution within the electronic realm and a "throw out the old" mindset, preserving a means of reading older electronic expression is a challenge. The Dodd Archivists have identified this developing problem, and in 2005 published a records management strategic plan: Keeping the whole Record: a Strategic Plan for Managing and Preserving the University of Connecticut's Knowledge Assets in t he Digital Century, http://www.lib.uconn.edu/online/research/speclib/ASC/recordsmgmt/strategicplan.htm. Implementation of the plan will be a challenge for UConn, but an early acknowledgement of the problem will assist greatly in preventing insoluble problems in the future.

Projection

The Libraries has articulated a strategic plan for the period 2005 to 2010. (http://www.lib.uconn.edu/about/administration/strategic/plan2010.pdf) The plan's goals include:

- maintaining attractive learning environments and services;
- becoming a coherent and comprehensive gateway to research materials worldwide;
- offering rich and diverse collections deriving from local ownership, consortia and licensed information arrangements, and links to open access materials;
- employing a knowledgeable, flexible, and responsive staff; and
- exerting leadership and expertise for the University community as scholarly communication systems are transformed.

Achieving those goals will depend largely on the budgetary resources available. This is especially true in the areas of collection development and staffing. The trend toward electronic and away from print resources is likely to continue unabated. This will mean greater access to electronic journals, cooperative collection development for monographs, and has already provided users with rapid access to regional collections. But it will also mean increased costs and a continued de-emphasis of monographs not just print journals. It is important to keep in mind that the landscape of scholarly publishing is unstable and changing rapidly, and the needs of the libraries and their users may look rather different in the medium term.

Funds from UCONN 2000 and 21st Century UCONN have been crucial to the renovation of the physical space of the libraries throughout the University and in support of collections. It is crucial that new budgetary resources emerge as these bonding funds are exhausted. The Libraries will continue efforts at fundraising, but such funds are unlikely to be adequate by themselves. Recognizing that within ten years bond funds will most likely cease to be available for library resource funding, in fiscal year 2006 the University's Central Administration began transferring some library acquisitions costs (about $2 million) onto the annual operating budget. The Provost and the Chief Financial Officer

are devising plans to have an adequate library resource budget funded by the operating budget in place before the conclusion of the 21st Century UCONN capital program.

The Institute for Teaching and Learning

The Institute for Teaching and Learning (ITL) comprises eight units.

- **Instructional Design and Development (IDD)** - This group works with faculty at all campuses to design courses and curricula for face-to-face, on-line, blended delivery, or interactive compressed video. The on-line components are designed to be delivered through the University's course management software – WebCT Vista. The IDD group aims not merely to produce high-tech curriculum products, but to contribute generally to the professional development of the faculty. Technical services, now part of IDD, provides design, installation, and maintenance of high-tech classrooms across all campuses.

- **Instructional Resource Center** - This area provides walk in or appointments for faculty and teaching assistants to learn how to use hardware and software for educational purposes. It is the center for WebCT Vista training and for support for e-portfolio creation.
- **Learning Resources Center** - This is a student facility that is directly accessible to Storrs-based students and electronically available to all students through email and phone communications. It provides advice on all technical matters concerning learning including WebCT, e-portfolio, and e-mail.

- **Teaching Assistants Program** - This unit provides orientations, training, and evaluation of all teaching assistants. The elements of the international part of the program include cultural, language, and pedagogical training. Seminars are provided on demand or through the regular lunchtime series.
- **Video, Photo, and Graphics** – This unit has two main components, Video Design Services (VDS) and Graphic & Photographics (G&P). VDS offers courses in TV production and provides many digital services related to audio and video. G&P provides teaching and research services in the photographic and graphic areas.

- **The University Writing Center** - This center provides support, across all undergraduate campuses, for faculty who are teaching W courses or who have a significant writing component in their courses. It also supplies tutors to help individual students in becoming more proficient in the writing assignments.
- **The Quantitative Learning Center** - This relatively new center is beginning to provide math and science faculty with support as well as tutoring students in the quantitative subjects. The Q Center also provides services across all undergraduate campuses.

- **Early College Experience** - This area of ITL works with high schools to provide experiences in coursework that can allow high school students to enroll concurrently in a UConn course, thus having the ability of transferring credit upon entry to the University.

Detailed description of the Institute for Teaching and Learning
There are eighty-four high-technology classrooms at the Storrs campus and at least one at each of the regional campuses. Each of these rooms has a computer (and cable for laptop), document camera, DVD and VHS players, sound system, internet connection, cable TV, digital projection and/or plasma displays – all switchable through a control touch panel which includes lighting scenes. A few rooms have multiple screens (front or back projection). There are four rooms equipped with a Sympodium touch-panel interactive display unit. Several rooms have ceiling cameras for faculty self-evaluation recordings. If a course is designed through the Instructional Design group of the Institute for Teaching and Learning, the appropriate mode of delivery is determined by the pedagogy required by the course. If a technological solution is required, the high-tech classrooms are able to accommodate the needs. At the

Health Center campus in Farmington, there are 40 high-technology classrooms, conference rooms, and auditoria of various sizes. Each of these rooms has a computer (and cable for laptop), DVD and VHS players, sound system, internet connection, and digital projection and/or plasma displays. Twenty-two have AMX touch-panel controls; twenty-one have Polyvision "smart boards" and annotation panels; a few have document cameras and web-casting capabilities; and seven of the rooms have additional equipment for interactive videoconferencing. One auditorium has an audience response system installed.

High-tech rooms are in extremely high demand. It is expected that all new rooms will be either fully "high-tech" or "tech ready." This latter designation means a room with a wall plate with connection to a projector; lighting and screen control; and a sound system. Four rooms are currently equipped with interactive compressed video (ICV) systems which, through IP2, can be connected to any or all of the regional campuses, the state educational system in general, and beyond. At present about ten to twelve courses are delivered through the ICV system each semester. (7.3)

In addition to face-to-face synchronous delivery, the University uses the WebCT course management system for asynchronous instruction. In academic year 2005-2006 the staff of the Institute for Teaching and Learning worked with faculty to convert all courses from version CE 3.8 to Vista for fall 2006 delivery. Almost three thousand courses contain elements of WebCT material. The Center for Continuing Studies also uses the WebCT software for many courses. (7.3)

Server, network, and video support are provided for the classrooms and WebCT by the University's Information Technology Services unit. Several academic units provide secondary server delivery for on-line courseware and streaming media.

Every semester before the start of classes, the IDD group of the ITL offers instruction on how to effectively use the high-tech classrooms. A help phone number is prominently displayed in every high-tech classroom so that assistance is available throughout all the day and evening class hours. (7.5)

The Instructional Resource Center (IRC) provides walk-in and appointment support for any faculty member or teaching assistant requesting it. In addition, the IRC is available by phone or email. Some regional campus faculty visit the IRC in person, others use the phone or email. Assistance is provided for hardware or software inquiries, pedagogical questions related to technology, digitization of media, and creation of courseware including WebCT materials. The advent of a University e-portfolio facility for all students and faculty has added a significant load to the work of the IRC staff. (7.5)

The Learning Resources Center is located in the Homer Babbidge Library (HBL) and staffed with members of the ITL. A manager, graduate students, and undergraduate students provide technical support on all questions regarding WebCT, e-portfolio, email, etc., in person, by phone, or by email. This facility is available for all students at all campuses during the normal operating hours of the library. (7.5)

In addition the ITL offers a lunchtime seminar series, book reading and study groups, future faculty sessions for graduate students, and faculty learning communities. It is also engaged in professional development for adjunct faculty and provides awards for regular faculty and teaching assistants. (7.5)

Staff members of the IRC have been heavily involved in the creation of the University's on-line Computer Technology Competency tests. Each student is expected to take the self-administered test before the start of his/her academic program. This entry-level test is aimed to provide an assurance to instructors of the basic computer skill levels of all students. Exit-level requirements are set by each program of the University. (7.8)

Staffing-

The administration of ITL consists of a director and an associate director, supported by staff assistants and student office workers. The Instructional Design and Development group has a staff of seven, including a director, one graduate student, and three to five undergraduates. The Teaching Assistant Program has a director, an administrator, one part-time staff member, and several student workers. The Instructional Resource Center and Learning Resource Center have a staff of four, including a director, and also employ graduate and undergraduate student workers. The Center for Instructional Media and Technology has a staff of seventeen, including a director, an administrator, and a number of technicians and technical staff members. The Writing Center has a director and associate director and employs some twenty-one graduate students. The Q Center has a director, a part-time assistant, and employs a number of graduate students. The Early College Experience group has a staff of three, including a director. (7.4)

Appraisal

Since 1985-86, the University's focus on support for instructional technology has had a positive effect on the development and delivery of programs in support of classroom instruction. ITL now serves a valuable and important role in the delivery of information on campus and in the use of instructional technology. It provides strong pedagogical and technology support for all instructional needs and serves the students through tutoring and technology help. Among ITL's strengths is its reputation for quality in developing classroom materials and in assisting faculty in the use of instructional technology. In addition, ITL offers a wide range of support to a diverse constituency of campus and off-campus clients. It has become a vital part of the University's infrastructure.

In 2005, the University of Connecticut commissioned a Classroom Design Study in order to facilitate standardization of classroom technology. This study is contained in Appendix 7.4. The aim of the study is to save costs by use of standard technology, further ease of servicing the equipment, and assist faculty by not requiring them to use disparate technologies in different classrooms. The recommendations of this study are now being implemented.

Projection

ITL will continue to play a critical role in support of good pedagogy through instructional technology and materials. The instructional role of information technology will almost certainly expand in the next ten years.

There are, however, several concerns about ITL's ability to sustain all of its support services. Like many departments on campus, ITL is short-staffed, given the number and multifaceted nature of its activities. ITL relies to some extent on the revenue it generates in order to continue to offer a wide range of services. Like many units of the university, it is able to generate some of its annual budget of $1.3 million. Typically, the revenue is used to hire part-time and temporary labor. However, the annual training provided to the temporary staff is a drain on the permanent staff resources because it has to be repeated every year.

ITL currently maintains an installed base of equipment that is valued at well over $1 million. A portion of this represents a recurring annual cost of replacement in order to provide users with the most effective equipment. Here, as in other areas of information technology, a central issue is the extent to which future resources will be sufficient to maintain and expand the necessary infrastructure, especially as the capital money project, 21st Century UCONN, comes to an end in 2015.

While the University of Connecticut offers a few selected distance learning programs, expansion is unlikely in the near future. The University has successfully raised capital funding that will help in the near term with classroom renovation projects and the enhancement of the campus network, but the costs associated with distance learning tend to be operating expenditures. For example, the cost of developing a single course for distance learning is up to $10,000 in person hours. This estimate does not include overhead, technical support, or the operating costs associated with transmission. Expanded use of distance education does not seem feasible except in those areas, such as the Masters in Accounting on-line, where the distance-learning medium is used for credit and non-credit courses that generate additional revenues.

INSTITUTIONAL EFFECTIVENESS

Due to the largess of the people of the State of Connecticut, since the inception of UCONN 2000 in 1995, the University of Connecticut has had a stable source of capital funding on which to draw for library and other information resources support. The University has tried to be a good steward of these funds and use them wisely and effectively. To that end, the institution has engaged in a great deal of planning in all three areas of information technology services, libraries and instructional resources. It will continue to do so in order to ensure adequate funding for these endeavors beyond the end of 21st Century UCONN.